Údarás Náisiúnta Iompair
National Transport Authority

Transport Strategy for the Greater Dublin Area

2022 – 2042

Strategy Development and Modelling Report

November 2021

National Transport Authority,
Dún Scéine,
Harcourt Lane,
Dublin 2.

CONTENTS

1 Introduction

1.1 Background

The present Transport Strategy for the Greater Dublin Area 2022-2042 (Transport Strategy) updates and supersedes the previous Transport Strategy for the Greater Dublin Area 2016-2035 (Prior Strategy), which was approved by the then Minister for Transport, Tourism and Sport in 2016. The updated strategy is referred to as the Strategy for the remainder of this document.

That prior transport strategy set out to contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods. In other words, it was about making the Dublin region a better place for people who live and work there, and for those who visit.

Under the Dublin Transport Authority Act, the National Transport Authority (NTA) must review its transport strategy every 6 years. Arising from the review of the 2016 plan, an updated strategy has been developed which sets out the framework for investment in transport infrastructure and services over the next two decades to 2042.

Of course, no transport strategy can ever be a standalone document. A transport strategy will always be part of a larger picture of overall national policies that must work towards a single set of overall objectives. To a large extent, policies and objectives around issues such as land use, development, population distribution, investment, sustainability and climate action, for example, are determined by other state agencies and authorities, but must be reflected in any transport strategy.

As such, this Transport Strategy has been developed to be consistent with the spatial planning policies and objectives set out in the Regional Spatial and Economic Strategy (RSES) as adopted by the Eastern and Midland Regional Assembly and finalised in January 2020. These objectives in turn are consistent with the National Planning Framework and the National Development Plan as set out in Project Ireland 2040.

This Transport Strategy is also based on national policies on sustainability as set out in climate action and low carbon legislation, and in climate action plans. The potential impacts of the on-going Covid-19 pandemic, beyond the short-term, have also been taken into account.

1.2 Transport Strategy Aims and Objectives

In crafting a 20-year transport strategy, it is vital at the outset to develop a clear understanding of what it is you are trying to achieve. The NTA developed the following aims and objectives for the strategy based on the relevant plans, programmes and policies at the international, national and local level.

1.2.1 Strategy Aim

The aims of the Strategy are:

> *"To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth."*

The Strategy timeframe includes a 2030 goal to decarbonise the transport system, with a commitment to reducing Greenhouse Gas (GHG) emissions in the transport sector by 51% relative to 2019 levels within its first decade. The Strategy therefore must include the flexibility to respond to and incorporate the measures required to meet these commitments.

In developing the Strategy to meet this aim there is a strong emphasis on building on the existing plans and projects, in particular BusConnects and Metrolink to meet the objectives set out below.

1.2.2 Strategy Objectives

The NTA is responsible for developing and implementing strategies to provide high quality, accessible, sustainable transport across Ireland. The Strategy therefore aims to support improvements in in: the environment; our quality of life; the economy; and access to a sustainable and inclusive transport system. These objectives have been developed in collaboration with the wider NTA stakeholder group.

The general objectives of the Strategy are summarised along these lines below.

- An Enhanced Natural and Built Environment:
  - To create a better environment and meet our environmental obligations by transitioning to a clean, low emission transport system, reducing car dependency, and increasing walking, cycling and public transport use.
- Connected Communities and Better Quality of Life:
  - To enhance the health and quality of life of our society by improving connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for walking and cycling.
- A Strong Sustainable Economy:
  - To support economic activity and growth by improving the opportunity for people to travel for work or business where and when they need to, and facilitating the efficient movement of goods.
- An Inclusive Transport System:
  - To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.

1.3 East Regional Model Suitability for Supporting Strategy Development

1.3.1 Model Calibration and Validation

To support the development of the Strategy the NTA's East Regional Model (ERM) has been used. The ERM has been subject to a comprehensive calibration and validation process whereby a substantial amount of observed data has been incorporated into both the demand model and the assignment models as presented in Figure 1.

Demand Model	Assignment Models
Tour proportions	Road traffic volumes
Generalised cost distributions	Road journey times
Travel distance distributions	Road trip length distribution
Modal share	Public transport in-vehicle time factors
Journey time distribution	Public transport fares and ticket types
	Public transport passenger flows
	Public transport boardings and alightings
	Public transport journey times
	Public transport interchange/transfers

Figure 1 Observed data used for model calibration and validation

The calibration and validation process ensure that the ERM accurately reflects existing conditions and 'costs' associated with travel. This allows changes in the forecasting of transport demand and strategic transport infrastructure schemes and appropriate transport policies to be modelled and tested using the ERM. Further details on the model calibration can be found in the ERM Model Development Report, available from the NTA Website.

1.3.2 Use of ERM for Strategic Transport Planning

The model has many strengths and features that make it the ideal tool to aid the strategic planning process. The ERM has been developed from first principles making best use of the most recently available data (POWSCAR and NHTS) to replicate travel choices and transport network conditions as accurately as possible.

Several distinct journey purposes and characteristics including car availability, employment status, and education level are considered within the model to evaluate travel choices more accurately. This carries through to forecasting whereby specific person type demand can be forecast to derive appropriate trip distributions and future year travel conditions.

The model utilises a tour-based approach which allows for more accurate mode choice modelling and consideration of travel costs, particularly with respect to the inclusion of parking charges.

Four main modes of travel: private car, public transport (PT), walking, and cycling are included in the model. Each mode has been calibrated individually, for each journey purpose, to replicate observed trip cost distributions.

The use of SATURN software in the road model allows for junction modelling to be included in the model which improves typical network representation in congested areas over an entirely link-based approach. Link speeds and delays are transferred to the public transport model which allows journey times of on-street modes (Bus, Bus Rapid Transit) to reflect perceived traffic conditions rather than a strict timetable.

The model covers the GDA region plus surrounding counties, and takes full account of travel within, into and out of the GDA area. As the model is also used as the basis for scheme evaluation, the transport networks represented contain a level of detail beyond that which would be normally required for its use as a strategic transport planning tool.

To account for the availability of parking facilities in Dublin City Centre, both a free workplace parking model and a parking constraint model have been implemented to re-evaluate mode choice based on whether parking was available at the travellers' ultimate destination.

There are however, as with all transport models, limitations to what the model can be used to assess. There are several potential measures which cannot be assessed using the ERM. These include, amongst others;

- Intelligent Transport measures which improve wayfinding, management of parking and route choices;
- Behavioural Change Initiatives which influence choice of mode and time of travel;
- Public Transport measures such as Real Time Information and integrated ticketing; and
- Public Ream enhancements – which improve the quality of the environment and likelihood for walking/cycling trips.

Any measures identified in the strategy will need to undergo further assessment as part of their future appraisal which may include further modelling. For example, operational assessments should be undertaken at a more localised level using microsimulation modelling, if required. However, for the purposes of this strategy, this level of detail is not required.

1.3.3 Summary

The East Regional Model (ERM) provides a comprehensive representation of travel patterns across the Greater Dublin Area and is a suitable tool for the testing and appraisal of the Strategy. The limitations of strategic transport models are recognised and fully understood. The ERM is considered the appropriate tool for fulfilling the NTA's requirements in terms of its planning and appraisal needs. Further information on the ERM and the NTA's Regional Modelling System (RMS) is provided in Annex 1 of this report.

1.4 Land Use

Land use forecasts for the years 2030 and 2042 have been developed by the NTA that are consistent with the National Planning Framework, the Eastern & Midland Regional Assessment, and Local Authority Development Plans.

1.5 Purpose Transport Strategy Development Report

The purpose of this report (titled the Transport Strategy Development Report) is to describe the:

- Strategy development methodology and supporting transport modelling;
- Phases and processes;
- Analysis undertaken and Key Performance Indicators (KPIs) used; and
- Associated decisions and their rationale that have resulted in the Strategy.

2 Transport Strategy Development Process

2.1 Introduction

This chapter describes the Strategy Development Process used to support the development of the GDA Strategy 2022-2042. It also describes the Key Performance Indicators (KPIs) which measure the performance of the Strategy against its objectives (in Section 2.4) based on the transport model scenarios.

2.2 General Process

Figure 2 outlines the process for the development and assessment of the strategy options.

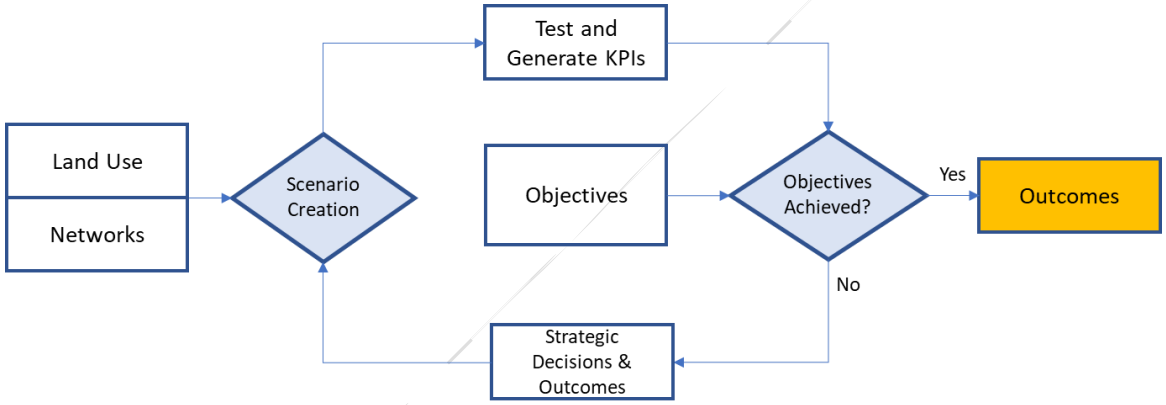


Figure 2 Strategy Development Process

The strategy development process shown above in Figure 2 represents how options have been iteratively developed, evaluated in the transport modelling and reviewed by NTA in association with the wider stakeholder group, to inform decisions and further scenario tests.

Therefore, the transport modelling supports a decision-making process that includes significant professional judgement; expertise in sustainable transport planning practices; and recognition of the relevant sequencing requirements in delivering major schemes and associated lead-in times (for the planning and approval process, construction, testing and operational phases).

In line with the diagram shown in Figure 2, the Strategy development process works as follows:

Scenario Creation

- An initial scenario is required to begin the process. This can be a base year, 'do-minimum', or Prior Strategy network model, accompanied by a land use forecast in terms of population and employment. A do-minimum only includes committed schemes for the relevant forecast year.
- A new scenario follows when the subsequent steps in the process are undertaken, i.e., "Test and Generate KPIs", "Objectives Achieved?", and "Strategic Decisions and Outcomes".

Test and Generate KPIs

- This step involves modelling the scenario, obtaining relevant model outputs for the scenario (using the NTA's East Regional Model (ERM), discussed further below).

Objectives Achieved?

- The KPIs are then evaluated against the objectives, in other words, the scenario is evaluated to see if it has achieved the desired outcomes.

- If not and the analysis suggests further improvements can be made with respect to the objectives then those improvements are generated in the "Strategic Decisions" steps.
- If the indicators, on balance, are supportive of the schemes being tested, then the process can conclude to inform next steps..
- These insights can lead to the decisions which are carried forward into the final Strategy, for example, whether a scheme is viable or not based on certain decision-making criteria (discussed later). Thus, high-level options can be ruled in or out at early stages of the Strategy development process.

Strategic Decisions and Outcomes

- This is a critical stage in the process which involves discussion and strategic transport planning decision making, using the modelling and expertise to inform and guide further changes to the network or other assumptions. This leads to the **creation of a new scenario** and the process repeats.

The final outcome of the Strategy Development Process is the identification of an Emerging Preferred Strategy Network that meets the Strategy objectives and all other requirements and constraints as determined during the process.

The above general iterative process has been repeated a number of times through three broad 'Phases' of work, each focusing on important but relatively distinct objectives of the GDA Strategy update process. These phases are explained in the following section.

2.3 Overview of Phases

This work has been undertaken through three main Phases:

- Phase 1: Idealised Network Development;
- Phase 2: Produce Strategic Network Plan; and
- Phase 3: Scenario Planning.

2.3.1 Phase 1 – Idealised Network Development

Public transport is the backbone to a sustainable transport system for the wider movement of people within the Greater Dublin Area. Identifying the public transport requirements to support the sustainable growth of the region was seen as the critical starting point for the Strategy to meet its objectives. With this in mind, the purpose of this phase is to estimate the upper limit of Public Transport demand for travel within the GDA.

This phase uses the Prior Strategy public transport network as a starting point and goes on to assess what the additional potential for public transport might be beyond what is already planned. With each model run, beginning with the Idealised Network (described below), key insights can be obtained which inform the subsequent scenarios.

The transport modelling approach taken in this phase estimates the effect of providing unlimited capacity, speed, and frequencies on the public transport network. For example, by assuming a 1-minute headway on all bus routes operating within the GDA with no capacity constraint. The need for additional public transport connectivity is informed by reviewing where resulting line flows on the 'idealised services' perform well for the given travel demand, which might suggest where current plans do not provide enough capacity.

The full 'Idealised Network' (i.e., GDA wide) is therefore used to provide later decision making with a guide to the potential for a high level of public transport usage that could be achieved which would

result in a significant reduction in car dependency supported by a strong level of car demand management.

Phase 1 in described in detail in Chapter Three of this report.

2.3.2 Phase 2 – Produce Strategic Network Plan

Taking the output from Phase 1 which identified the "idealised" public transport required to meet the GDA travel demand, the purpose of Phase 2 is to produce a Strategic Network Plan that would emulate the idealised network in a practical and deliverable way.

This Phase develops and examines, through an iterative modelling approach, a number of strategic mass transit public transport network proposals and associated car demand management strategies which would aim to serve the required public transport demand identified from Phase 1.

The key output from Phase 2 is the identification of a preferred Strategy Transport Network and associated car demand management options which deliver on the key GDA Strategy objectives. This informs the final phase (Phase 3) of the Strategy Development Process.

Phase 2 is described in detail in Chapter Four of this report.

2.3.3 Phase 3 – Scenario Planning

Phase 3 examines a set of 'alternative future' scenarios and the implication these have on the Strategy Network identified from Phase 2. These scenarios account for inherent uncertainty in some of the known factors that affect future transport demand, for example the impact of behavioural change (as evidenced through the Pandemic where more people may decide to work from home) and the impact of achieving higher levels of cycle mode share (reflecting the cycle mode share levels achieved internationally in cities such as Amsterdam and Copenhagen). A further key consideration within this phase was the climate reduction targets for 2030 which is a key influencer on decisions taken during the Strategy development.

The output from Phase 3 is the Emerging Preferred Strategy which forms the basis for the NTA's GDA Strategy 2022-2042 Report.

Phase 3 is described in detail in Chapter Five of this report.

2.4 Key Performance Indicators (KPIs)

KPIs are an important component of the Strategy Development Process and are used to assess the performance of different modelling scenarios with respect to the expected contribution of the proposals and measures, tested within the modelling process, towards the wider real-world objectives and expected policy outcomes.

There are two categories of KPIs used in the Strategy Development Process as follows:

- KPIs which are used in the iterative process throughout the Strategy Development process; and
- KPIs used to demonstrate the performance of a scenario under each of the Strategy Objectives.

2.4.1 KPIs for Strategy Development (Decision Making)

Mode Shares

Mode share is a KPI that is used throughout the Strategy Development Process to understand the performance of various strategy assessment runs. The mode share comparison helps to identify how active modes, public transport and private car respond to the different scenarios.

Mode share is evaluated/monitored for four areas within the GDA as shown below in Figure 3, Figure 4, Figure 5 and Figure 6 respectively.

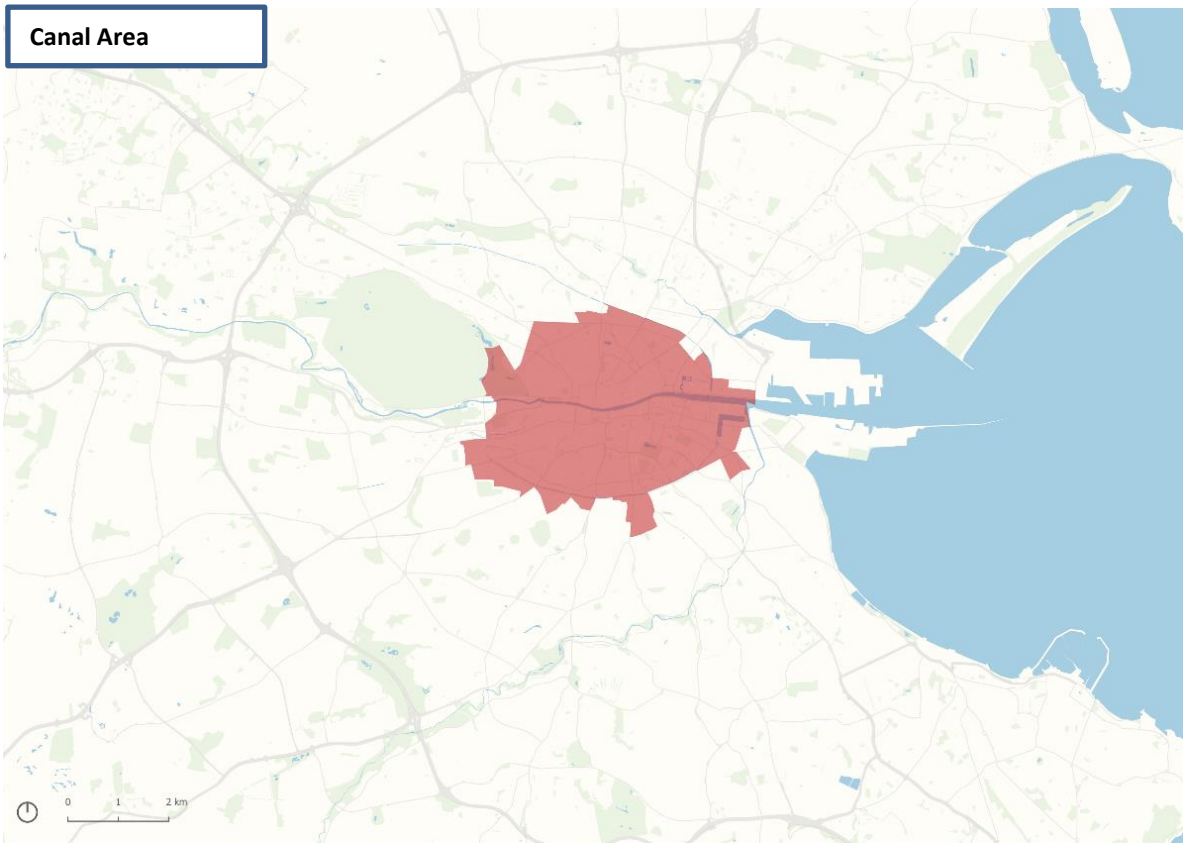


Figure 3 Canal Assessment Area

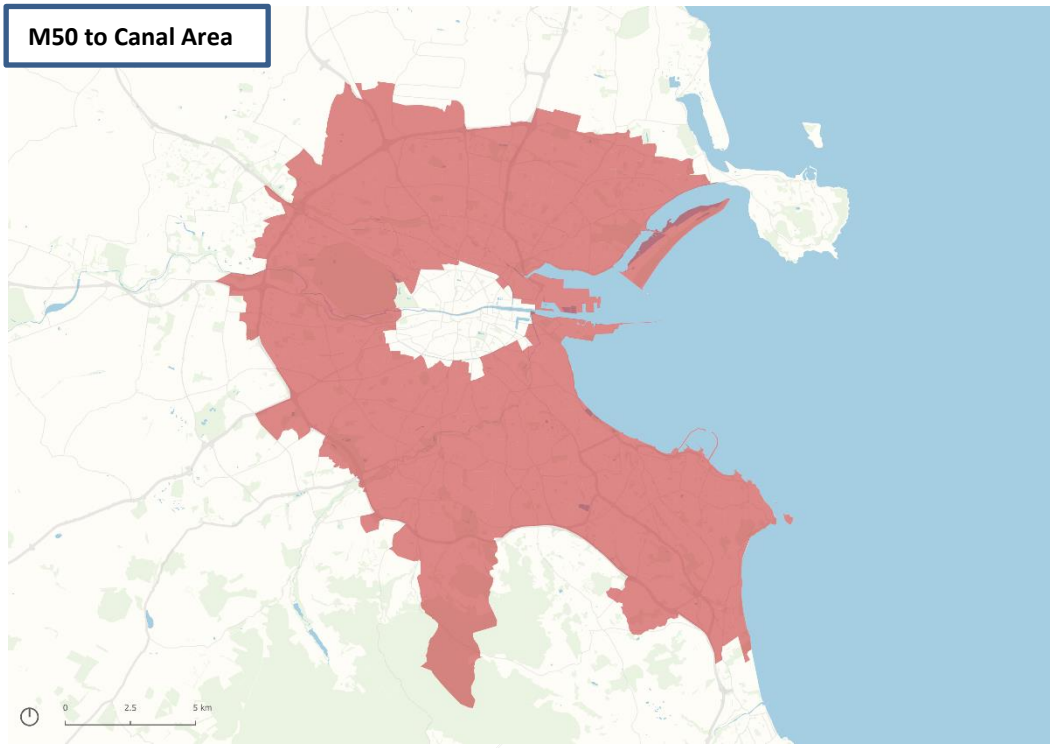


Figure 4 M50 to Canal Assessment Area

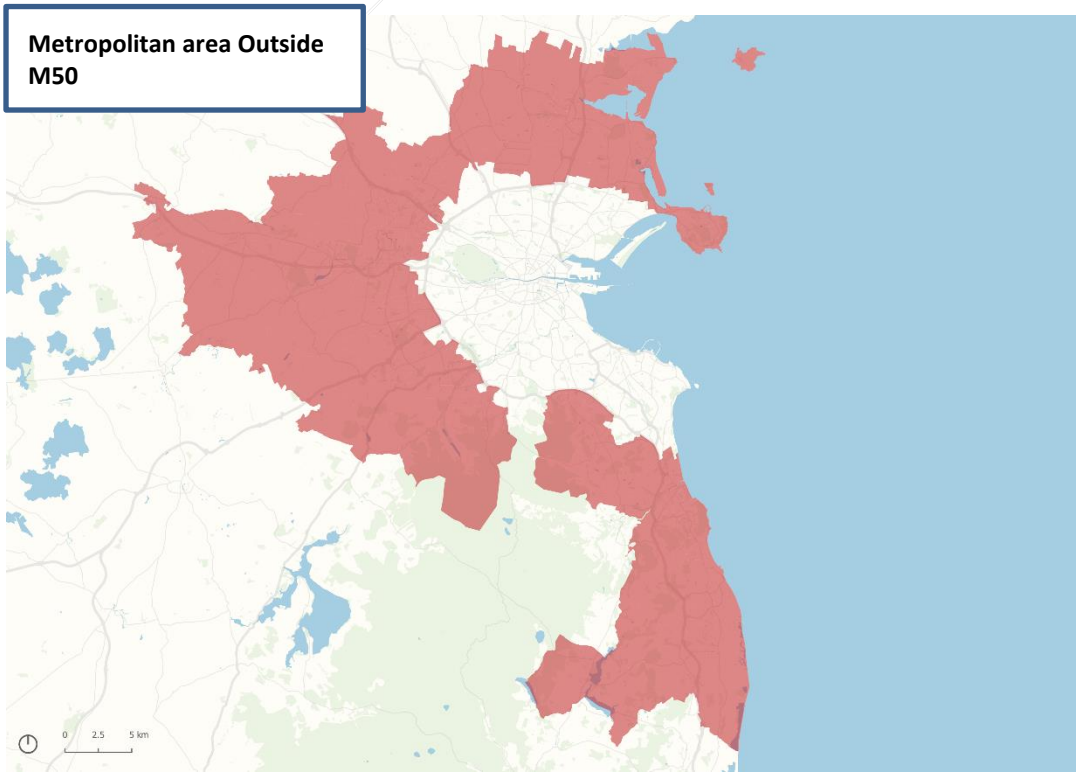


Figure 5 Metropolitan Assessment Area

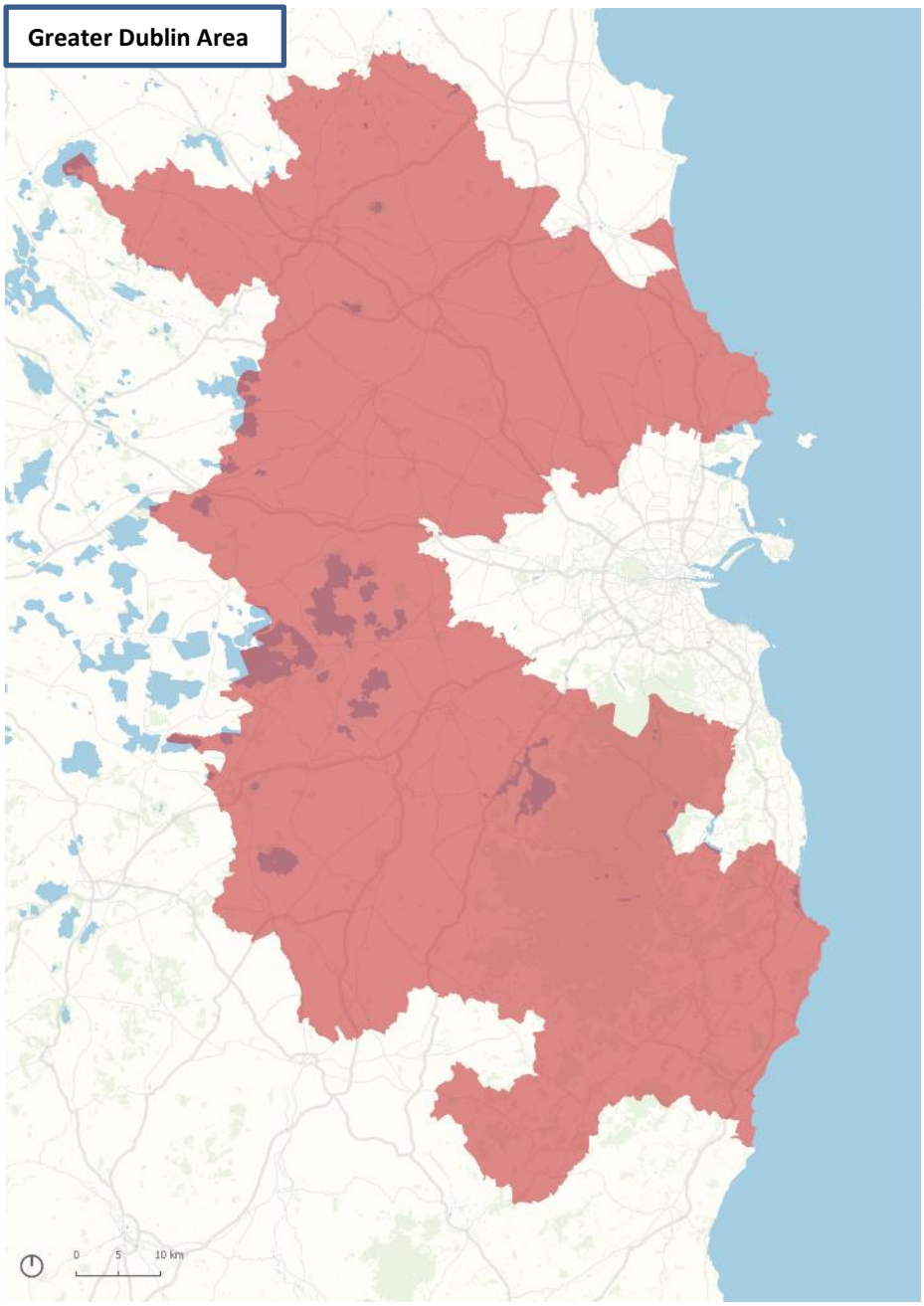


Figure 6 GDA Assessment Area

Settlement Based Analysis

The GDA is divided into settlement areas shown in Figure 7. These are generally district or town centres and their associated catchment areas. Settlement based assessment was undertaken for all settlements within the GDA and this involved the following:

- Settlement based analysis for the assessment of trip length and mode share by distance band; and
- Settlement to settlement journey time comparison between Public Transport and car.

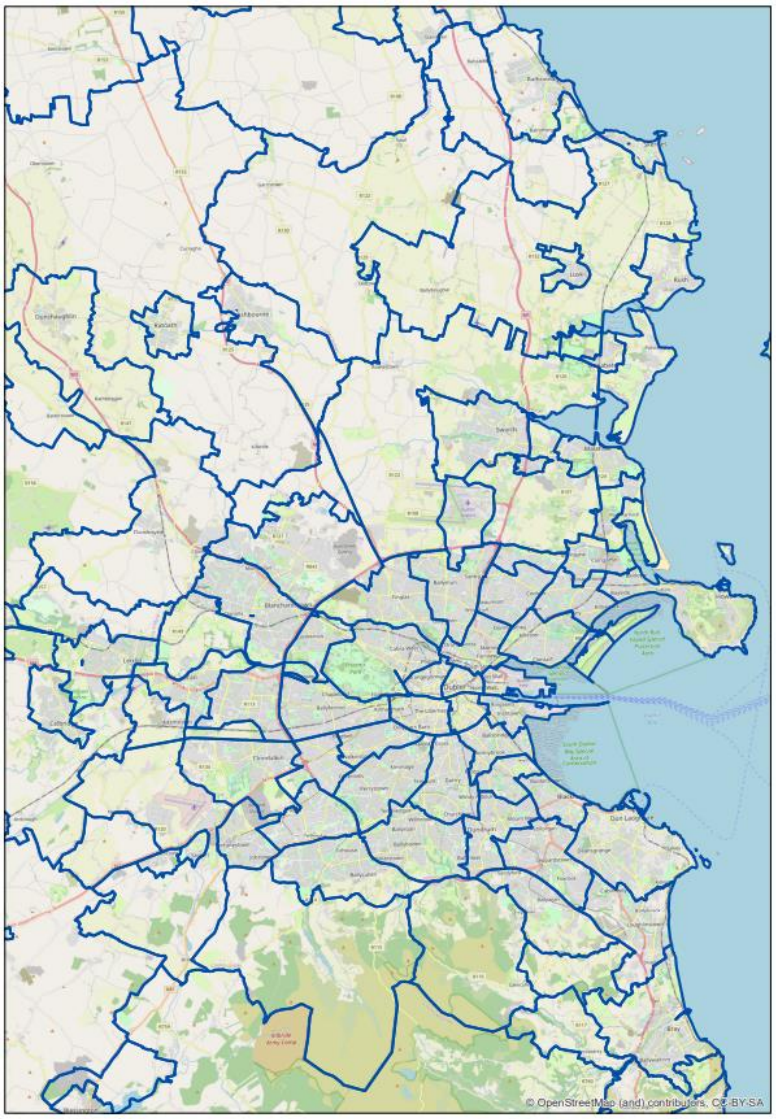


Figure 7 Settlement Areas within GDA

Settlement to Settlement Journey Time Assessment

This comparison measures the journey time difference between private car travel and public transport travel between settlements, which shows how well the public transport measures perform in comparison with the private car. This KPI was used in the early phase of Strategy Development Process within Phase 1. The KPI extraction methodology involves demand weighting the journey times by mode from origin settlement to destination settlement for all trip purposes.

Public transport journey times include:

- Access time (between zones and public transport stops);
- Waiting time (incl. potential transfers); and
- Transit time (time spent on board the service).

An example output for this KPI is shown below, in Table 2-1, for the 2016 network. The table shows the settlement to settlement percentage journey time difference between public transport and car is shown for 19 selected settlements. This matrix is used to help identify public transport network deficits particularly in hinterland areas of the GDA where the network is more dispersed.

In addition to providing insight into particular movements, a global KPI, covering all 68 settlements in the Greater Dublin Area is calculated and used in evaluating scenarios. An example is shown in the red box within Figure 8, in this case demonstrating that, in the 2016 model, car generally out-performs public transport, with average journey times of 23mins vs 49mins for car and public transport respectively.

Table 2-1: Settlement to Settlement Journey time comparison between Car and Public Transport 2016

PT Vs Road	Cabra	Clontarf	Darndale	Drimnagh	Finglas_DCC	Kimmage_DCC	Marino	North Docks	North East Quad	North West Quad	Raheny	Rathgar_DCC	Red Cow_DCC	South Docks	South East Quad	South West Quad	UCD_DCC	Airport - Dub	Balbriggan
Cabra	-	107%	150%	129%	283%	130%	124%	87%	83%	96%	102%	73%	148%	45%	33%	79%	43%	127%	201%
Clontarf	113%	-	121%	55%	194%	68%	154%	177%	60%	92%	219%	50%	51%	72%	49%	49%	87%	140%	141%
Darndale	142%	125%	-	102%	214%	72%	81%	78%	40%	73%	226%	34%	131%	58%	36%	36%	61%	283%	236%
Drimnagh	124%	67%	96%	-	127%	302%	118%	92%	77%	97%	73%	195%	224%	101%	92%	130%	134%	109%	167%
Finglas_DCC	233%	220%	271%	136%	-	119%	148%	135%	71%	86%	189%	68%	150%	66%	48%	93%	61%	154%	284%
Kimmage_DCC	152%	96%	86%	237%	136%	-	123%	132%	121%	156%	87%	240%	182%	148%	138%	171%	138%	90%	152%
Marino	126%	174%	120%	78%	165%	85%	-	168%	82%	111%	134%	50%	73%	73%	53%	69%	55%	97%	212%
North Docks	158%	237%	126%	81%	207%	105%	339%	-	80%	174%	137%	80%	79%	85%	92%	85%	186%	47%	188%
North East Quad	159%	129%	88%	113%	141%	119%	221%	159%	-	236%	93%	54%	94%	67%	57%	115%	58%	60%	136%
North West Quad	212%	111%	111%	118%	157%	168%	139%	118%	121%	-	92%	92%	105%	79%	55%	131%	66%	87%	165%
Raheny	85%	187%	150%	54%	147%	51%	98%	94%	37%	67%	-	35%	73%	38%	24%	33%	52%	168%	122%
Rathgar_DCC	152%	106%	74%	195%	119%	227%	133%	154%	100%	148%	89%	-	174%	214%	152%	119%	158%	55%	133%
Red Cow_DCC	155%	108%	135%	280%	135%	187%	66%	63%	59%	91%	88%	137%	-	91%	79%	116%	125%	177%	n/a
South Docks	130%	180%	114%	151%	139%	212%	225%	241%	180%	142%	100%	223%	139%	-	202%	138%	253%	49%	162%
South East Quad	120%	108%	78%	125%	121%	151%	135%	163%	152%	134%	75%	123%	124%	219%	-	147%	116%	42%	123%
South West Quad	141%	86%	78%	162%	153%	221%	131%	124%	108%	144%	72%	122%	135%	95%	99%	-	93%	64%	131%
UCD_DCC	96%	92%	87%	165%	98%	190%	117%	200%	97%	104%	65%	216%	181%	183%	105%	125%	-	55%	128%
Airport - Dub	137%	151%	312%	93%	98%	91%	99%	44%	33%	74%	193%	35%	112%	6%	12%	42%	57%	-	215%
Balbriggan	161%	135%	236%	127%	223%	113%	146%	73%	63%	97%	141%	68%	148%	46%	47%	72%	77%	174%	-

PT mode faster than car
PT journey less than 50% longer than car
PT journey 50% to 100% longer than car
PT journey 100% to 200% longer than car
PT journey more than 200% longer than car

Average JT by car = 23 mins
Average JT by PT = 49 mins
% diff = 113% (in favour of Car)

Multi-Modal Trip Length

Trip length analysis is an important KPI used in Phase 1 to understand the variation of trip length across modes (i.e. walking, cycling, public transport and car) and by area. The trip length variations by mode where examined using the same assessment areas as those used for mode share. Please refer to Figure 8 below.

Each area has its own demand characteristics which is heavily influenced by proximity to other settlements and the range of services available in each. This has implications for the length of a trip made and thereby influencing the decision on which mode to take to serve the trip. For example, as can be seen from the figures below the trip length distribution of trips originating from within the Canal Cordon Area is different than trips which originate from within the area between Canal and M50. Key differences are that walking trips are higher within the Canal area and public transport trips are higher within the area between the Canal and M50.

Generally, settlements within all areas of the GDA will support walking and cycling up to distances of 3 to 4km, however the extent of what can be achieved by walking and cycling is driven by services available locally. Generally, distances above 3 to4km and up to 10km is where demand for public

transport is at its highest and for distances above 10km, car and Rail are the predominate modal choices.

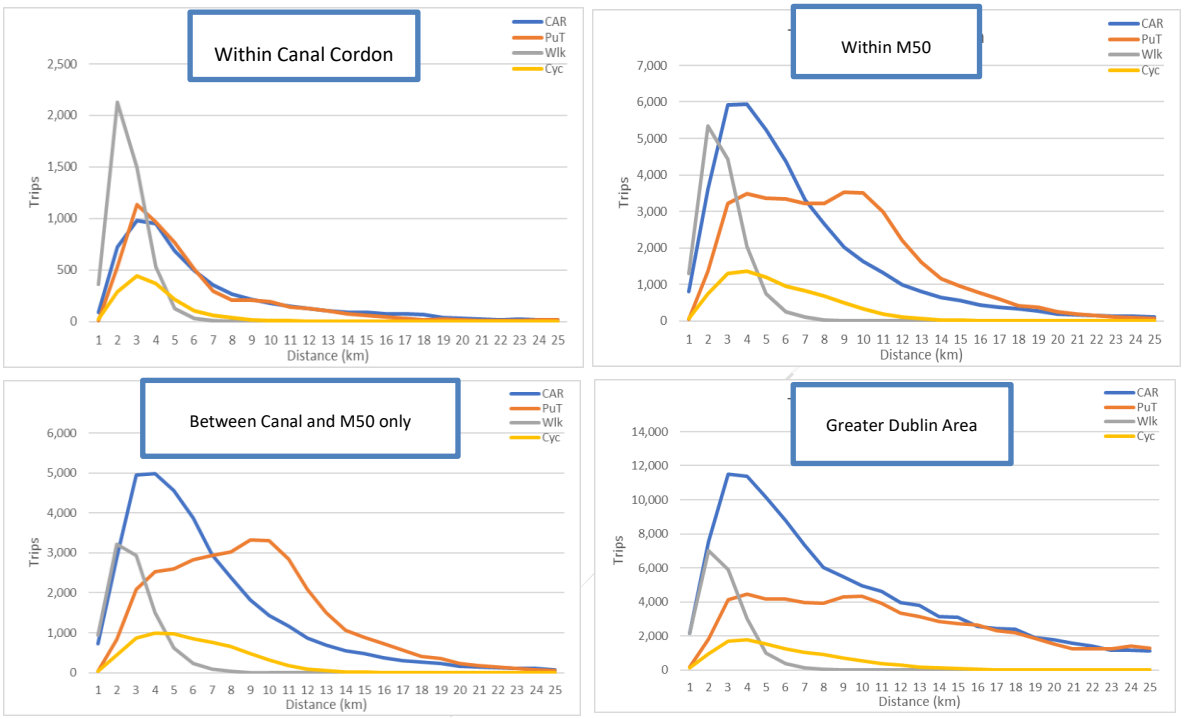


Figure 8 Trip Length Distribution by Mode for four assessment areas

Public Transport Corridor Demand

The public transport corridor demand analysis reports on the anticipated public transport patronage, operating along a corridor/link/service and allows for the identification of the appropriate level of public transport intervention required to cater for this demand (e.g. in terms of capacity and public transport mode(s) required).).

Public Transport Mode Bands

Public transport mode bands shown below in Figure 9 are used to identify the appropriate public transport mode required to serve various public transport demands (identified through the public transport corridor demand analysis) in terms of passengers per hour per direction (pphpd).

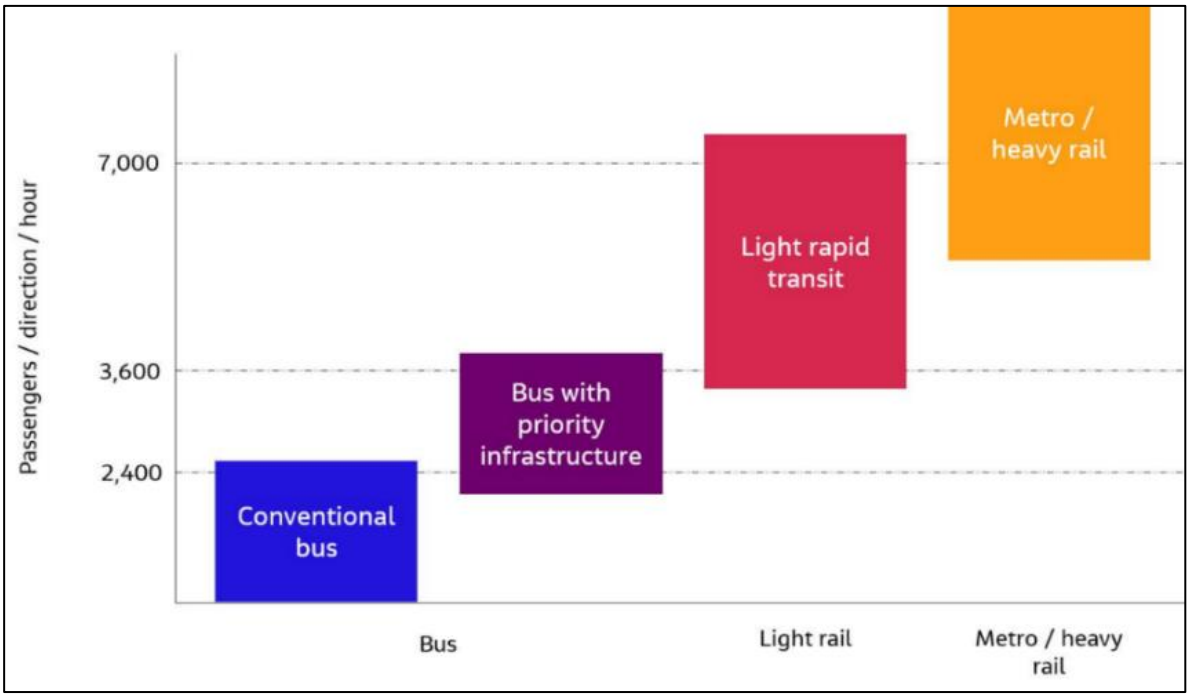


Figure 9 Public Transport Capacity Ranges[1]

2.4.2 KPIs for Strategy Performance (Outcomes)

KPIs are used to measure the performance of key scenarios against the Strategy and are presented below in Table 2-2.

[1] UITP Conference 2009 – Public Transport: Making the Right Mobility Choices

Table 2-2 Objectives and Modelled KPIs

Strategy Objective	KPI (code)	Description of KPI
An Enhanced Natural and Built Environment	Env_1	Emissions (various GHGs and Pollutants)
	Env_2	Noise (% of population exposed to noise)
	Env_3	Car Mode Share
	Env_4	Vehicle Kms
Connected Communities and Better Quality of Life	Con_1	Number of people within 15 min public transport travel time of City Centre, Major Town Centres, Universities & Major Hospitals
	Con_2	Map of journey time bands to the city centre by public transport in the AM peak (15, 30, 45 – consider walk and wait time as discussed)
	Con_3	Walking and Cycling Mode Share
	Con_4	KSI data
A Strong Sustainable Economy	Eco_1	Journey times for business and commute trips
	Eco_2	Travel times for goods vehicles
	Eco_3	Travel time for trips to/from Dublin airport and port
An Inclusive Transport System	Inc_1	Number of jobs accessible by public transport in 30 minutes (all & by Pobal Index)
	Inc_2	Numbers living in proximity to transport service with better than 10-minute off-peak frequency

2.5 Report Structure

The following provides a description of the contents of each section of the report;

- Chapter 2 has described the Transport Strategy Development Process and the Key Performance Indicators used to support and the Strategy Development;
- Chapter 3 describes the work undertaken for Phase 1 of the Strategy Development Process and the outcome of this phase;
- Chapter 4 describes the work undertaken for Phase 2 of the Strategy Development Process and the outcome of this phase;
- Chapter 5 describes the work undertaken for Phase 3 of the Strategy Development Process and the outcome of this phase; and
- Chapter 6 presents a comparative assessment of the key Strategy scenarios under each of the strategy objectives and their KPIs measures against the Base Year and a forecast Do-Minimum.

3 Phase 1 – Develop Idealised Network

3.1 Overview

This section describes Phase 1 of the Strategy Development Process. The purpose of this phase is to identify the upper limit of Public Transport demand for travel within the GDA. This phase considers the public transport network provided for in the 2016-2035 Transport Strategy for the GDA as a starting point but assumes capacity, speed, and frequencies of the public transport network are effectively unconstrained (e.g. 1 minute frequencies on all bus routes operating within the GDA with no capacity constraint etc.) and that any gaps in public transport connectivity identified within the GDA Strategy network are removed to ensure public transport is available for all.

In other words, Phase 1 provides later decision making with a view as to the best achievable results in terms of highest public transport usage if any transport network could be delivered, taking account of the effect of significant car demand management.

3.2 Phase 1 Objectives and Scope

The key objectives of Phase 1 are:

- To determine the upper limit of public transport use (and lowest likely levels of car usage) within the GDA if the public transport network is effectively unconstrained (i.e., extremely frequent and without capacity limitations);
- To determine the upper limit of public transport use (and lowest likely levels of car usage) within the GDA if stringent car management is also imposed throughout the network; and
- Provide information on potential line flows on key corridors/movements within GDA to Phase 2 of the Strategy Development Process, to inform any required updates to the Strategy network (relative to GDA Transport Strategy 2016-2035).

3.3 Phase 1 Process

The Phase 1 of the GDA Strategy Development Process follows the format of the general strategy development process as previously described in Chapter 2, Figure 2. The additional detail relevant to the Phase 1 process is explained further below and shown in Figure 10.

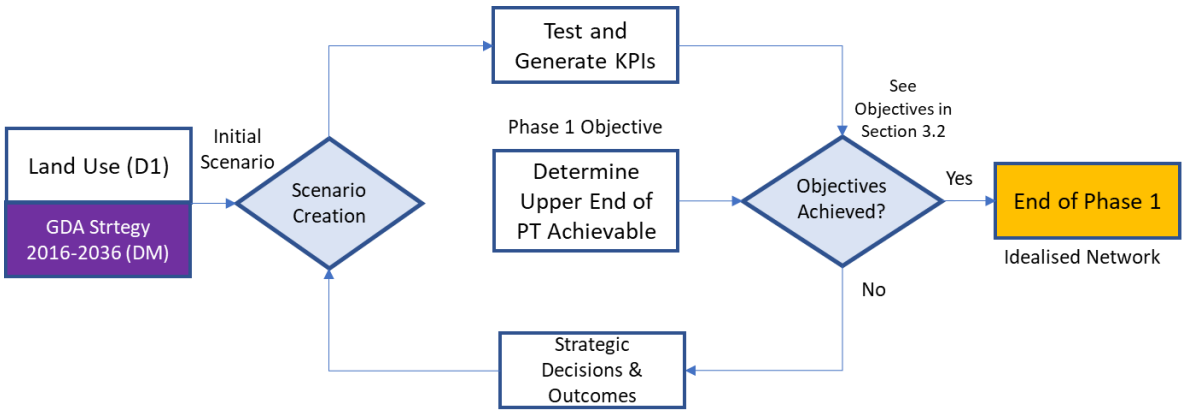


Figure 10 Phase 1 Process Overview

3.3.1 Scenario Creation

- The initial scenario is the GDA Strategy network proposed by the 2016-2035 GDA Strategy. This is shown in Table 3-1; and
- Land use is the standard NTA 2042 forecast. See Annex 2 for further detail.

3.3.2 Test and Generate KPIs

- The standard KPIs listed in Section 2.4 have been used in this Phase 1. Public transport line flows and Settlement-to-Settlement journey times are of particular importance.

3.3.3 Objectives Achieved?

- The KPIs extracted are then used to assess the network performance against the objectives listed in Section 3.2 above.

3.3.4 Strategic Decisions and Outcomes

- The first pass through the process provides a benchmark from which future scenarios are developed that aim to improve public transport mode share and minimise car. Subsequent passes aim to update the scenarios in order to find an acceptable solution and run back through the above steps; and
- The Phase concludes when the results provide enough indication of the kinds of public transport mode shares achievable on key corridors throughout GDA, which then inform the subsequent Phases.

The following sections step through the iterative scenario development process noting assumptions, results, and outcomes for each stage.

3.4 Phase 1 First Iteration (Prior Strategy)

3.4.1 Scenario Creation

The Prior Strategy is taken as the starting public transport network supply. The full Transport Strategy network includes the following key transport elements:

- BusConnects Core Bus Corridor infrastructure;
- BusConnects service plan;
- 2019 bus network for the remainder of the network;
- Luas extensions to Finglas, Lucan and Bray;
- MetroLink Charlemont – Estuary; and
- DART Underground.

Further details of the assumptions are presented in Table 3-1. The relevant rail network is shown in Figure 11.

Table 3-1 Initial Network Input Assumptions

Scenario:	GDA Transport Strategy 2016-2035 Network
Run ID:	AAA
Year	2042
Road network	BCID all CBCs
PT network - Urban Bus	BusConnects network
PT network - Other Bus	2019 Bus network
PT network - Luas	Extension to Finglas Extension to Bray Extension to Lucan
PT network - Metro	Metrolink Estuary-Charlemont
PT network - Rail	Dart Underground
PT network - Capacity	Normal
PT network - Frequency	Normal
PT network - Bus speed	Normal
PT network - Fares	Integrated fare system
PT network - Transfer pen.	5min all transfers

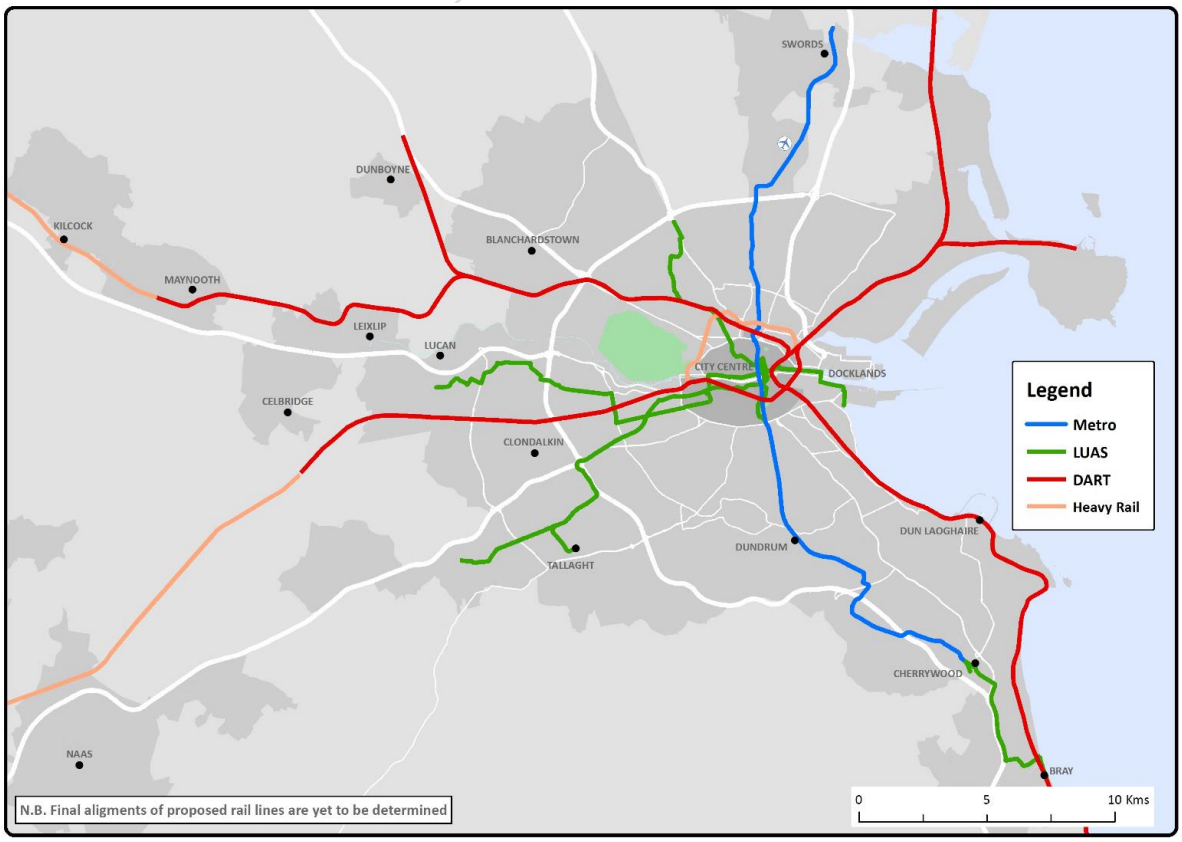


Figure 11 Prior GDA Transport Strategy 2016-2035 (Rail Network)

3.4.2 KPI Assessment

The Prior Strategy Network is the reference case against which further improvements to the level of public transport service are tested against through the iterative process in Phase 1. The results presented in this section therefore provide a baseline or starting point from which to consider further network adjustments.

Mode Shares

Average mode share for trips originating within the M50 were obtained for the AM peak period for the Prior Strategy as shown below in Figure 12. This is used as a reference case for comparison for later iterations in Phase 1 of the Strategy Development Process.

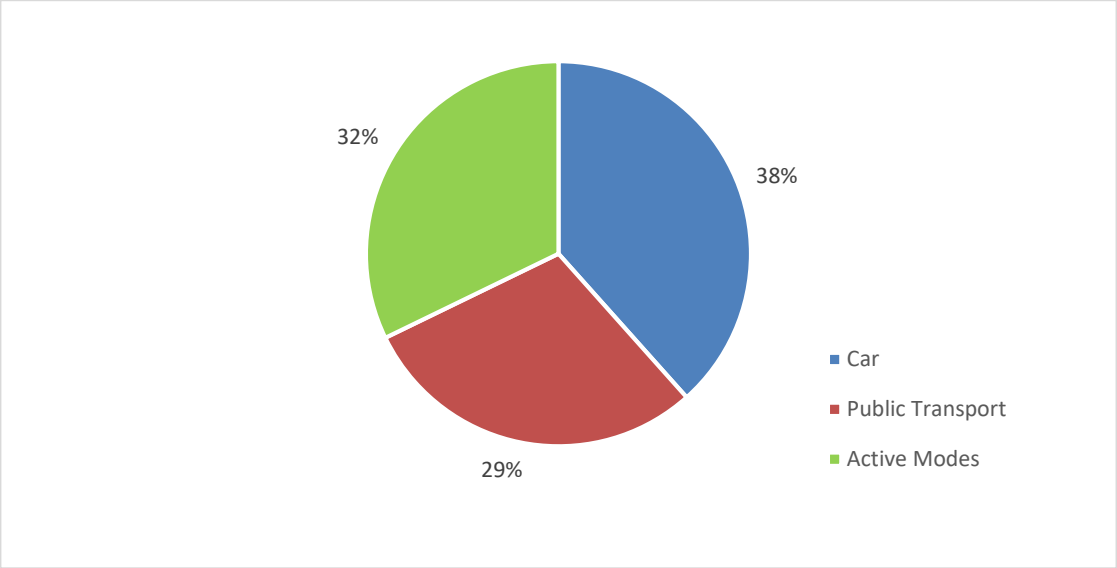


Figure 12 Mode Shares – Phase 1 Iteration 1

Settlement to Settlement Journey Times Review

Table 3-3 details the settlement to settlement journey time comparison for the 2036 Transport Strategy for the GDA Network during the AM peak hour. It can be seen that the average car journey time, at 33 minutes, is 10 minutes faster than the average public transport journey time, at 43 minutes. The matrix of settlement to settlement journey time comparisons indicates that in broad terms car journey times are faster than public transport journey times for the majority of settlement to settlement journeys.

Table 3-2 Settlement to Settlement Journey time comparison between Car and Public Transport (Run AAA)

PT Vs. Road	Cabra	Clontarf	Darndale	Drimnagh	Finglas_DCC	Kimmage_DCC	Marino	North Docks	North East Quad	North West Quad	Raheny	Rathgar_DCC	Red Cow_DCC	South Docks	South East Quad	South West Quad	UCD_DCC	Airport - Dub	Balbriggan
Cabra	-	24%	46%	30%	133%	34%	-2%	13%	-2%	8%	15%	1%	42%	-17%	-21%	-4%	-25%	2%	93%
Clontarf	23%	-	90%	-14%	51%	-17%	20%	17%	-2%	14%	207%	-28%	8%	-18%	-29%	-22%	-25%	58%	94%
Darndale	59%	52%	-	25%	94%	20%	-15%	-6%	-16%	8%	149%	0%	58%	-6%	-22%	-11%	0%	108%	181%
Drimnagh	46%	-10%	34%	-	49%	218%	-1%	12%	13%	28%	-3%	85%	139%	24%	21%	41%	23%	27%	73%
Finglas_DCC	152%	70%	107%	40%	-	24%	48%	51%	12%	18%	71%	2%	70%	-5%	-10%	20%	-14%	56%	174%
Kimmage_DCC	41%	-5%	24%	128%	30%	-	5%	12%	13%	30%	-9%	135%	42%	34%	5%	9%	26%	6%	63%
Marino	88%	75%	72%	6%	111%	9%	-	46%	45%	73%	70%	12%	-1%	0%	-6%	13%	-24%	43%	118%
North Docks	85%	141%	106%	20%	115%	19%	272%	-	122%	133%	80%	16%	13%	35%	23%	29%	35%	51%	202%
North East Quad	53%	47%	38%	30%	58%	23%	85%	165%	-	171%	39%	2%	37%	12%	10%	55%	-13%	-6%	78%
North West Quad	143%	56%	35%	32%	75%	52%	27%	54%	33%	-	32%	17%	28%	16%	4%	26%	-5%	-8%	80%
Raheny	6%	112%	106%	-23%	41%	-23%	-17%	-16%	-26%	-11%	-	-34%	18%	-27%	-40%	-34%	-34%	56%	54%
Rathgar_DCC	18%	6%	23%	76%	12%	183%	11%	39%	-1%	20%	2%	-	28%	60%	5%	1%	33%	-20%	48%
Red Cow_DCC	35%	n/a	111%	82%	41%	14%	-14%	-12%	-12%	19%	7%	0%	-	-24%	-30%	1%	-19%	26%	143%
South Docks	13%	45%	57%	14%	23%	50%	51%	66%	6%	26%	26%	75%	5%	-	51%	11%	42%	24%	126%
South East Quad	36%	32%	36%	32%	38%	40%	41%	155%	66%	64%	17%	37%	25%	187%	-	65%	3%	-5%	70%
South West Quad	58%	-8%	6%	86%	40%	84%	12%	12%	33%	59%	-11%	53%	92%	27%	34%	-	6%	-6%	47%
UCD_DCC	10%	33%	32%	35%	14%	88%	29%	85%	13%	18%	16%	118%	3%	111%	11%	11%	-	20%	102%
Airport - Dub	20%	56%	100%	26%	26%	7%	22%	47%	-16%	-14%	77%	-25%	79%	-1%	-24%	-17%	-9%	-	99%
Balbriggan	80%	61%	118%	56%	113%	42%	66%	46%	31%	42%	55%	29%	80%	22%	12%	22%	30%	66%	-

PT mode faster than car
PT journey less than 50% longer than car
PT journey 50% to 100% longer than car
PT journey 100% to 200% longer than car
PT journey more than 200% longer than car

Average JT by car = 33 mins (+10min from 2016)
Average JT by PT = 43 mins (-6 min from 2016)
% diff = 30% (in favour of Car)

Public Transport Corridor Demand Review

Figure 13 illustrates the public transport demand associated with the Prior Strategy Network. High demand is shown along the heavy rail lines and the light rail lines, with line flow exceeding 7,000 passengers per hour per direction (pphpd). The BusConnects network shows line flows of more than 1,000pphpd on all corridors, with the following BusConnects corridors showing a demand of more than 3,000pphpd:

- Malahide Road;
- Navan Road;
- Rathmines; and
- N11.

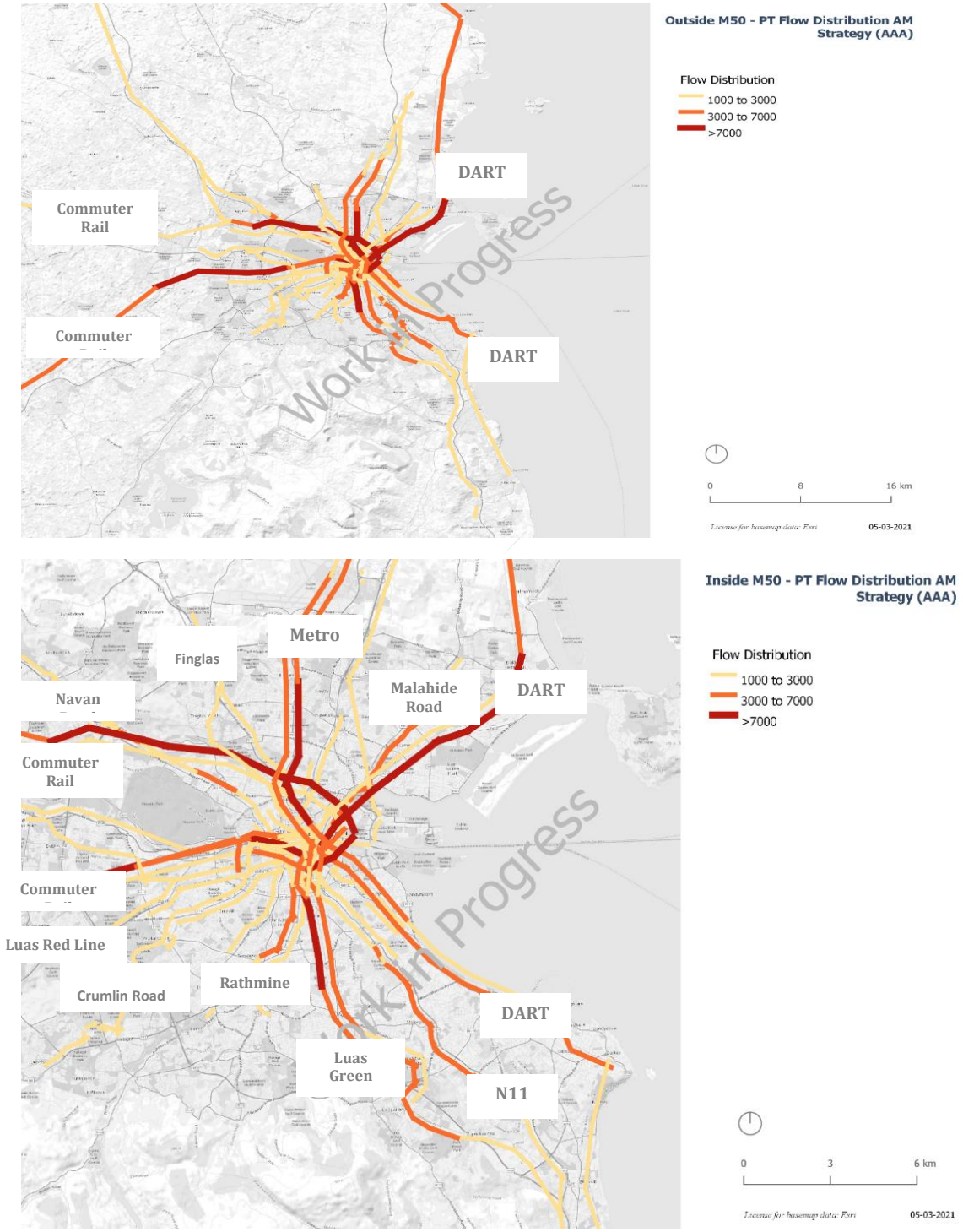


Figure 13 GDA Transport Strategy 2016-2035 Network (Run AAA)

3.4.3 Strategic Outcomes – First Iteration

Using the set of KPIs outlined above the key outcomes with respect to the performance of the GDA Strategy 2016-2035 Network are as follows:

- High demand along heavy and light rail lines (>7,000 pphpd);
- BusConnects network has high demand (>1,000 pphpd) on all corridors;
- Sections of some BusConnects corridors exceed the 3,000 pphpd threshold on Malahide Road, Stillorgan Road, Rathmines and Navan Road; and
- Overall, radial demand is well served by the GDA Strategy, but there is little in the way of orbitally services for demand which may exist there.

According to the modelling, network functions well albeit with some services reaching capacity in the peak hours, and potential demand for better orbital integration within the city. Therefore, in line with the purpose of Phase 1, the next iterations test increased levels of capacity across the network (both radially and orbitally), in order to test the limits of the potential for public transport demand along the relevant corridors.

3.5 Phase 1 Second Iteration (Idealised Network)

3.5.1 Scenario Creation

The scenario created for this iteration assumes the attributes on the public transport network shown in Table 3-3. These inputs emulate the maximum potential level of public transport service that could be achieved within the GDA. The network developed with these attributes is called the Idealised (public transport) Network.

Table 3-3 Idealised Public Transport Network Assumptions

Scenario:	Idealised Public Transport
Run ID:	AAE
Year	2042
Road network	BCID all CBCs
PT network - Urban Bus	BusConnects network
PT network - Other Bus	2019 Bus network
PT network - Luas	Extension to Finglas Extension to Bray Extension to Lucan
PT network - Metro	Metrolink Estuary-Charlemont
PT network - Rail	DART Underground
PT network - Capacity	Unlimited
PT network - Frequency	1min all PT routes
PT network - Bus speed	Min 20kph
PT network - Fares	Integrated fare system
PT network - Transfer pen.	5min all transfers

The Idealised Network considers the Prior Strategy public transport network but assumes capacity and frequencies are effectively unconstrained and that public transport can travel at a minimum speed of 20kph (where it is effectively protected from congestion). This approach provides

information on the additional public transport utilisation (demand) beyond what the 2036 Transport Strategy network provides if an extremely quick and efficient network (i.e., metro level capacity and frequencies as standard) could be provided across the GDA.

In summary, the following assumptions have been applied to the public transport services underpinning the Idealised Network:

- All of the elements listed above for the Prior Strategy network are included;
- Unlimited capacity on all public transport services;
- 1 minute frequency on all public transport routes; and
- A minimum service speed of 20kph.

The Idealised Network scenario facilitates an analysis of potential (unconstrained) public transport demand on key corridors in the GDA. In modelling the idealised network, it has been assumed that each corridor on the network will operate at maximum levels of frequency, capacity, coverage, interchange opportunity, directness and speed. This approach attempts to provide insight into what the upper limit of mode share for public transport might be along a given the corridor.

3.5.2 KPI Assessment

Mode Shares

Average mode share for trips originating within the M50 were obtained for the AM peak period. Figure 14 compares the 2036 GDA Strategy with the Idealised Network for mode share for active modes, public transport and private car. It can be seen that the Idealised Network significantly increases the public transport mode share from 29% to 40%, reduces the car mode share from 38% to 35% and also reduces the active mode share from 32% to 25%.

The reduction in active mode share is to be expected as the attractiveness of public transport outperforms active modes in the overlapping area of the competing trip length distributions. This is an important consideration for the Strategy Development Process in determining the right balance of public transport levels of service and supply requirements versus those of active modes and particularly that of cycling.

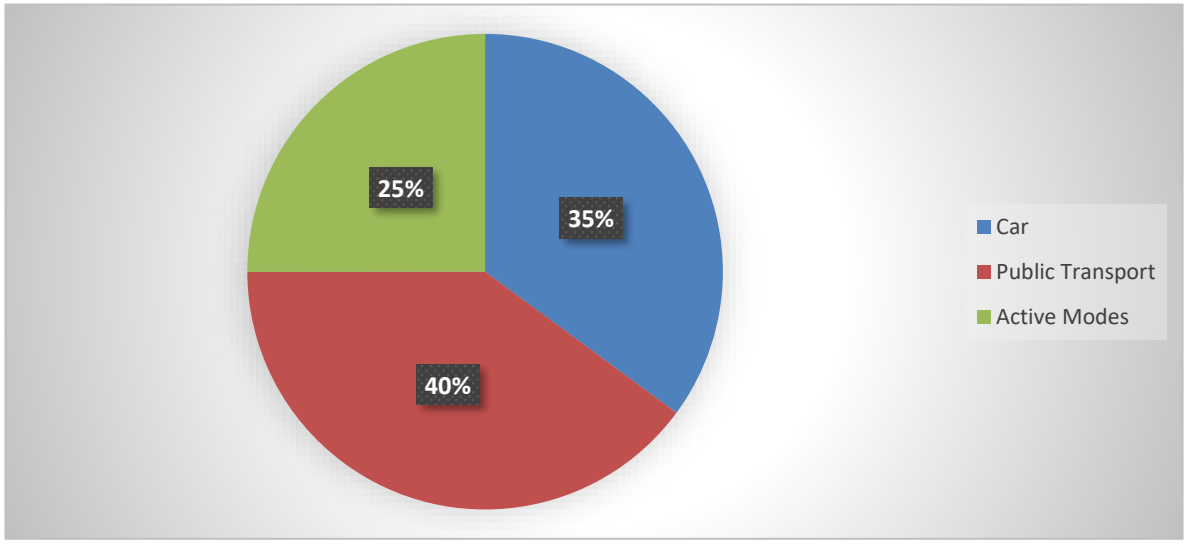


Figure 14 Mode Share within M50 for Run AAE (AM Peak)

Settlement to Settlement Journey Time Analysis

Table 3-4 details the settlement to settlement journey time comparison for the Idealised Network. It can be seen that the average public transport journey time, at 31 minutes, is 1 minute faster than the average car journey time, at 32 minutes. This represents a significant average public transport journey time improvement of 12 minutes when compared with the average public transport journey time in the 2036 Transport Strategy for the GDA Network run. The matrix of settlement to settlement journey time comparisons indicates that in broad terms public transport journey times are faster than car journey times for the majority of settlement to settlement journeys.

Table 3-4 Settlement to Settlement Journey time comparison between Car and Public Transport (Run AAE)

PT Vs. Road	Cabra	Clontarf	Darndale	Drimnagh	Finglas_DCC	Kimmage_DCC	Marino	North Docks	North East Quad	North West Quad	Raheny	Rathgar_DCC	Red Cow_DCC	South Docks	South East Quad	South West Quad	UCD_DCC	Airport - Dub	Balbriggan
Cabra	-	7%	16%	-2%	83%	-5%	8%	-6%	-11%	6%	1%	-22%	-3%	-35%	-34%	-21%	-42%	-5%	35%
Clontarf	6%	-	54%	-27%	13%	-28%	40%	13%	-9%	7%	134%	-36%	-10%	-26%	-30%	-25%	-39%	5%	71%
Darndale	24%	34%	-	1%	47%	-2%	-5%	-11%	-26%	-8%	91%	-27%	36%	-26%	-34%	-29%	-28%	44%	101%
Drimnagh	7%	-25%	1%	-	3%	130%	-21%	-14%	-17%	3%	-19%	32%	76%	-16%	-18%	18%	-18%	0%	15%
Finglas_DCC	100%	22%	46%	-5%	-	-11%	28%	24%	-5%	5%	18%	-18%	-1%	-23%	-28%	-16%	-32%	21%	90%
Kimmage_DCC	2%	-19%	-7%	72%	-6%	-	-20%	-17%	-19%	-1%	-29%	71%	10%	-4%	-14%	-3%	-18%	-6%	10%
Marino	43%	59%	46%	-17%	51%	-17%	-	59%	21%	39%	45%	-17%	-15%	-22%	-23%	-12%	-42%	4%	73%
North Docks	27%	76%	45%	-17%	46%	-19%	179%	-	58%	62%	44%	-23%	-13%	-12%	-14%	-12%	-26%	13%	78%
North East Quad	17%	24%	9%	-4%	20%	-10%	57%	91%	-	136%	16%	-23%	10%	-24%	-20%	11%	-44%	-16%	9%
North West Quad	93%	31%	2%	3%	37%	5%	11%	20%	17%	-	14%	-13%	-1%	-24%	-22%	0%	-39%	-17%	17%
Raheny	-5%	96%	61%	-31%	7%	-33%	-3%	-9%	-25%	-13%	-	-41%	-6%	-29%	-39%	-34%	-46%	16%	43%
Rathgar_DCC	-12%	-10%	-2%	34%	-13%	104%	-15%	7%	-22%	-7%	-16%	-	0%	14%	-12%	-14%	-17%	-21%	5%
Red Cow_DCC	-13%	n/a	-19%	71%	-16%	-10%	-30%	-16%	-23%	-11%	-31%	-17%	-	-31%	-38%	-14%	-30%	-8%	41%
South Docks	-18%	6%	16%	-19%	-8%	2%	9%	27%	-23%	-7%	-2%	10%	-22%	-	10%	-22%	-14%	-2%	33%
South East Quad	6%	20%	6%	-10%	7%	2%	18%	84%	33%	30%	4%	5%	-2%	115%	-	22%	-31%	-8%	12%
South West Quad	21%	-18%	-21%	39%	-1%	35%	-14%	-15%	-3%	26%	-21%	22%	53%	-14%	0%	-	-30%	-21%	-2%
UCD_DCC	-17%	0%	0%	-9%	-10%	21%	-4%	23%	-21%	-14%	-10%	37%	-9%	38%	-21%	-23%	-	-5%	36%
Airport - Dub	13%	15%	54%	10%	13%	-4%	10%	25%	-26%	-18%	33%	-27%	40%	-22%	-31%	-27%	-34%	-	77%
Balbriggan	46%	55%	81%	26%	77%	11%	47%	17%	-3%	16%	41%	-5%	87%	-9%	-15%	-7%	-17%	51%	-

PT mode faster than car
PT journey less than 50% longer than car
PT journey 50% to 100% longer than car
PT journey 100% to 200% longer than car
PT journey more than 200% longer than car

Average JT by car = 32 mins
Average JT by PT = 31 mins (-3min from 2016)
% diff = 3% (in favour of PT)

Public Transport Corridor Demand Analysis

Figure 15 illustrates the public transport demand associated with the Idealised Network. It shows increases in demand on most of the corridors. Again, there is high demand along the heavy rail lines and the light rail lines, with demand of over 7,000pphpd. The BusConnects network shows a high demand with the following corridors showing a demand of more than 3,000pphpd:

- Malahide Road > 3,000pphpd;
- Dublin Port Tunnel >7,000pphpd;
- Finglas Road >3,000pphpd;
- Navan Road >7,000pphpd;
- Crumlin Road >3,000pphpd;
- Rathmines > 3,000pphpd; and
- N11 >7,000pphpd.

The south east quadrant shows four corridors with demand exceeding 3,000pphpd. Orbital demand for public transport increased, with orbital demand on the M50 between 1,000 and 3,000 pphpd. There is an apparent drop in demand on the MetroLink, which appears to transfer to the Dublin Port Tunnel. This has been identified as an issue with this specific model run, as the unlimited bus capacity and lack of congestion on the road network makes using the bus through the Dublin Port Tunnel appear more attractive than MetroLink. This issue was resolved in the subsequent model runs.

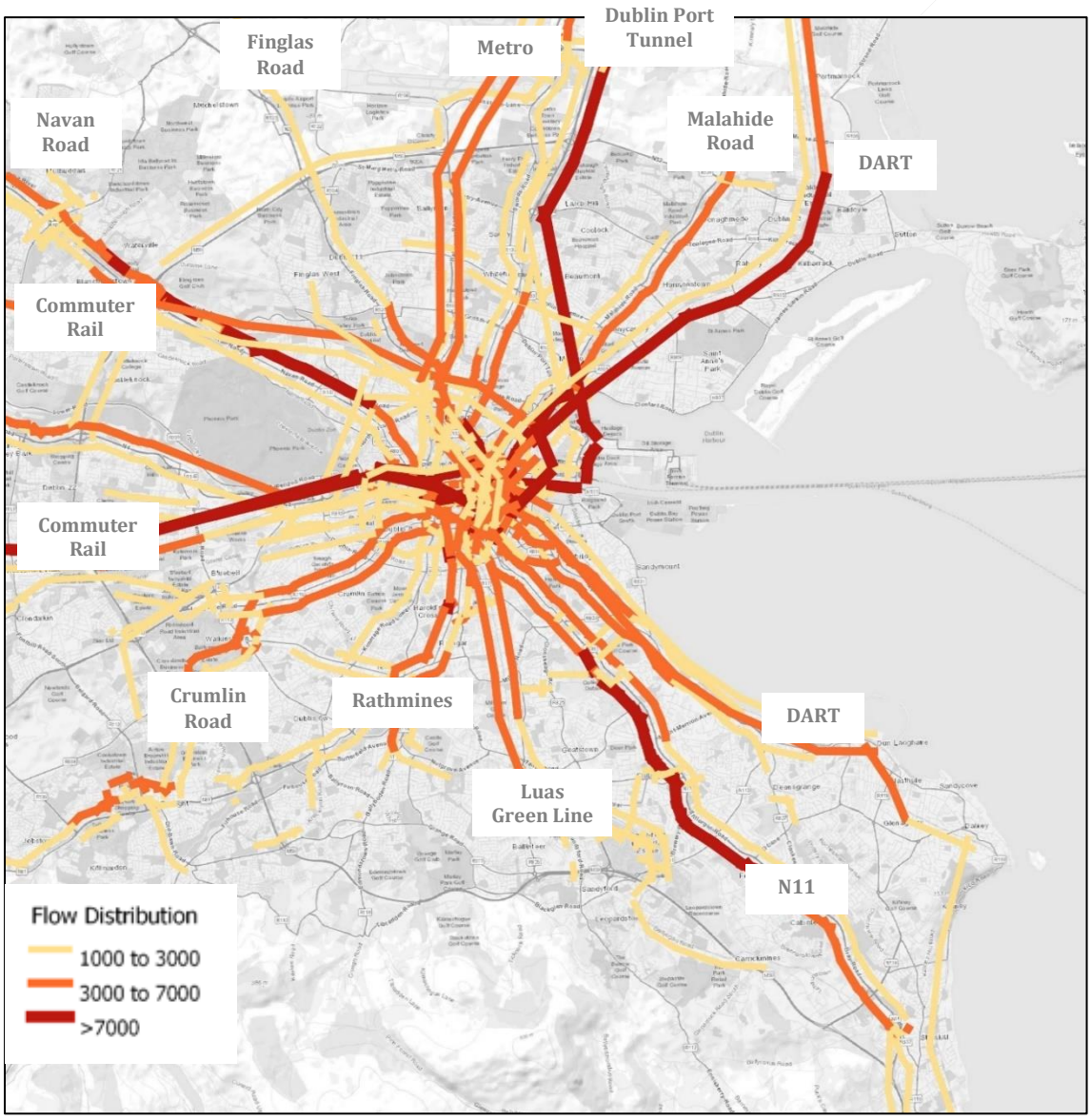


Figure 15 Public Transport Line Flows from Idealised Network (Run AAE)

3.5.3 Hinterland Public Transport Demand Analysis

Analysis of the hinterland public transport network has also been undertaken as part of this phase (i.e. in the GDA but outside the Metropolitan area).

The following process was undertaken to identify additional potential public transport demand:

- Step 1: Calculate actual and desired journey times by Public Transport between settlements
- Step 2: Include orbital bus routes from the "Bus Network Strategy Appraisal Report" (Scott Wilson – 2000);
- Step 3: Code bus routes to connect areas with poor public transport access; and
- Step 4: Complete the network with missing links and using car mode share indicator (ERM run with/without car demand management).

For Step 2, Figure 16 below shows areas (zones in darker colours) to which greater connectivity is required for public transport connecting main towns such as, for example Dundalk, Virginia, Tullamore and Portlaoise), based on the journey time analysis from Step 1.

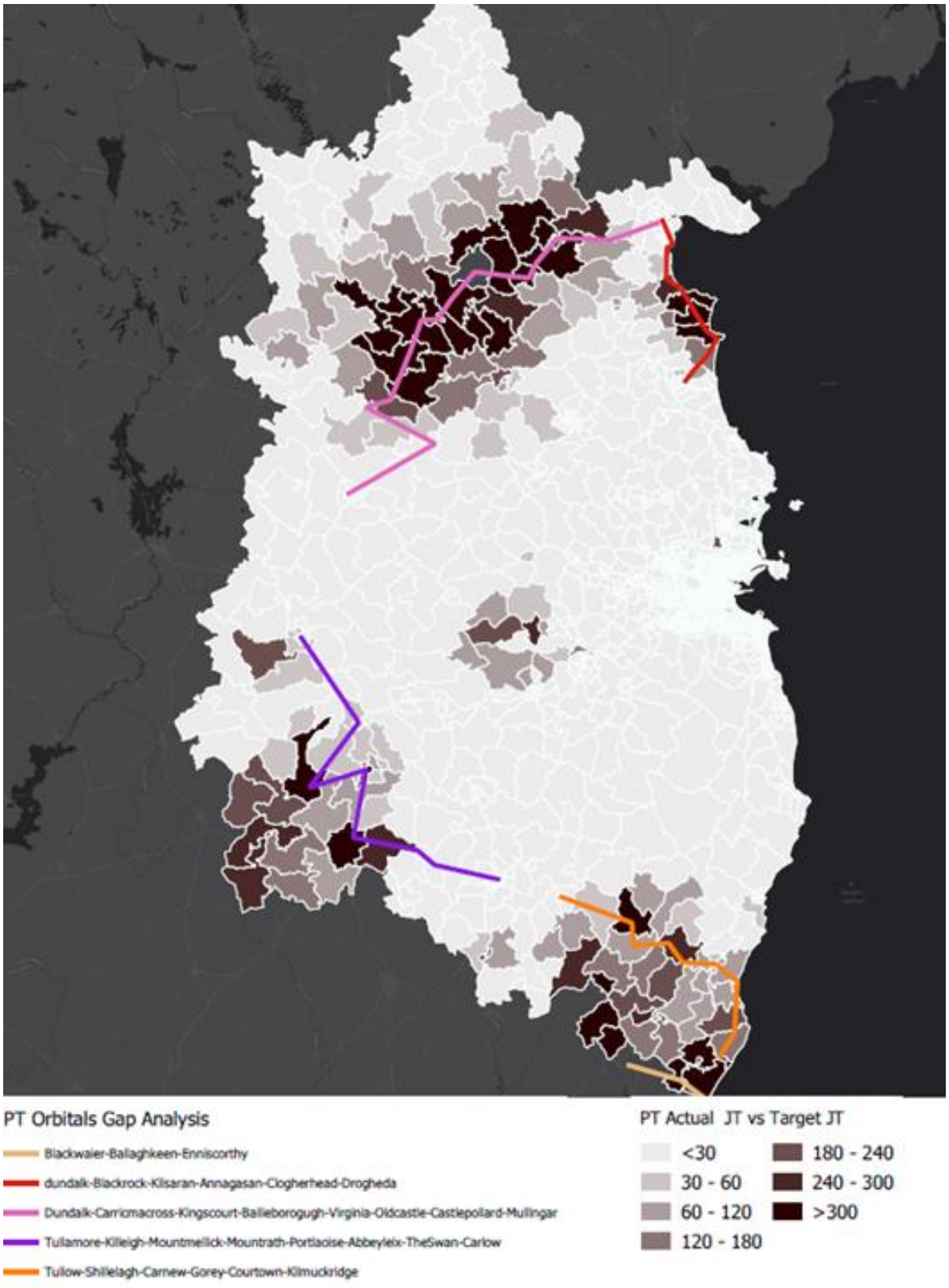


Figure 16 Hinterland Gap Analysis

For Steps 3 and 4 additional bus routes were coded and tested using the mode share indicator. Figure 17 shows the bus routes/corridors where the results indicate that public transport connectivity could be improved. These routes have been taken forward in the Strategy development process.

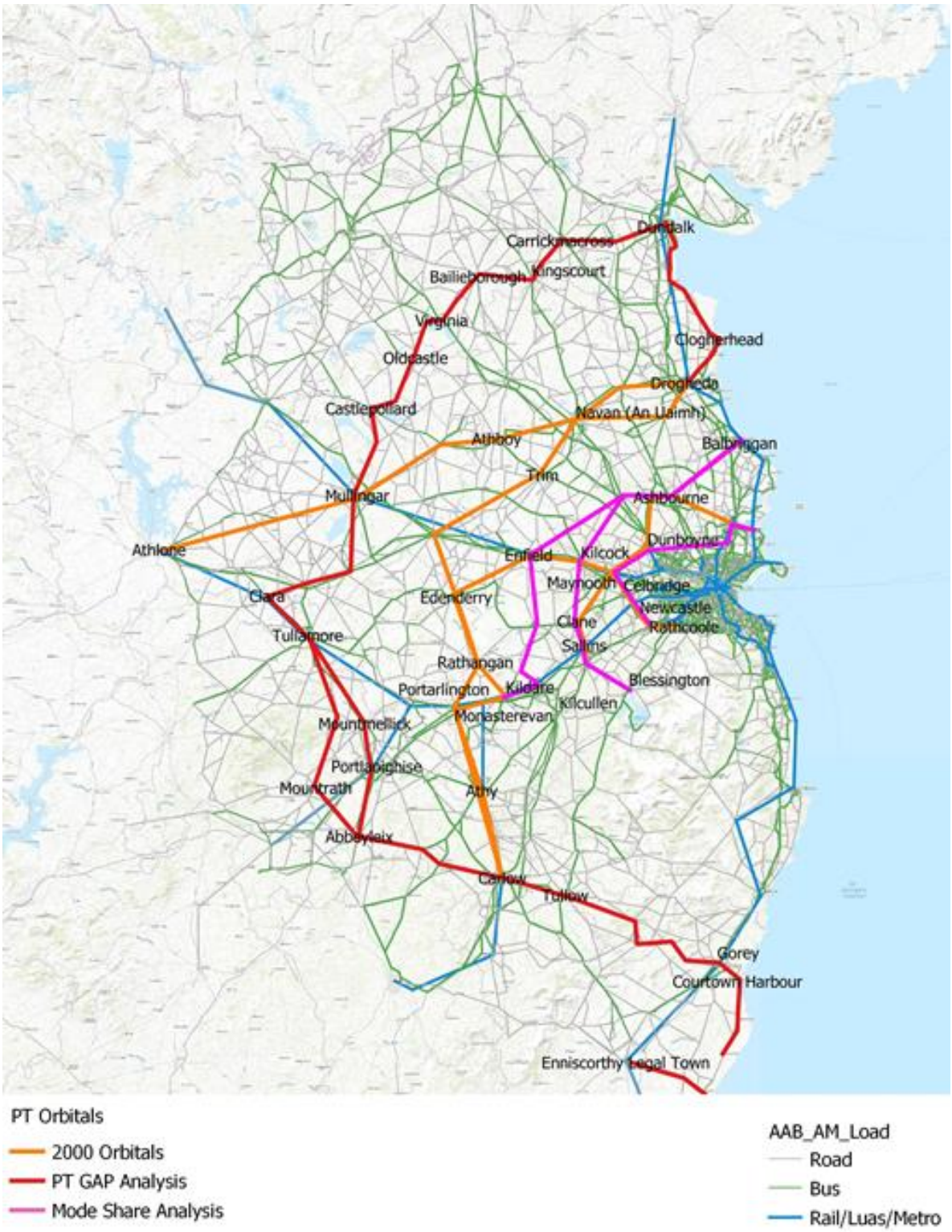


Figure 17 Additional Potential Hinterland PT Service Demand

3.5.4 Outcomes – Phase 1, Second Iteration

Considering the full range of KPIs presented in this section, the effect of running a 'ideal' levels of public transport levels of service throughout the GDA Network can be summarised as follows:

- Overall mode share for public transport increases from 29% to 40%, compared to the initial GDA Strategy network presented in Iteration 1, with additional potential demand demonstrated on most corridors;
- Some corridors have a public transport demand potential of 3,000-7,000 pphpd, i.e. Swords Road, Greenhills, Malahide Road, Navan Road;
- High public transport demand potential on other corridors such as Stillorgan road, Malahide Road, Rathmines;
- South east quadrant of the city is showing 4 corridors with potential public transport demand exceeding 3,000ppdph;
- Walking and cycling mode shares would reduce if serving this demand was achieved by public transport; and
- There is significant potential orbital public transport demand (e.g. on M50), with levels in the 1,000-3,000pphpd range.

These outcomes inform the potential network to be taken forward into subsequent phases and iterations of the strategy development process. For example, a potential line flow of in excess of 3,000pphpd seen in the modelling indicates a Light Rail type system may be the most efficient and effective sustainable transport mode and should be considered in more detail in the Strategy development process.

3.6 Phase 1 Third Iteration (Traffic Management)

3.6.1 Scenario Creation

This scenario tests the effect of significant car demand management on the overall network performance in terms of mode shares and settlement to settlement journey times. To represent a highly car demand managed network the frequency of buses in the model can be used to constrain capacity for car. The high frequency bus services tested in the Idealised Network in Iteration 2 have the effect of reducing capacity for cars on the road network and thereby imposing additional costs on car users in the model. The Idealised Network includes frequencies of 1 bus per minute on all routes with full priority through bus lanes and junctions. Given that buses are prioritised through the network, the available capacity for private car reduces when the additional buses are converted into traffic flows by the model.

For this scenario, this feature of the modelling is used to represent a car demand management mechanism. This is also termed 'flooding' the network with bus vehicles to simulate a constraint, but this only intended to represent what could be achieved in the real world by road pricing or car demand management measures.

This is considered a useful early stage method for testing demand management on car. However, it should be noted that mechanisms to demand manage car are assessed in more detail later in Phases 2 and 3 of the Transport Strategy development process. The relevant network assumptions are shown below in Table 3-5.

Table 3-5 Idealised Network with Traffic Management Assumptions

Scenario:	Idealised Transport Network with Traffic Management
Run ID:	AAB
Year	2042
Road network	BCID all CBCs With idealised bus services "flooding" the network
PT network - Urban Bus	BusConnects network
PT network - Other Bus	2019 Bus network
PT network - Luas	Extension to Finglas Extension to Bray Extension to Lucan
PT network - Metro	Metrolink Estuary-Charlemont
PT network - Rail	DART Underground
PT network - Capacity	Unlimited
PT network - Frequency	1min all PT routes
PT network - Bus speed	Min 20kph
PT network - Fares	Integrated fare system
PT network - Transfer pen.	5min all transfers

3.6.2 KPI Assessment

Mode Share Comparison

The Idealised Network with Traffic Management, shown in Figure 18, shows a further increase in public transport mode share to 46%, while significantly reducing the car mode share to 26%. The introduction of the proxy for demand management also shows an increase in active modes from 25% in "Idealised" scenario to 28%, most likely associated with the transfer from car usage to active travel in the overlapping area of the competing trip length distributions.

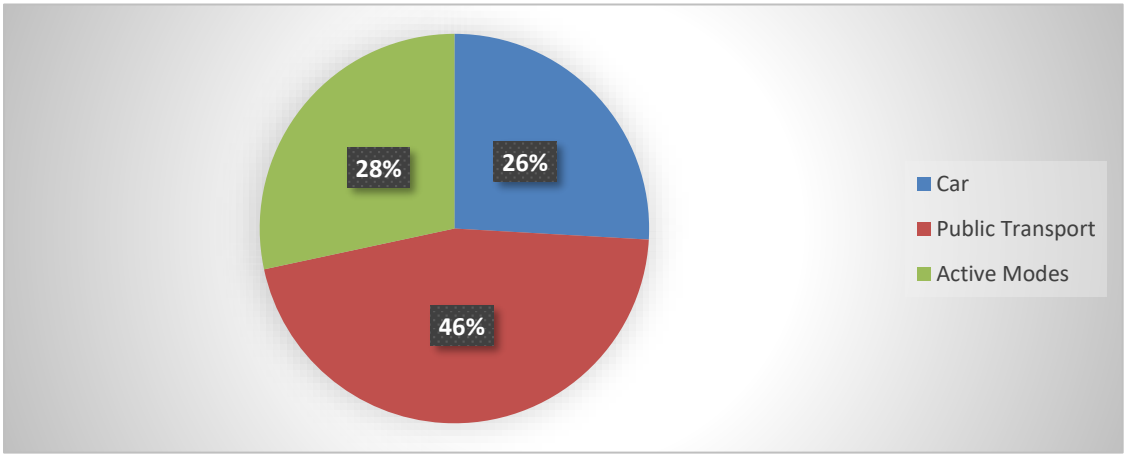


Figure 18 Mode Share Comparison, Phase 1 Third Iteration

It can be seen that with Traffic Management the highest achievable mode share whilst holding all other assumptions constant would be 46% on public transport.

Settlement to Settlement Journey Time Comparison

Table 3-6 details the settlement to settlement journey time comparison for the Idealised Network with car demand management to restrict car movement. It can be seen that the average public transport journey time, at 33 minutes, is 27 minute faster than the average car journey time, at 60 minutes. The "flooding" of the road and street network is reflected in the significant increase in average car journey times of 28 minutes compared to the Idealised Network run. This is essentially restricting private car usage through congestion, as a proxy for demand management measures that will be developed and refined at a later stage in the Transport Strategy development process. The public transport journey times remain broadly consistent with the previous Idealised Network run. The matrix of settlement to settlement journey time comparisons indicates that in broad terms public transport journey times are faster than car journey times for the nearly all of settlement to settlement journeys.

Table 3-6 Idealised Network with Traffic Management (model Run AAB)

PT Vs. Road	Cabra	Clontarf	Darndale	Drimnagh	Finglas_DCC	Kimmage_DCC	Marino	North Docks	North East Quad	North West Quad	Raheny	Rathgar_DCC	Red Cow_DCC	South Docks	South East Quad	South West Quad	UCD_DCC	Airport - Dub	Balbriggan
Cabra	-	-39%	-31%	-54%	35%	-53%	-51%	-50%	-66%	-33%	-40%	-65%	-45%	-82%	-85%	-62%	-76%	-52%	5%
Clontarf	4%	-	29%	-31%	7%	-33%	20%	-23%	-57%	-41%	119%	-52%	0%	-75%	-84%	-49%	-72%	-13%	25%
Darndale	0%	-1%	-	13%	31%	11%	-18%	-31%	-68%	-46%	28%	-39%	n/a	-73%	-84%	-47%	-46%	-4%	27%
Drimnagh	-24%	-48%	-18%	-	-33%	118%	-50%	-61%	-61%	-32%	-37%	-13%	126%	-65%	-84%	10%	-60%	-39%	19%
Finglas_DCC	112%	-8%	-2%	-39%	-	-38%	-8%	-5%	-78%	-46%	-19%	-52%	-24%	-74%	-80%	-50%	-66%	-10%	46%
Kimmage_DCC	-17%	-52%	-28%	85%	-36%	-	-50%	-62%	-58%	-40%	-35%	45%	19%	-61%	-65%	-9%	-58%	-36%	18%
Marino	26%	34%	15%	-48%	44%	-54%	-	43%	-70%	-42%	9%	-62%	-35%	-79%	-84%	-63%	-75%	-6%	18%
North Docks	-17%	25%	3%	-42%	30%	-40%	69%	-	-84%	-48%	-9%	-57%	4%	-78%	-82%	-67%	-73%	2%	46%
North East Quad	-65%	-61%	-42%	-58%	-56%	-68%	-53%	-52%	-	7%	-59%	-75%	-31%	-86%	-88%	-57%	-81%	-40%	-21%
North West Quad	57%	-17%	-34%	-63%	-23%	-72%	-39%	-32%	-1%	-	-26%	-56%	-43%	-80%	-79%	-63%	-74%	-42%	-10%
Raheny	-22%	81%	37%	-28%	-11%	-27%	-18%	-31%	-66%	-50%	-	-57%	-14%	-74%	-83%	-63%	-65%	-24%	-3%
Rathgar_DCC	-41%	-57%	-26%	25%	-48%	87%	-60%	-57%	-67%	-50%	-57%	-	-10%	-57%	-64%	-39%	-58%	-45%	7%
Red Cow_DCC	-38%	n/a	-11%	125%	-60%	-31%	-61%	n/a	-69%	-36%	-53%	-47%	-	-43%	-73%	-28%	#DIV/0!	-48%	22%
South Docks	-54%	-25%	-8%	-42%	-44%	-22%	-41%	-25%	-88%	-65%	-28%	-10%	-41%	-	-24%	-74%	-29%	-23%	18%
South East Quad	-59%	-51%	-50%	-50%	-50%	-54%	-59%	-66%	-82%	-59%	-49%	-56%	-42%	-1%	-	-61%	-60%	-67%	-32%
South West Quad	-12%	-73%	-51%	-10%	-46%	-24%	-64%	-74%	-52%	-28%	-61%	-47%	-18%	-77%	-60%	-	-72%	-50%	-21%
UCD_DCC	-33%	-19%	-10%	-9%	-24%	21%	-18%	-5%	-79%	-57%	-27%	38%	57%	8%	-77%	-56%	-	-29%	23%
Airport - Dub	-62%	-63%	-62%	-36%	-73%	-35%	-46%	-47%	-79%	-62%	-63%	-51%	-11%	-80%	-85%	-49%	-75%	-	-26%
Balbriggan	27%	7%	14%	36%	27%	27%	9%	-26%	-38%	-10%	8%	0%	133%	-47%	-73%	-19%	-18%	-14%	-

PT mode faster than car
PT journey less than 50% longer than car
PT journey 50% to 100% longer than car
PT journey 100% to 200% longer than car
PT journey more than 200% longer than car

Average JT by car = 60 mins
Average JT by PT = 33 mins
% diff = 45% (in favour of PT)

Public Transport Corridor Demand Analysis

Figure 19 illustrates the public transport demand associated with the Idealised Network with Traffic Management. It shows similar levels of demand across all corridors to the "Ideaslied" Public Transport network, with the main difference being the constraint applied to private car suage through the proxy demand management. Again, there is high demand along the heavy rail lines and the light rail lines, with demand of over 7,000pphpd. The BusConnects network shows a high demand with the following corridors showing a demand of more than 3,000pphpd:

- Malahide Road >7,000pphpd;
- Finglas Road >3,000pphpd;
- Navan Road >7,000pphpd;
- Crumlin Road >3,000pphpd;
- Rathmines / Terenure > 7,000pphpd; and
- N11 >7,000pphpd.

Again, the south east quadrant shows four corridors with demand exceeding 3,000pphpd. Orbital demand for public transport increased, with orbital demand on the M50 between 1,000 and 3,000 pphpd.

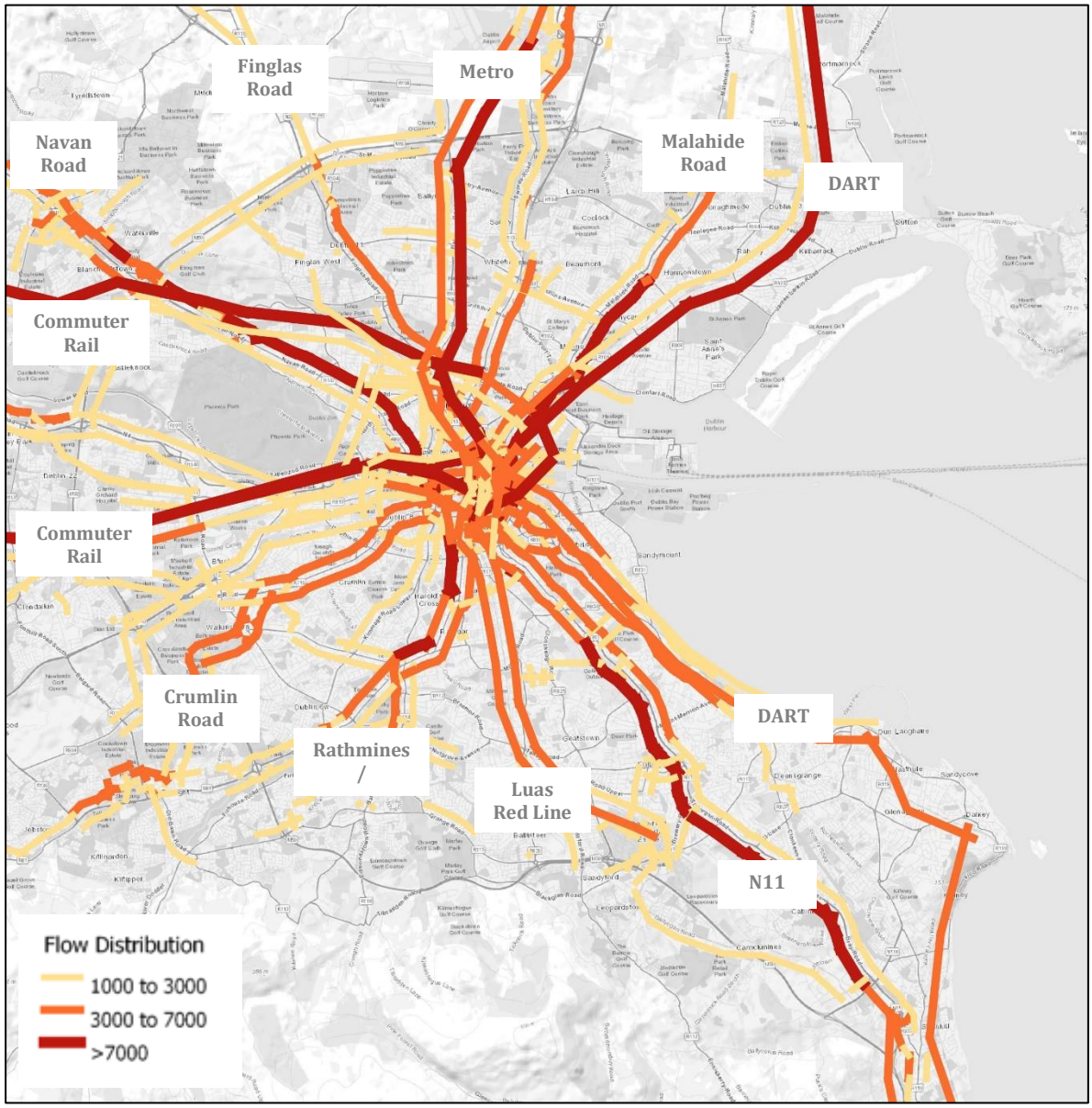


Figure 19 Idealised Network with Traffic Management (model Run AAB)

3.6.3 Hinterland Public Transport Demand Analysis

This test is similar to the hinterland analysis presented in Section 3.5.3. For this test the analysis investigates car mode share difference between a run with and without Traffic Management measures. Resulting differences are shown below in Figure 20.

- Areas in blue-green see a large reduction in car mode shares (mostly within M50); and
- Areas in orange see a small reduction in car mode share (<1%) suggesting a lack of alternative to car.

Only two additional bus routes have been identified in this step, taking into the account the potential for car demand management measures to cause a further increase to public transport. These are

- Carlow – Tullow; and
- Tullamore – Clara – Kilbergan – Tyrellspass –Mullingar.

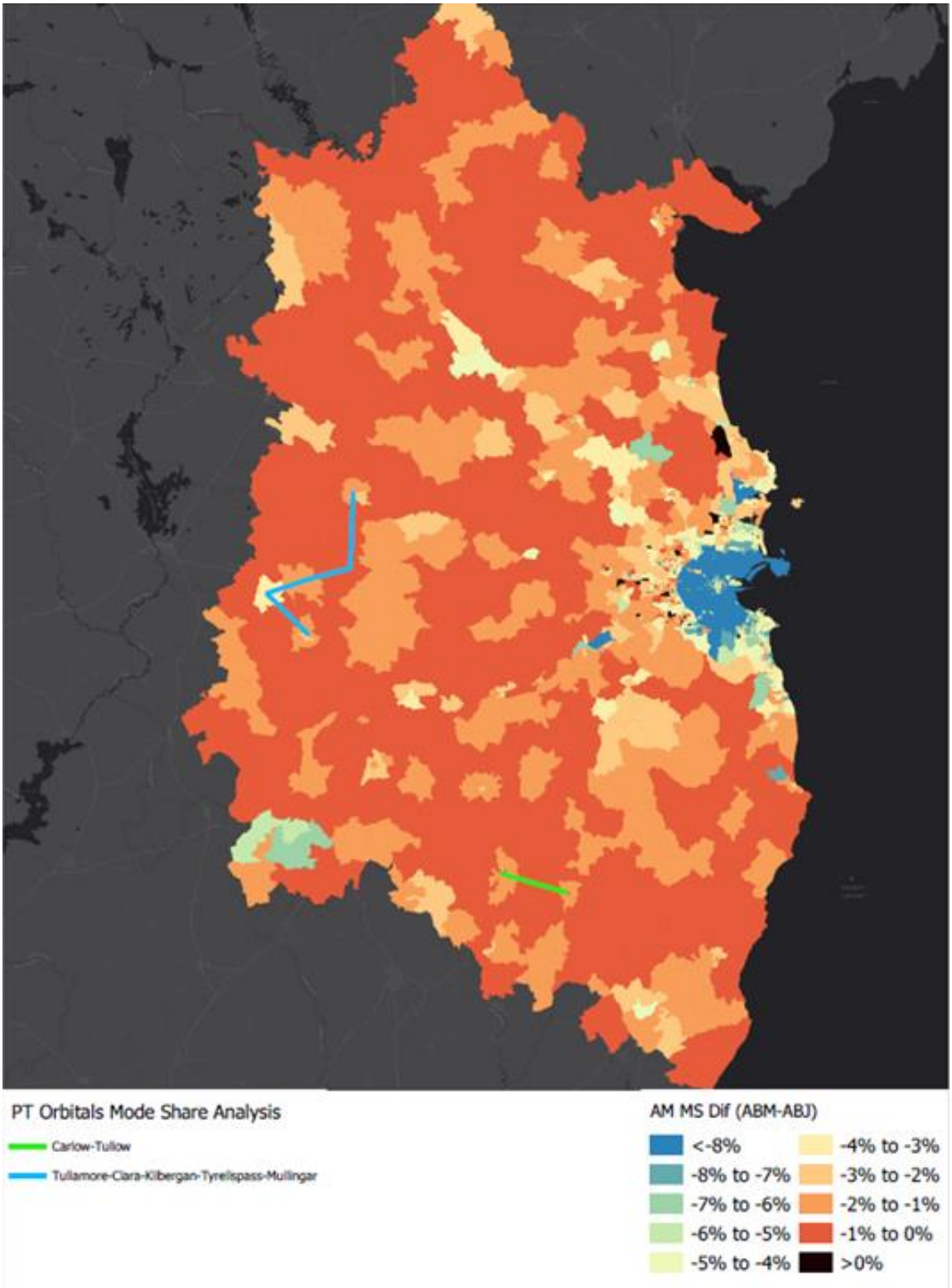


Figure 20 Hinterland Gap Analysis,

3.6.4 Outcomes – Phase 1, Second Third Iteration

The effect of running a higher public transport level of service on the GDA Network with accompanying bus fleet operating on the network is:

- AM Mode share for public transport increases from 29% to 46% with increases in demand on most corridors;
- Numerous bus corridors move into 3,000-7,000 pphpd threshold – Swords Road, Greenhills;
- High demand on other corridors such as Stillorgan road, Malahide Road, Rathmines;
- South east quadrant showing 4 corridors with demand exceeding 3,000 pphpd;
- Demand along the Navan Road corridor of between 3,000-7,000 pphpd threshold, longer distance public transport demand increases;
- Active mode share not significantly affected; and
- Orbital demand for public transport increased (e.g. on M50), levels enter 1,000-3,000 pphpd threshold.

3.7 Phase 1 Outcome

Phase 1 has tested the Prior Strategy with a higher demand to 2042 and identified potential demand for additional public transport connectivity within the GDA. This was established by testing Prior Strategy public transport network with higher levels of service (called Idealised network), and then higher levels of car demand management measures, to understand the upper end of public transport demand and mode share that could be achieved.

The network at the 'maximum achievable' line flow (and mode share) is shown in Figure 21. This provides an insight into the kinds of modes that would be needed to achieve that outcome, in combination with car demand management measures. In the figure the colours are graded according to the type of mode, from bus with high priority through to on-street light rail to heavy rail/metro.

The relevant flows in Figure 21 these generally fall into the following bands:

- <1,000 pphpd (not shown for clarity of mapping);
- 1,000 – 3,000 pphpd;
- 3,000 – 7,000 pphpd; and
- >7,000 pphpd.

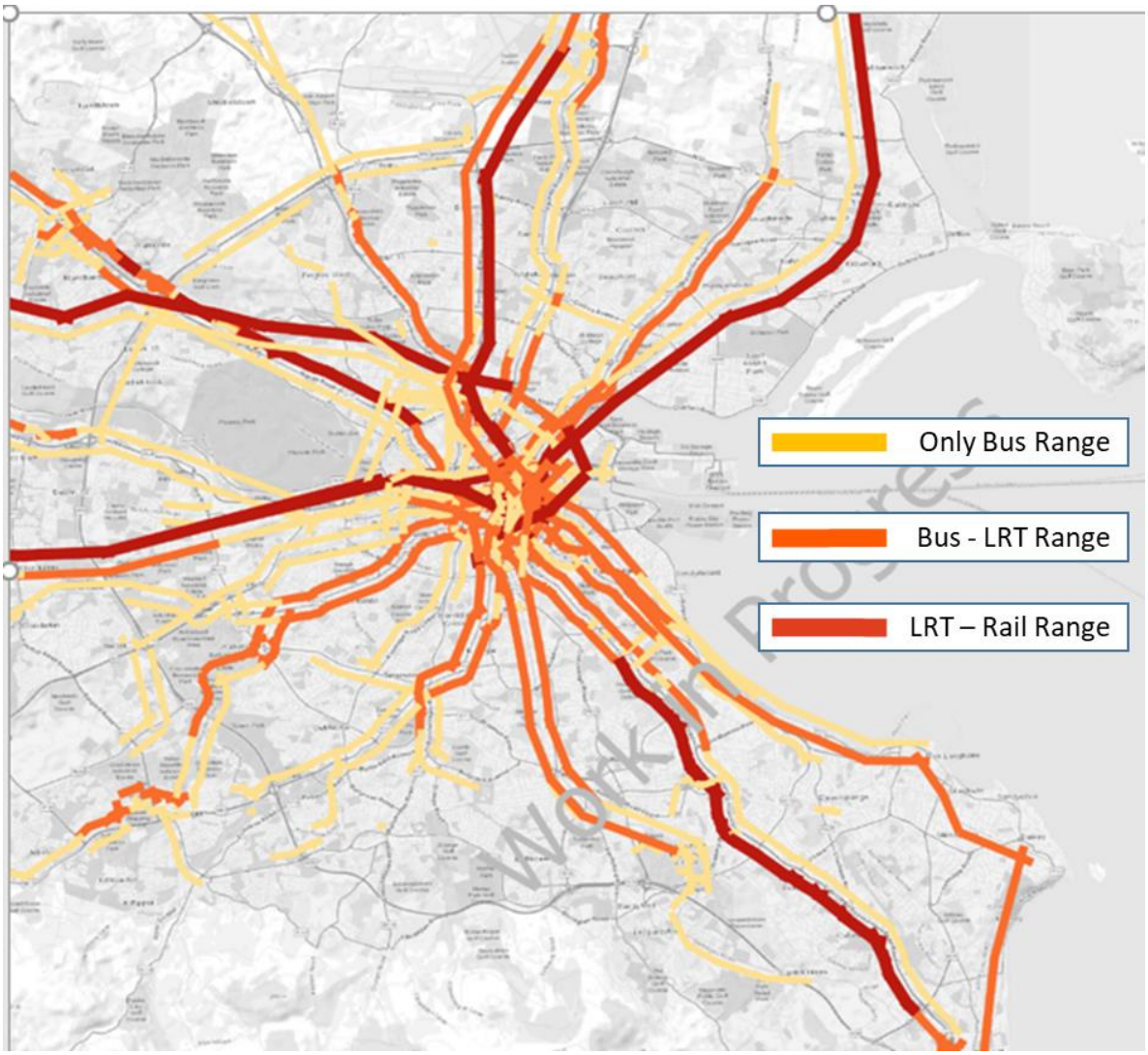


Figure 21 Overview of Phase 1 Line Flow Results

Figure 22 illustrates the type of public transport mode needed at different levels of demand, passengers per hour per direction. Bus-only based public transport can cater for capacities of up to 3,600 pphpd, LRT can cater for capacities between 3,000 and 7,000pphpd, with Metro or Heavy Rail catering for capacities above 5,000pphpd. While the values outlined below are not absolute they do provide a good indication as to the likely public transport requirements for the corridors being reviewed.

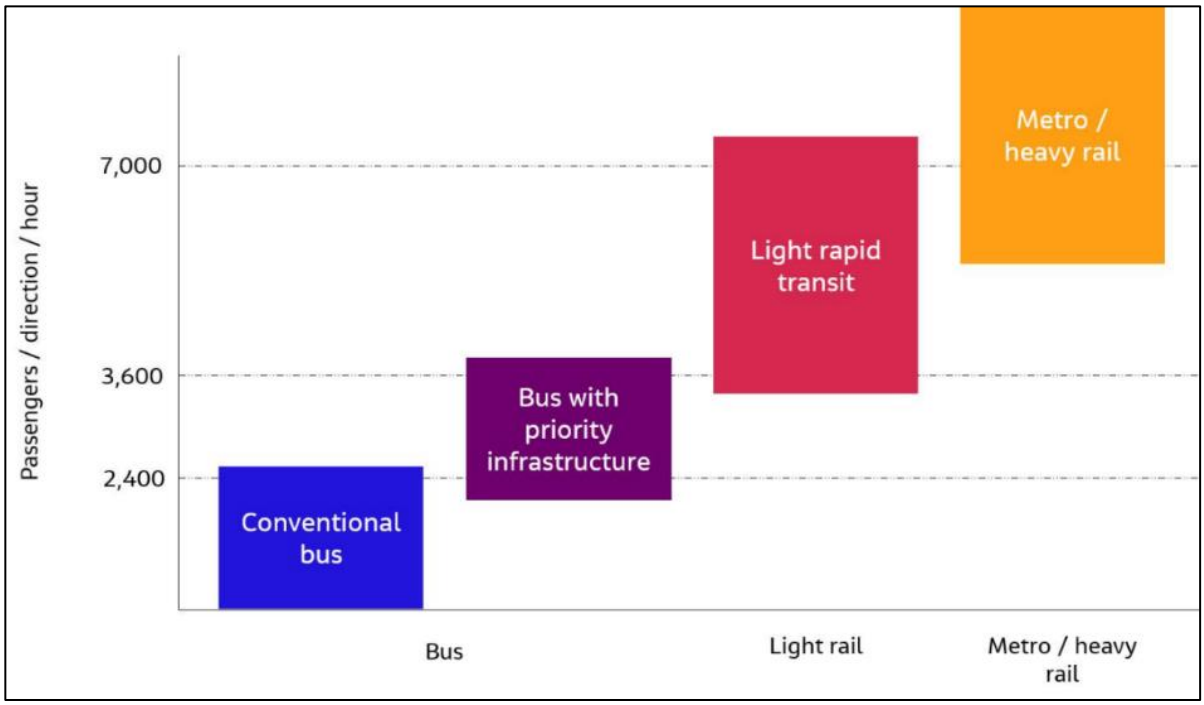


Figure 22 Public Transport Capacity Ranges[2]

Based on the line flows shown, the demand at the following locations could potentially grow beyond the levels that the planned bus network would cater for, but only under extremely heavy car demand management and low cycle uptake conditions, as assumed in the later stages of Phase 1. The relevant corridors include:

- Malahide Road;
- Navan Road;
- Crumlin Road;
- Terenure / Rathmines; and
- N11.

In other words, these findings suggest that in the longer term the potential exists for a comprehensive on-street light rail network covering at least these additional corridors.

Subsequent phases of the Strategy Development process further test such a network to find the appropriate balance between different public transport modes and examine how these networks function and achieve NTA's objectives.

[2] UITP Conference 2009 – Public Transport: Making the Right Mobility Choices

Phase 1 has also shown that very high public transport levels of service and car demand management mechanisms applied across the GDA could further reduce car use from the 38% achieved by the GDA Strategy 2016-2035 in its present (published) form, to 26%, if those schemes were all upgraded (to the idealised level described above) and car demand management arrangements were introduced.

From Table 3-7 it can be seen that within the Canal Cordon, the mode share of car would reduce from 23% under the existing GDA Strategy 2016-2035, to 21% under an Idealised Network scenario, to 12% with the introduction of reduced car demand management measures throughout the network. At the same time public transport mode share increase from 32% to 43% to 47.5% respectively. These results make it clear that while very efficient and effective public transport network delivers higher public transport mode shares, it does not on its own deliver significant modal shift in the city centre in particular. For this to happen both the network and the car demand management measures (which support the movement of sustainable modes across the network and reduce car capacity) have to be implemented as a package.

Table 3-7 Zonal (Destination) Mode Shares within Canal Cordon (24 hour)

24H	**Zones within the Canal Cordon (Mode Shares)**		
Mode Share	Iteration 1	Iteration 2	Iteration 3
Car_24h	23.4%	21.4%	12.4%
PT_24h	32.2%	42.9%	47.5%
Wlk_24h	37.9%	30.7%	34.8%
Cyc_24h	6.3%	4.7%	5.2%
Total	100.0%	100.0%	100.0%
24H	**Zones within the Canal Cordon (Total Trips)**		
Trips	Iteration 1	Iteration 2	Iteration 3
Car_24h	83,457	75,880	44,185
PT_24h	114,793	152,420	168,848
Wlk_24h	135,139	108,850	123,536
Cyc_24h	22,372	16,808	18,297
Total	**356,518**	**355,002**	**355,134**

Figure 23 shows settlement to settlement average speeds by car and public transport for the various iterations of in Phase 1. This shows a clear travel time advantage for car in 2016, but the difference is significantly reduced by the introduction of the existing GDA Transport Strategy 2016-2035. If the target is to achieve equal average journey times, then modelling in Phase 1 suggests that present proposals are insufficient and only a network delivering the Idealised Network attributes for public transport would deliver such an outcome.

The implication of this assessment undertaken in Phase 1 is that there will be a balance to be struck between the provision of high public transport levels of service across the GDA and car demand management mechanisms to reduce car use.

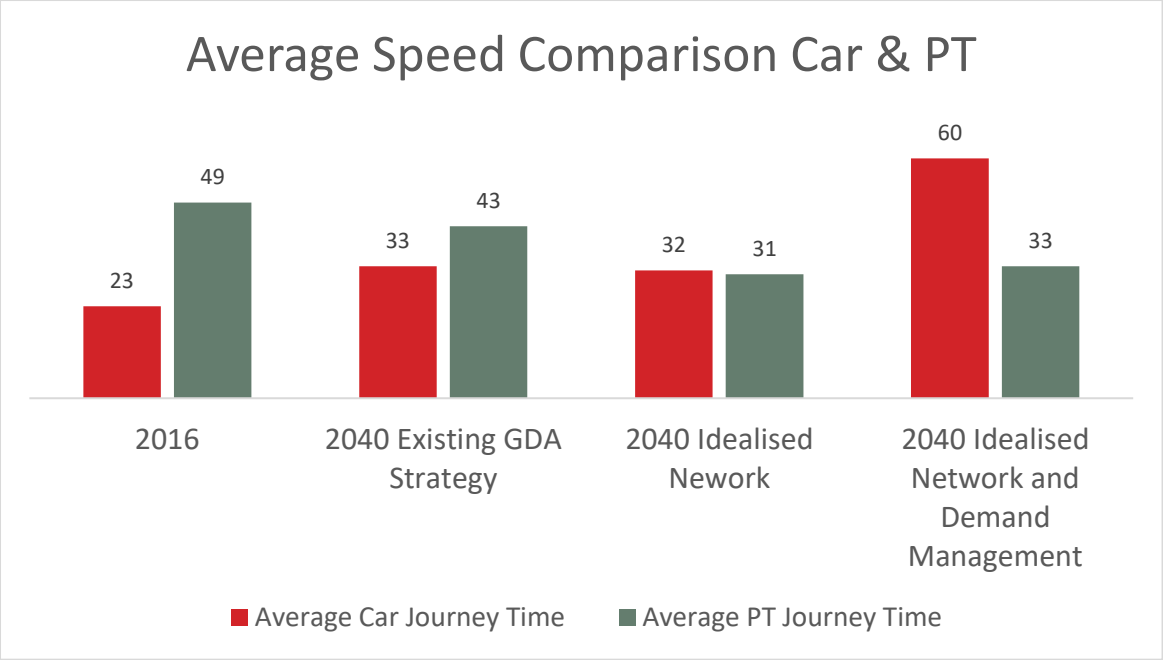


Figure 23 Settlement to Settlement Average Journey Times Comparison (for Dublin Area)

Finally, the Phase 1 modelling suggests that car demand management measures are needed to support and prioritise the movement of sustainable modes on the road network. This is particularly important in the context of targets to deliver higher cycling mode share by implementing a comprehensive cycle network and associated policies to support its uptake.

The next phase of the Strategy development process outlined in the following chapter therefore is to identify an appropriate form and level of mass transit service that could serve the potential additional demand identified in Phase 1.

4 Phase 2 – Develop Strategic Network Plan

4.1 Phase 2 Objectives and Scope

Phase 1 identified the upper end of public transport / sustainable mode travel demand in 2042. The starting point for Phase 2 is to consider the public transport network which could provide the capacity to serve the levels of demand for public transport identified in Phase 1 in an efficient and effective manner. The corridors which exhibit high public transport flows, when combined with high levels of car demand management from the modelling are as follows (as shown above in Figure 21):

- Malahide Road;
- Navan Road;
- Crumlin Road;
- Terenure / Rathmines; and
- N11.

Two different initial scenarios were created from these options with a preference for Metro in one and Luas in the other. These are explained in further detail in Initial Scenario Creation below. These scenarios are intended to support:

- a comprehensive high-quality cycle network and supporting measures;
- walking and cycling by enhancing prioritisation of these movements at junctions;
- A wide range of measures identified in prior studies and policy documents, including:
    - Report on the Pre-Draft Public Consultation;
    - Supplementary Area Based Studies;
    - Various Scheme Studies;
    - Various Sectoral Studies;
    - Transport Strategy Measures Report; and
    - The SEA Environmental Report and AA Natura Impact Statement.

In relation to roads investment, the strategy proposals are based on a combination of transport policy – as it relates to ensuring reduced emissions from transport – and on the outcomes of the supporting Area-Based Studies undertaken as part of the strategy development. This is reflected in a principles-based approach being taken to investment in roads in the GDA over the period of the strategy. There are a number of strategy proposals to note in this regard, namely:

- The Eastern Bypass is not included. Instead the South Port Access Route will be implemented and the reservation in Dún Laoghaire-Rathdown examined for use for sustainable transport modes;
- The N3-N4 link is included primarily in order to provide resilience in the event of major incidents on the M50; and
- The Leinster Outer Orbital Route is not included with orbital traffic to be catered for by online upgrades where required.

4.2 Phase 2 Process

Phase 2 identifies the services required to meet the "idealised" PT demand from Phase 1 by assessing the public transport demand operating along key corridors (both radially and orbitally) produced in Phase 1 modelling and testing public transport proposals which provide the capacity to cater for that demand.

Phase 1 indicates that a high level of additional car demand management is needed within the M50 and in urban centres across the GDA if public transport is to effectively compete with car in terms of settlement to settlement travel times. Phase 2 therefore also tests a range of car demand management approaches to reduce the use of the private car and support the operation of sustainable transport modes (walking, cycling and public transport) operating across the GDA network.

The process followed in Phase 2 is similar to that of Phase 1 in terms of the iteration; Figure 24 and Sections 4.2.1 to 4.2.4 below describe the process relevant to the current Phase.

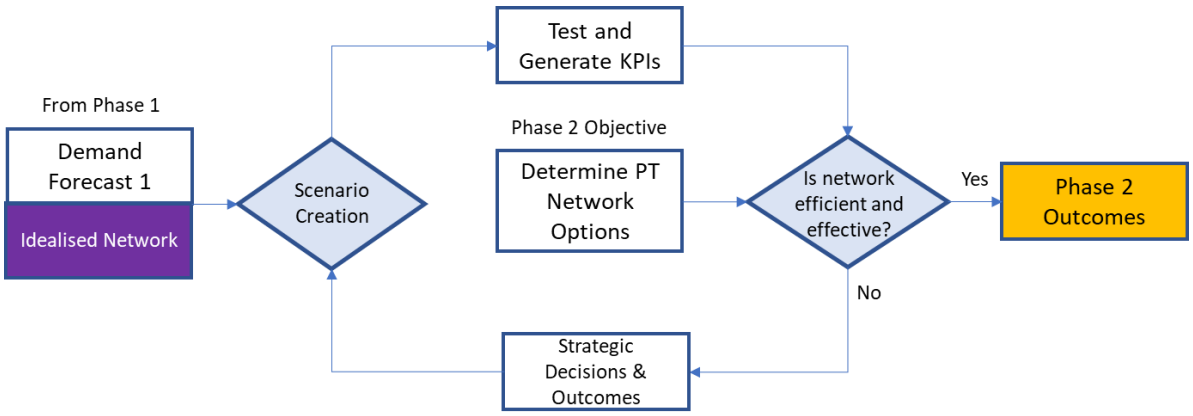


Figure 24 Strategy Development Process Phase 2

4.2.1 Scenario Creation

In line with the patronage bands indicated in Figure 21, the public transport modal options to serve these corridors include Luas on the Malahide Road, Navan Road, and Terenure/Rathmines corridors, Metro option on the N11 Corridor, and an additional Luas in the South West along the Crumlin Corridor. An overall network plan including all options is presented in Figure 25 below.

Land use is the standard NTA 2042 forecast. See Annex 2 for further detail.

4.2.2 Test and Generate KPIs

For Phase 2 the Strategy development process uses some of following KPIs to inform the relevant Transport Strategy outcomes:

- Mode Share by Area;
- Public Transport Mode Share;
- Public Transport Patronage;
- Public Transport Screenline Volumes; and
- Cost Estimates.

4.2.3 Objectives Achieved

The KPIs extracted are then used to assess the network performance against the objectives discussed Section 4.1 above.

4.2.4 Strategic Decisions and Outcomes

Decisions in Phase 2 are informed by the performance of the networks with respect to the KPIs and therefore the efficiency/effectiveness of the network.

4.3 Phase 2 First Iteration (Initial Network Options)

4.3.1 Scenario Creation, First Iteration

Figure 25 presents a range of potential additional on-street light rail or Metro solutions in response to the levels of demand identified in Phase 1. Two scenarios have been derived from these overall possible responses to the Phase 1 outcomes (e.g. potential, "Idealised" demand).

The first option is a comprehensive light-rail solution, termed **On-Street Luas Network Alternative (Run AAN)**; the other is a **Metro Network Alternative (Run AAO)**, which incorporates a mix of new on-street and underground lines. These networks were also informed by consideration of a range of other studies including the Area Based Studies and the scheme studies (see other background reports).

4.3.2 Do Nothing Scenario (Run AAM)

The 2016 Transport Network is used as the "Do-Nothing Scenario" against which the On-Street Luas and Metro alternative networks are tested. The 2016 Transport Network provides a consistent basis for comparing the two alternative future networks.

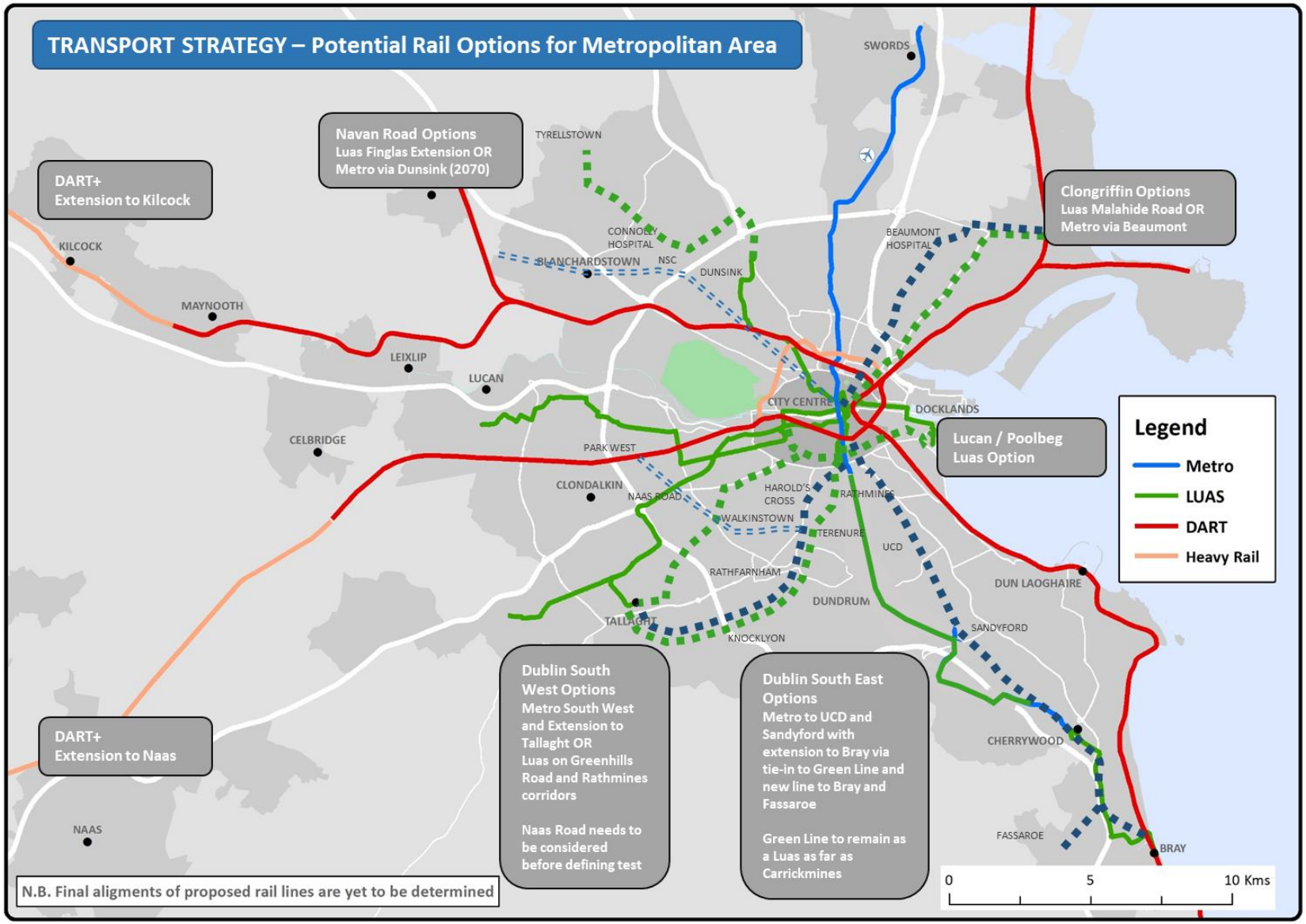


Figure 25 Overall Network Options to Address Phase 1 ("Idealised") Demand

A description of the assumed network inputs is presented in Table 4-1 and in the text below.

Table 4-1 Summary of Initial Phase 2 Network Scenarios

Scenario:	Do Nothing Scenario	Do On-Street Luas Alternative Network	Do Metro Alternative Network
Run ID:	AAM	AAN	AAO
Year	2042	2042	2042
Road network	2016 Base year	Full Strategy	Full Strategy
PT network - Urban Bus	2016 Base year	BusConnects network	BusConnects network
PT network - Other Bus	2016 Base year	2019 network	2019 network
PT network - Luas	2016 Base year	New routes	2019 network + Lucan Luas + Extensions
PT network - Metro	No	Metrolink	Metrolink + New Routes
PT network - Rail	2016 Base year	DART+	DART+
PT network - Bus speed	2016 Base year	BC speeds	BC speeds
PT network - Fares	2016 Base year	Integrated Fare system	Integrated Fare system

On-Street Luas Network Alternative (Run AAN)

Figure 26 illustrates the On-Street Luas Network public transport alternative developed by the NTA. This network tests the effect of providing a comprehensive Light Rail across the Dublin Metropolitan Area, in response to the corridor analysis presented in Phase 1.

The following lists the additional Luas services proposed in additional to the existing and those previously proposed in the 2036 Transport Strategy for the GDA:

- New Luas Line on Malahide Road: City Centre – Clongriffin;
- Finglas Luas: Further Extension to Tyrrellstown;
- New Luas: City Centre – Rathmines – Terenure – Firhouse – Tallaght;
- New Luas: City Centre – N11 – Sandyford; and
- New Luas: Fassaroe – Bray.

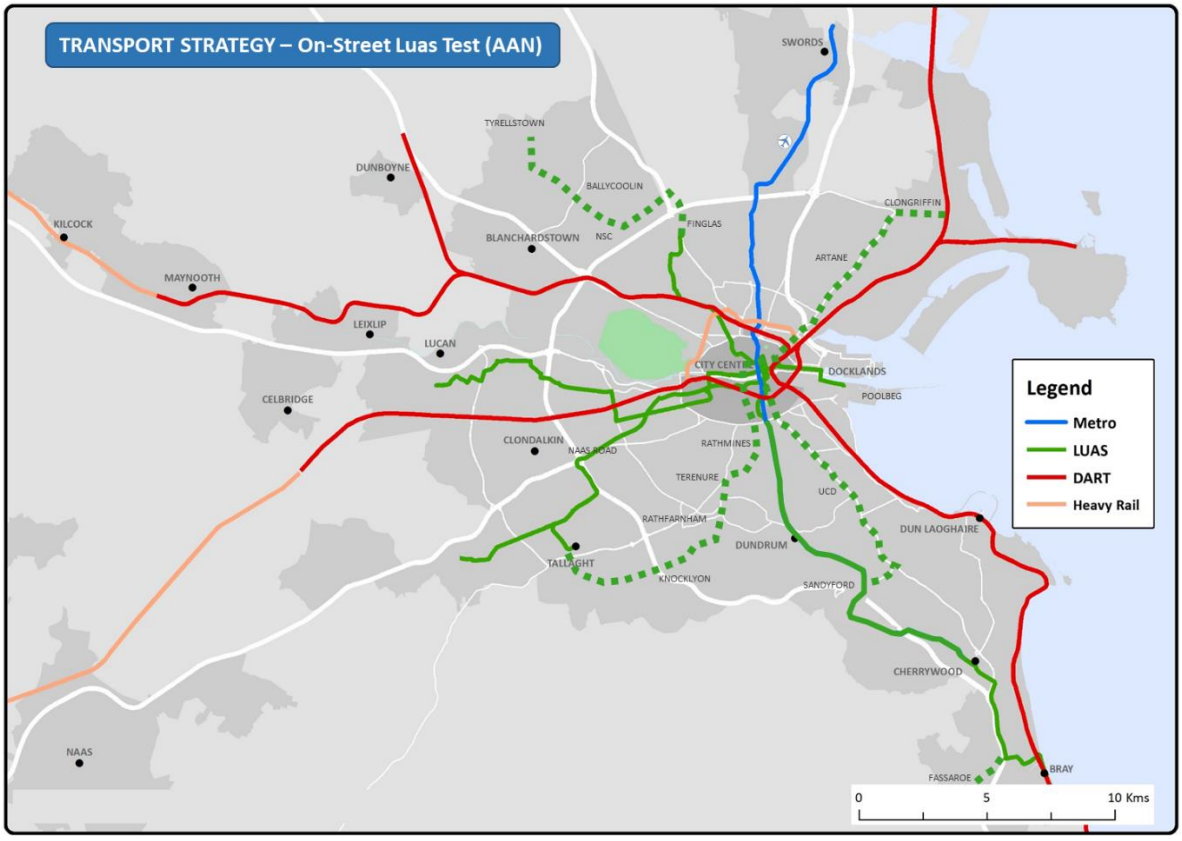


Figure 26 On-Street Luas Network

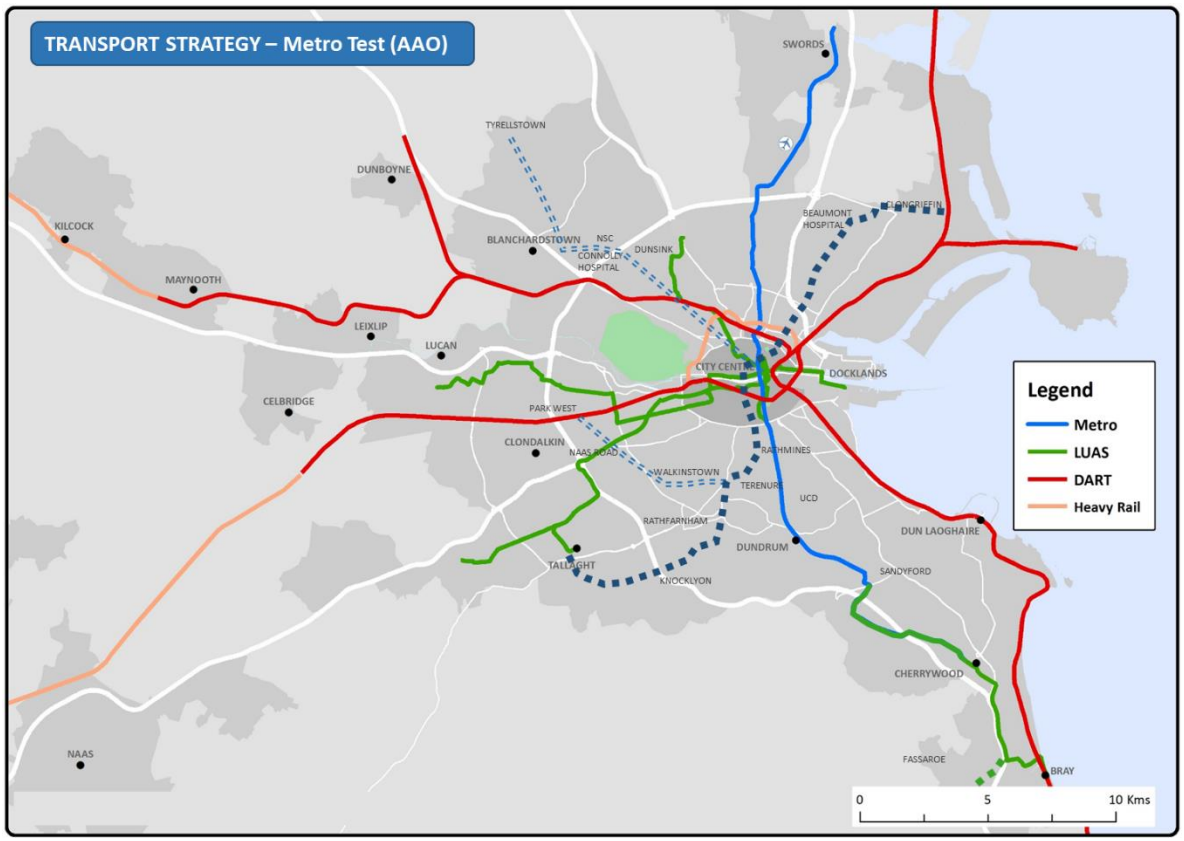


Figure 27 Metro Network Alternative

Metro Network Alternative (Run AAO)

Figure 27 illustrates the Metro Network public transport alternative developed by the NTA. The intention of this network plan is to investigate the effect of providing a comprehensive network of MetroLink style Metro services across the Dublin Metropolitan Area, in response to the corridor analysis presented in Phase 1.

The following lists the additional Metro services proposed in additional to the Metro North and Metro South previously proposed in the 2036 Transport Strategy for the GDA:

- New Metro: City Centre – Clongriffin;
- New Metro: Tyrrellstown – City Centre;
- New Metro: City Centre – Rathmines – Terenure – Firhouse – Tallaght; and
- New Metro: Park West – Naas Road – Walkinstown.

4.3.3 KPI Assessment

Public Transport Mode Shares

Average public transport mode share for trips originating within the full GDA, within the Dublin Metropolitan Area and within the M50 cordon were obtained for the AM peak period and for the 24hr period. Table 4-2 and Table 4-3 detail the AM peak and 24hr public transport mode shares, respectively, for the three scenarios being considered.

It can be seen in both tables that the introduction of the On-Street Luas mass transit network and the Metro mass transit network both show a significant increase in public transport mode share above the Reference Scenario. The Metro scenario shows a slightly better mode share improvement than the On-Street Luas scenario, increasing the mode share by 1 percentage point above the On-Street Luas Scenario.

Table 4-2 AM Peak Public Transport Mode Share Comparison

Mode Share by Area	Do Nothing (Run AAM)	Luas Alternative (Run AAN)	Metro Alternative (Run AAO)
Full GDA	21%	28%	29%
Metropolitan	25%	32%	33%
Inside M50	27%	35%	36%

Table 4-3 24hr Public Transport Mode Share Comparison

Mode Share by Area	Do Nothing (Run AAM)	Luas Alternative (Run AAN)	Metro Alternative (Run AAO)
Full GDA	16%	20%	21%
Metropolitan	18%	24%	25%
Inside M50	21%	28%	29%

Public Transport Patronage Comparison

Table 4-4 and Table 4-5 detail the public transport patronage for rail, bus, Luas and metro for each scenario for the Am peak and 24hr periods, respectively. All public transport modes see an increase in patronage from the Do-Nothing scenario to the two mass transit scenarios.

The On-Street Luas scenario shows an increase of public transport usage above the Do Nothing of 500,000 persons per day, or a 45% increase in patronage. The Metro scenario shows an increase of public transport usage above the Do Nothing of 600,000 persons per day, or a 55% increase in patronage. This percentage change is reflected in the AM peak mode share increase.

The Luas scenario shows a higher rail usage than the Metro scenario, whereas the Metro scenario shows a higher bus usage than the Luas scenario. This is to be expected as the Metro network would broadly be competing against the rail network in terms of trip lengths and the bus network would be required to cater for the gaps in the metro network. Conversely, the Luas scenario would broadly be competing more with the bus network than the Metro scenario.

Table 4-4 Public Transport Boarding Numbers Comparison (AM Peak)

	Do Nothing (Run AAM)	Luas Alternative (Run AAN)	Metro Alternative (Run AAO)
Rail	39,000	51,000	49,000
Bus	128,000	135,000	136,000
Luas	28,000	74,000	30,000
Metro	0	22,000	84,000
Total Public Transport	**195,000**	**282,000**	**300,000**

Table 4-5 Public Transport Boarding Numbers Comparison (24hr)

	Do Nothing (Run AAM)	Luas Alternative (Run AAN)	Metro Alternative (Run AAO)
Rail	202,000	255,000	248,000
Bus	714,000	751,000	761,000
Luas	156,000	441,000	186,000
Metro	0	125,000	483,000
Total Public Transport	**1,100,000**	**1,600,000**	**1,700,000**

Public Transport Screenline Patronage Comparison

Table 4-6 details the AM peak inbound public transport patronage volumes for passengers crossing the Canal and M50 screenlines for both the Luas scenario and the Metro Scenario. Table 4-7 details the 24hr all-direction public transport patronage volumes for passengers crossing the Canal and M50 screenlines for both the Luas scenario and the Metro Scenario.

The Metro scenario caters for approx. 12-15% more public transport demand crossing the Canal Screenline than the On-Street Luas scenario. The Metro scenario caters for between 4 – 7% more public transport demand crossing the M50 Screenline than the On-Street Luas scenario.

Table 4-6 Inbound Screenline Passenger Volume Comparison (AM Peak)

	Luas Alternative (Run AAN)		Metro Alternative (Run AAO)	
	Canal	M50	Canal	M50
Bus	23,500	24,000	22,000	24,000
Rail	31,000	28,500	27,000	26,000
Metro	10,000	7,000	54,000	22,000
Luas	32,000	16,000	7,000	7,000
Total PT	**96,500**	**76,000**	**110,000**	**79,000**

Table 4-7 All-Direction Screenline Passenger Volume Comparison (24hr)

	Luas Alternative (Run AAN)		Metro Alternative (Run AAO)	
	Canal	M50	Canal	M50
Bus	198,000	172,000	180,000	171,000
Rail	190,000	167,000	171,000	158,000
Metro	93,000	70,000	435,000	178,000
Luas	268,000	115,000	54,000	54,000
Total PT	**749,000**	**524,000**	**841,000**	**561,000**

Cost Estimate Comparison

Cost estimates were developed for both the On-Street Luas scenario and the Metro scenario. These costs were based on recent outturn costs for Luas Cross City and rough order cost estimates for MetroLink. The On-Street Luas scenario assumed a unit cost of ~€62m per km and the cost of the Metro scenario assumes a unit cost estimate of ~€450m per km.

- the cost breakdown for the On-Street Luas scenario, with a total cost of ~€14,000m; and
- the cost breakdown for the Metro scenario, with a total cost of ~€30,000m.

It can be seen that the cost of delivering the Metro themed network would be double that of the On-Street Luas themed network.

4.3.4 On-Street Luas Performance Summary

Figure 28 summarises the operation of the On-Street Luas scenario, describing the operation and patronage of the key Luas lines being considered. It also summaries potential gaps in the On-Street Luas network, in particular, in the north-east quadrant between the MetroLink corridor and the proposed Malahide Road Luas Corridor, and in the south-west quadrant between the existing Luas Green Line and the proposed City Centre – Rathmines – Terenure – Firhouse – Tallaght Luas corridor.

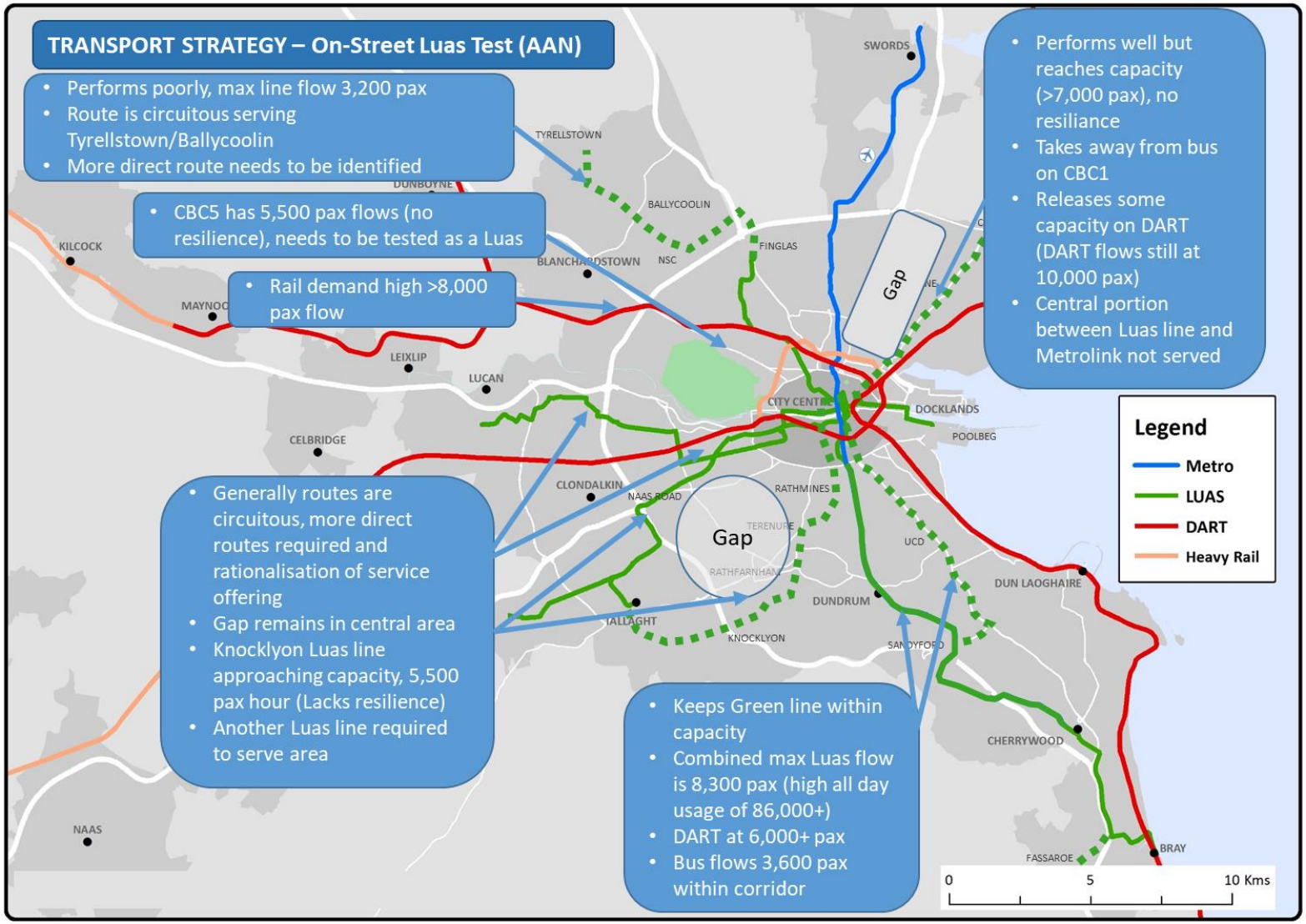


Figure 28 Summary of On-Street Luas Alternative Operations

4.4 Phase 2 Second Iteration (Refine Network Options)

4.4.1 Do Minimum Scenario (Run AAR)

At this point in the process a more complete picture of the potential future public transport network is visible. From this point the objective of the modelling is to refine this network and associated car demand management to give better priority to cycles and pedestrians and further encourage public transport usage. To provide a consistent basis for comparison a new Do-Minimum scenario was created. This corresponds to the scenario code AAR and includes the current (2020) road network and other committed schemes, most notably BusConnects service networks, but not the Core Bus Corridors.

4.4.2 Scenario Creation, Second Iteration

The initial network scenario in Iteration 2 investigates improvements to the initial Luas scenario discussed above and attempts to serve potential additional demand for public transport identified in the South West and North East areas (see Figure 29). The modifications to the Iteration 1 (AAN) network that form the Iteration 2 (AAN+) network include the following:

- providing more direct Luas lines via Greenhills/Harolds Cross and Rathfarnham / Terenure;
- Spurs to Clondalkin, Clonburris and Knocklyon;
- Removal of Tymon to Ballymount Luas section;
- Rationalise operation of Lucan and Red lines;
- Luas line on Navan Road;
- Direct line serving Tyrellstown and Ballycoolin connecting to Broombridge;
- Operating Finglas Luas as spur from Broombridge; and
- Operating a second Luas line parallel to the Clongriffin line (the latter provides overall better performance than a Metro line which undercuts DART mode share).

The second round of testing thus expands the Luas network as shown in Figure 29.

This round of testing is useful for highlighting the potential for an optimised, extensive Luas network to serve the public transport needs of Dublin. No car demand management is included in this scenario as the key comparison is how well it performs against the scenarios in the previous Iteration 1.

An overview of the expanded/optimised network is shown in Figure 29, with a side-by-side comparison between the Iteration 1 and Iteration 2 networks shown in Figure 30 for clarity.

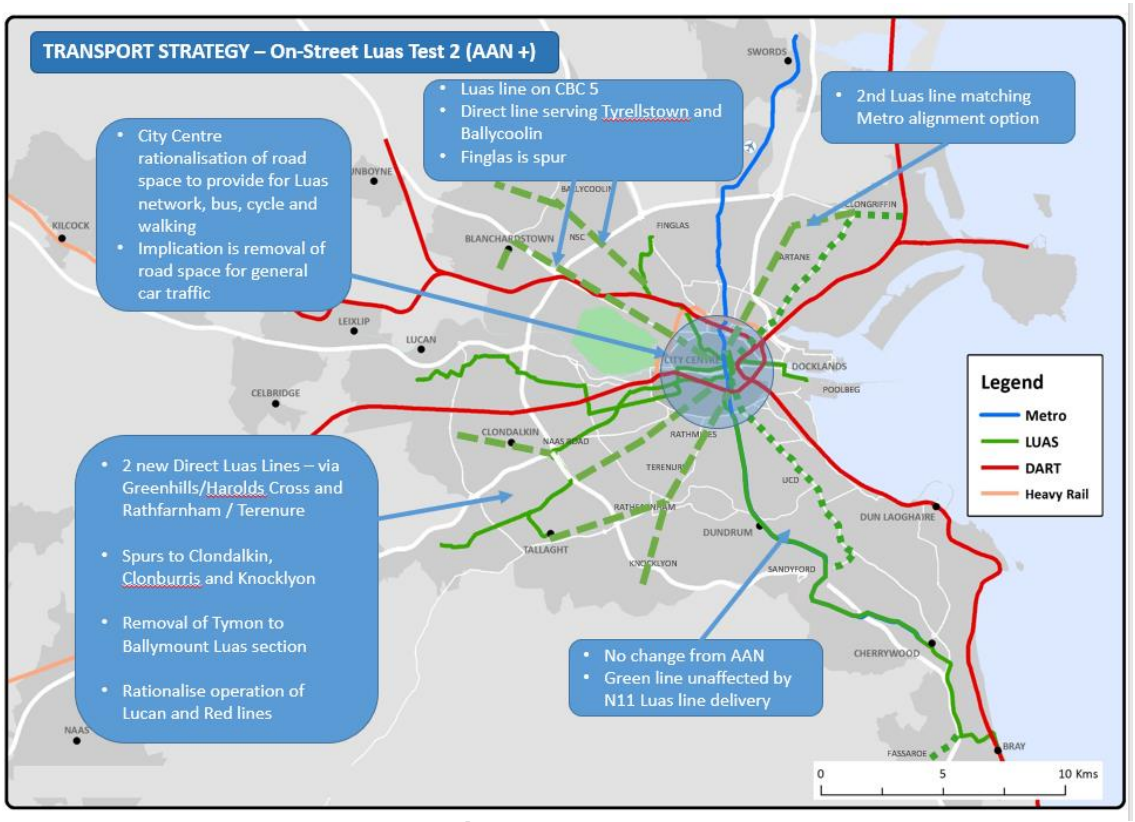


Figure 29 On Street Luas with Optimisation

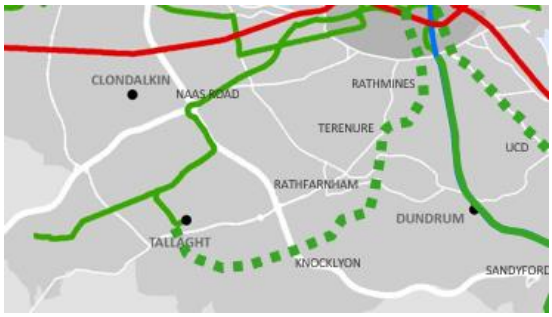
South West Area - On Street Light Rail	South West Area - Expanded/Optimised
	
North West Area – On Street Light Rail	**North West Area – Expanded/Optimised**
	
North East Area – On Street Light Rail	**North West Area – Expanded/Optimised**
	

Figure 30 On-street Light Rail Alignments with/without Optimisation

4.4.3 KPI Assessment

Table 4-8 below shows the differences between the On-Street Luas test devised in Iteration 1 (AAN) and the Optimised (AAN+) option. The results show an overall increase in boardings, and that additional lines would be well-used, in line with the indications provided by Phase 1 and the Idealised Network approach.

Table 4-8 Total Passenger Boardings (24hour)

Daily Boardings	(Do-Minimum) AAR	On-Street Luas Test (AAN)	Optimised Luas (AAN+)
Metro	0	113,000	123,000
DART+Irish Rail	221,000	236,000	238,000
Luas	174,000	392,000	632,000
Urban+Other Bus	802,000	700,000	720,000
TOTAL	1,197,000	1,441,000	1,713,000

4.4.4 Outcomes – Phase 2, First Iteration

The On-Street Luas themed option is preferred to the Metro themed Option on cost grounds given that they both perform similarly in terms of performance as meeting the public transport demand requirements.

Importantly, an extensive Luas network would serve almost as many public transport users but cost less than half the Metro network. A Luas scenario was therefore taken forward into Iteration 2 with additional improvements intended to further optimise the performance of the network.

4.4.5 Outcomes – Phase 2, Second Iteration

The modelling in Phase 2, Second Iteration supports the longer-term viability of an extensive Luas network based on the demand levels achieved for the given land use scenario. NTA recognise that such a network would be highly integrated in land use and transportation terms and could potentially supersede BusConnects infrastructure in the longer term. Therefore, this scenario is useful for informing subsequent transport planning decisions around potential for Luas lines in later stages of the Strategy development process.

It is recognised that Luas is ideal for serving key growth areas Clonburris, North Fringe, Adamstown, and the Airport and integrates well with Park and Ride. However significant challenges associated with the Luas include achieving the alignments tested and integrating the lines outside the city centre, which could in time require an Orbital system.

It is important to note that car demand management options have not been considered up to this point within Phase 2. The KPIs confirm that without this, car mode share remains excessive relative to the wider strategy objectives and that some form of car demand management is required. This finding is consistent with the Phase 1 modelling, which suggests that in order to make public transport journey times about the same as car on average in the GDA area a significant level of restriction and/or price increase on car access/usage is required.

4.5 Phase 2 Third Iteration (Car Demand Management)

4.5.1 Scenario Creation, Third Iteration

This iteration of the Strategy development process begins to look at the impact of car demand management on overall network performance and wider KPIs. The car demand management measures include providing additional capacity for sustainable modes through traffic signalling. This

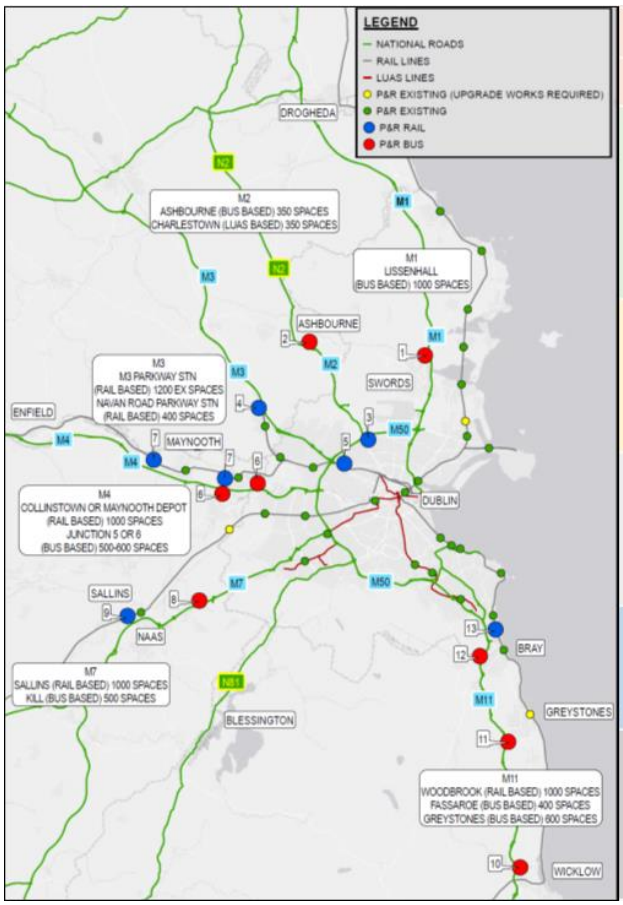
can reduce green time for car whilst increasing it for buses, cycles, and pedestrians, thus acting as a car demand management measure.

Various ERM scenarios were developed in line with the process shown in Figure 22 to examine Traffic Management in this Iteration.

The relevant runs assessing Traffic Management proposals as part of the Strategy development process are as follows:

- AAU: Phase 2 Iteration 2 Network (=AAN+, renamed at this point); and
- AAV: Traffic signals set to reduced cycle 60 second cycle time where applicable and speed limits lowered in urban areas outside Dublin.

Both scenarios also include the Park and Ride sites shown in Figure 31.



Corridor	No	Location	Spaces
A (M1/N1)	1	Lissenhall	1,000
B(i) (M2/N2)	2	Ashbourne	350
	3	Charlestown Luas	350
B(ii) (M3/N3)	4	M3 Parkway Station	1,200
	5	Navan Road Parkway Station	400
C (M4/N4)	6	Junction 5 OR Junction 6	500-600
	7	Collinstown OR Maynooth Depot	1,000 (500 initially)
D (M7/N7)	8	Kill	500
	9	Sallins	1,000
F (M11/N11)	10	Wicklow	200
	11	Greystones	600
	12	Fassaroe	400
	13	Woodbrook	1,000

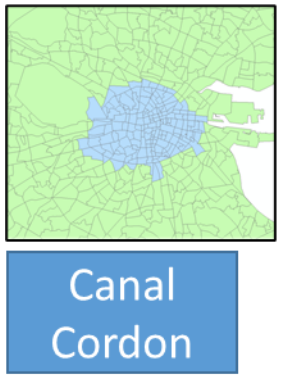
Figure 31 Proposed Strategy Park and Site Sites

4.5.2 KPI Assessment

Mode shares are presented below for the runs AAU and AAV noted above. A key finding is that within the Canal Cordon, car mode share (24 hour) is estimated as 22.2% without any network updates (except introduction of BusConnects services, but not infrastructure) and 19.2% with the full Luas network. This indicates that even a high level of investment in city centre public transport would not dramatically reduce car mode share.

Similarly, car mode share within the M50 (excluding the canal) for these scenarios is 48.2% and 44.1% respectively. These results suggest that further measures, in addition to an extensively enhanced public transport network, are necessary to restrict the car in order to achieve more significant reductions in car use.

The AAV tests, which include a 60 second cycle time at all traffic signals and approximately an 18 seconds full wraparound pedestrian and cycle stage (which is consistent with BusConnects design objectives), provide more positive results in terms of car mode share of 16.6% in the canal and 40.1% within the M50 (excluding canal).



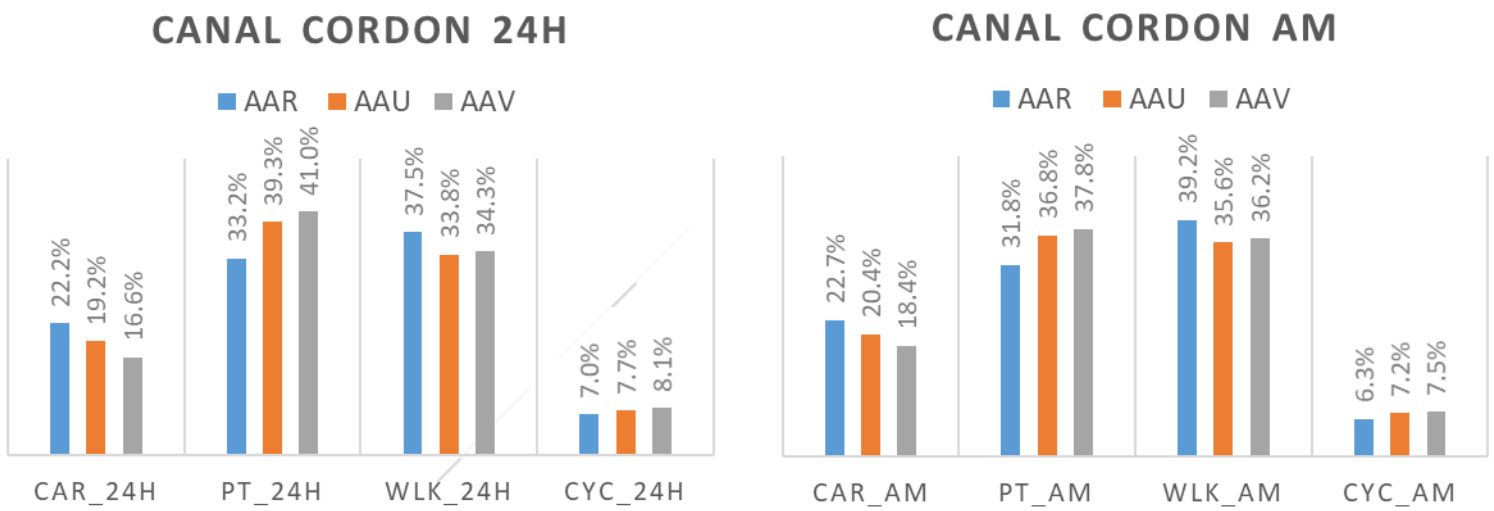
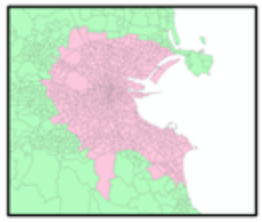
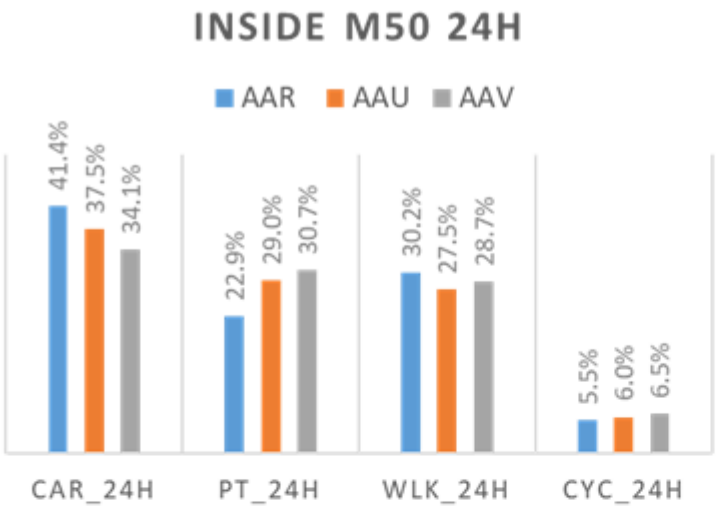
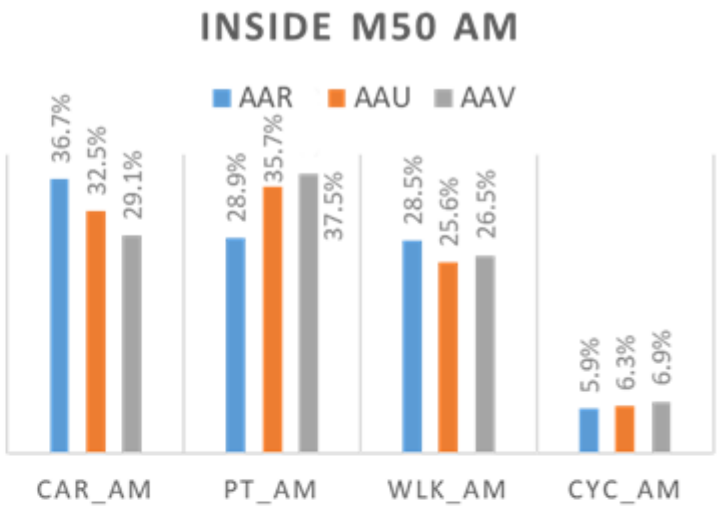


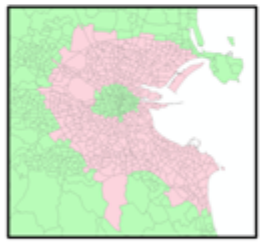
Figure 32 Mode Share comparison, Canal Cordon (Phase 2, 2nd Iter)



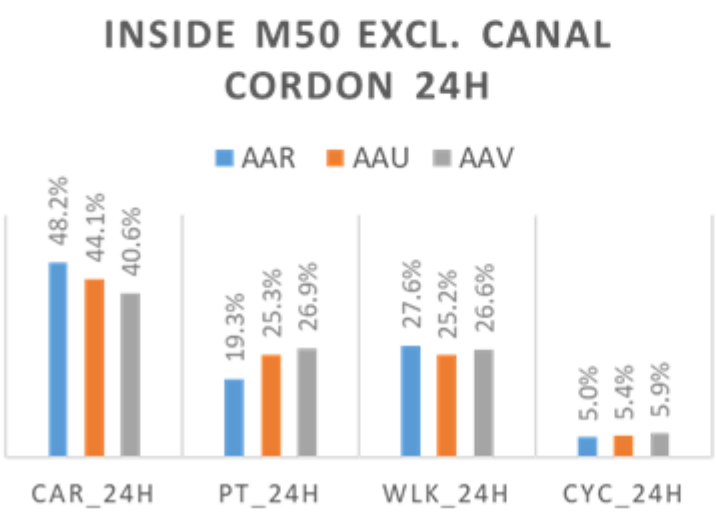
Including Canal







Excluding Canal



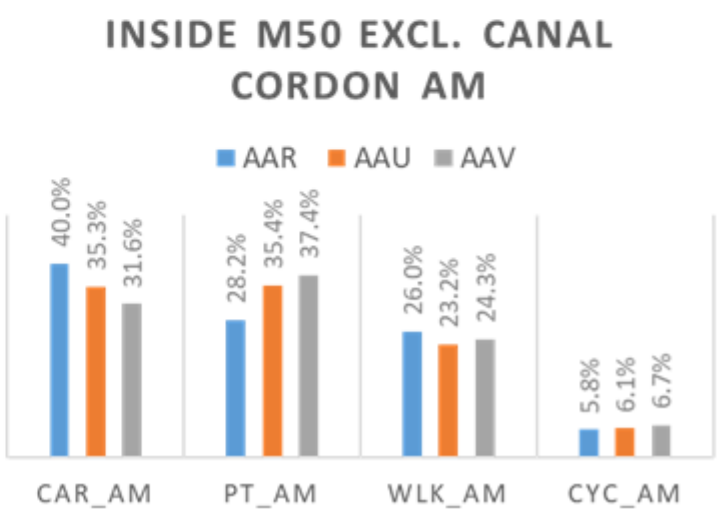
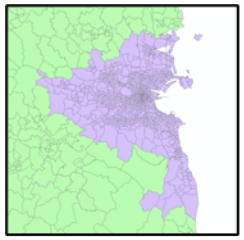
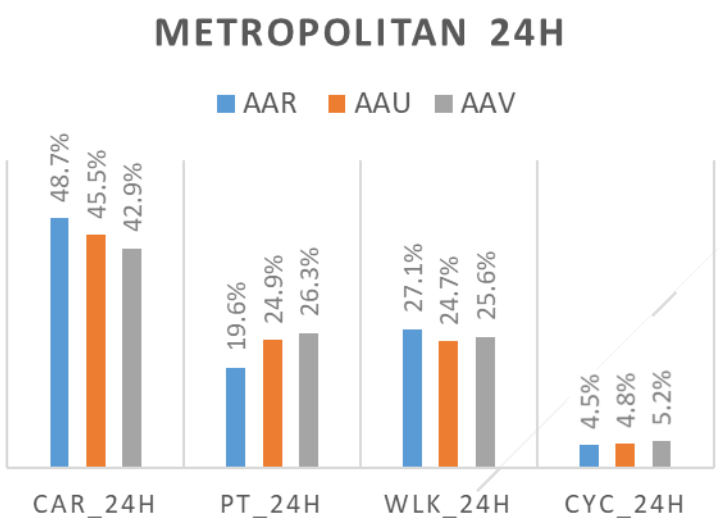
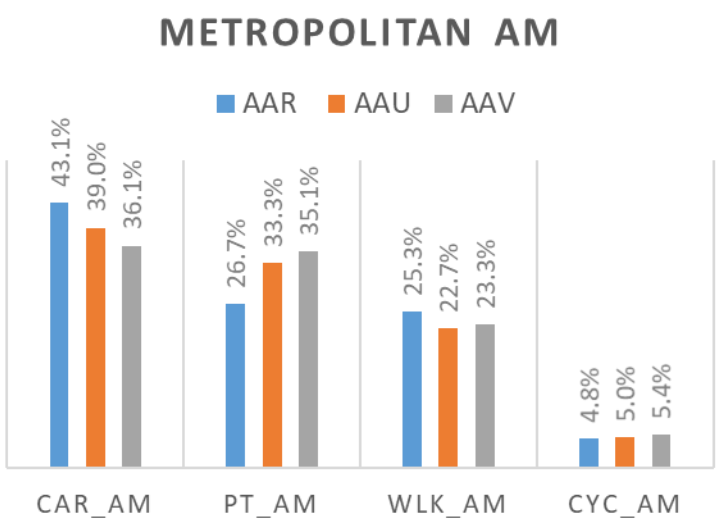


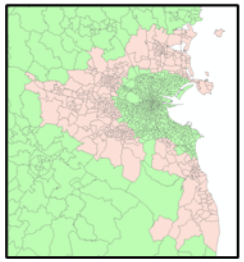
Figure 33 Mode Share comparison, M50 Cordon (Phase 2, 2nd Iteration)



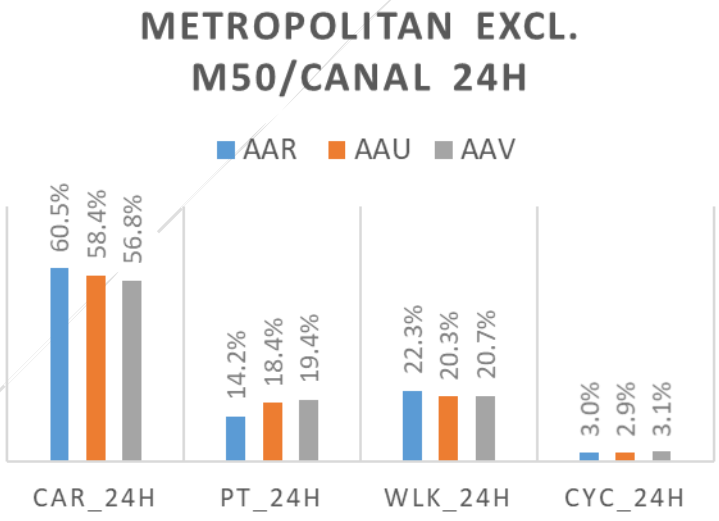
Including Inside M50/Canal







Excluding Inside M50/Canal



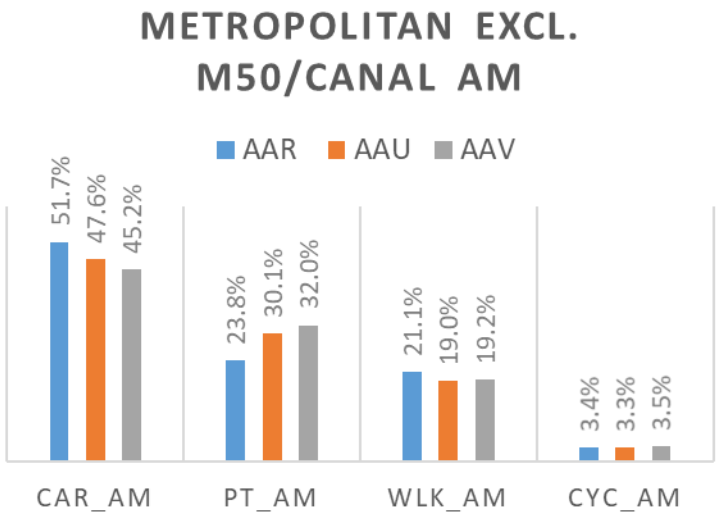
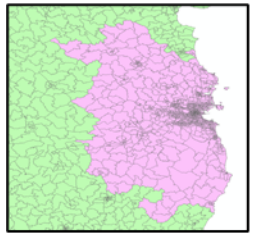
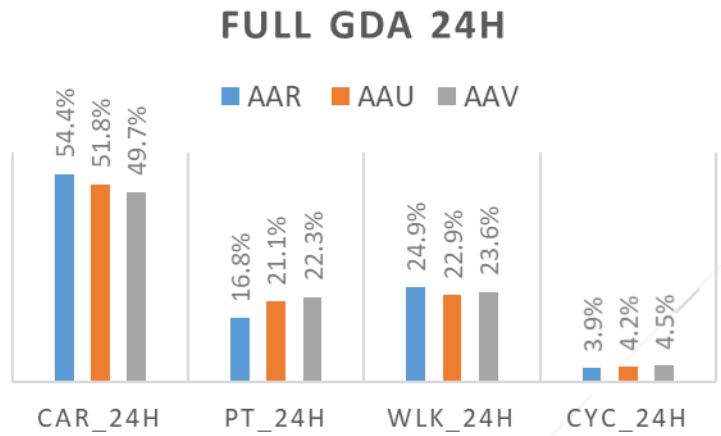
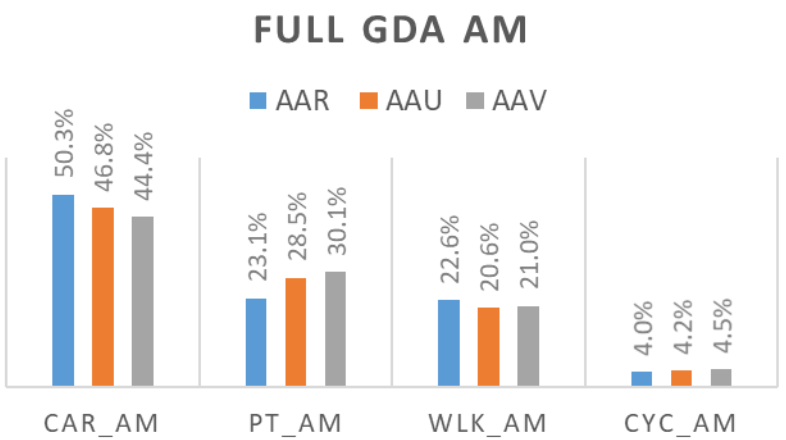


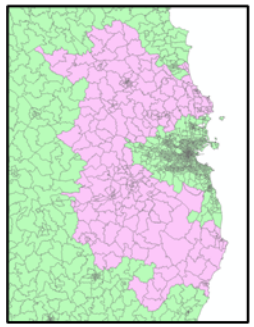
Figure 34 Mode Share comparison, Metro Area (Phase 2, 2nd Iteration)



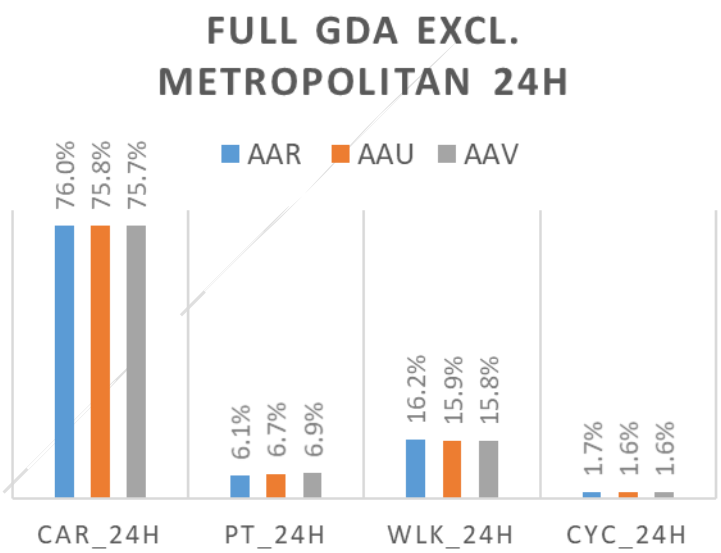
Including Metro







Excluding Metro



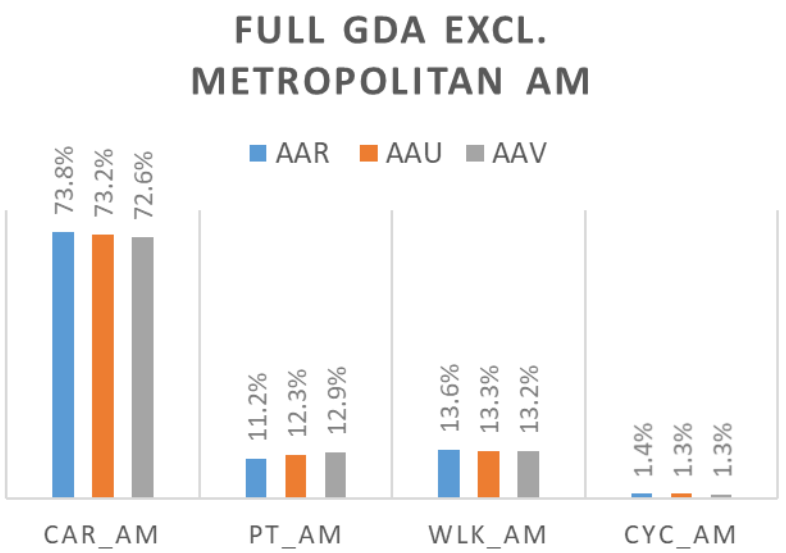


Figure 35 Mode Share comparison, Full GDA (Phase 2, 2nd Iteration)

4.5.3 Outcomes – Phase 2, Third Iteration

The Iteration 3 tests show that an efficient and effective public transport system, in combination with measures to manage car demand can achieve a significant shift from car to public transport, particularly in the Dublin area.

Tests also show that the public transport network on its own is not enough to achieve these aims; the investment must be complimented by extensive car demand management. This is in line with the overarching national, regional and local policy to reduce car dependence and carbon emissions in the medium term, i.e., within the lifespan of this twenty-year strategy.

While the mode share numbers for cars were reduced through the different tests, it is important to consider the overall effectiveness of car demand management. For example, if car trips take longer routes or find different locations to park in, there may be unintended increases in overall vehicle kilometres travelled and more circuitous routes, resulting in more emissions. To achieve the Strategy aims and objectives, therefore, both additional public transport capacity and car demand management measures must work together to achieve not just modal shift but also a significant reduction in car kilometres travelled.

With the reduction in car mode share demonstrated in the KPIs above, there is a corresponding increase in usage of other modes. This is consistent with the intention of the cycle time adjustment to directly benefit not just public transport operations but also pedestrians and cyclists. However, it is noted that the increase in cycle mode share is relatively limited in the KPIs, but also that at this point in the testing full roll out of cycle infrastructure has not been assumed, i.e., only the uplift in priority through junctions, and not the infrastructure dedicated to cycling.

Later iterations account for increased cycle uptake over the longer term, based on both infrastructural improvements and the associated changes in mode choice behaviour that is expected to result from substantial levels of investment planned in cycle infrastructure.

The Strategy development process has also examined the use of Park and Ride, which can be effective at shortening some car journeys, and reducing congestion, by offering a public transport option for part of the trip. The relevant Park and Ride sites informed by the NTA Park and Ride Strategy and has been included in the present iteration and taken forward as part of the core package of Strategy measures.

The key conclusion arising from this iteration is that car demand management measures are a critical part of the Strategy going forward. Traffic management is needed to keep car usage within certain limits, and in order to maintain gains (environmental etc.) made through investment in non-car alternatives. Without car demand management, car use would grow to fill any network capacity regained from mode shift to those alternatives.

4.6 Phase 2 Fourth Iteration (Refine Car Demand Management)

4.6.1 Scenario Creation, Fourth Iteration

This iteration examined further demand management options, including Parking and Tolls, focussed specifically on high demand parking areas.

The measures input the models to test further car demand management policies were as follows:

- Free Parking
  - Conversion of 400,000 free work place parking spaces (FWPP) to paid parking.
- On Street parking
  - Parking spaces reduced in high demand areas by half from approximately 40,000 spaces to 20,000 spaces.

- Minimum €10 Parking Charges for any space.

The principal measures tested in this iteration, therefore, included reduced parking in central urban areas and inclusion of higher quality cycle infrastructure on all links in Metropolitan area (to reflect the expected uplift in quality with regard to cycle measures).

The scenarios in this iteration are set out in Table 4-9

Table 4-9 Traffic management, Parking Restriction Scenarios

Run ID	Year	Demand	Name	Description
ACC	2042	D3	Strategy	Revised Strategy
ACD	2042	D3	Strategy + DM	As ACC + No FWPP + Reduced PDist + 10€ parking charge
ACE	2042	D3	Strategy + DM2	As ACD with FWPP included

4.6.2 KPI Assessment

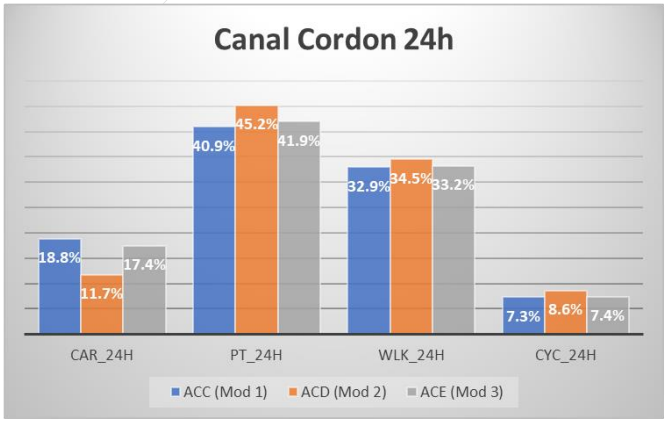
The KPI assessment in this iteration focusses on mode shares by area.

The various reductions in parking supply in ACD result in significantly reduced car trip levels to core urban areas, as evident from the data presented in Figure 36. In the canal cordon, car trips entering the city reduce by 38%, or 54,000 trips in a 24-hour period. Public Transport increases by 10%, walk by 5%, and cycling by 17%, equating to 31,000, 12,000, and 9,000 trips respectively for these modes. While this was useful to inform the potential for influencing mode shares using parking supply measures, it is unlikely that this level of influence on free parking provision is achievable.

The ACE scenario tests similar assumptions with respect to paid parking but reintroduces Free Workplace parking to the base year level. The resulting change in mode share proportions is far less than for the ACD test as expected, with around 12,000 fewer car trips arriving in the city, but around 3,000 more non-car trips.

		Car_24h	PT_24h	Wlk_24h	Cyc_24h	Total	Car_ms	PT_ms	Wlk_ms	Cyc_ms	Car_AM	PT_AM	Wlk_AM	Cyc_AM	Total	Car_ms	PT_ms	Wlk_ms	Cyc_ms
Canal Cordon	ACC	140,827	306,263	246,220	54,611	747,921	18.8%	40.9%	32.9%	7.3%	12,256	23,157	21,033	4,229	60,674	20.2%	38.2%	34.7%	7.0%
	ACD	87,368	337,478	257,771	63,877	746,494	11.7%	45.2%	34.5%	8.6%	7,894	25,369	22,813	5,008	61,084	12.9%	41.5%	37.3%	8.2%
	ACE	128,812	309,527	245,153	54,710	738,202	17.4%	41.9%	33.2%	7.4%	11,768	23,509	21,059	4,236	60,572	19.4%	38.8%	34.8%	7.0%
	Dif ACD - ACC	-37.96%	10.19%	4.69%	16.97%	-0.19%					-35.59%	9.55%	8.46%	18.43%	0.68%				
	Dif ACE - ACC	-8.53%	1.07%	-0.43%	0.18%	-1.30%					-3.98%	1.52%	0.12%	0.18%	-0.17%				
Inside M50	ACC	1,034,043	838,662	754,460	161,488	2,788,652	37.1%	30.1%	27.1%	5.8%	103,075	118,589	80,667	19,370	321,701	32.0%	36.9%	25.1%	6.0%
	ACD	910,299	906,888	786,307	185,609	2,789,104	32.6%	32.5%	28.2%	6.7%	85,812	129,626	85,951	23,101	324,489	26.4%	39.9%	26.5%	7.1%
	ACE	1,014,034	846,860	758,811	162,048	2,781,754	36.5%	30.4%	27.3%	5.8%	102,084	119,612	81,179	19,358	322,233	31.7%	37.1%	25.2%	6.0%
	Dif ACD - ACC	-11.97%	8.14%	4.22%	14.94%	0.02%					-16.75%	9.31%	6.55%	19.26%	0.87%				
	Dif ACE - ACC	-1.93%	0.98%	0.58%	0.35%	-0.25%					-0.96%	0.86%	0.63%	-0.06%	0.17%				
Metropolitan	ACC	2,043,651	1,180,549	1,098,517	210,161	4,532,878	45.1%	26.0%	24.2%	4.6%	217,901	197,926	125,864	26,883	568,574	38.3%	34.8%	22.1%	4.7%
	ACD	1,899,709	1,266,782	1,135,262	237,916	4,539,669	41.8%	27.9%	25.0%	5.2%	194,895	214,458	131,957	31,415	572,725	34.0%	37.4%	23.0%	5.5%
	ACE	2,028,901	1,190,338	1,104,114	210,829	4,534,182	44.7%	26.3%	24.4%	4.6%	216,904	199,139	126,506	26,869	569,418	38.1%	35.0%	22.2%	4.7%
	Dif ACD - ACC	-7.04%	7.30%	3.35%	13.21%	0.15%					-10.56%	8.35%	4.84%	16.86%	0.73%				
	Dif ACE - ACC	-0.72%	0.83%	0.51%	0.32%	0.03%					-0.46%	0.61%	0.51%	-0.05%	0.15%				
Full GDA	ACC	2,931,253	1,281,727	1,279,522	227,982	5,720,484	51.2%	22.4%	22.4%	4.0%	337,448	223,153	147,097	28,894	736,592	45.8%	30.3%	20.0%	3.9%
	ACD	2,780,016	1,373,137	1,319,834	256,606	5,729,593	48.5%	24.0%	23.0%	4.5%	312,371	241,278	153,821	33,590	741,059	42.2%	32.6%	20.8%	4.5%
	ACE	2,918,483	1,291,670	1,285,341	228,659	5,724,153	51.0%	22.6%	22.5%	4.0%	336,548	224,382	147,760	28,881	737,571	45.6%	30.4%	20.0%	3.9%
	Dif ACD - ACC	-5.16%	7.13%	3.15%	12.56%	0.16%					-7.43%	8.12%	4.57%	16.25%	0.61%				
	Dif ACE - ACC	-0.44%	0.78%	0.45%	0.30%	0.06%					-0.27%	0.55%	0.45%	-0.05%	0.13%				
Full ERM	ACC	4,060,517	1,357,840	1,525,212	254,522	7,198,091	56.4%	18.9%	21.2%	3.5%	481,481	241,093	173,436	31,436	927,445	51.9%	26.0%	18.7%	3.4%
	ACD	3,888,423	1,452,845	1,572,256	284,737	7,198,261	54.0%	20.2%	21.8%	4.0%	452,309	260,156	181,356	36,411	930,232	48.6%	28.0%	19.5%	3.9%
	ACE	4,048,705	1,367,851	1,531,142	255,196	7,202,894	56.2%	19.0%	21.3%	3.5%	480,644	242,337	174,111	31,422	928,514	51.8%	26.1%	18.8%	3.4%
	Dif ACD - ACC	-4.24%	7.00%	3.08%	11.87%	0.00%					-6.06%	7.91%	4.57%	15.83%	0.30%				
	Dif ACE - ACC	-0.29%	0.74%	0.39%	0.26%	0.07%					-0.17%	0.52%	0.39%	-0.04%	0.12%				

Figure 36 Mode Share Table by Area



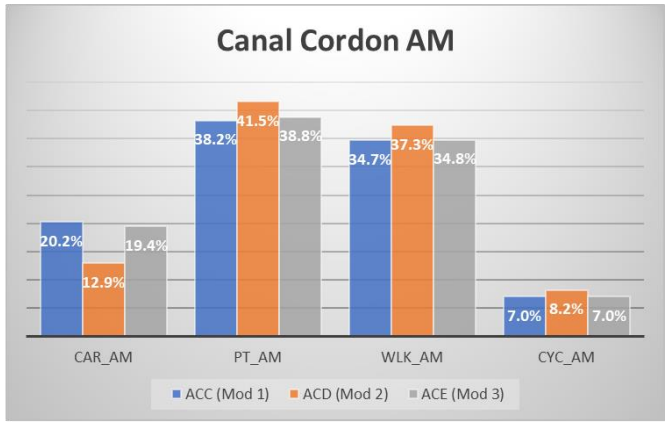
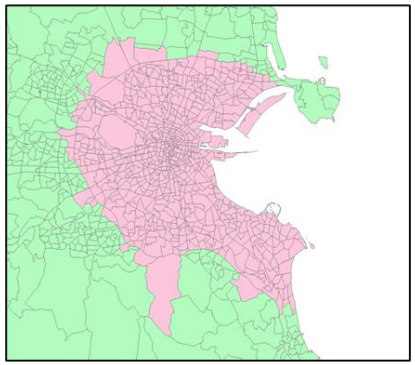
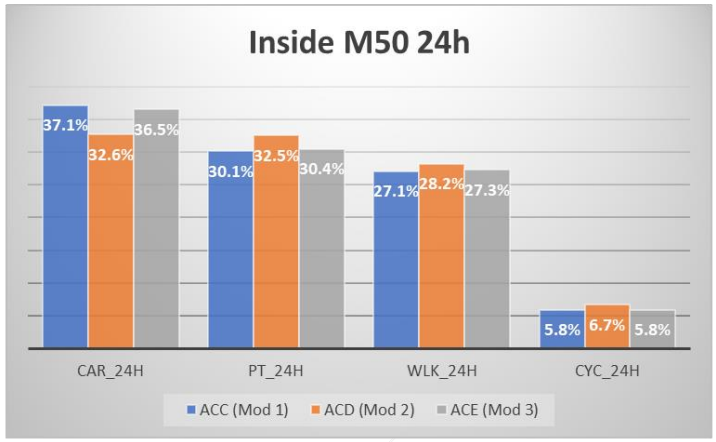


Figure 37 Mode Share, Canal Cordon (24h)





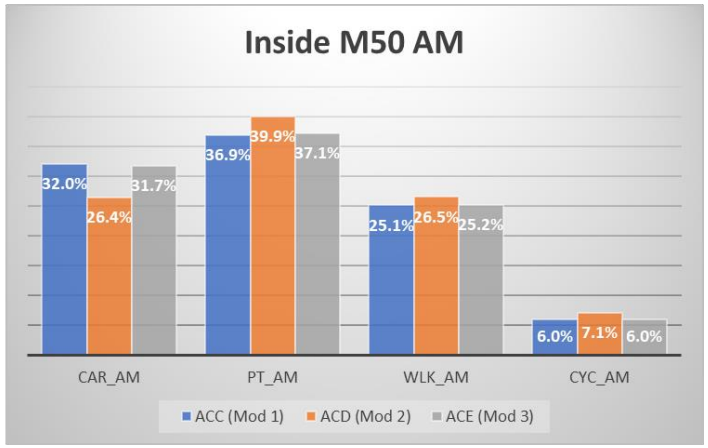
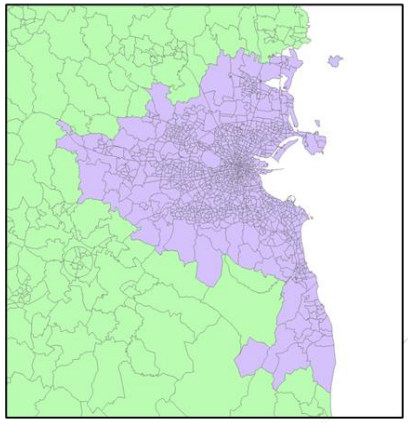
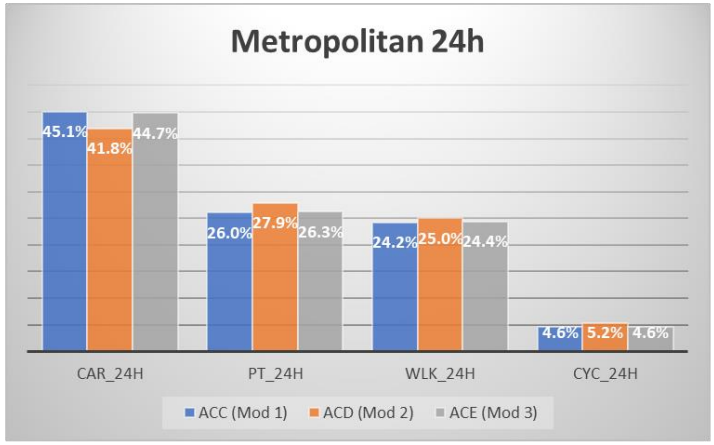


Figure 38 Mode Share, M50 (24h)





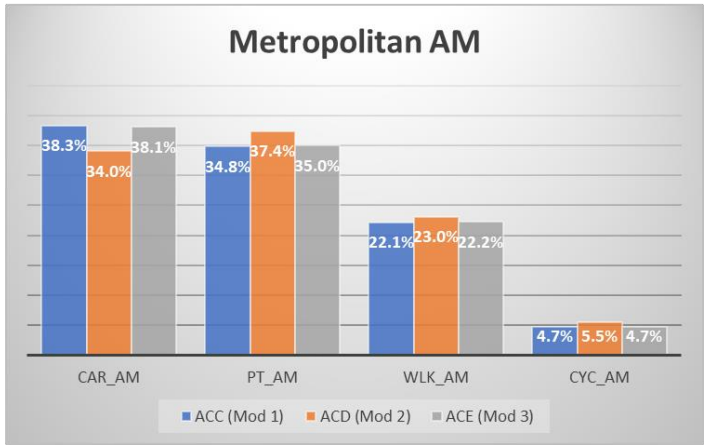
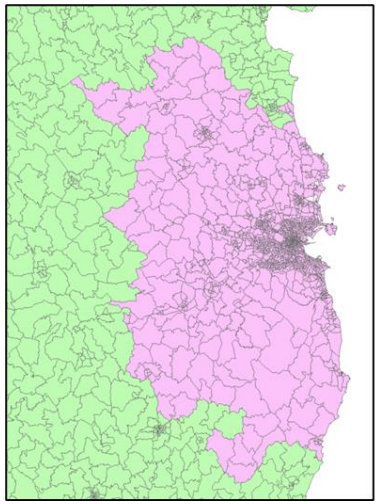
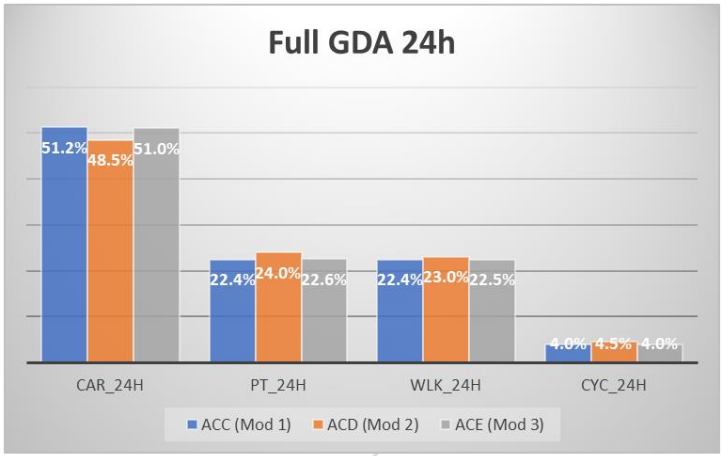


Figure 39 Mode Share, Metropolitan (24h)





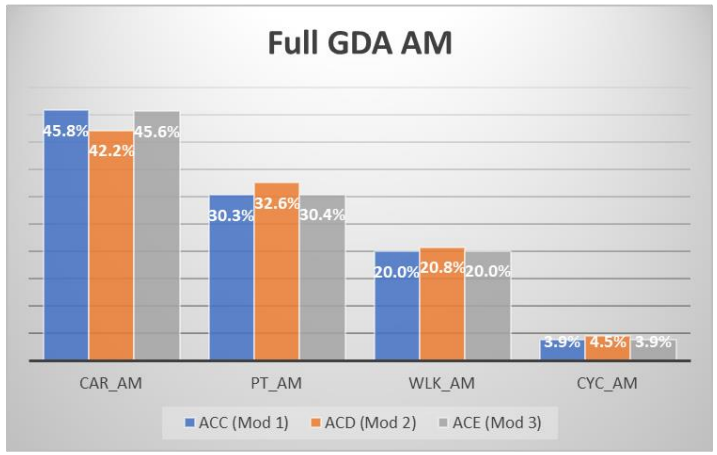
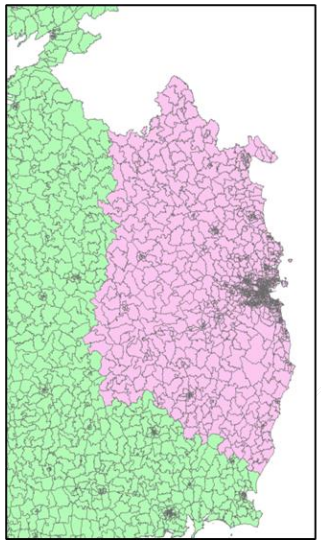
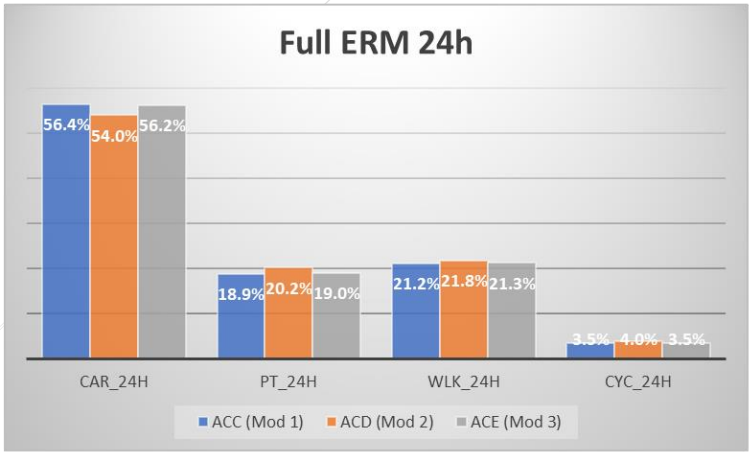


Figure 40 Mode Share, Full GDA (24h)





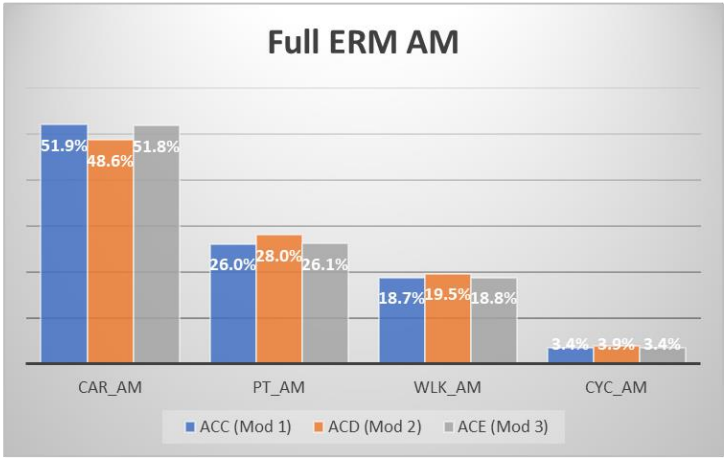


Figure 41 Mode Share, Full ERM (24h)

4.6.3 Outcomes – Phase 2, Fourth Iteration

The ACD scenario removed all the Free Workplace parking, reduced on-street parking in high demand paid-parking area in Dublin City, and increased parking charges everywhere, resulting in significantly reduced car trip levels to core urban areas. While this was useful to inform the potential for influencing mode shares, it is unlikely that this level of reduction in free parking provision is achievable.

Therefore, the final scenario within this iteration reverts back to the free parking levels in base year but keeps reduced paid-parking levels and the increased parking charges.

Subsequent iterations use a combination of the parking charge assumptions explored in this iteration in order to achieve a balanced outcome in terms of car to non-car modal shift and decongestion effects in central areas.

4.7 Phase 2 Fifth Iteration (Preferred Strategy)

4.7.1 Scenario Creation, Fifth Iteration

This final iteration within Phase 2 aims to draw together the findings of all the previous iterations and their outcomes to construct a combined scenario that represents the best balance between new network proposals and the overall associated package of car demand management. This iteration then presents a review of the range of related scenarios that show the progressive impact of different car demand management measures. This scenario incorporates outputs from key studies undertaken as part of the background work for the strategy, including the Navan Rail line, the Cycling Strategy, the Park and Ride Strategy and elements of the Area Based Studies.

Network Assumptions

Road

- BusConnects infrastructure
- Individual schemes
- Active modes measures

Heavy Rail

- DART+ & DART Underground
- Navan Rail line

Metro

- Metrolink

Light Rail

- Additional Luas lines as per **AAU**

Bus

- BusConnects on lower demand routes (vs new Luas)
- Rural Orbitals

Park and Ride

Active Modes

- Full cycle network
- 20 kph cycle speed

Land Use Assumptions

Land use is consistent with previous iterations.

Traffic Management Assumptions

- Sustainable mode priority on Road Network:
  - 60 second cycle times, BusConnects Infrastructure prioritisation measures and hinterland town speed changes.
- No Free Workplace parking:
  - Conversion of 400,000 free parking spaces into paid parking.
- Reduced Pdist (Parking Distribution):

- Number of parking spaces usable if destination zone parking capacity is reached divided by 2 (from 40,000 spaces to 20,000 spaces).

- GDA wide Parking charge testing:
  - We are investigating other options – such as tolling strategy on M50/national routes

Resulting Scenarios

5 Strategy Runs for 2042 are compared:

- Do Minimum (ACB);
- From Iteration 1:
  - Idealised public transport supply with DM (AAB).
- From Iteration 3:
  - Preferred GDA Strategy public transport network, (model run AAU); and
  - Preferred GDA Strategy public transport network (model run AAU) with Sustainable Mode Prioritisation measures (model run AAV).
- From Iteration 4 (this iteration):
  - Model run AAV with parking constraint demand management measures (called model run ACG).

4.7.2 KPI Assessment for Iteration Five

The KPI assessments in this Iteration demonstrate the effects of car demand management interventions introduced up to this point in the Strategy development process, using the five Strategy runs outlined above.

An analysis of car trip totals and mode shares is presented in the figures below separately for Canal, M50, Metropolitan and GDA areas and for combined GDA (Please refer to Chapter Two which shows maps for these areas).

The following figures and associated KPIs are presented:

- Figure 42 presents the total trip numbers that are generated within each assessment area over 24 hours and in the AM Peak in 2042;
- Figure 43 presents the vehicles kilometers travelled in the AM Peak Hour in 2042 from each assessment area; and
- Figure 44 to Figure 49 present the modes shares for the AM Peak Hour and 24-hour for 2042 for each scenario by area.

Finally, a further set of KPIs are presented for the Do Minimum (ACB) and the preferred Do Strategy Scenario (ACG).

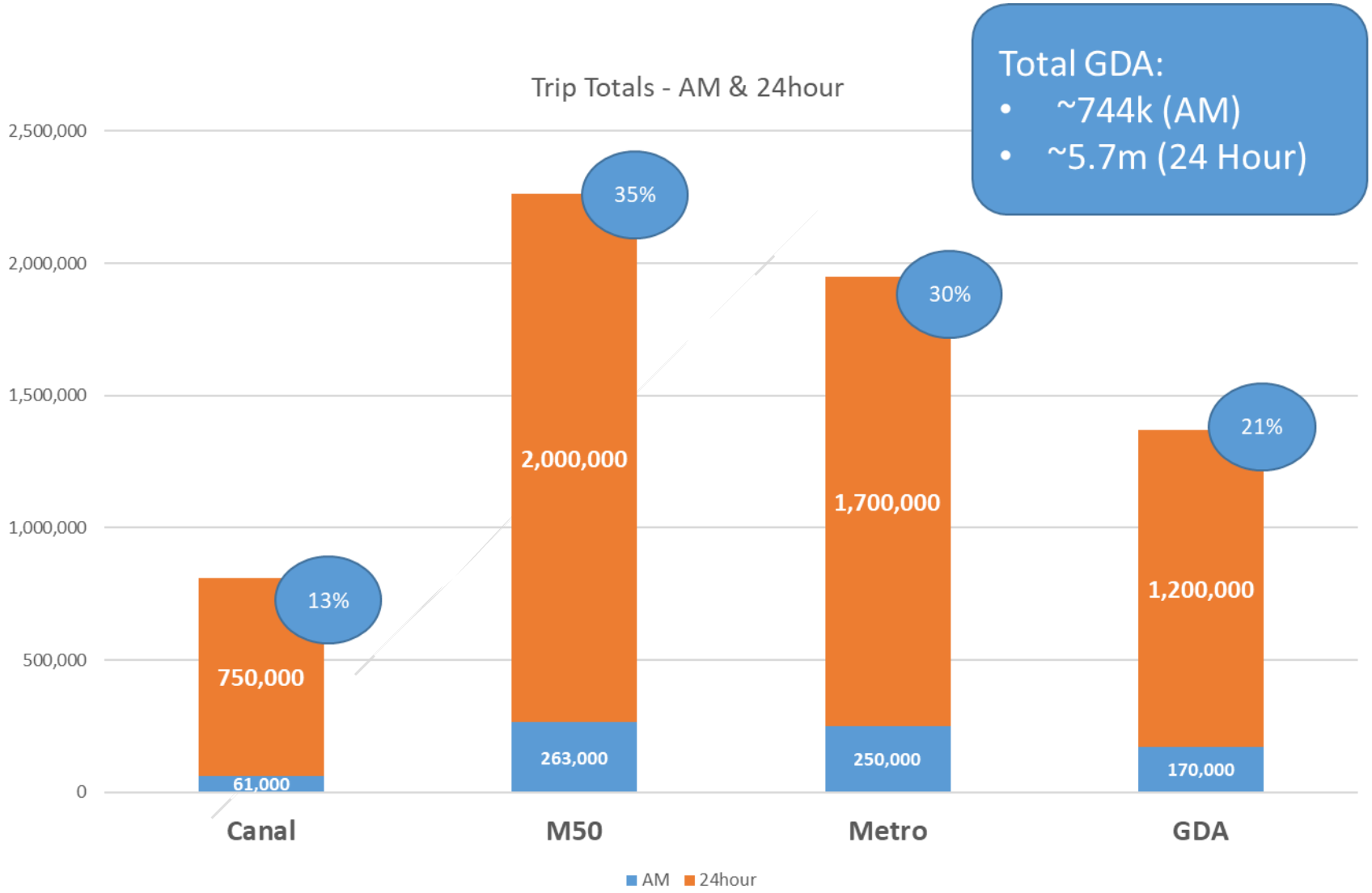


Figure 42 Trip Totals, AM and 24hr (Phase 2, 5th Iteration)

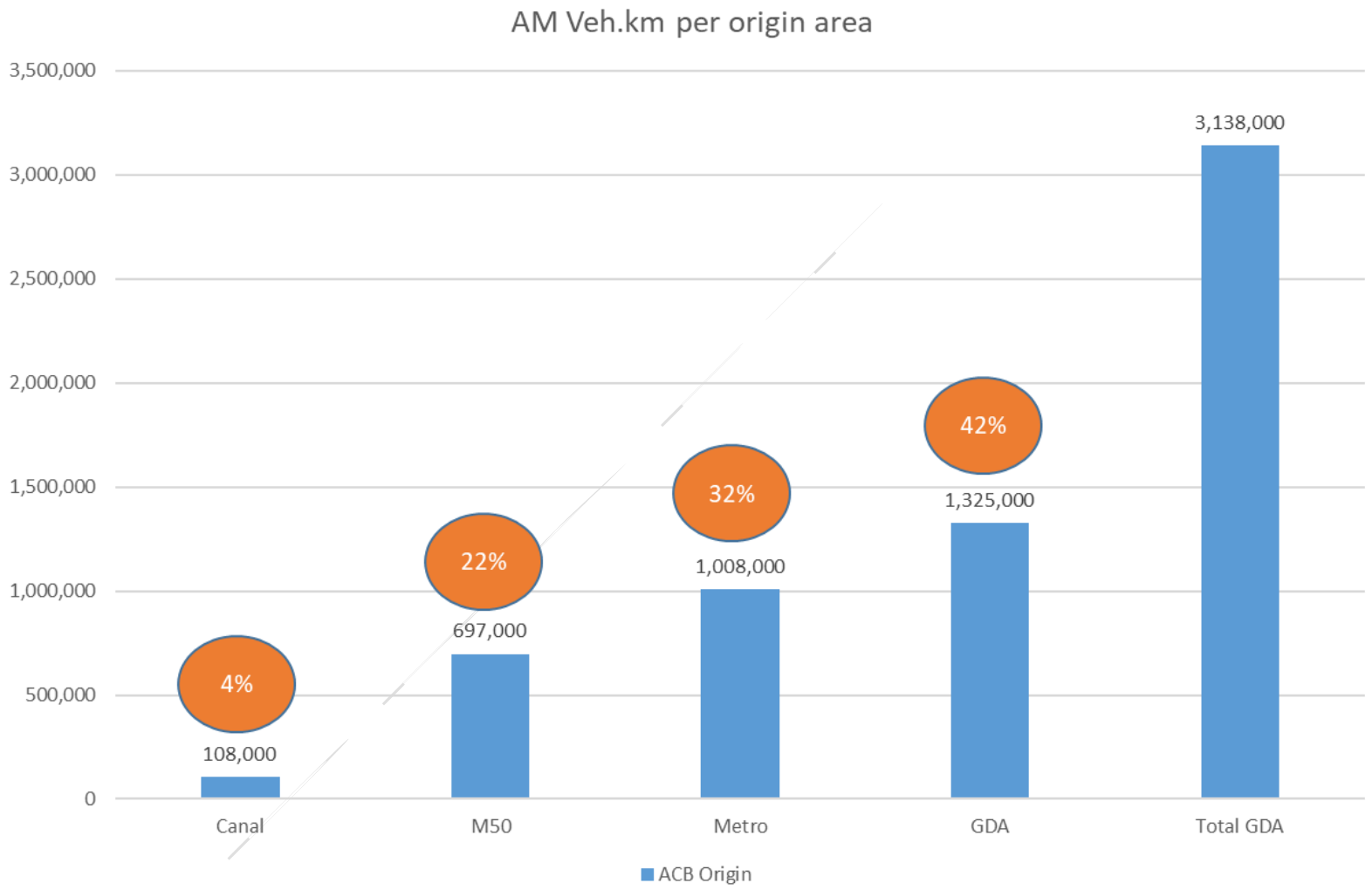


Figure 43 Car Vehicle KMs by Area (Phase 2, 5th Iteration)

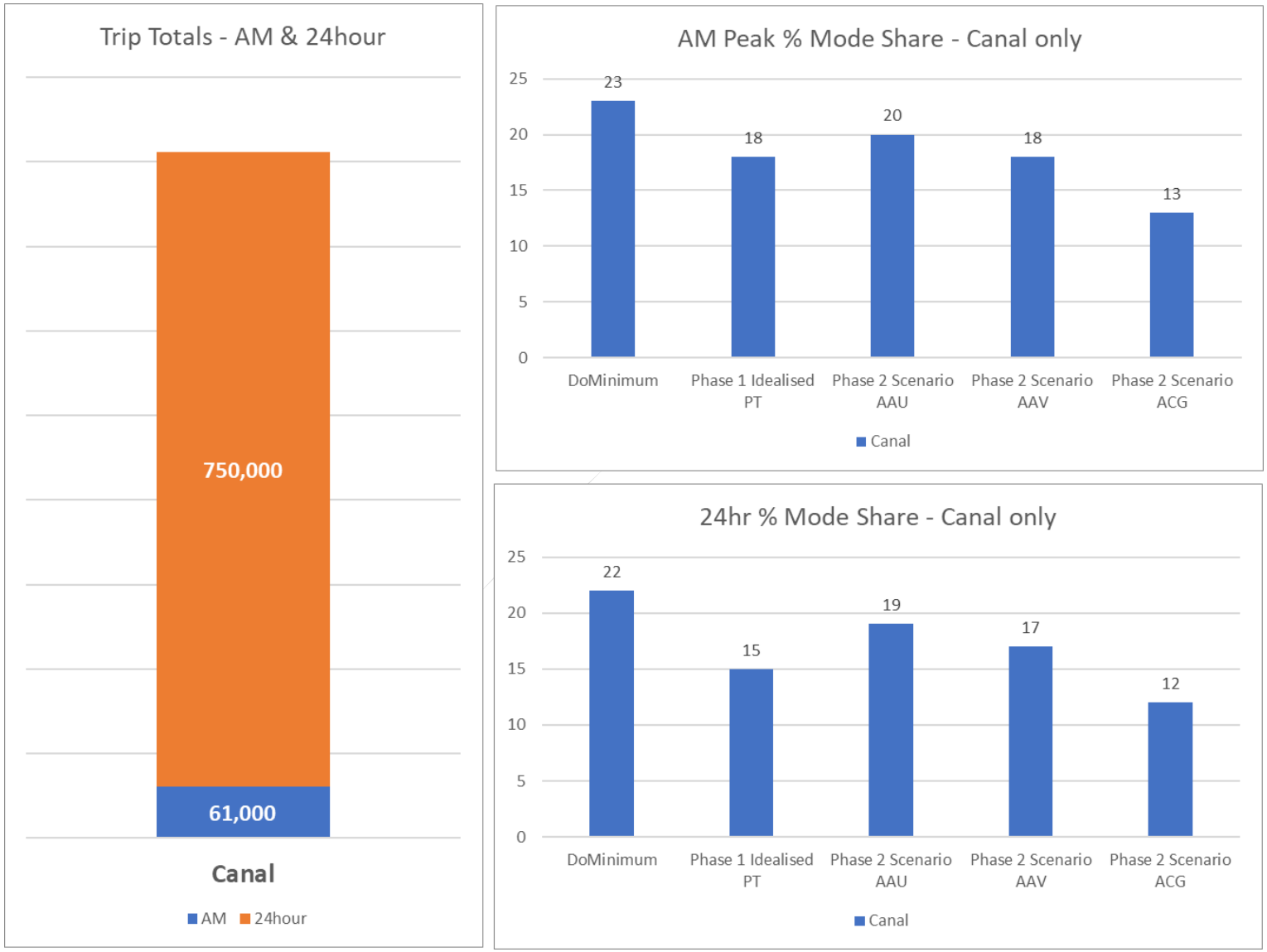


Figure 44 Car Trip Totals and Mode Shares, Canal (Phase 2, 5th Iteration)

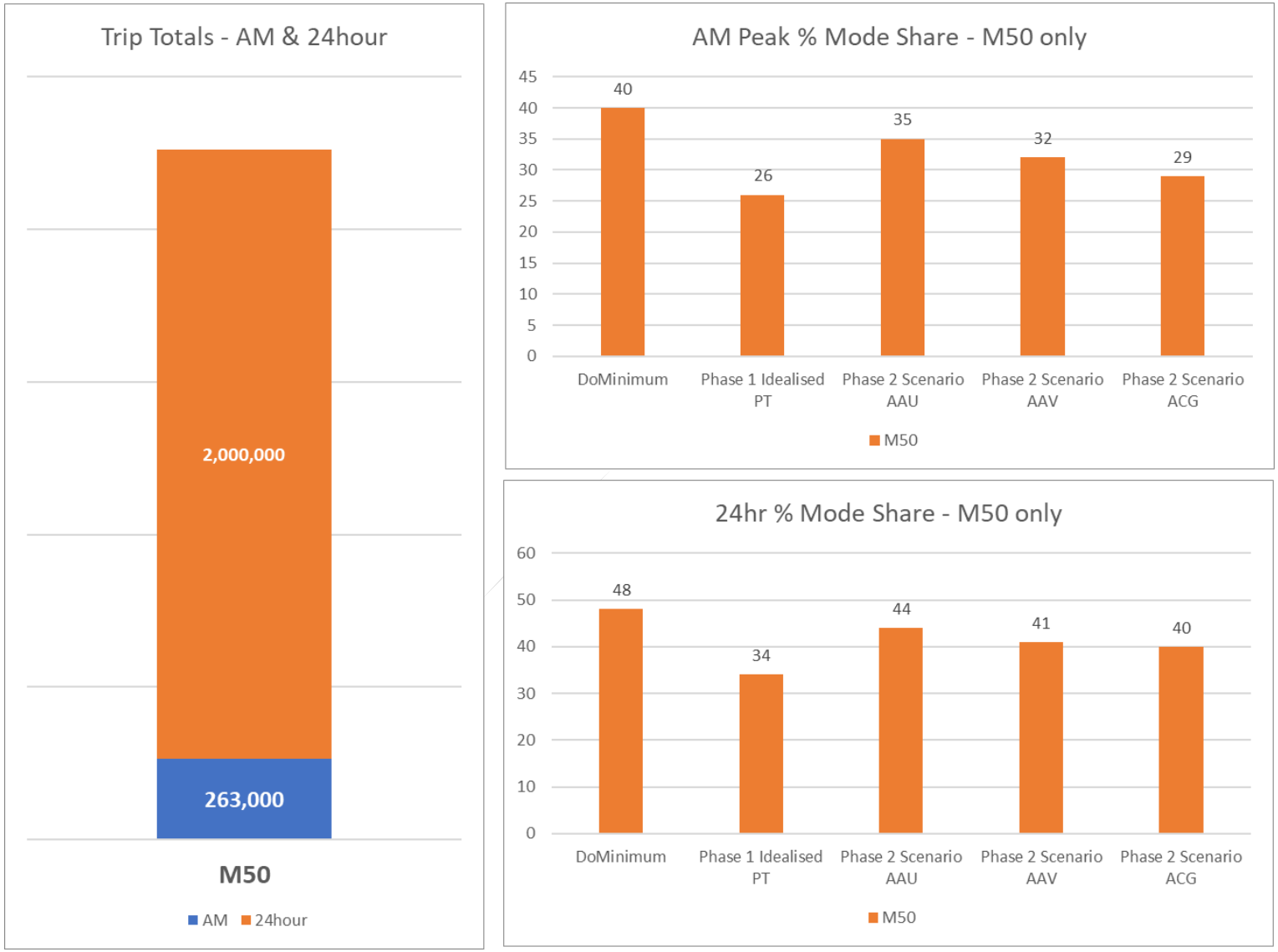


Figure 45 Car Trip Totals and Mode Shares, M50 (Phase 2, 5th Iteration)

Figure 46 Car Trip Totals and Mode Shares, Metro (Phase 2, 5th Iteration)

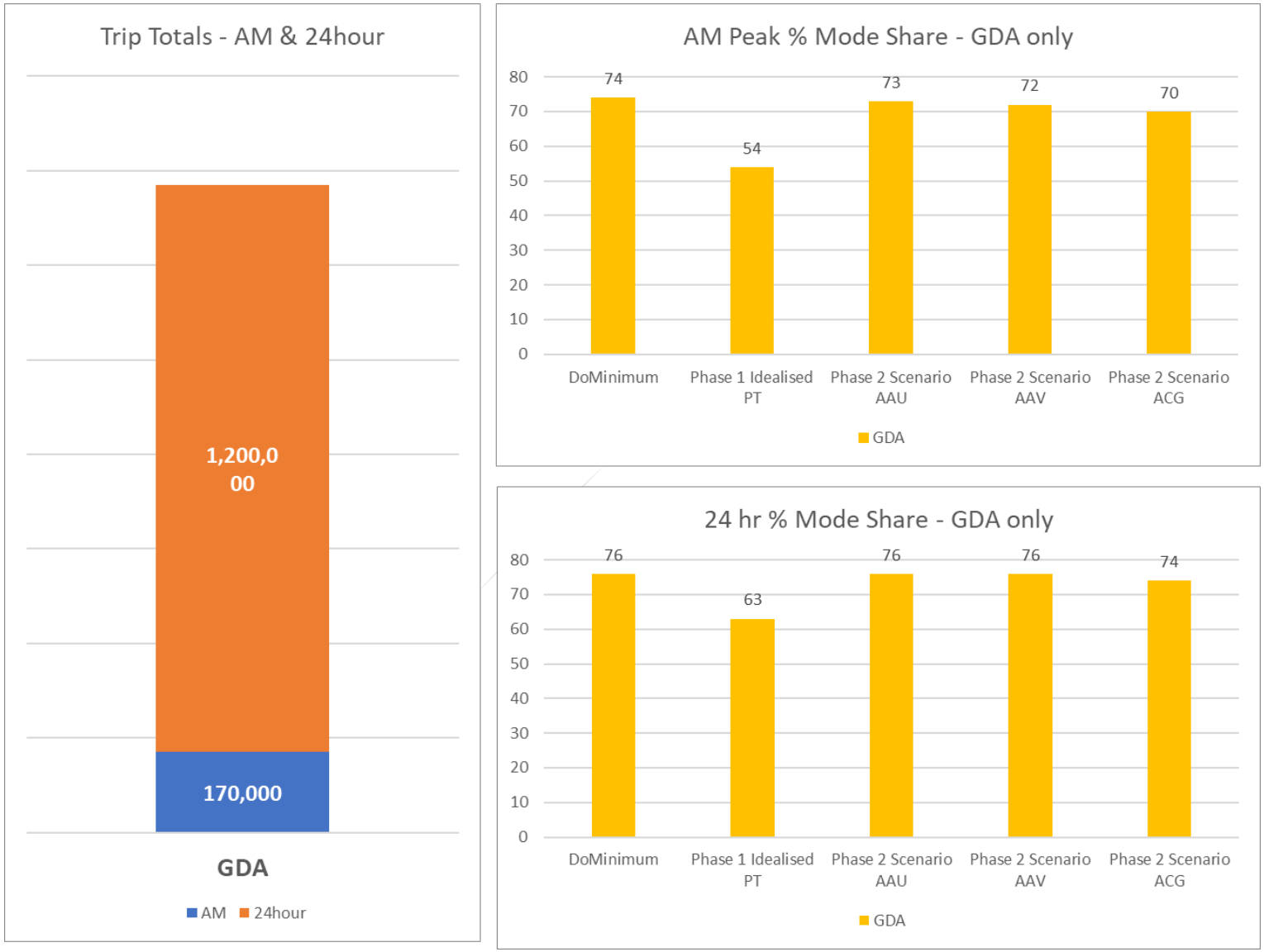


Figure 47 Trip Totals and Mode Shares, GDA (Phase 2, 5th Iteration)

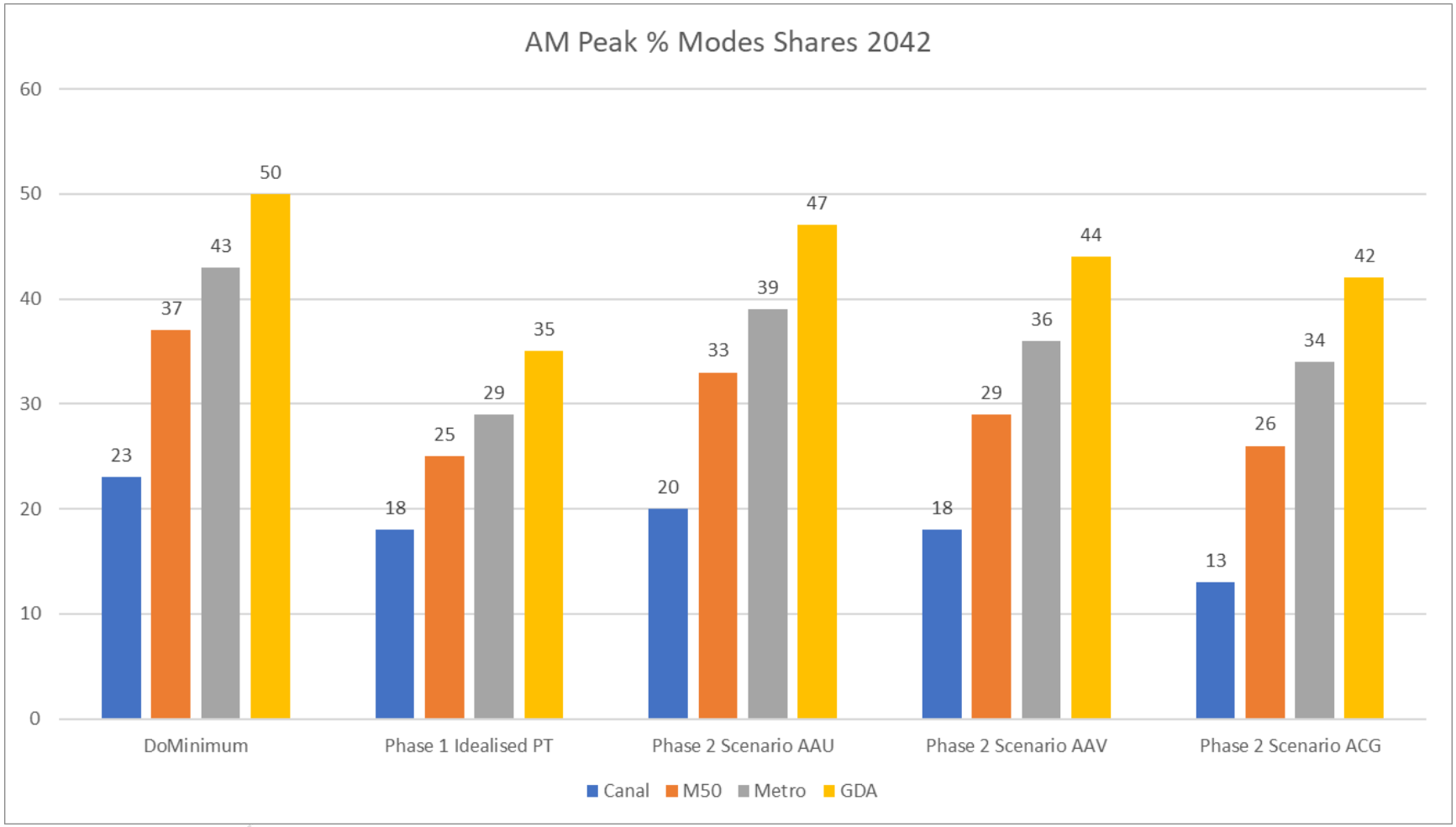


Figure 48 AM Peak Mode Shares, Cumulative (Phase 2, 5th Iteration)

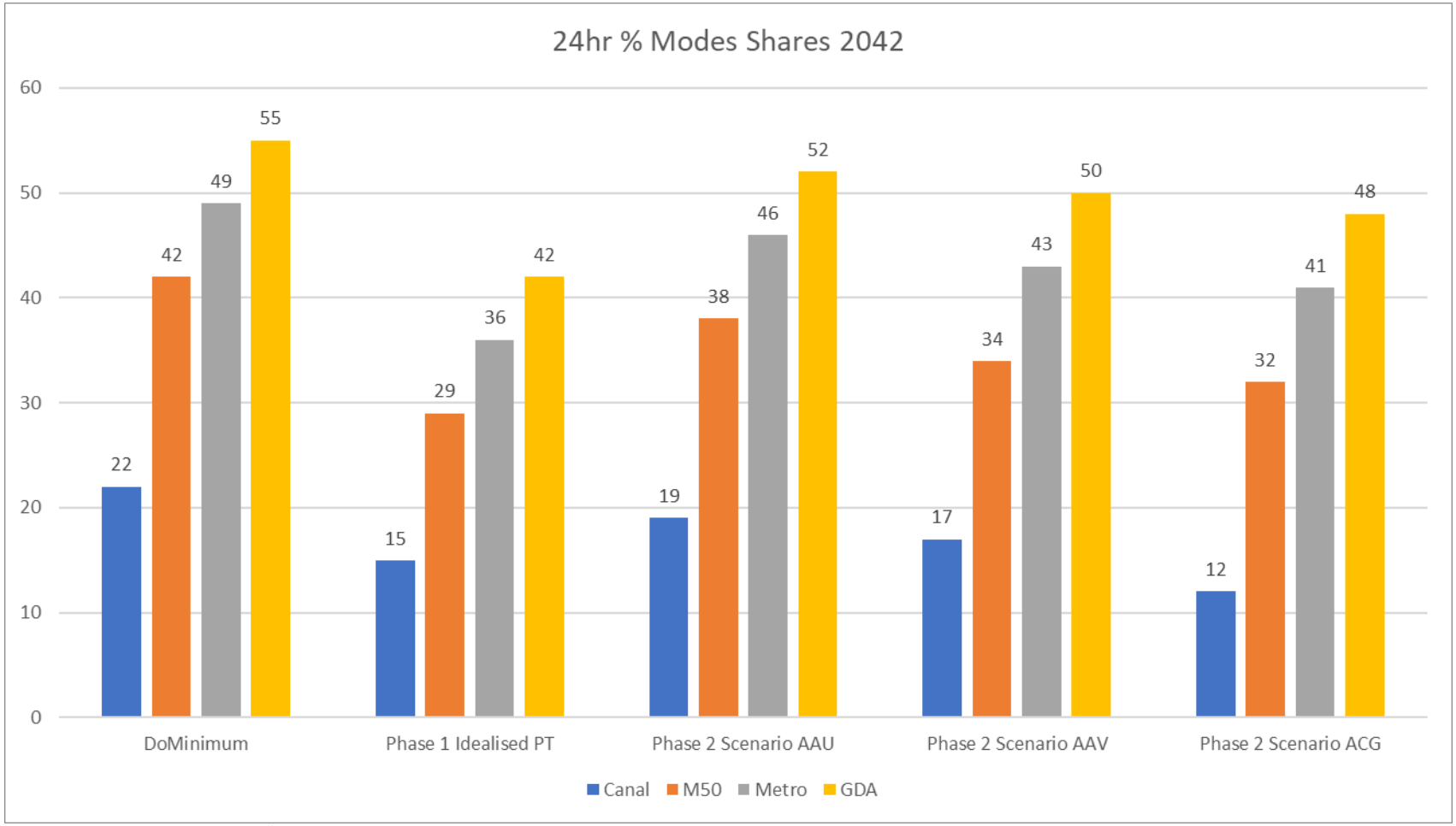


Figure 49 24hr Mode Shares, Cumulative (Phase 2, 5th Iteration)

Mode Share Assessment

Mode shares have been extracted for both Do Minimum & Strategy model runs and are presented in figures below.

Across the full GDA, the 24h car mode share is reduced from 54.5% in the DM to 48.2% with the Strategy in place. This mode shift benefits to the Public Transport mode, with an increase from 16.8% to 23.2%. The increase in cycling (from 3.9% to 6.0%) is counterbalanced by a decrease in walking (from 24.8% to 22.6%), meaning limited impact to active modes overall.

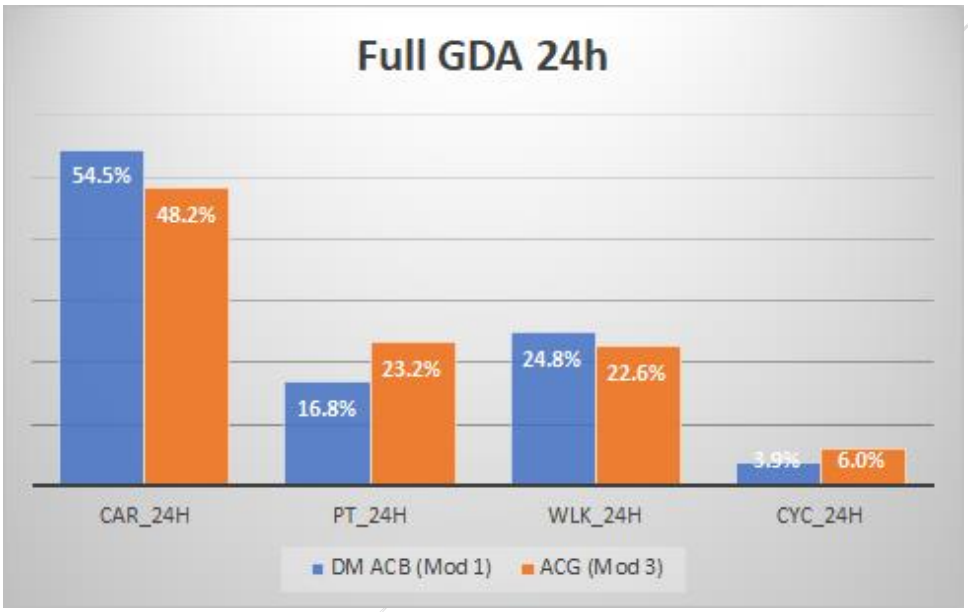


Figure 50 Mode shares: Full GDA – 24h - ACB Vs. ACG

When looking at the AM peak hour only, the gap between the Do Minimum and the Strategy is even wider, with a 8.5 %points reduction in car mode shares (Vs. 6.3 %points for 24h). The AM peak hour being the most congested hour of the day, car journey times are the longest, making Public Transport more attractive than during the other time periods.

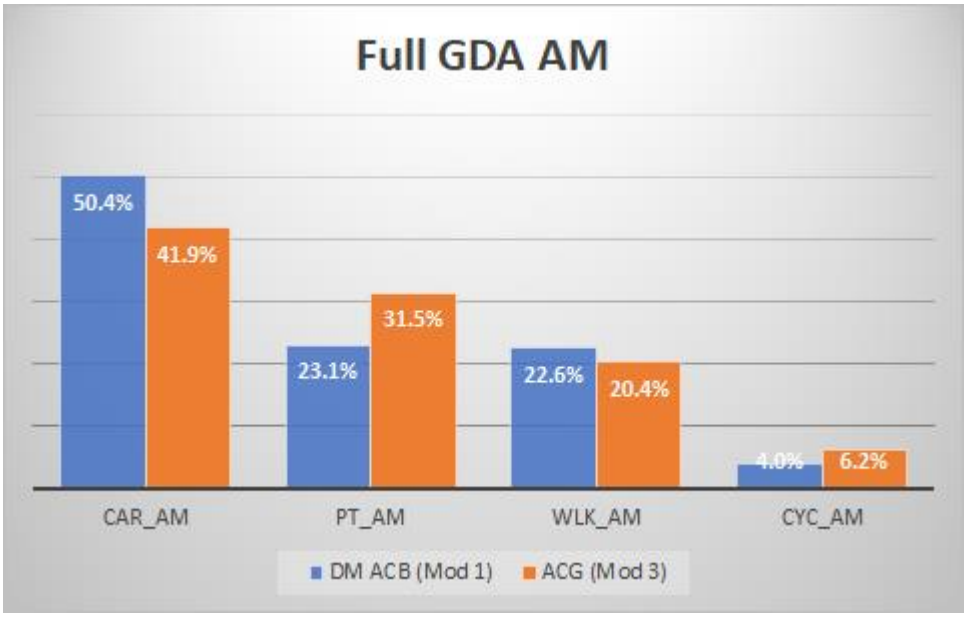


Figure 51 Mode shares: Full GDA – AM - ACB Vs. ACG

The focus on the Dublin City centre, delimited by the canal cordon, shows that car becomes a minor mode of travel, with only 11.7% of the trips choosing the car with the strategy. Public Transport becomes the main mode of travel for trips originating within the canal cordon (43.9%).

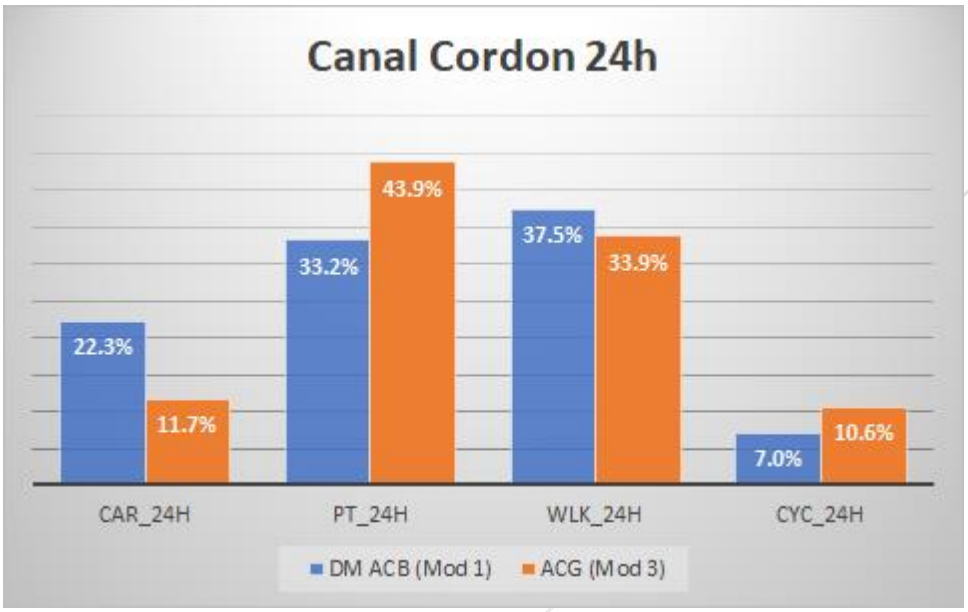


Figure 52 Mode shares: Canal Cordon – 24h - ACB Vs. ACG

Looking at a wider area, delimited by the M50, the strategy brings Car and public transport demand to similar level (32.3% Car – 31.4% PT), compared to an unbalanced ratio in favour of car in the DoMin (41.6% Car – 22.9% PT).

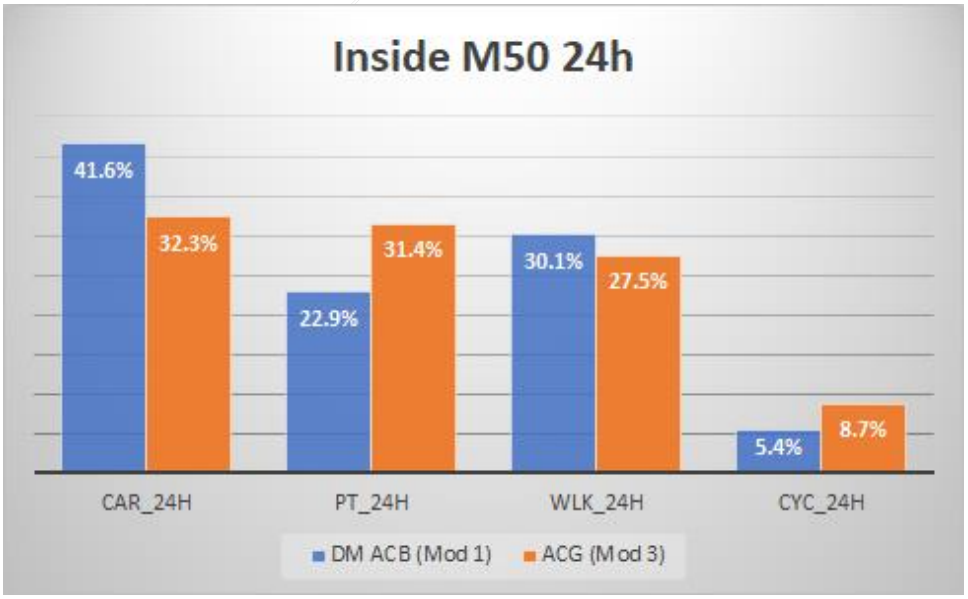


Figure 53 Mode shares: M50 – 24h - ACB Vs. ACG

Car CO2 Emissions Assesment

Total annual CO2 emissions from cars are estimated using the ENEVAL tool and presented in figure below. We can see that the strategy reduces the volume of CO2 emitted by cars.

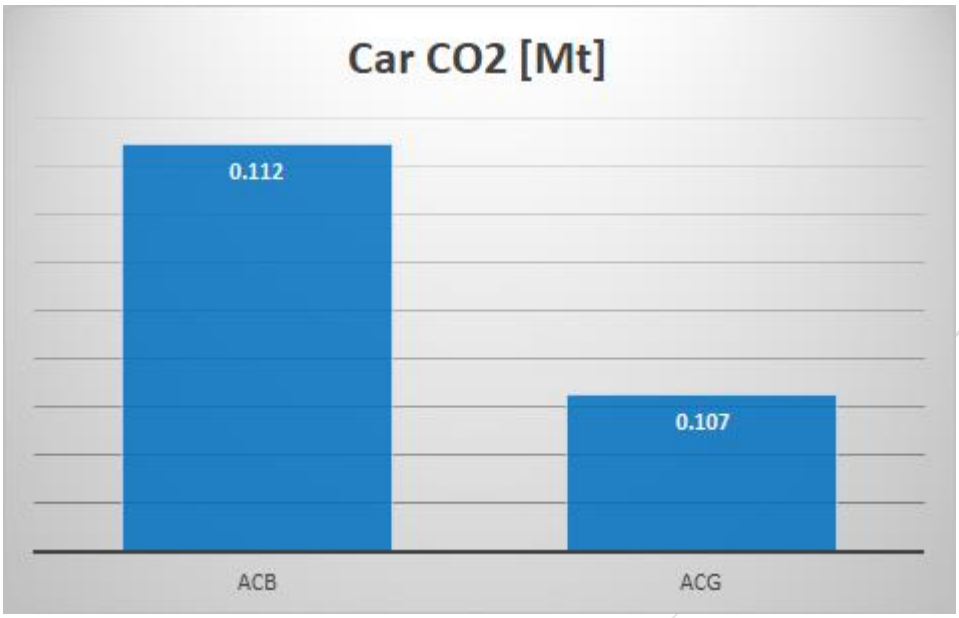


Figure 54 Car CO2 emissions – ACB Vs. ACG

Veh.kms travelled Assessment

Total distance travelled by motorized vehicles is estimated by the model. It provides a proxy to assess nuisances associated with road traffic (noise, pollution, congestion). The Strategy reduces the number of daily veh.km by 1.8m veh.km (5%) compared to the Do Minimum.

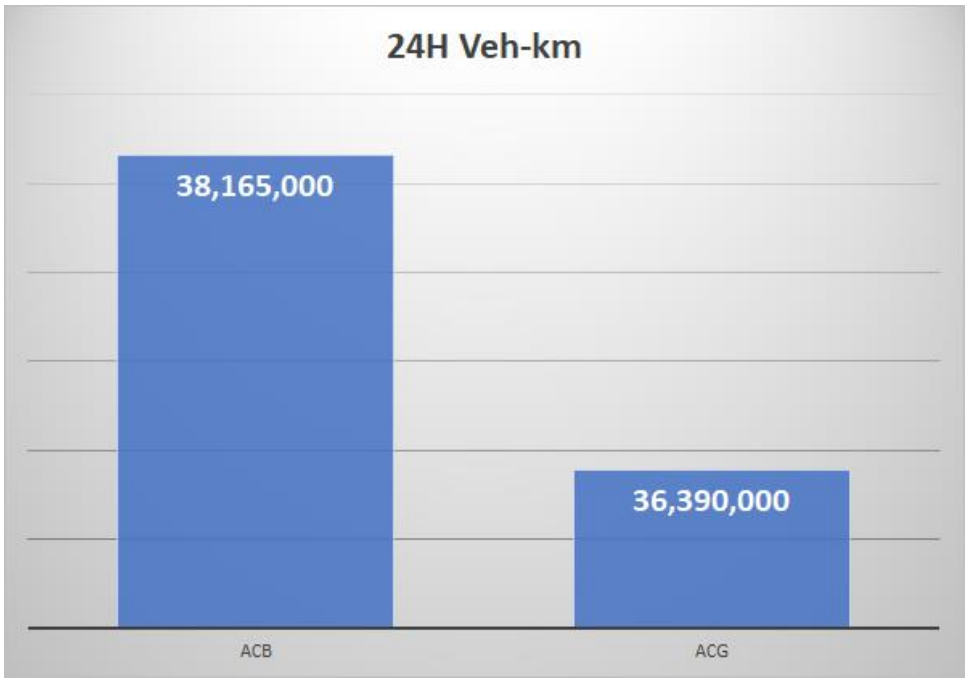


Figure 55 24h veh.km – ACB Vs. ACG

Road Casualties Assessment

Using COBALT software, road casualties were estimated for both Do Minimum and Strategy. Calculations are based on veh.km on road type with different collision rates associated. Table 4-10 below shows a reduction in road casualties, mainly driven by the overall reduction in veh.km.

Table 4-10 Road Casualty estimation – ACB Vs. ACG

	Do Minimum (ACB 2042)	Strategy (ACG 2042)
Fatal Casualties	53	50
Serious Casualties	234	220
Slight Casualties	5,999	5,652
Fatal Casualty Saving v DM	–	3
Serious Casualty Saving v DM	–	14
Slight Casualty Saving v DM	–	347

Travel time – Goods vehicles

Strategic movements such as goods vehicle journeys are monitored to ensure that the strategy works for all types of transport. The average journey times for goods vehicle has been calculated for both Do Minimum and Strategy are presented in table below.

The average journey times for goods vehicle goes up by 5% with the strategy in place. An increase was expected as road network capacity is reduced.

Table 4-11 Goods vehicle Journey Times – ACB Vs. ACG

	DM			DS			%DIFF		
Mode	Trips	Journey Times (pcu.hours)	Av. JT per trip (min)	Trips	Journey Times (pcu.hours)	Av. JT per trip (min)	Trips	Journey Times (pcu.hours)	Av. JT per trip (min)
LGV	130,610	58,511	26.9	130,609	61,717	28.4	0%	5%	5%
OGV1	18,090	14,260	47.3	18,175	15,053	49.7	0%	6%	5%
OGV2_P	5,982	4,122	41.4	6,092	4,752	46.8	2%	15%	13%
OGV2_NP	33,471	26,722	47.9	33,499	27,718	49.6	0%	4%	4%
TOT	**188,153**	**103,616**	**33.0**	**188,375**	**109,240**	**34.8**	**0%**	**5%**	**5%**

Travel time – Dublin Airport & Dublin Port

Access to strategic infrastructure is essential and must be looked at as part of the strategy. The average journey times to access Dublin Airport and Dublin Port are presented in table below.

The average journey times to the airport is reduced by 8% with the strategy by car and by 21% by public transport. These reductions are due to Metrolink, which provides a fast public transport connection to the airport. It also switches a lot of car demand to public transport, making the road network locally faster.

The average journey times to the port increase by 4% for car and is reduced by 10% for public transport. The increase in road journey times is due to the road network capacity reductions in the strategy, while the reduction in public transport journey times is coming from the improvement to the public transport network.

Table 4-12 Goods vehicle Journey Times – ACB Vs. ACG

	ACB			ACG			%DIFF		
	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)
To Dublin Airport									
ROAD	13,594	7,448	32.9	9,655	4,841	30.1	-29%	-35%	**-8%**
PT	12,487	12,245	58.8	18,175	14,156	46.7	46%	16%	**-21%**
To Dublin Port									
ROAD	18,977	13,684	43.3	18,860	14,129	44.9	-1%	3%	**4%**
PT	460	540	70.4	524	553	63.4	14%	3%	**-10%**

Connectivity – PT access to Dublin centre

Maps below show public transport journey times in the AM peak to access O'Connell Street, by 15min band. By comparing the DoMin and the Strategy maps, we can see that the light red area (<15min) has expanded with the strategy. It is also worth noting that almost all the area within the M50 can reach O'Connell St in less than 45min by public transport.

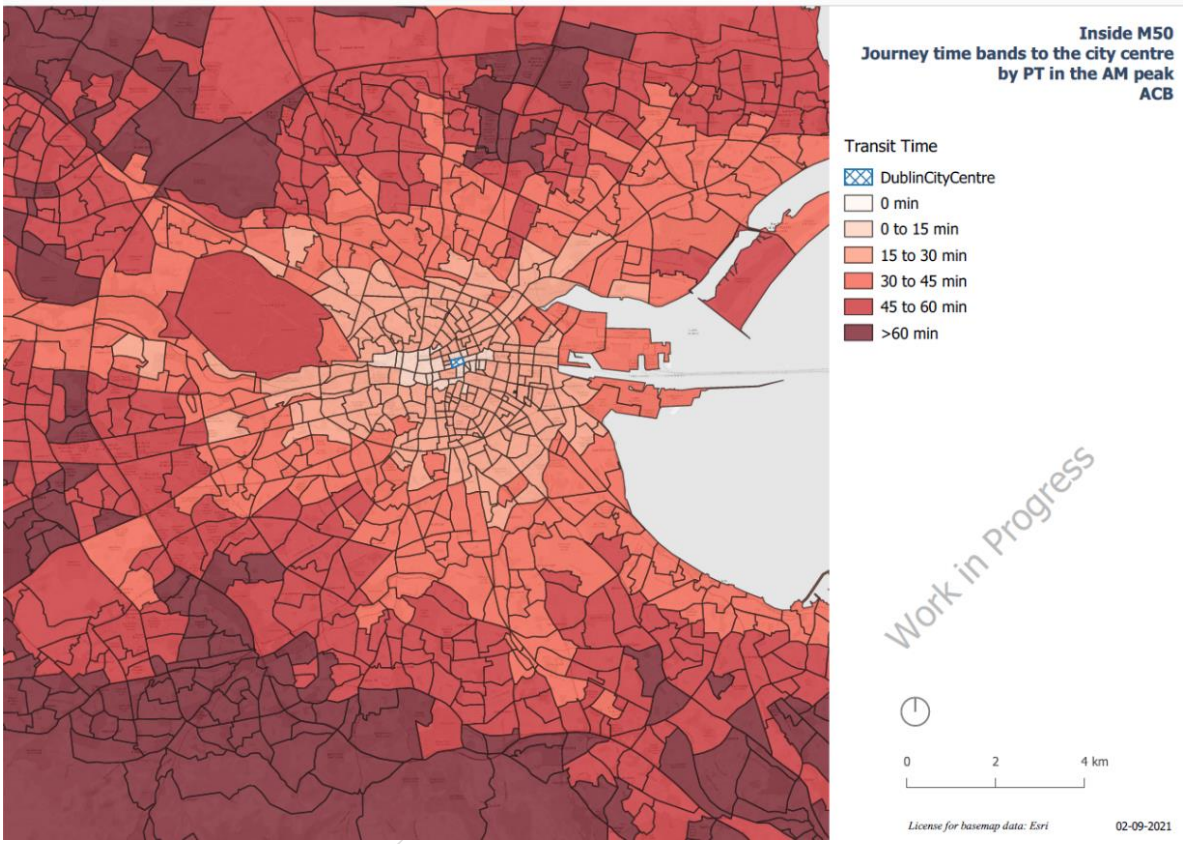


Figure 56 AM PT journey time to O'Connell St. ACB

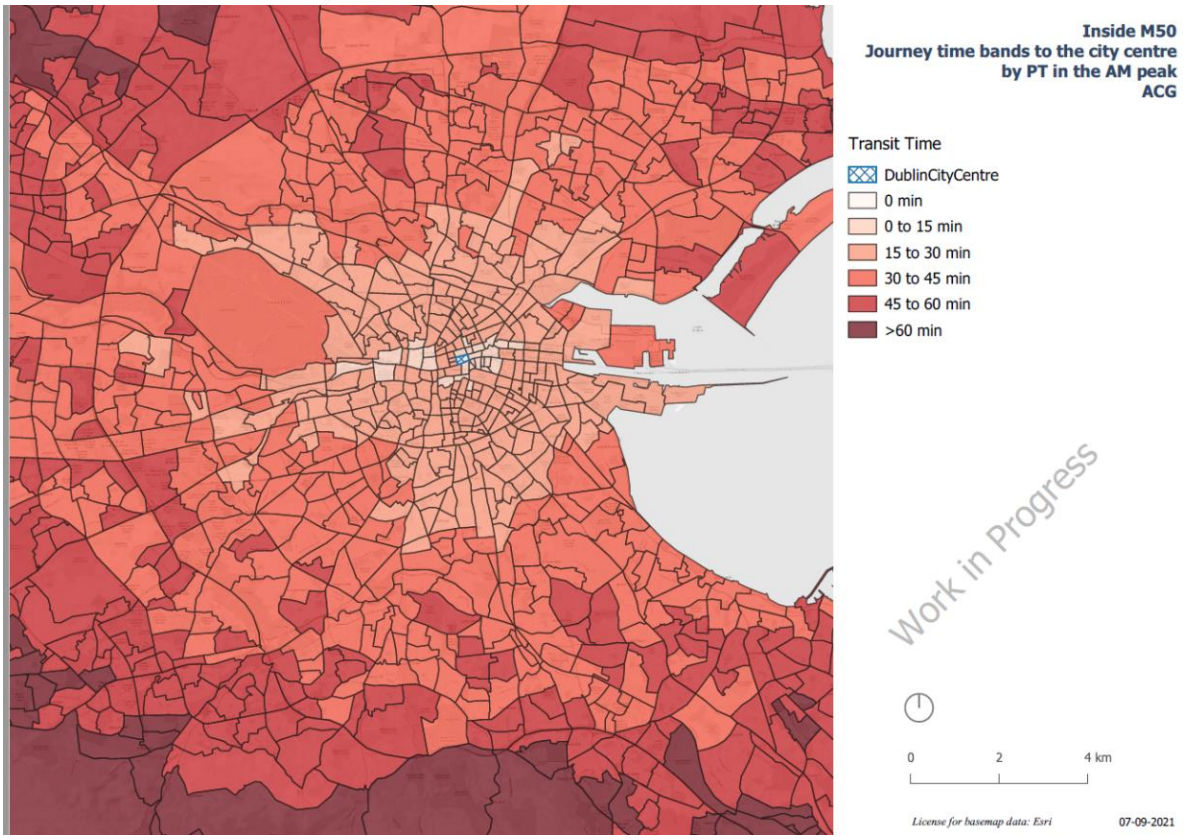


Figure 57 AM PT journey time to O'Connell St. ACG

4.7.3 Outcomes – Phase 2, Fifth Iteration

Based on the KPIs presented in the previous section the fifth iteration has achieved a good balance between future additional network and car demand management measures. The various indicators suggest therefore an efficient and effective balance of Strategy measures have been developed up to this point. This phase therefore concludes with the main outcomes as summarised below.

4.8 Phase 2 Outcomes

Phase 2 brought forward the key findings from Phase 1 around potential additional demand to serve on various corridors, and then included five additional iterations of modelling with the following outcomes:

- Phase 2, Iteration 1 outcome:
  - Analysis of Phase 2, First Iteration results show the overall the Luas option is preferred to the Metro Option on cost and performance grounds. An extensive Luas network would serve almost as many public transport users but cost less than half the Metro network. A Luas scenario was therefore taken forward into the next iteration (Iteration 2) with additional improvements intended to further optimise the performance of the network.
- Phase 2, Iteration 2 outcome:
  - The Second Iteration modelled extensive Luas network based on the demand levels achieved for the given land use scenario.
  - This modelling also shows that for significantly less cost than Metro alternatives, an extensive Luas network would provide equivalent levels of total ridership.
  - Traffic management options were not considered up to this point.
  - This Iteration showed that significant level of restriction and/or price increase on car access/usage is required in order to equalise car and public transport journey times.
- Phase 2, Iteration 3 outcome:
  - Iteration 3 developed an efficient and effective public transport system, in combination with measures to manage car demand which could achieve a significant shift from car to public transport, particularly in the Dublin area.
  - A cycle time reduction was applied to benefit public transport, pedestrians and cyclists.
  - The key conclusion arising from this iteration is that car demand management measures are a critical part of the Strategy going forward.
- Phase 2, Iteration 4 outcome:
  - Iteration 4 sought to refine the level of parking supply as a car demand management measure. ACD removed all the Free Workplace parking, reduced other parking in high demand paid-parking area in Dublin City, and increased parking charges everywhere, resulting in significantly reduced car trip levels to core urban areas.
  - The final scenario outcome from this iteration reverted back to the free parking levels in base year but kept reduced paid-parking levels and the increased parking charges.
- Phase 2, Iteration 5 outcome:
  - This iteration drew the various findings from previous iterations to produce the final Phase 2 Network Plan, which is described in Figures 58 to 62 below.

- The resulting outcome from Phase 2 is a robust but ambitious strategy for high levels of travel demand assuming continuation of trends in low cycling mode share and reverting to pre-pandemic trip rates.

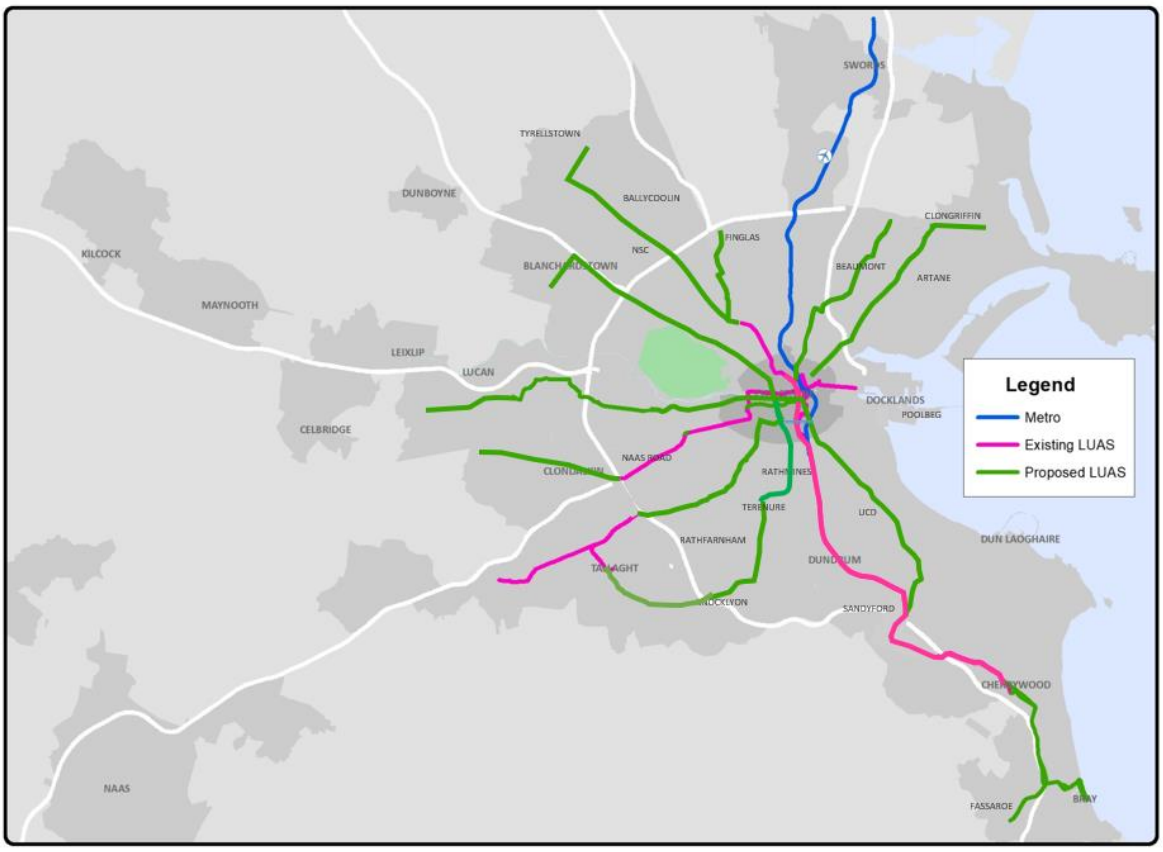


Figure 58 Phase 2 Proposed Light Rail Network

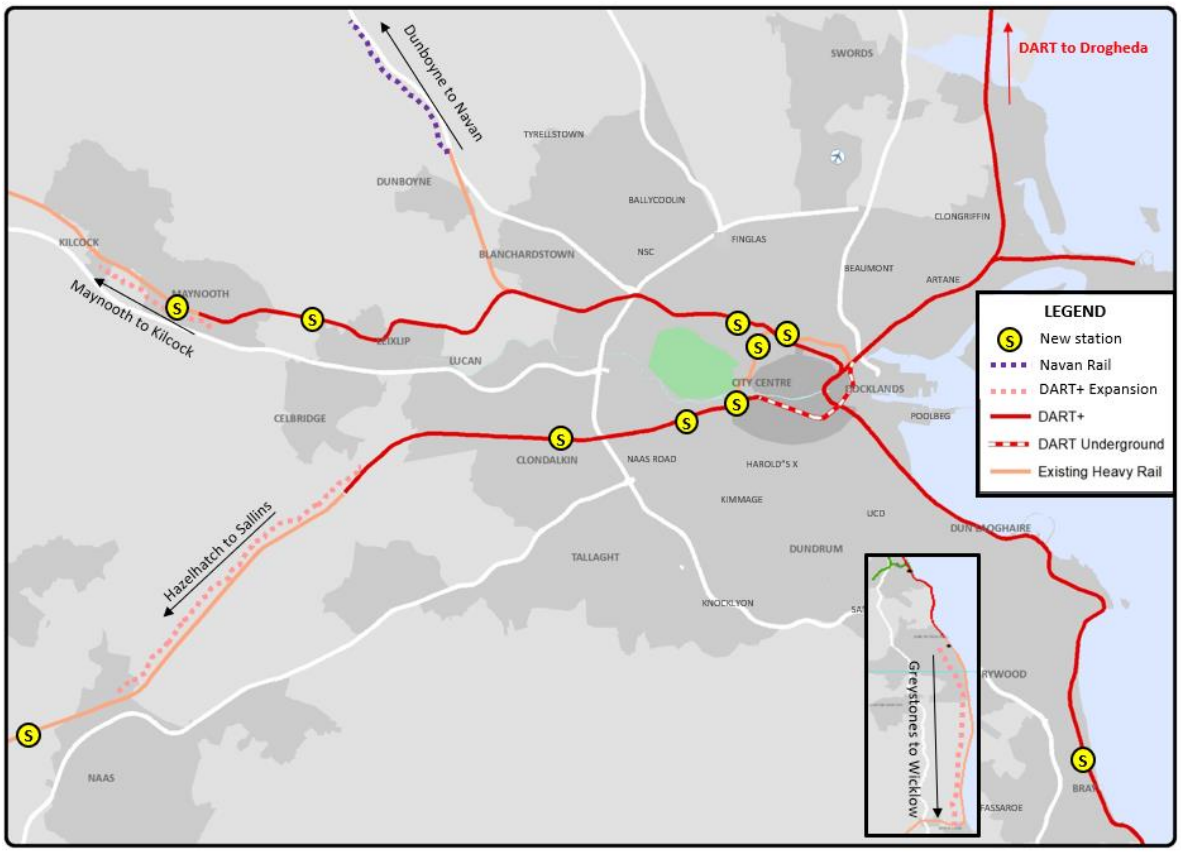


Figure 59 Phase 2 Proposed Heavy Rail Network

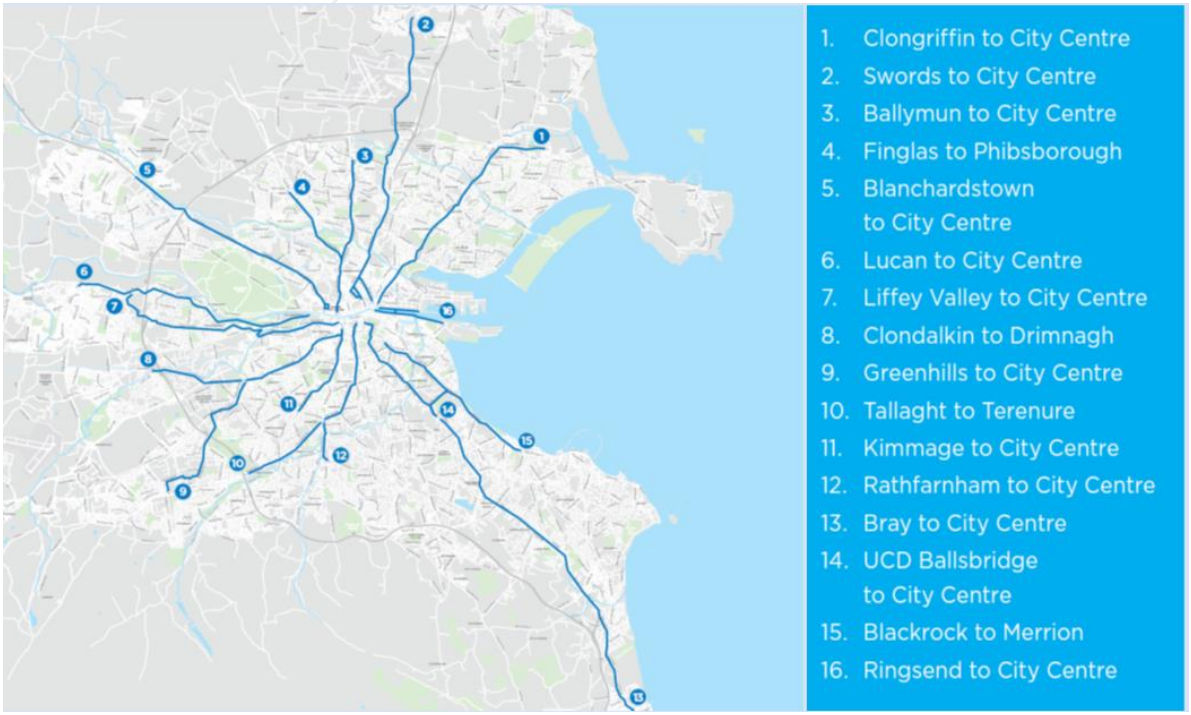


Figure 60 Phase 2 Proposed Bus Network (Radial)

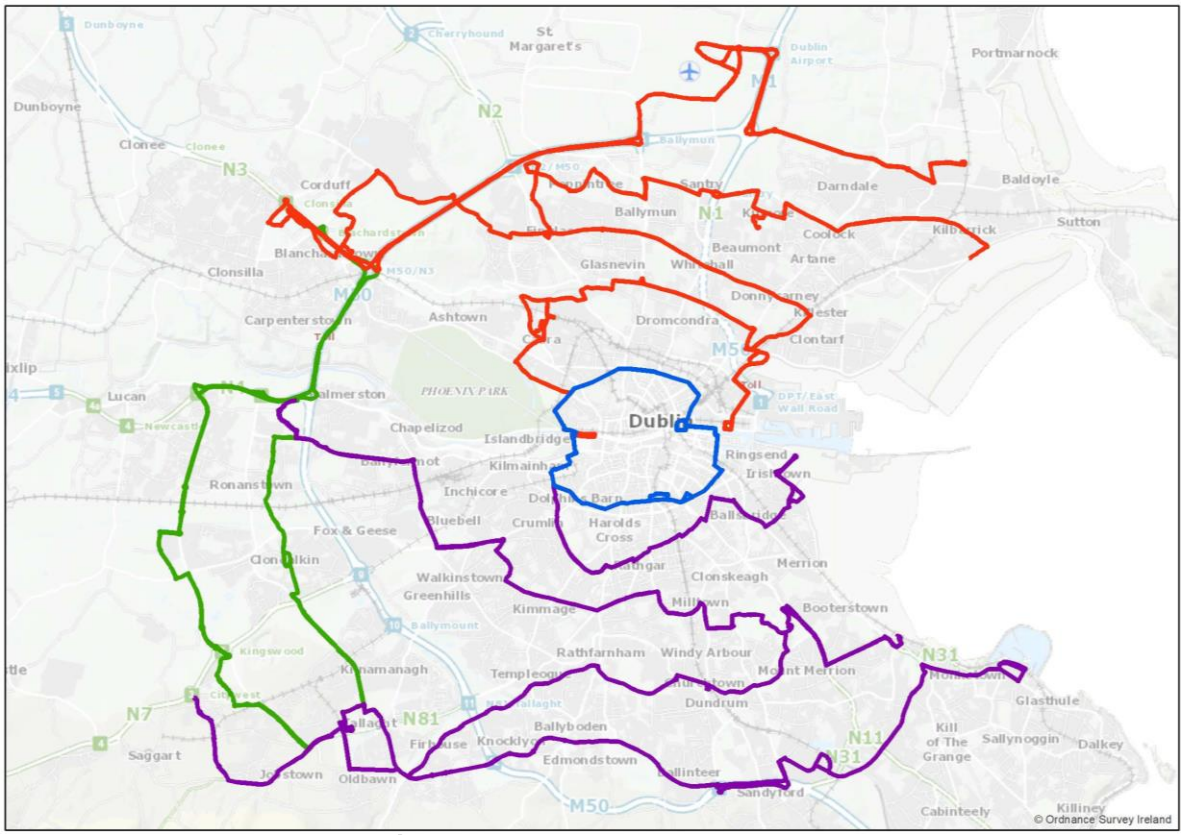


Figure 61 Phase 2 Proposed Bus Network (Orbital)

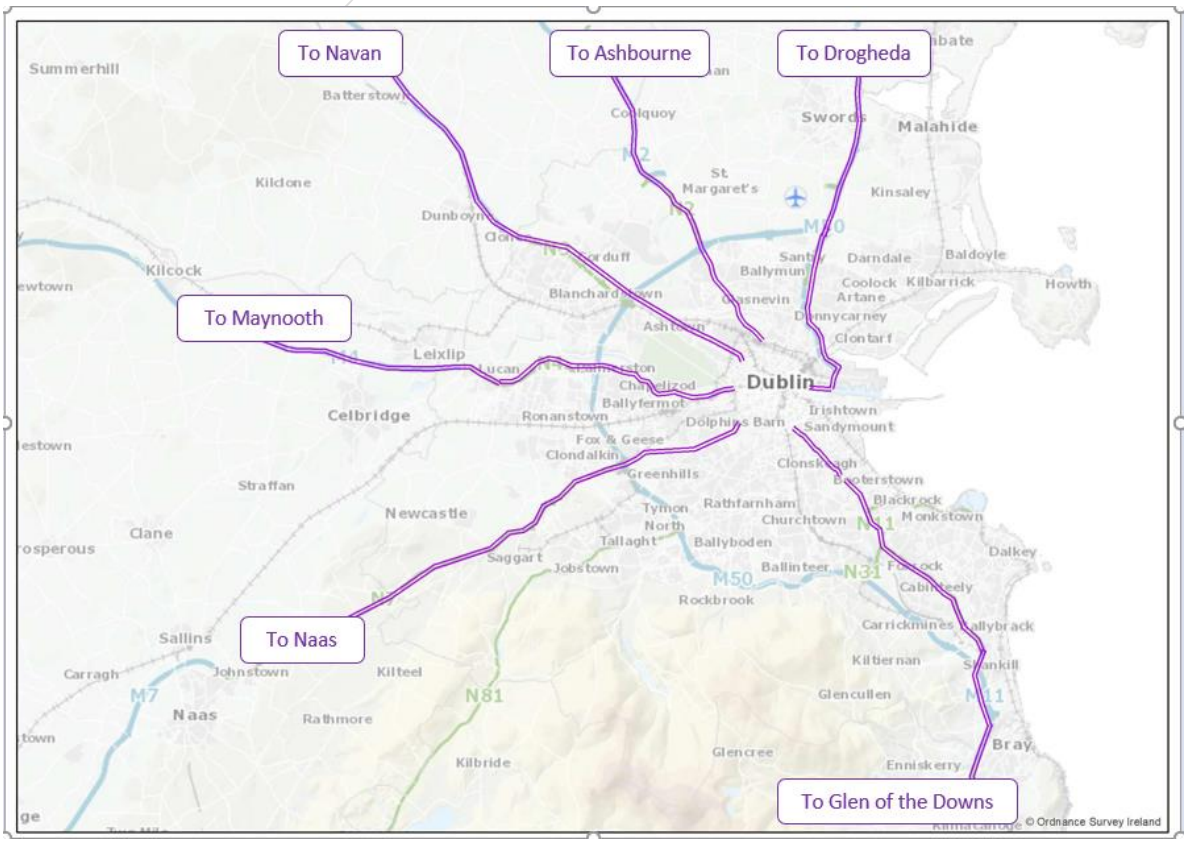


Figure 62 Phase 2 Proposed Bus Network (Long Distance)

5 Phase 3 – Scenario Planning

5.1 Phase 3 Objectives and Scope

To finalise the Strategy Development Process the NTA has taken a Scenario Planning approach to test a wide range of potential alternative futures. The purpose of this approach is to stress test the Emerging Transport Strategy from Phase 2 against a range of different but plausible alternative futures. This process informed a significant level of the strategic decision making that has resulted in the final GDA Transport Strategy 2022-2042.

To recap, Phase 2 involved taking the demand output to be served by public transport from Phase 1 and optimising different combinations of potential network and car demand management options to achieve the transport strategy objectives. The output from Phase 2 is a preferred emerging package of transport strategy measures.

To test the robustness of the emerging strategy recommendations, Phase 3 takes the output from Phase 2 and examines the impact of varying key external factors. Phases 1 and 2 have to this point focussed on iterating different options of transport supply and car demand management but have not changed other key (external factor) assumptions such as, for example, changing trip rates and behavioural changes which would lead to a significant ramp up in cycling mode share equivalent to those seen internationally in cities such as Amsterdam and Copenhagen.

Phase 3 also takes account of the Climate Action Plan (CAP), 2019 and the associated goal of reducing carbon emission from transport in Ireland by 51% in 2030 relative to 2019. Contributing over 20% of the national carbon emissions, the transport sector has a key role to play in achieving the national decarbonisation objective and that transformational change will be required to achieve it.

Overall, the additional transport infrastructure and transport services set out in the Transport Strategy, in addition to proposed vehicle electrification and increased use of bio-fuels, will reduce the likely emissions outturn for the GDA in 2030 to approximately 2.0 MtCO2eq, down from 3.2 MtCO2eq in 2018. While this constitutes a very significant level of decrease in greenhouse gas emissions, it does not fully achieve the required 51% reduction target – a further reduction in the order of 0.4 MtCO2eq is needed to reach the prescribed threshold. Additional demand management measures to achieve the GDA transport emissions target for 2030 need to be implemented. The NTA will undertake a detailed assessment to establish the optimal framework of demand management measures, which is likely to include parking restraint, zonal charging, additional tolling / road pricing and/or further vehicle electrification. Implementation of the full measures set out in this strategy aim to reduce greenhouse gas emissions in the GDA to below 1 MtCO2eq by 2042.The supporting behavioural changes can be achieved through a combination of some or all of the following measures:

- Increased Public Transport provision;
- Improved cycling and walking facilities;
- Traffic Management; and
- Pricing/Fiscal Measures.

While many of these approaches have been looked at in Phase 2, in Phase 3 the modelling has also taken account of the potential for additional road tolls on the M50 and its approaches, similar to those proposed in the Prior Strategy, in order to produce the final Strategy update.

5.2 Phase 3 Process

The transport modelling includes behavioural models that explain how land-use, along with the experience and cost of making a trip influence the travel choices that are made. The Phase 3 process varies the representation of behaviour in the model within realistic and evidence based bounds for these variables. Established forecasting and planning methods assume relative stability in such external factors and how they influence travel demand. Some degree of confidence in how these key factors may change over time leads to official demand forecasts (incorporating sensitivity to uncertainty) that underpin policy and investment decisions. Increasingly, people's travel behaviour patterns and choices, both existing and new, are more complex and influenced by various economic, demographic, technological, environmental and social factors. There is growing recognition that increasingly, past trends cannot be relied upon for very far into the future. For example, the potential long-term impacts on travel behaviour and preferences associated with the Covid-19 pandemic and technological change are still just in their infancy.

It can be expected that a population 20 years from now would not necessarily make the same choices given the same options as the population today. COVID (cultural shift) or work-from-home (technological change) are indeed having a major effect on behaviour. Behaviour parameters can be changed, therefore, to investigate what the future might look like on the transport network should the relevant trends change.

A wide range of possible futures can be represented in the modelling through the development of scenarios, with each scenario representing one of the possible futures. For each scenario the modelling gives an insight into a range of indicators showing how the networks could perform under the various conditions. Each model scenario therefore permits an analysis of how the relevant transport schemes and policy fit with the Strategy's overall objectives.

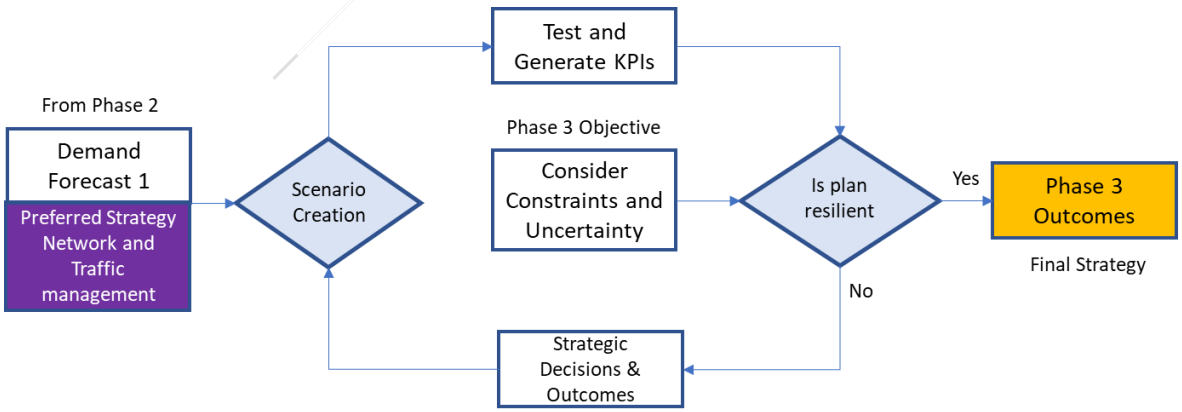


Figure 63 Phase 3 Process

5.2.1 Scenario Creation

- The initial scenario for Phase 3 is the outcome of Phase 2 with some modifications with respect to car demand management and tolls;
- Land use is the standard NTA 2042 forecast. See Annex 2 for further detail; and
- The ERM Trip Rates are adjusted according to the NTA research paper titled 'Alternative Futures'.

5.2.2 Test and Generate KPIs

- For Phase 3 the scenarios are assessed and compared based primarily on peak public transport line flows and the appropriate transport mode required to serve the relevant demand.

5.2.3 Objectives Achieved

- The criteria for achieving the outcomes of Phase 3 are focussed on the potential ranges of public transport demand that could occur, from the highest levels in Phase 1, to the more realistic levels in Phase 2 based on the on-street Luas tests and car demand management, down to the lower end of the range which might be expected if behaviours change compared to the assumptions in previous phases; and
- Objectives are considered achieved in Phase 3 if the lower end of the plausible future demand estimates can be accommodated on the public transport schemes currently in planning, given these schemes must be delivered to meet climate goals to 2030.

5.2.4 Strategic Decisions and Outcomes

- The iteration in this Phase focussed on behavioural change aspects that the NTA regard as having a significant bearing on the Strategy and the associated delivery plan.
- Of particular note is the trade-off between cycling and public transport, with significant uptake in cycling strongly influencing the level of public transport that is needed.
- Decisions have been guided by extensive research on potential for increased cycling in the GDA and potential variation in trip rates, and these have been introduced to the Strategy development process to understand effect on the proposed transport network and hence the final strategy outcome.

5.3 Phase 3 First Iteration (Alternative Trip Rates)

5.3.1 Scenario Creation

Phase 3 Input included the final Phase 2 network (please refer back to Figure 58 to Figure 62) the key elements of which are summarised below:

Metro

- It is proposed to construct Metrolink as currently planned.

Luas

- It is proposed that 11 new/extensions to Luas will be provided.

Rail

- Navan Rail Line
- DART+ and the DART+ Tunnel

New Dublin Area Bus Service Network (BusConnects)

- New structure to the service network – Spines / Orbitals / Radials / Local Routes / Peak-Only and Express Routes

Traffic Management:

- Sustainable Mode Prioritisation at Signals
- Improvements to Cycling Speeds

Demand Management Optimisation:

- Traffic Management
- Parking Management

Climate Action Plan (2019) Responses:

- Carbon Targets
- EV fleet proliferation
- Tolling

- Parking Management

Strategic Road Network Improvements

- Southern Port Access Route
- M/N11 Additional Capacity
- N3-N4 Link (Leixlip-Blanchardstown)
- N4-N7-N81 Link
- Slane Bypass
- South Fingal Transport Study Roads
- Swords Western Bypass
- Level Crossing removal for DART+ West

Alternative Trip Rates Assumption

In line with the Scenario Planning approach the first iteration of Phase 3 takes the initial network inputs as described above and investigates the impact of reduced trip rates on the integrated, light-rail based public transport network proposals that have been developed in the Strategy up to this point.

The NTA has undertaken research that indicates that trip rates could reasonably be expected to reduce in the future given dual influences of a population permanently habituating to COVID related work from home practices (at least part time), and the influence of online commerce and improved delivery efficiency reducing the need to make as many shopping trips, for example.

The NTA's own National Household Travel Survey indicates a reduction in trip rates overall may already be an established trend, with weekday average trips recorded in the surveys reducing from an average of 3.07 per person per day in 2012 to 2.69 per person per day in 2017.

5.3.2 KPI Assessment

The indicator most useful to assessing the impact of lower trip rates on public transport demand is the peak line flow on a given line. The level of ridership on the line estimated by the ERM is the means by which the mode appropriate for that level of flow is judged. Figure 65 shows the locations chosen for the peak flow indictor. The corresponding data presented below is for the AM peak.

Figure 64 shows the different between the initial network flows (from Phase 2 network with standard demand assumptions) and the updated network in Phase 3 (with alternative, lower trip rates). The level of change is indicated on the right-hand side of the figure, with the thickness of the bands in green indicating the scale of reduction on the public transport network due to the lower demand.

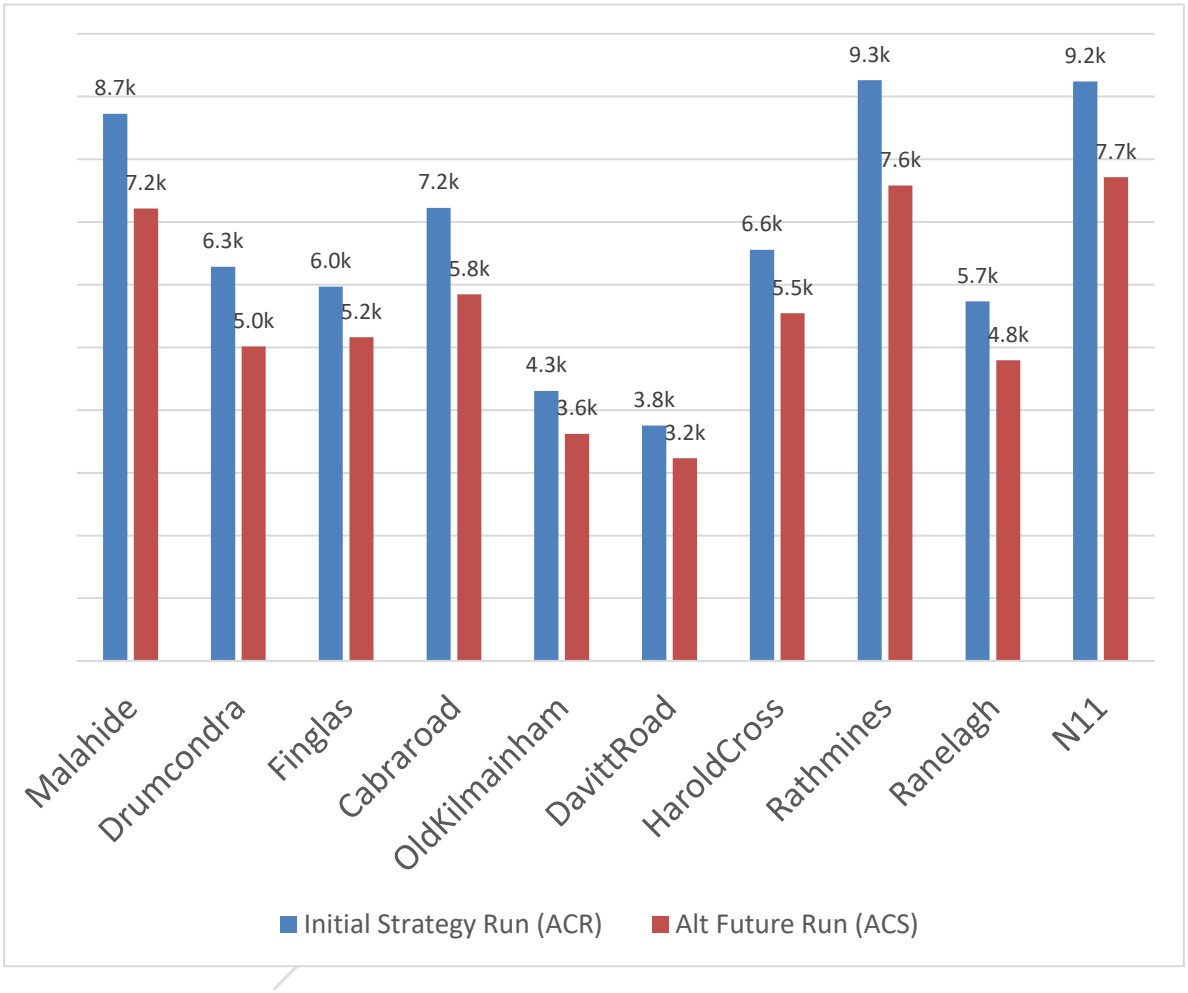


Figure 64 Peak Line Flow, Initial Strategy vs Alt Future

The impact of the alternative trip rate assumption can be seen in the chart in Figure 64. Given the flows are presented for the AM peak the reduction in the home to work trip rate has the expected effect of reducing peak volumes on each of the inbound services.

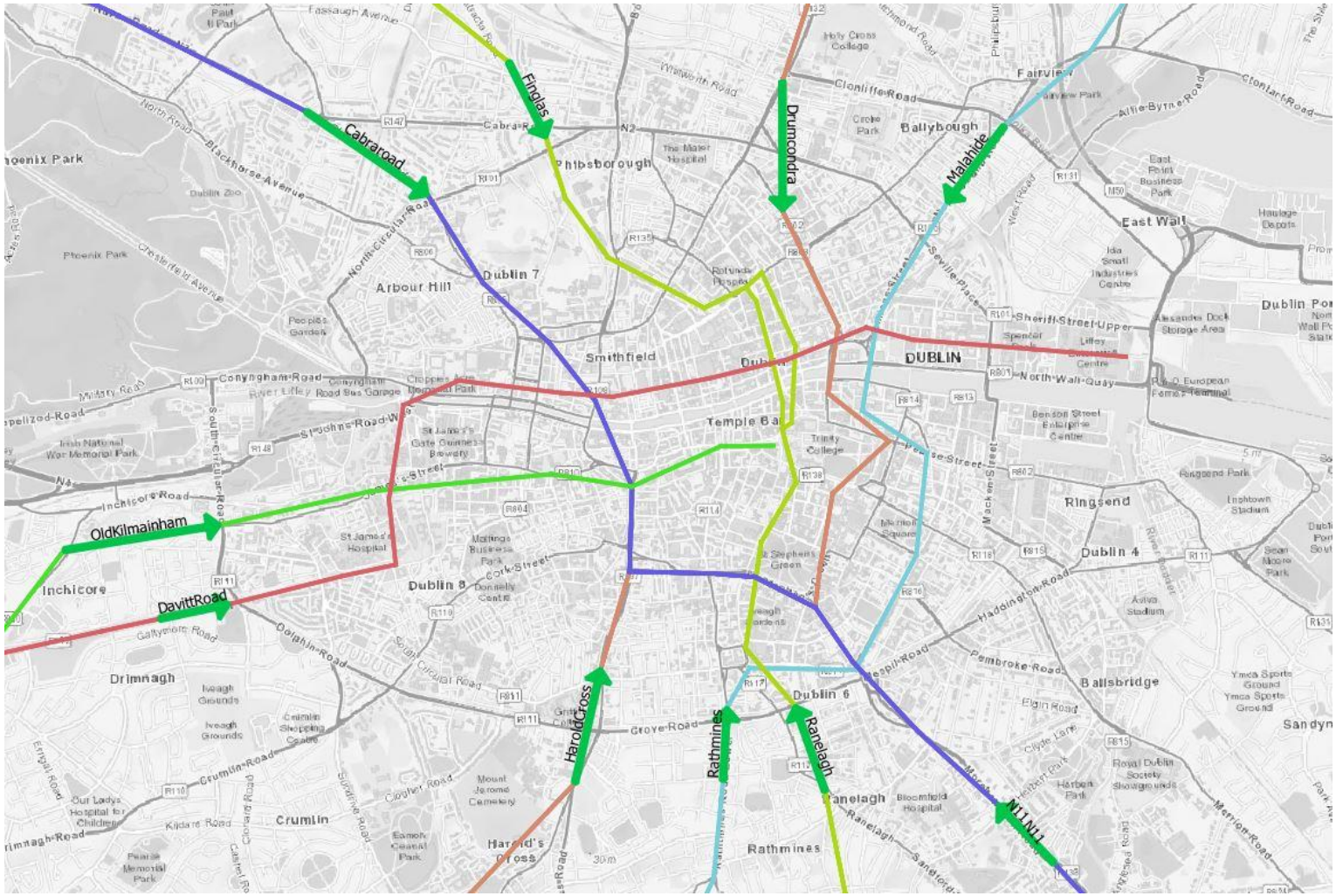


Figure 65 Locations Chosen for Peak Flow Indicators

Figure 66 Flow Difference between ACR (Phase 3 Initial Input) and ACS (Alt. Future / Lower Trip Rate)

5.3.3 Phase 3 First Iteration – Outcomes

The outcome of the Alternative Future scenario test on public transport line flows suggests that if trip rates continue to lower into the future, as could be reasonably expected based on current trends, that the short-term capacity improvements (i.e. bus corridors) proposed by BusConnects could be sufficient to cater for the required demand for public transport potentially even towards the later years of the strategy, 2042.

Although such a network would provide less capacity than envisaged in the Luas network (as recommended from Phase 2), it also provides significant levels of complimentary cycle infrastructure. The NTA are already committed to rolling out an extensive cycle network across the GDA, as well as through the schemes that will be delivered through BusConnects. The modelling up to and including this point does not however examine the impact of a successful outcomes in terms of mode share in line with National Cycle Plan.

The National Cycle plan (2010) set a mode share target of at 10% by the year 2020, however rollout of cycle infrastructure required to achieve targets in excess of this for the GDA is still in its early stages. However, NTA are fully committed to delivering the level of infrastructure need to grow cycle mode share to at least 15% for the GDA as a whole, and even higher in central areas. This would be in line with cycle mode shares achieved internationally in places such as Amsterdam, Copenhagen and Berlin.

The next iteration of Phase 3 has looked at what effect a significantly higher transition to cycling would have on the demand levels operating on the public transport network.

5.4 Phase 3 Second Iteration (Cycle Propensity)

5.4.1 Scenario Creation

NTA policy objectives, including those in support of climate change action, are seeking to encourage rapid growth in cycle use and a step-change increase in cycle mode share through the removal of barriers to cycling.

This is likely to be driven by the availability of cycle facilities (such as cycle hire schemes, cycle parking and shower facilities), infrastructure improvements, and also by changes in the Most of the impacts of these drivers of cycle demand are not easily captured in generalised cost changes currently used as input to the NTA's Regional Model System (RMS) suite of transport modelling and forecasting tools.

NTA has developed a version of its Regional Modelling System which adjusts behavioural parameters that feed its standard forecasting mechanisms to take account of higher propensity to cycle among the general population[3]. These adjustments are based on extensive research, that concluded there is significant potential to increase cycle mode shares by:

- Increasing female cycle share to match that of male (through appropriate policies focussing on cycle safety and security, amongst others);
- Attempting to increase cycle share outside Dublin (although analysis of typical trip characteristics in section 3.2 may show significant limitations in scope to this);
- Increasing urban cycling rates amongst under-20s and over 40s to be closer to those of 20-39 year olds (especially primary students, again through dedicated cycleway provision, safety and security measures as well as attitudinal campaigns);
- Increasing use of cycle by part-time workers;

[3] For further information see NTA report 20210820_NTA_CyclingModelling_v6.1_issue.docx

- Promoting cycle use for trips where a car is available;
- Increasing cycle use in lower income bands (possibly through purchase schemes, increased cycle hire provision and promotional campaigns); and
- Facilitating household cycle availability through purchase schemes, cycle parking and storage provision and promotional campaigns.

A series of model scenarios have therefore been created for this iteration which assume that the above outcomes can be achieved by 2042. These kinds of outcomes would be expected to accrue from the rollout of a comprehensive, Dutch-level of cycle priority on the road network and sustained and successful investment in cycle as a mode.

Table 5-1 High Propensity Cycle Tests

Run ID	Year	Name	Description
ACS	2042	Alt Future Demand	Alternative Future demand
ACT	2042	Cycle Prop + Tolls	"High" Cycle propensity scenario & Alternative Future demand
ACU	2042	Cycle Prop + Reduced Pking Mgmt	"High" Cycle propensity scenario & Alternative Future demand & Relaxed Parking
ACV	2042	Cycle Prop + No Pking Mgmt	"High" Cycle propensity scenario & Alternative Future demand & No Parking Management
ACW	2042	Cycle Prop + No Pking Mgmt + Tolls	Alt. Demand + 2030 Traffic Management + "High" Cycle propensity.

From the table it can be seen that all the tests in this iteration include a High Cycle Propensity behavioural adjustment. The variations introduced are related to the levels of parking management assumed. These were set to restrictive levels on the basis of analysis work undertaken in Phase 2 to limit car access to parking throughout the city in order to justify the extensive Luas network. For this iteration of Phase 3 one of the goals was to assess if lower and therefore more achievable levels of parking restriction could work in the context of a High Cycle Propensity assumption.

This iteration focussed on further measures to refine the balance between car and non-car mode shares. One of the key outcomes from the previous iteration was the relatively poor performance of the cycle mode. This was due to the absence of any additional assumptions around new network infrastructure or behavioural changes with respect to the propensity to cycle across the population. Furthermore, the level of mode shift resulting from the traffic signal cycle time change, while in the right direction, was not enough to have a major impact on carbon emissions and general car usage.

5.4.2 KPIs for Phase 3 Second Iteration

Public Transport line Flows

As in Iteration 1 the peak line flow on a given line is used to indicate the impact of higher cycling mode share in tandem with lower trip rates and various car demand management options (e.g., tolling, parking constraint) on public transport demand. Table 5-2 shows the impact on public transport demand at the locations shown in Figure 65 above. The data presented below is for the AM peak hour.

Table 5-2 High Cycle Propensity Tests – Effect on PT Flow

Bus Connect	0-3,500 pax/hr
Bus Connect Plus	3,500-5,400 pax/hr
LRT	>5,400 pax/hr

	RunID	ACS	ACT	ACU	ACV	ACW
Corridors	Location of Flow	Alt Future Demand	Cycle Prop + Tolls	Cycle Prop + Reduced Pking Mgmt	Cycle Prop + No Pking Mgmt	Cycle Prop + No Pking Mgmt + Tolls
Clongriffin	Malahide	7,300	5,800	5,300	5,100	5,100
Beaumont	Drumcondra	5,100	4,100	3,600	3,400	3,600
Ballycoolin/Finglas	Finglas	5,200	4,200	3,800	3,700	3,800
Blanchardstown	Cabra Road	5,900	4,900	4,400	4,200	4,300
Lucan	OldKilmainham	3,700	3,100	2,900	2,800	2,900
Luas Red Line	Davitt Road	3,300	2,700	2,600	2,500	2,600
Harolds Cross	Harold's Cross	5,600	4,200	3,900	3,800	3,800
Rathmines	Rathmines	7,600	5,700	5,200	5,100	5,100
Luas Green Line	Ranelagh	4,800	3,700	3,400	3,200	3,200
N11	N11	7,800	6,800	5,900	5,800	6,100

24 hr Mode Shares by Area

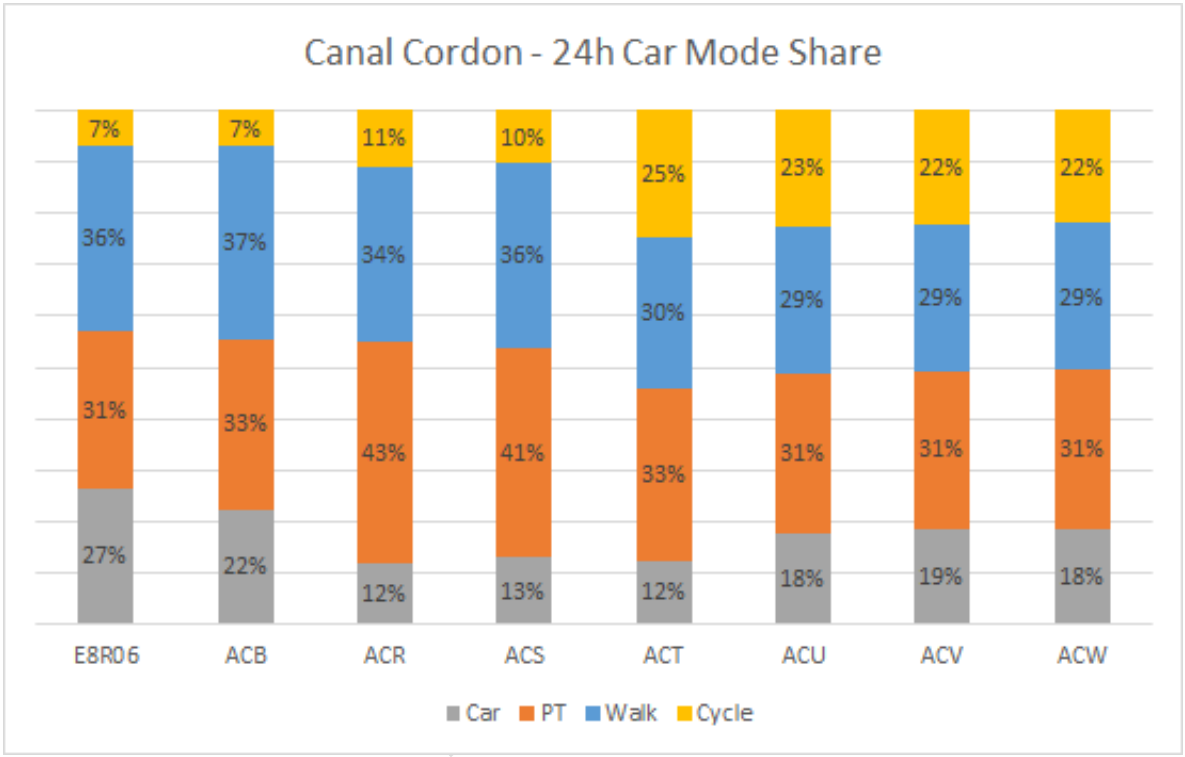


Figure 67 Canal Mode Shares

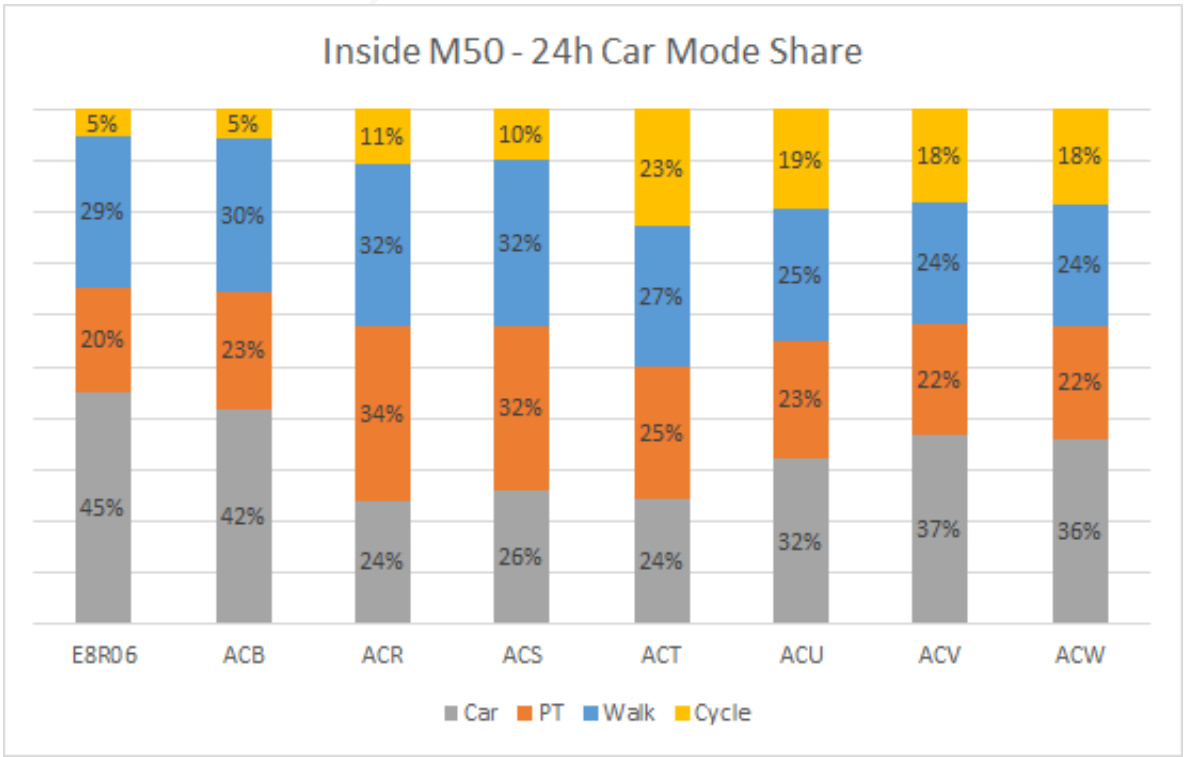


Figure 68 Inside M50 Mode Shares

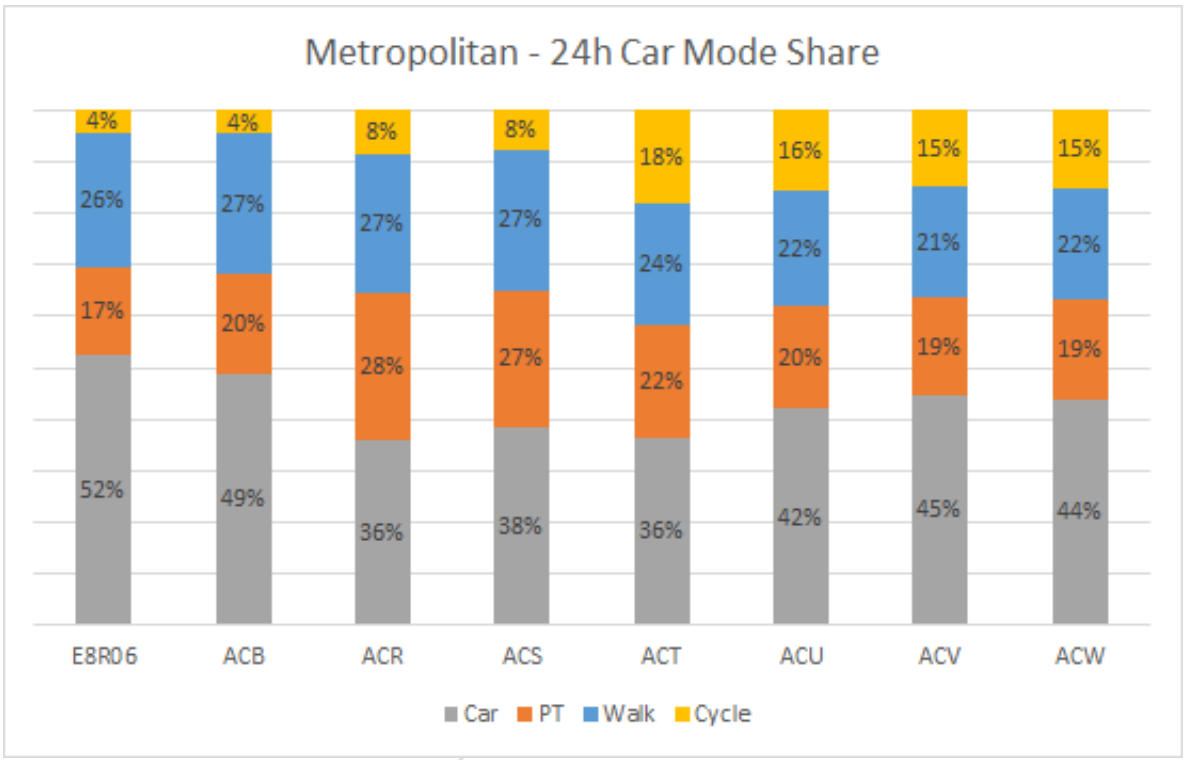


Figure 69 Metropolitan Mode Shares

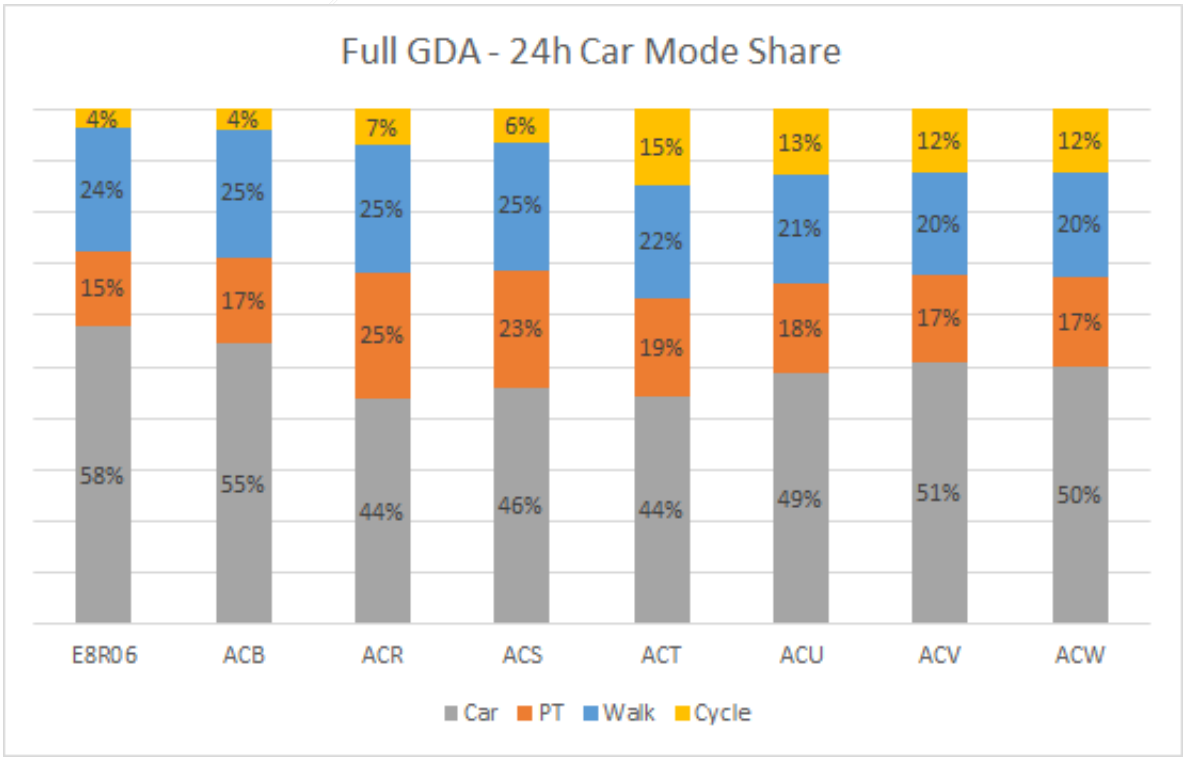


Figure 70 Full GDA Mode Shares

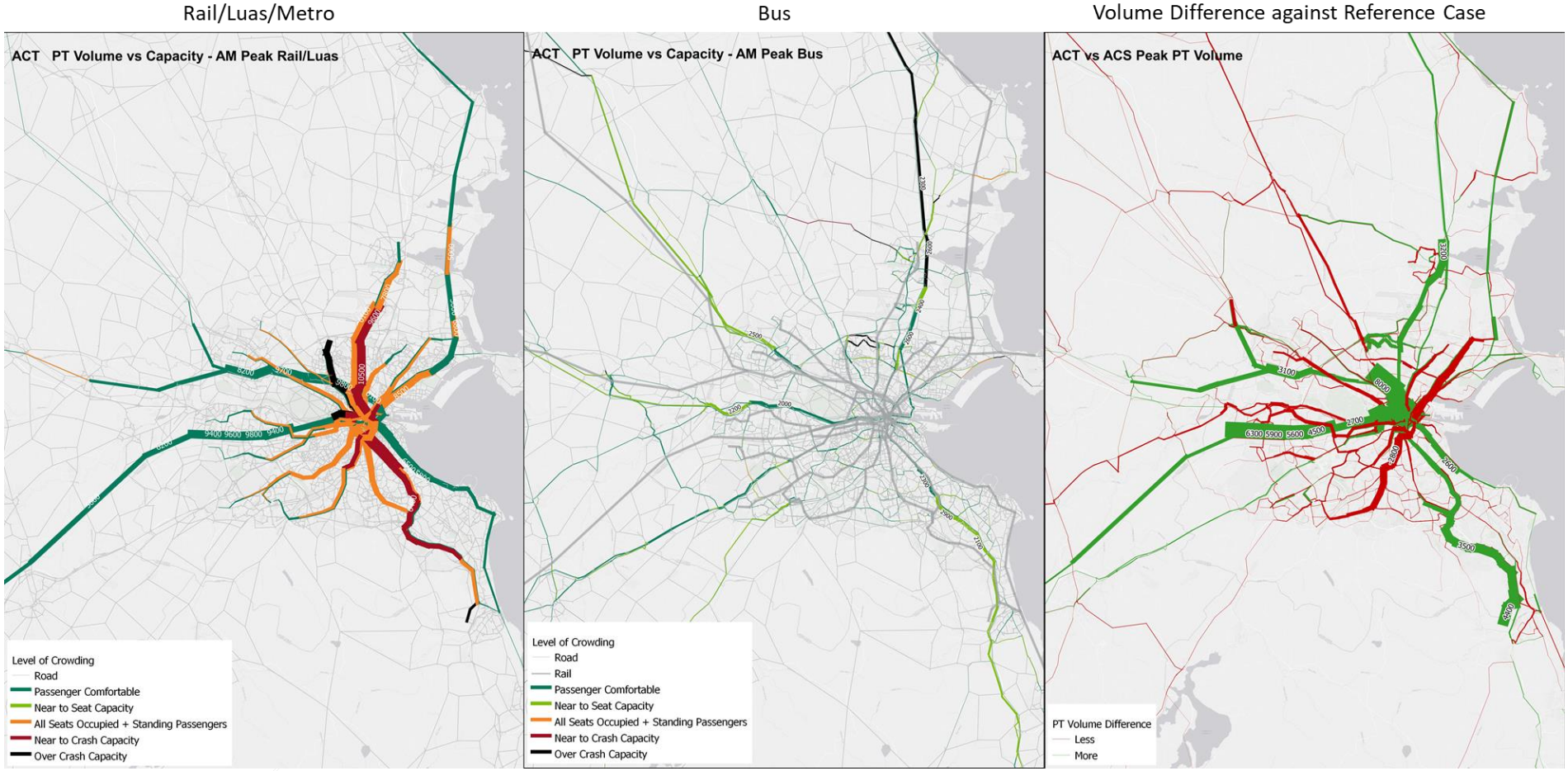


Figure 71 ACT (Alt Future + Cyc Prop) 2042 PT Volume vs Capacity (AM)

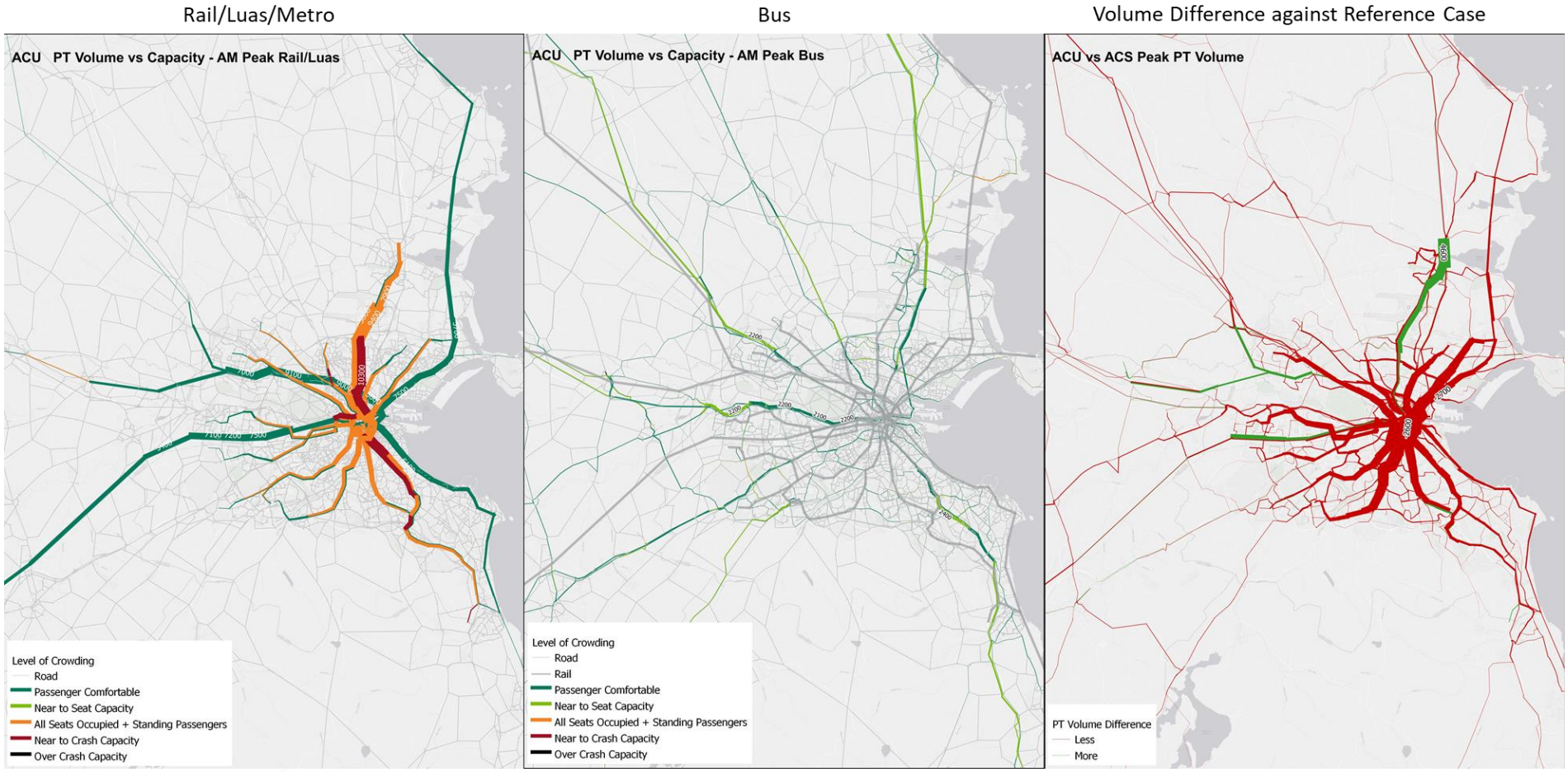


Figure 72 ACU (Alt Future + Cyc Prop + Relaxed Parking) 2042 PT Volume vs Capacity (AM)

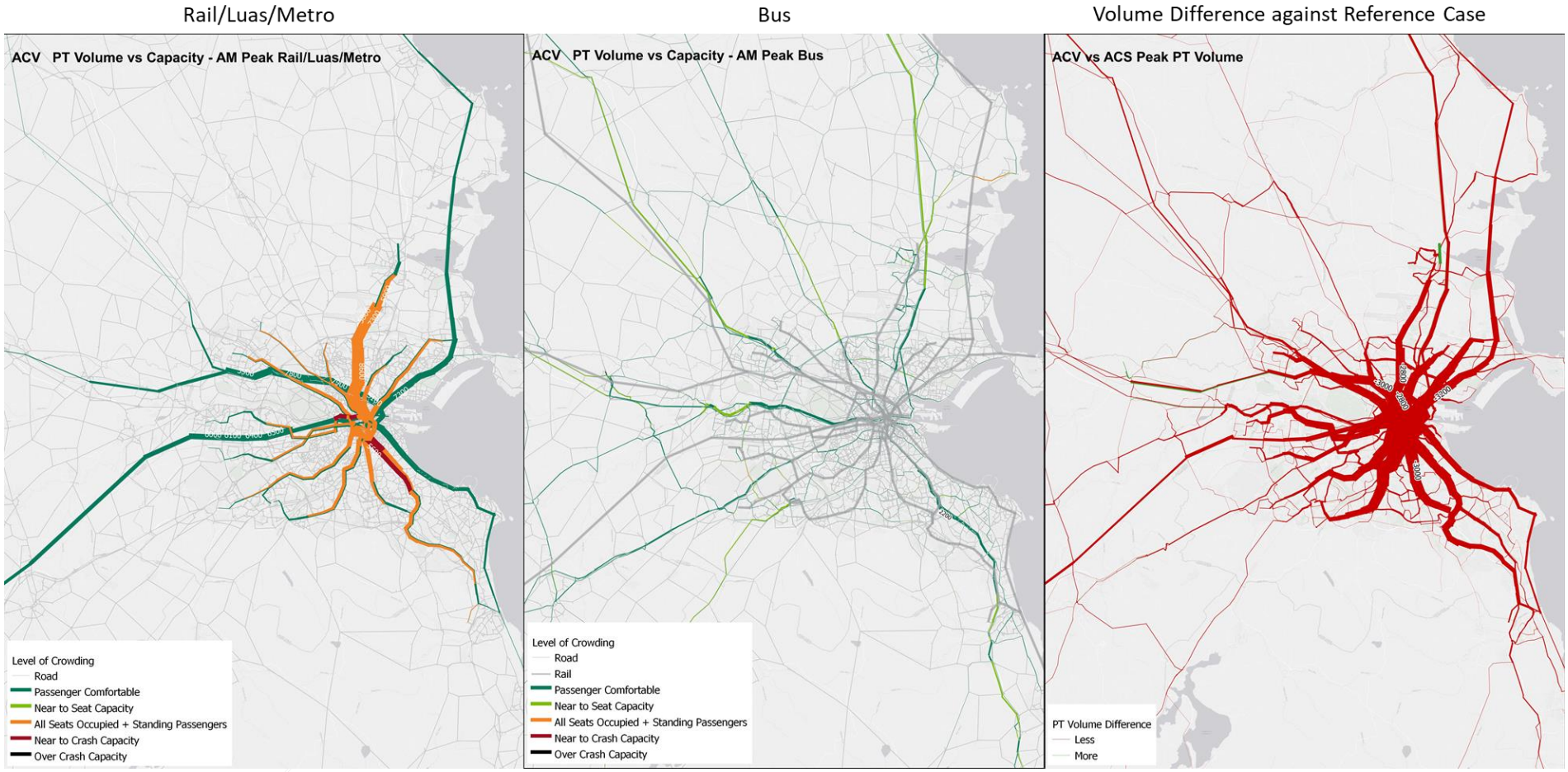


Figure 73 ACV (Alt Future + Cyc Prop + Relaxed Parking) 2042 PT Volume vs Capacity (AM)

Rail/Luas/Metro

Bus

Volume Difference against Reference Case

Figure 74 ACW (Alt Future + Cyc Prop + Traffic Mgmt) 2042 PT Volume vs Capacity (AM)

5.4.3 Phase 3 Second Iteration – Outcomes

The key outcomes from Phase 3 second iteration are as follows:

- With the introduction on the Alternative Future Demand operating on the Phase 2 recommended public transport network the requirements for Light Rail on some corridors reduces as shown in Figure 5.2 above (run ACS).
- The assumption that trips do not return to pre-pandemic levels is built in to the next stages of Strategy modelling. NTA acknowledges that higher trip rates could return, but takes the view that a monitoring and managing approach can be used to expand corridor capacity where required, in addition to BusConnects and potentially up to Luas levels in future.
- When the higher propensity to cycle assumption is then added into the modelling (ACT, ACU, ACV and ACW) with various combinations of car demand management options to manage car the requirement for LRT on most corridors as identified from Phase 2 reduced and a high capacity Bus based option would satisfy the public transport demand requirements up to 2042 on all corridors except N11;
- N11 public transport demand flow requires LRT in all scenarios however the combined public transport flow on the Green Line Luas and N11 is circa 9,000-10,000pphpd in the AM Peak Hour which would be within a combined LRT combined with BusConnects in terms of capacity. Optimum service pattern, therefore, to be identified which maximises Green Line Luas capacity and BusConnects N11 capacity;
- High combined public transport demand from the South West City quadrant (>14k pphpd across four lines). Much of this demand for sustainable travel can be delivered by a combination of DART+, Red Luas Line, BusConnects and uplifts in cycling, however this area will need to be monitored closely in future strategy updates and may need the addition of more Light Rail lines to serve demand into the future particularly beyond 2042;
- Clongiffin Corridor public transport demand is >5,000 pphpd and Beaumont corridor flow >3,000 pphpd in all scenarios. It should be noted that when Clongriffin operates as a Light Rail line this attracts ~1,500pphpd from the DART line in the AM Peak. Similarly, Beaumont operating as a Light Rail line attracts passengers from Bus. It is, therefore, important that the accessibility to DART is enhanced (via bus, cycling and walking access) and the balance of capacity provided by BusConnects, DART+ and cycling within the North East area of the city is rationalised to maximise usage achieved and the capacity provided across these modes serving the area. Beyond 2042 there may be a requirement to deliver a Light Rail line to serve this area;
- Blanchardstown corridor public transport demand is >4,000 pphpd in all scenarios. This can be served by high capacity Bus operating on BusConnects infrastructure. However, beyond 2042 there may be a requirement to deliver a Light Rail line to serve this area;
- Lucan corridor (included in the Prior Strategy) has demand levels approaching 3,000 pphpd in all Phase 3 scenarios, in addition to high numbers using bus from the Lucan area. In the short to medium high capacity bus will be required to serve Lucan with Light Rail being required to serve the area by 2042.
- Finglas Luas (included the Prior Strategy), as an extension of the Luas Green Line, will approach 4,000 pphpd by 2042 with a further 1,000 pphpd travelling by Bus in the AM Peak hour. In the short to medium term, therefore, bus will support the demand for travel from the area and Light Rail will be required to serve the area by 2042
- Phase outcomes assume cycling mode share increases significantly from 4% in the base year to 12%. This increase has a knock-on benefit of allowing public transport capacity to be allocated to longer trips, extending the reach of alternatives to the private car overall, and preserving the capacity of public transport schemes. This therefore demonstrates the importance of cycling in delivering higher levels of sustainable mode share in the short to medium term, particularly in

the event that the larger public transport infrastructural schemes (e.g. Metrolink and DART Underground) take longer to deliver;

- The performance of DART in terms of demand for travel operating along all the main rail corridors remains strong through all scenarios; and
- The performance of Metrolink in terms of demand for travel also remain strong through all scenarios.

5.5 Phase 3 Third Iteration (BusConnects)

5.5.1 Scenario Creation

The previous iteration has demonstrated that a higher level of cycling allows longer distance capacity on public transport to be preserved. The outcomes from the previous iteration, however, were obtained from model scenarios that assumed a light rail type system. This iteration of the process looks at the impact of reflecting actual service characteristics similar to those envisaged by BusConnects.

Table 5-3 shows the modelling scenarios that are considered/tested as part of Iteration 3.

As can be seen ACX and ACW have been run previously (in Iteration 2) but are included here for comparative purposes. The runs ACZ to ADF are testing a few different possible scenarios including:

- Replacing the LRT network with BusConnects network;
- Testing the performance of BusConnects infrastructure with higher speeds (achievable through signal priority optimisation for bus movement);
- Testing higher capacity bus fleet (up to 150 passenger capacity);
- Testing a scenario where bus is seen as attractive as LRT within the model;
- Stress testing varying degrees of cycle propensity; and
- Testing a with and without DART Tunnel.

Testing with and without DART Tunnel is included in this iteration to test the resilience of the Phoenix Park Tunnel link in the context assumptions included in the Phase 3 assessment.

Table 5-3 Phase 3 Iteration 3 Model run scenarios

Run ID	Name	Year	Demand	Cycle	Tolls	Parking	Heavy Rail	Light Rail	Bus Speed	Bus
ACX	DO MIN	2042	Alt. Future	2020 network No Cyc Prop.	2€ M50 &	As 2016 Base	2020 network	2020 network	Standard	Bus Connects (network, no infra)
ACW	Cycle Prop + No Pking Mgmt + Tolls			Cyc Prop		No parking management	DART Underground	Radials	NO Hardcoded BC	Bus Connects + Rural orbitals + Improvement
ACZ	STRATEGY HARDCODED BUS SPEED			Cyc Prop		50% Free Workplace parking – 2.5€/h within	DART Underground	Metro + Luas (see map)	Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines)
ADB	Strategy			75%			DART Underground	Metro + Luas (see map)	Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines)
ADC	Strategy 60% Cyc. Prop.			60%			DART Underground	Metro + Luas (see map)	Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines)
ADD	Strategy + IVT reduction			75%			DART Underground	Metro + Luas (see map)	Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines) & In-Vehicle Time factor reduced to Luas factor
ADE	Strategy Without Bus Speed hardcoded			75%			DART Underground	Metro + Luas (see map)	NO Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines)
ADF	Strategy Without DART UG			75%			NO DART Underground	Metro + Luas (see map)	Hardcoded BC	Bus Connects PLUS (150 pass capacity buses on spines)

5.5.2 KPIs for Phase 3 Third Iteration

Public Transport line Flows

As in Iteration 2 the indicator used to assess the various assumptions presented above in Table 5-3. Table 5-4 below shows the impact on public transport demand at the locations shown in Figure 34 above. The data presented below is for the AM peak hour.

Table 5-4 High Cycle Propensity Tests – Effect on PT Flow

Run ID	ACZ	ADB	ADC	ADD	ADE	ADF
Name	Strategy Hardcoded Bus Speed	Strategy (75% Cyc. Prop.)	Strategy (60% Cyc. Prop.)	Strategy + IVT reduction	Strategy Without Bus Speed hardcoded	Strategy Without DART UG
Malahide	1,500	1,600	1,700	2,800	900	1,700
Drumcondra	1,400	1,500	1,600	2,500	1,300	1,400
Finglas Luas	3,000	3,200	3,300	1,800	3,600	3,500
Cabraroad	3,100	3,200	3,300	4,900	1,300	4,100
Lucan Luas (Old Kilmainham)	2,800	3,000	3,100	2,200	3,000	3,600
Red Line Luas @ Davitt Road	2,500	2,700	2,800	2,200	3,100	2,800
Harold's Cross	1,300	1,400	1,500	2,300	900	1,400
Rathmines	2,200	2,400	2,600	3,900	1,200	2,400
Green Line Luas @ Ranelagh	5,500	5,800	6,100	3,900	6,500	5,700
N11	4,500	4,700	4,900	7,800	3,100	4,600
TOTAL	**27,800**	**29,500**	**30,900**	**34,300**	**24,900**	**31,200**

24 hr Mode Shares by Area

Canal

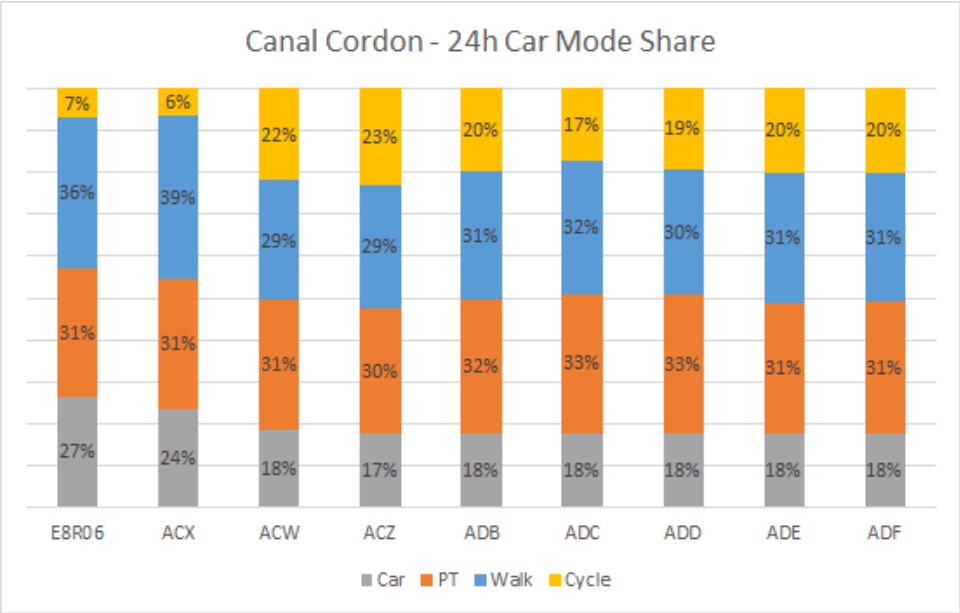


Figure 75 Canal cordon Mode Shares

Inside M50

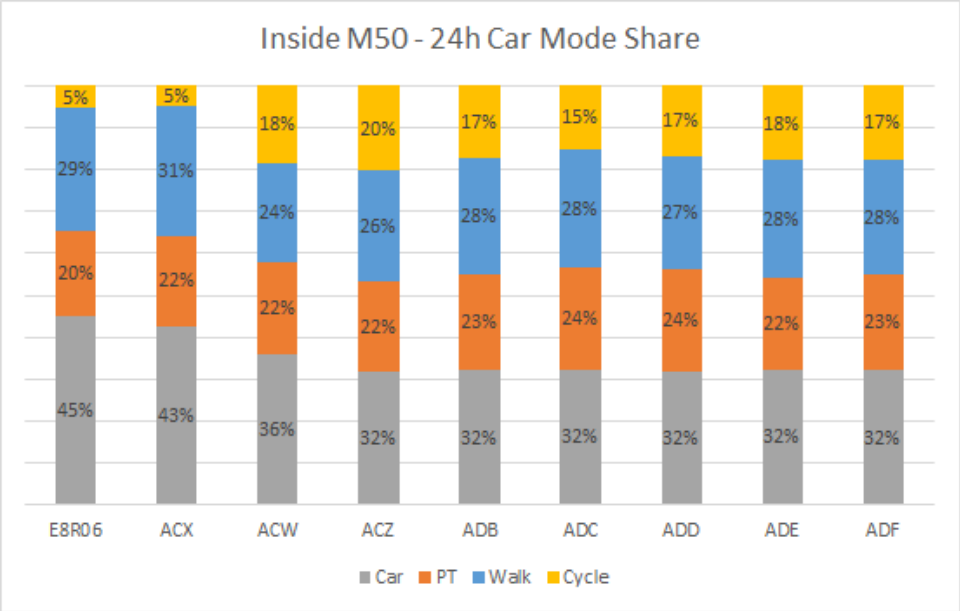


Figure 76 Inside M50 Mode Shares

Metropolitan

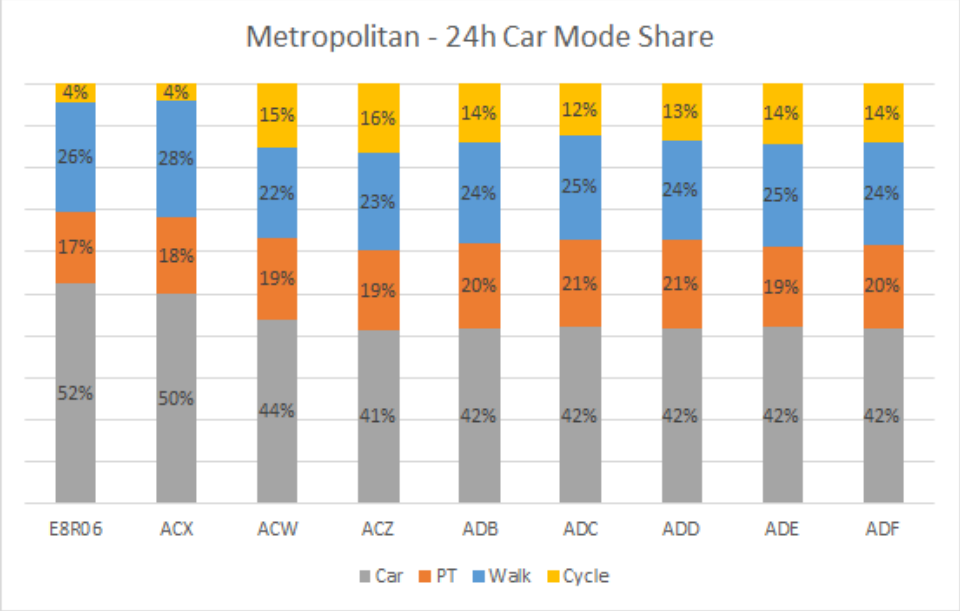


Figure 77 Metropolitan Mode Shares

Full GDA

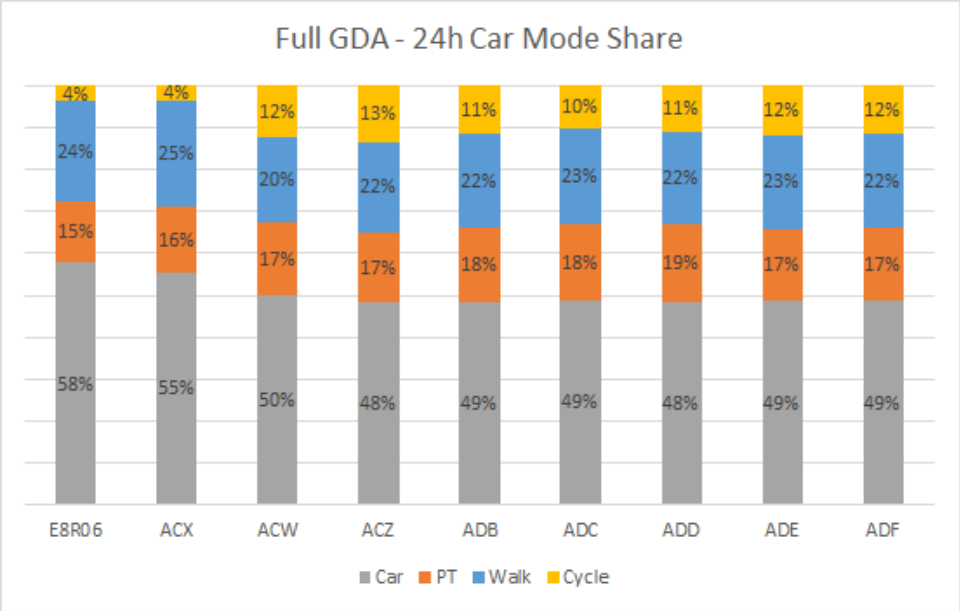


Figure 78 Full GDA Mode Shares

5.5.3 Phase 3 Third Iteration – Outcomes

The third iteration within Phase 3 has replaced the additional light rail network from Phase 2 with a high-capacity bus fleet operating on the BusConnects network with varying assumptions on cycle uplift and sensitivity assessments on achievable network bus speed. The key outcomes from Phase 3 third iteration are as follows:

- The effect of going from the Light Rail network to Bus based network is limited in the context of the demand for travel for public transport and other sustainable modes as more people switch back to Rail, Metrolink, bus and the other Luas Lines. However, it should be noted that the Light

Rail network may be required on some corridors post 2042 as demand for travel grows and the capacity of the Bus system may be exceeded;

- Car mode share will reduce from 58% and 55% in the Base and DoMin respectively to 49% in the Strategy in the GDA. This represents a significant reduction in car use both in percentage terms and absolute numbers;
- Cycling performs well in all scenarios ranging from a minimum of 10% to a maximum of 13% in the GDA (up from 4% in both the 2016 Base & 2042 Do Min). This represents a significant increase in cycling numbers. This, however, can only be delivered through cycle focussed policy initiatives, infrastructure design and monitoring in line with international best practice;
- Model run ADF, indicates that there is resilience in the public transport network to support growth to 2042 if DART Underground is delayed. The Strategy with & without DART Underground are achieving similar GDA mode shares (Car 49% / PT 18% / Cycle 11% / Walk 22%). However this means bus will need to carry more people and assumes that all other key elements of the Strategy must be delivered by 2042 including all other elements of DART+, MetroLink, the full BusConnects programme with additional higher capacity fleet (to provide 150 pass/vehicle) on key corridors (e.g. Malahide Road), Luas Lines for Finglas and Lucan, the full cycle network and car demand management measures to support the prioritisation of sustainable modes on the road network. Nonetheless, planning for DART Underground should progress during the lifetime of the Strategy as it will be required post 2042;
- Alternative Future scenario reduces daily travel demand by 7% (400k trips in the GDA) compared to core demand (which was used to determine the Strategy from Phase 2);
- Alternative Future demand generates higher daily GDA car mode share than the core demand (1.5 % pts). This is expected because less demand for travel means more available capacity on the network;
- The high cycle propensity parameters increase daily cycling trips in the GDA by 340k (+130%). Therefore, there is significant importance in providing a comprehensive cycle network and supporting cycle policies to enable this level of cycling to be achieved;
- Traffic management tested to manage car on the network has shown that:
    - Parking management measures (converting 50% free workplace parking into paid parking and 2.5€/h charge within M50) is shifting 100k daily GDA car trips and reduces GDA car mode share by 2 % pts; and
    - Tolling measure tests (2€ on M50 & on key radials approaching the M50) to support the movement of strategic traffic and protect strategic road capacity is shifting 30,000 daily GDA car trips to sustainable modes and reducing GDA car mode share by 1 % pts.

5.6 Phase 3 Outcome

In summary, Phase 3 has taken the public transport network output from Phase 2 and tested the robustness of this network by assuming a lower trip rate and a higher level of cycle propensity and tested these in tandem with numerous car demand management and tolling iterations. The public transport demand for travel was evaluated along mode share area-based assessments. Phase 3 proceeded with a further series of tests replacing the light rail network identified in Phase 2 with BusConnects only network with an assumption that the bus vehicle capacity could be 150 per bus. This assessment revealed that the additional light rail elements identified in Phase 2 output could be served by a bus-based system.

The analysis has identified that Strategy Scenario ADF would be the preferred option to bring forward as the Strategy for the following reasons:

- The most appropriate scenario given constraints, in terms of deliverability, and uncertainty in terms behavioural change, and have designed the Strategy with the knowledge that we have the ability to expand the network in future according the range of options identified for various possible futures.
- Schemes within this Strategy are the most robust with respect to constraints such as deliverability and the need to deliver on climate action goals within the early years of the Strategy
- A monitoring approach will be taken to ensure higher demand is catered for as required e.g. by bringing forward detailed planning for higher capacity modes.
- It provides the public capacity required to meet the demand for travel achieving a GDA wide car mode share of less than 50%;
- It takes cognisance of an expected uplift in cycle mode share to 2042;
- It supports the need to meet 2030 environment targets;
- It supports the delivery of currently planned public transport schemes (BusConnects, Metrolink and DART+) .
- Phase 3 has undertaken a with and without assessment of the DART+ Tunnel to test the resilience of the Phoenix Park tunnel up to 2042 in terms of the overall efficiency of the transport (e.g. total public transport boardings). This assessment has shown that the network can meet the capacity requirements of those wishing to use public transport up to 2042 without the DART+ Tunnel being in place. However it is anticipated that in the longer term there will be a need for additional connectivity provided by DART+ Tunnel.
- Finally, as part of Phase 3 consideration has been given and representation modelling were undertaken on the Climate Action Plan (CAP), 2019 in terms of:
    - Carbon Targets;
    - EV fleet proliferation; and
    - Tolling
- As part of the CAP work, car demand management and strategy proposals were found to give us a reduction from 3.2 megatonnes to 2.8 megatonnes of CO2, however a further 0.4 megatonnes required additional demand management measures to achieve this reduction.
- Car demand management and representative demand management measures were tested and the results showed that this reduction could be achieved and is line with the Strategy recommendations and sustainable mode capacity requirements. While the exact mechanism is yet to be worked out, the process gave confidence that the targets could be achieved and proposes that in the early phases the demand management proposals would be specifically identified.

Climate change, therefore, is a key consideration in the strategy development process particularly in terms of what can be achieved by 2030 and this has been a key focus on decisions and directions to take with regard to strategy development particularly in terms of maximising the potential of early phase scheme delivery which can support achieving 2030 climate targets. These measures, which can be delivered by 2030 include - cycling, BusConnects programme, DART+ elements, supporting car demand management arrangements to support sustainable mobility and fleet changes (e.g. transitioning to electric vehicle fleet).

Key Public Transport proposals included in the Strategy as informed by the modelling and decisions made in this Phase are presented in the figures below.

Figure 79 GDA Strategy 2022-2024 Bus Corridors

Figure 80 GDA Transport Strategy 2022-2042 Luas Network

Figure 81 GDA Transport Strategy 2022-2042 Combined Rail Nework

6 Assessment of Emerging GDA Strategy Options against Strategy Objectives

6.1 Introduction

KPIs are used to assess the overall modelling scenarios with respect to the expected contribution of the proposals configured in the modelling towards the wider real-world objectives and expected policy outcomes. These outcomes are grouped according to the four Strategy Objectives set out in Table 6-1.

Table 6-1 Objectives and Modelled KPIs

Objective	KPI	Description
An Enhanced Natural and Built Environment	Env_1	Emissions (various GHGs and Pollutants)
	Env_2	Noise (% of population exposed to noise)
	Env_3	Car Mode Share
	Env_4	Vehicle Kms
Connected Communities and Better Quality of Life	Con_1	Number of people within 15 min public transport travel time of City Centre, Major Town Centres, Universities & Major Hospitals
	Con_2	Map of journey time bands to the city centre by public transport in the AM peak (15, 30, 45 – consider walk and wait time as discussed)
	Con_3	Walking and Cycling Mode Share
	Con_4	KSI data
A Strong Sustainable Economy	Eco_1	Journey times for business and commute trips
	Eco_2	Travel times for goods vehicles
	Eco_3	Travel time for trips to/from Dublin airport and port
An Inclusive Transport System	Inc_1	Number of jobs accessible by public transport in 30 minutes (all & by Pobal Index)
	Inc_2	Numbers living in proximity to transport service with better than 10-minute off-peak frequency

6.2 An Enhanced Natural & Built Environment

The relevant Key Performance Indicators are as follows:

- Emissions – Do Min vs Do-Strat. GDA Wide Model Output
- Noise – identification of locations that have a positive, neutral, or negative short term noise impact when comparing the Do-Strat to the Do-Min
- Car Mode Share – GDA Do-Min and Do-Strat + Map of Do-Min and Do-Strat by Settlement – Metropolitan Area and GDA
- Vehicle Kms – Do-Min and Do-Strat

6.2.1 Emissions (Env_1)

The challenges faced by Ireland in order to reduce emissions from the Transport sector are common to that of many EU countries. To date these have included the higher purchase costs of EVs relative to ICE vehicles and the limited EV substitutes for freight and other types of heavy vehicle.

The ENEVAL tool has been used to estimate annual GHG emissions from transport vehicles. Figure below presents CO2 emissions from car for the following 3 scenarios: Base year 2016, Do Minimum 2042 and Strategy 2042.

The large reduction in car CO2 emissions is due to the electrification of the fleet, from a low proportion of EV in 2016 (<1%) to 95% EV in 2042 (both DM & DS). The gain in CO2 emissions brought by the strategy (mode shift and veh.km reduction) is small compared to the technology improvement contribution.

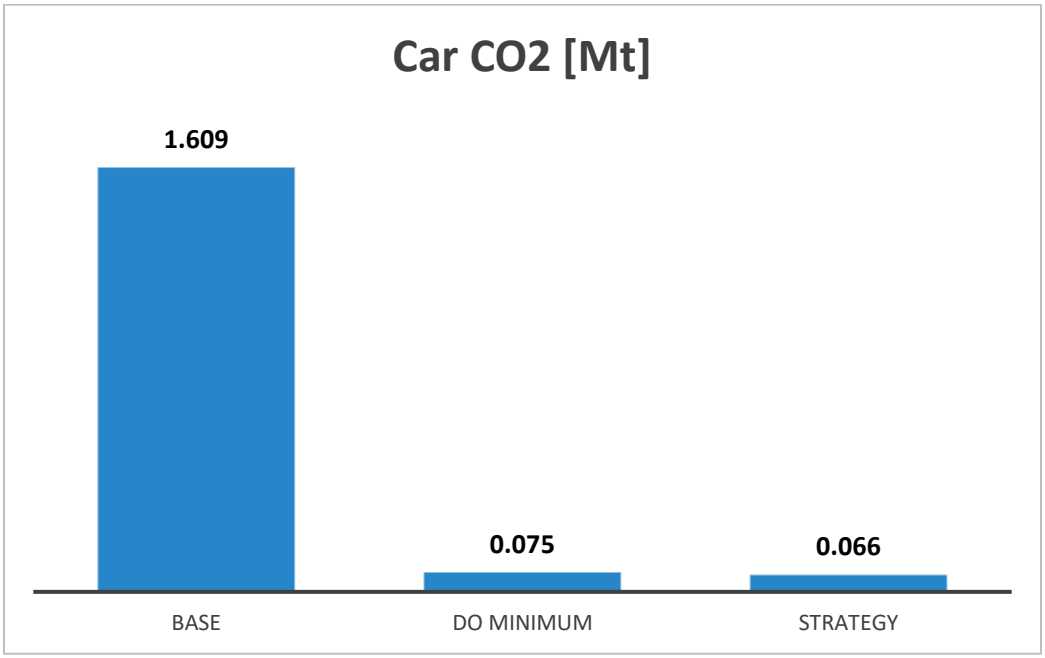


Figure 82 Car CO2 emissions - GDA

6.2.2 Noise (Env_2)

In accordance with the Design Manual for Roads and Bridges (DMRB) LA 111, AAWT18 hour data for traffic flow, speed and HGV percentage should be used alongside the Calculation of Road Traffic Noise (CRTN) to compare noise levels in the do minimum and do something scenarios. At this stage of the project only AADT 24-hour data has been made available and therefore this has been used in place of AAWT18 hour. When comparing noise changes across the network it is considered that this is acceptable as for example the percentage flow changes will likely be comparable between AADT

24hr and AAWT 18hr. It will not however be possible to judge with any certainty the absolute noise levels of the roads using this data and therefore this will not be reported.

One Way traffic data has been used throughout. Where Link ID's change between the do-minimum and do-something scenarios, the changes between these links are not considered and these are shown as do-minimum only or do-something only links in any graphics produced. An additional exercise to compare changes in these links could be made if comparable Link IDs are provided.

Using the CRTN methodology, the Basic Noise Level (BNL) of each link within the strategic network has been calculated using AADT 24 hour flow, speed and HGV percentage for the Do Minimum and Do Something opening year scenarios. The difference in noise level between the two scenarios has then been calculated and then plotted. An example of these plots are included as Appendix A.

An Affected Link has been considered as any link with a Basic Noise Level change of 1 dBLA10,18hr in the do-minimum opening year compared to the do-something opening year, with a positive change considered adverse and negative as beneficial.

The magnitude of noise change for each link has also been defined in accordance with Table 3.54a of DMRB LA111, reproduced in Table 6-2.

Table 6-2 Magnitude of Change (Short Term)

	Short term magnitude	Short term noise change (dB $L_{A10,18hr}$ or L_{night})
Major	Greater than or equal to 5.0	
Moderate	3.0 to 4.9	
Minor	1.0 to 2.9	
Negligible	Less than 1.0	

An initial assessment of likely significance can be made using these categories as shown in Table 3.58 of DMRB LA111, reproduced in Table 6-3.

Table 6-3 Initial Assessment of Operational Noise Significance

	Significance	Short term magnitude of change
Significant	Major	
Significant	Moderate	
Not significant	Minor	
Not significant	Negligible	

It should be noted that as we are simply assessing the Basic Noise Levels of links, with no context of distance to nearby noise sensitive receptors, the significance of each link can only be given in terms of its potential to impact nearby receptors and not the actual impact these links will have on those receptors.

The following calculations have been used to process the traffic data:

Calculation of total traffic flow:

$$Bus\ AADT\ +\ Car\ AADT\ +\ LGV\ AADT\ +\ OGV1\ AADT\ +\ OGV2\ AADT$$

Calculation of HGV percentage:

$$\left(\frac{OGV2\ AADT\ +\ OGV1\ AADT\ +\ LGV\ AADT}{Bus\ AADT\ +\ Car\ AADT\ +\ LGV\ AADT\ +\ OGV1\ AADT\ +\ OGV2\ AADT}\right) \times 100$$

Calculation of Average Speed:

In accordance with CRTN, all speeds below 20kph have been rounded up to 20 and all speeds above 130kph rounded down to 130kph.

Basic Noise Level Calculation:

$$29.1 + 10Log_{10}Q + 33Log_{10}\left(V + 40 + \frac{500}{V}\right) + 10Log_{10}\left(1 + \frac{5p}{V}\right) - 68.8\ dB(A)$$

Where Q = AAWT 18hr, V = Average Speed kph and p = percentage HGV

The noise assessment carried out using the aforementioned methodology is illustrated in Figure 83.

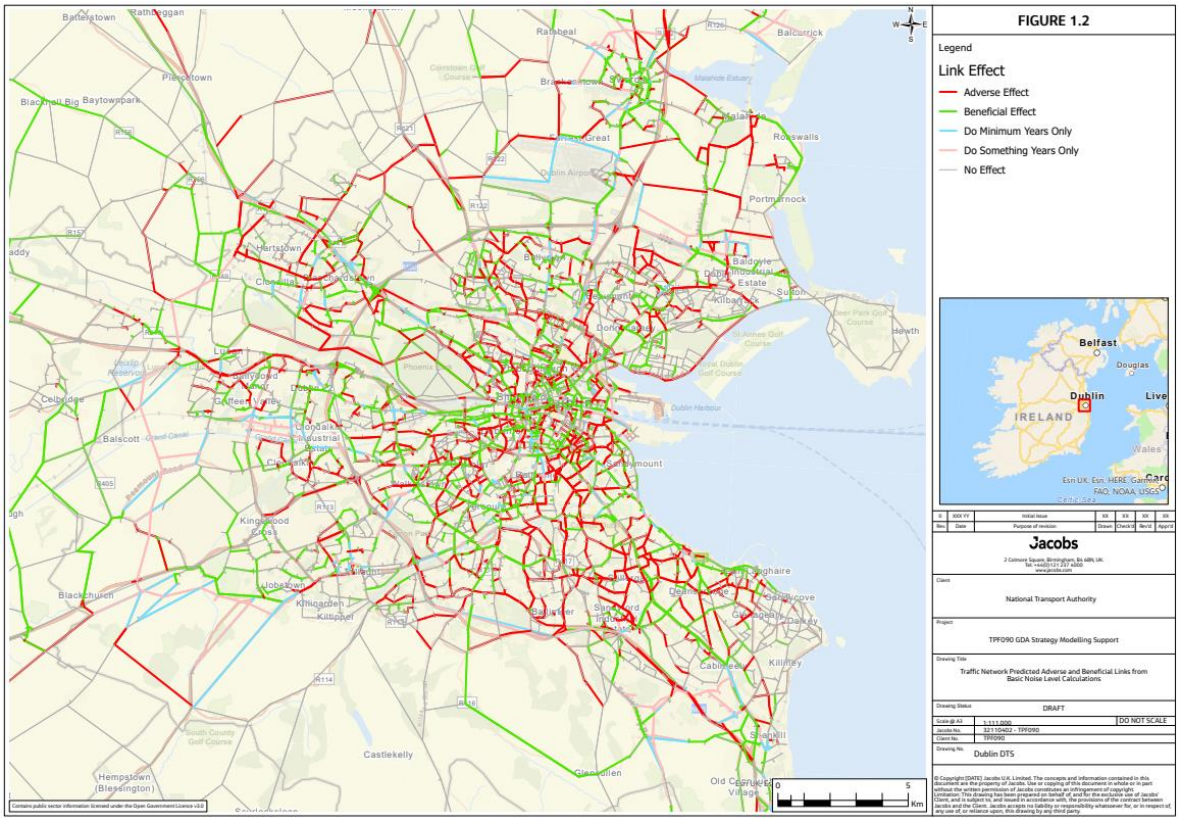


Figure 83 Short Term Noise Impact (GDA)

The Strategy indicates a beneficial impact along corridors where public transport provision has been enhanced, active travel measures have been introduced or where demand management measures have been introduced. There are adverse impacts on parallel and cross-corridor locations due to the redistribution of local traffic to avoid some of the measures.

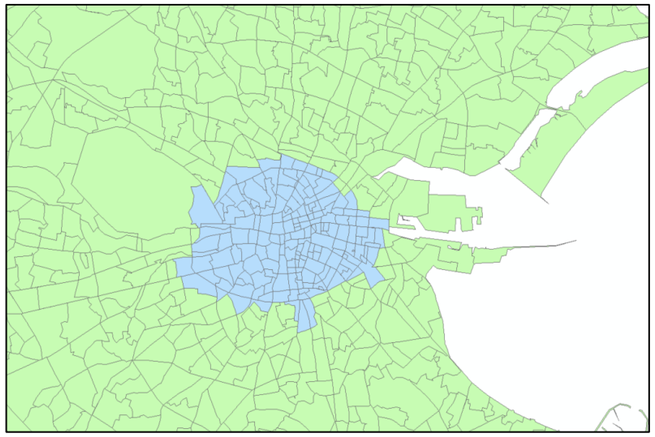
6.2.3 Car Mode Share (Env_3)

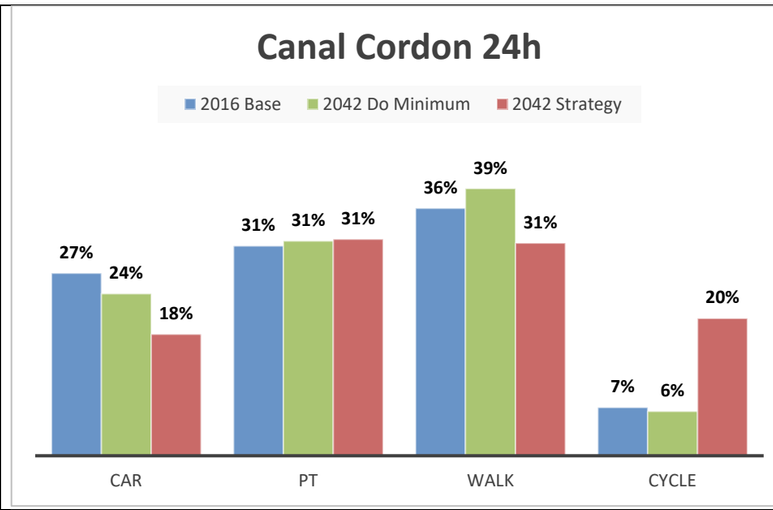
The Strategy shows a decrease in car mode share as presented a range of figures below. The 24h car mode share across the GDA is reduced by 6%pts by the strategy (from 55% to 49%), which represents 342,000 less daily car trips. Some of that demand reduction is transferred to public transport (+104,000 daily trips). The largest increase is for cycling mode, for which the 24h mode share climbs

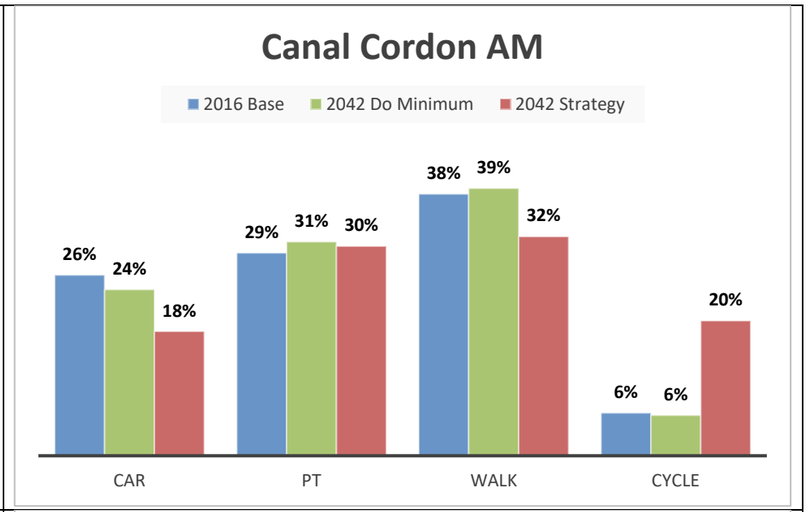
from 4% to 12% (+437,000 daily trips), some transferring from walking (-140,000 daily trips). The car mode share is reduced across all the geographical areas (canal cordon, M50, Metropolitan), as detailed in Table 6-4.

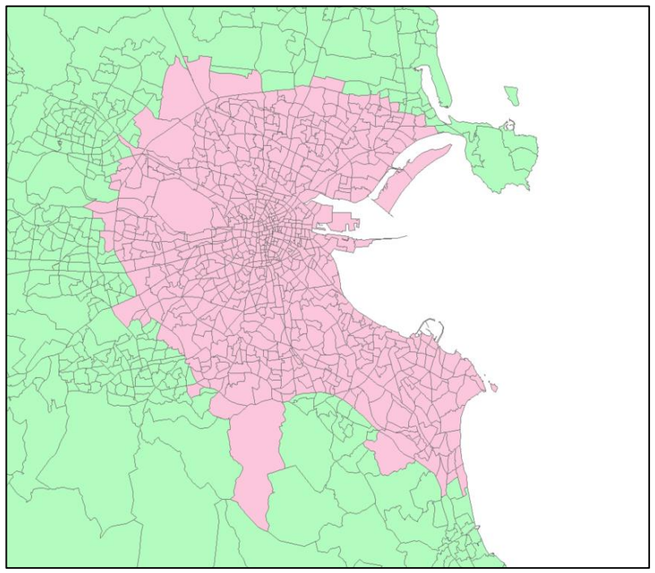
Table 6-4 Mode Shares Canal Cordon, Inside M50, Metropolitan, Full GDA and Full ERM

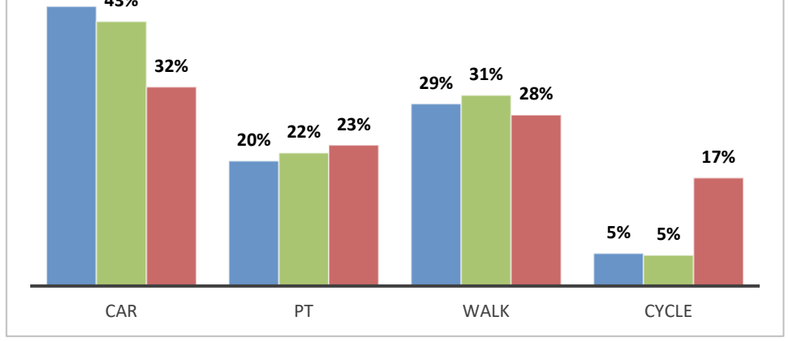
		24h									AM								
		Car	PT	Walk	Cycle	Total_24h	Car_ms	PT_ms	Wlk_ms	Cyc_ms	Car	PT	Walk	Cycle	Total	Car_ms	PT_ms	Wlk_ms	Cyc_ms
Canal Cordon	2016 Base	148,000	170,000	200,000	39,000	556,000	27%	31%	36%	7%	12,000	13,000	17,000	3,000	45,000	26%	29%	38%	6%
	2042 Do Minimum	154,000	204,000	254,000	42,000	654,000	24%	31%	39%	6%	13,000	17,000	21,000	3,000	54,000	24%	31%	39%	6%
	2042 Strategy	120,000	214,000	210,000	136,000	679,000	18%	31%	31%	20%	10,000	16,000	17,000	10,000	53,000	18%	30%	32%	20%
	Dif 2042 Do Minimum - 2016 Base	4%	20%	27%	8%	18%					10%	26%	22%	13%	19%				
	Dif 2042 Strategy - 2042 Do Minimum	-22%	5%	-17%	222%	4%					-26%	-3%	-18%	232%	-1%				
Inside M50	2016 Base	1,023,000	457,000	666,000	119,000	2,266,000	45%	20%	29%	5%	107,000	68,000	72,000	15,000	261,000	41%	26%	28%	6%
	2042 Do Minimum	1,096,000	552,000	790,000	128,000	2,566,000	43%	22%	31%	5%	108,000	78,000	82,000	15,000	283,000	38%	28%	29%	5%
	2042 Strategy	819,000	580,000	704,000	445,000	2,548,000	32%	23%	28%	17%	79,000	76,000	73,000	53,000	281,000	28%	27%	26%	19%
	Dif 2042 Do Minimum - 2016 Base	7%	21%	19%	7%	13%					1%	15%	13%	2%	8%				
	Dif 2042 Strategy - 2042 Do Minimum	-25%	5%	-11%	248%	-1%					-27%	-2%	-11%	255%	-1%				
Metropolitan	2016 Base	1,889,000	613,000	947,000	154,000	3,604,000	52%	17%	26%	4%	212,000	103,000	108,000	20,000	443,000	48%	23%	24%	4%
	2042 Do Minimum	2,092,000	769,000	1,154,000	172,000	4,188,000	50%	18%	28%	4%	222,000	125,000	127,000	21,000	496,000	45%	25%	26%	4%
	2042 Strategy	1,767,000	833,000	1,026,000	593,000	4,220,000	42%	20%	24%	14%	180,000	131,000	113,000	75,000	500,000	36%	26%	23%	15%
	Dif 2042 Do Minimum - 2016 Base	11%	26%	22%	11%	16%					5%	22%	17%	7%	12%				
	Dif 2042 Strategy - 2042 Do Minimum	-16%	8%	-11%	245%	1%					-19%	5%	-11%	255%	1%				
Full GDA	2016 Base	2,649,000	672,000	1,098,000	169,000	4,589,000	58%	15%	24%	4%	320,000	117,000	126,000	21,000	584,000	55%	20%	22%	4%
	2042 Do Minimum	2,942,000	832,000	1,339,000	190,000	5,303,000	55%	16%	25%	4%	333,000	140,000	148,000	23,000	644,000	52%	22%	23%	4%
	2042 Strategy	2,600,000	936,000	1,199,000	617,000	5,353,000	49%	17%	22%	12%	286,000	156,000	133,000	78,000	653,000	44%	24%	20%	12%
	Dif 2042 Do Minimum - 2016 Base	11%	24%	22%	12%	16%					4%	20%	18%	8%	10%				
	Dif 2042 Strategy - 2042 Do Minimum	-12%	13%	-10%	225%	1%					-14%	12%	-10%	237%	1%				
Full ERM	2016 Base	3,619,000	718,000	1,299,000	191,000	5,828,000	62%	12%	22%	3%	444,000	127,000	147,000	23,000	742,000	60%	17%	20%	3%
	2042 Do Minimum	4,031,000	875,000	1,581,000	216,000	6,703,000	60%	13%	24%	3%	467,000	150,000	173,000	25,000	815,000	57%	18%	21%	3%
	2042 Strategy	3,645,000	1,014,000	1,431,000	656,000	6,746,000	54%	15%	21%	10%	412,000	174,000	157,000	82,000	825,000	50%	21%	19%	10%
	Dif 2042 Do Minimum - 2016 Base	11%	22%	22%	13%	15%					5%	18%	18%	8%	10%				
	Dif 2042 Strategy - 2042 Do Minimum	-10%	16%	-10%	204%	1%					-12%	16%	-10%	221%	1%				











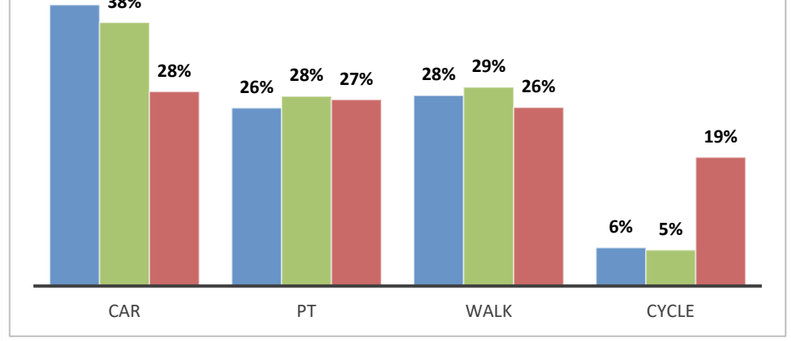
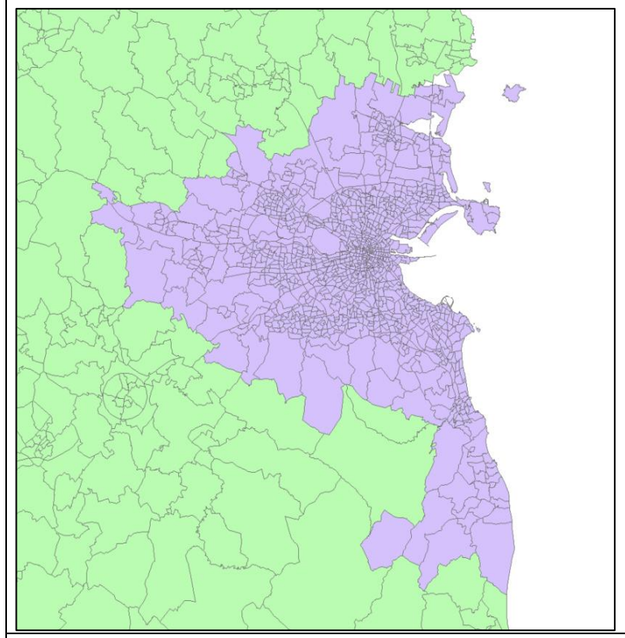
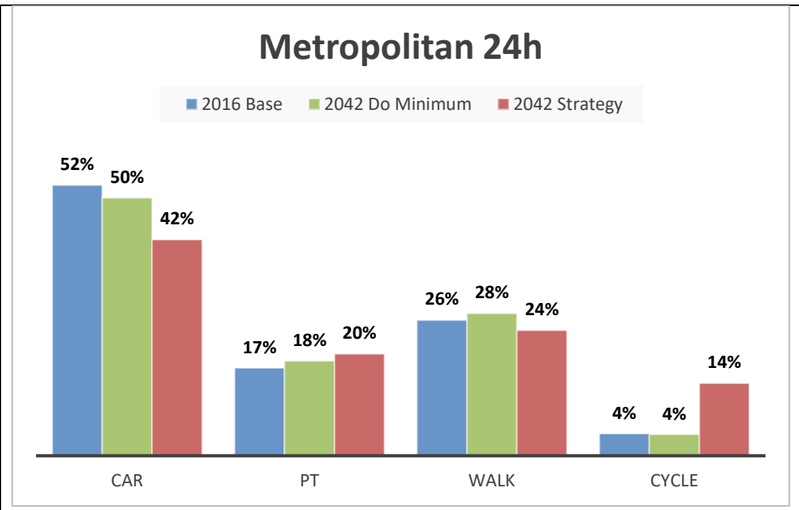
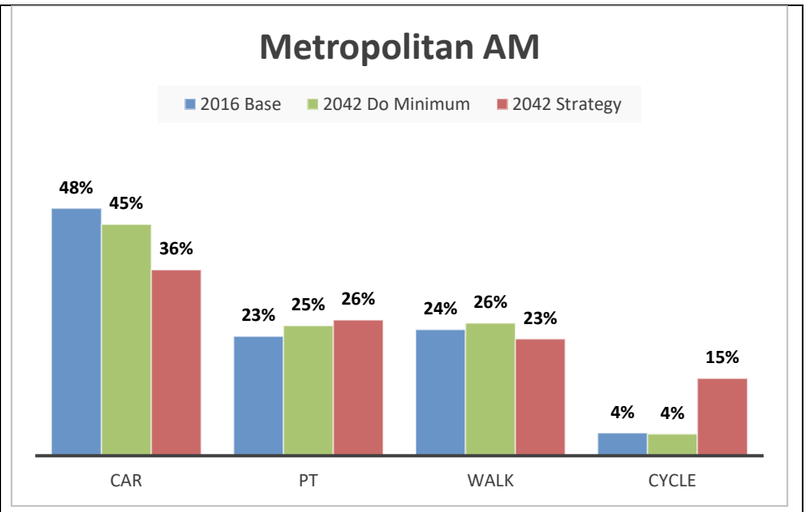
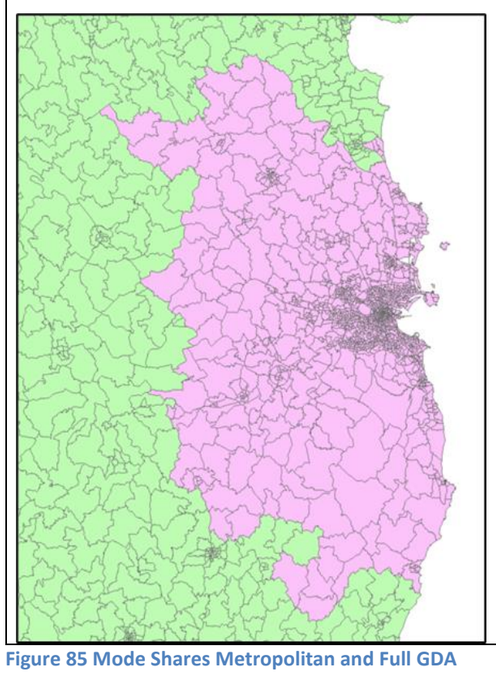


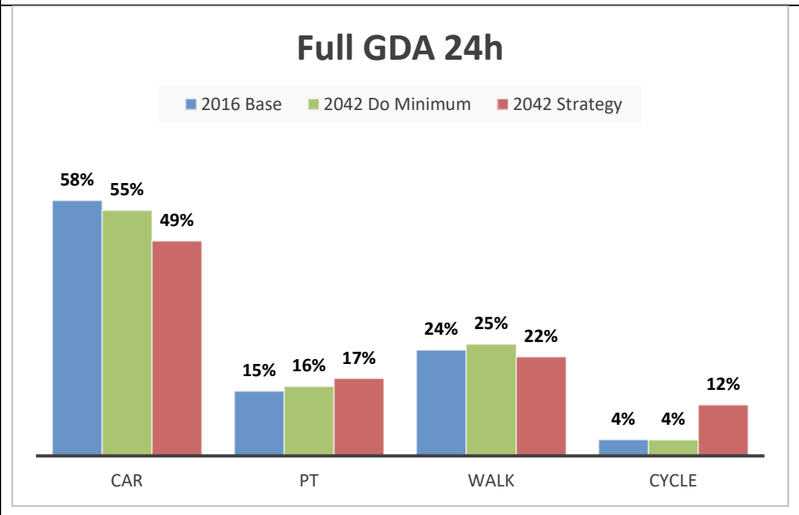
Figure 84 Mode Shares Canal Cordon and Inside M50











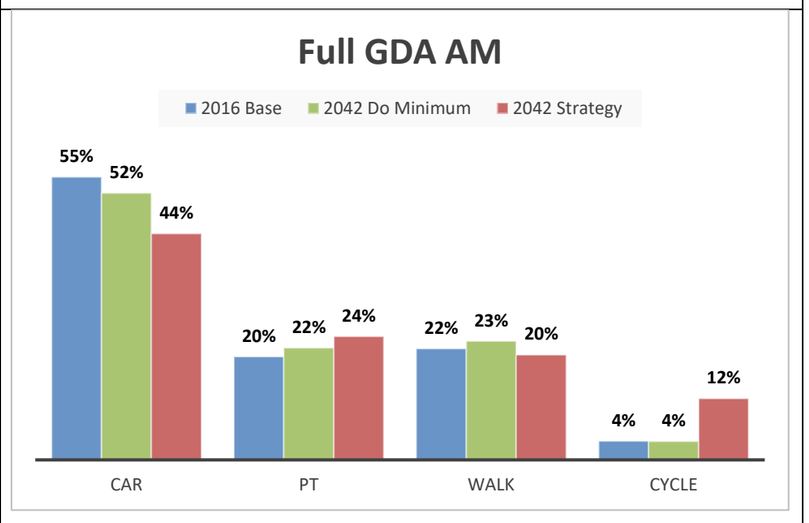
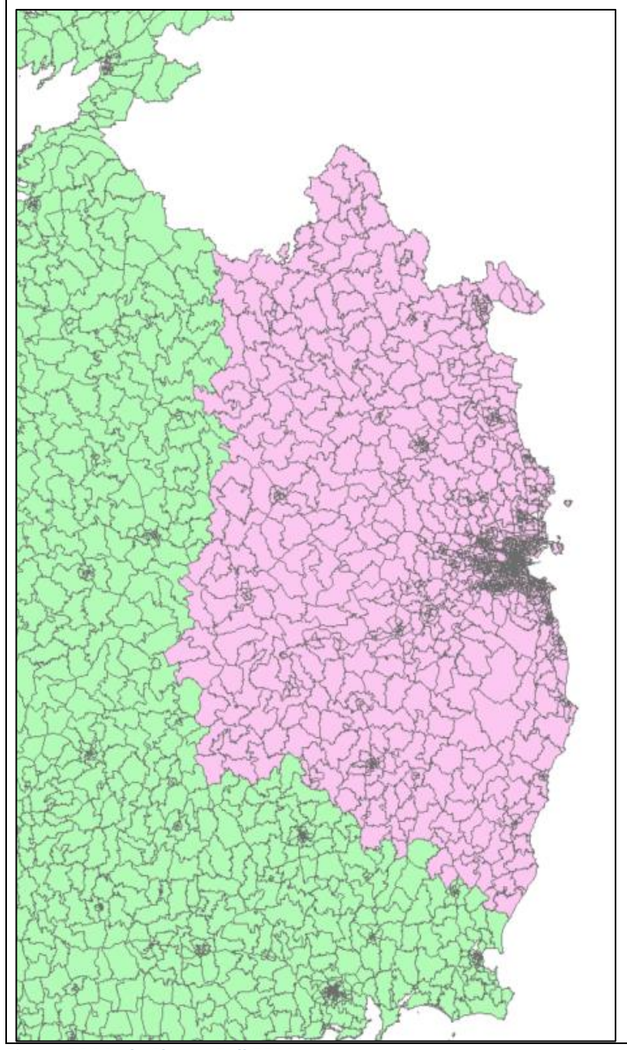
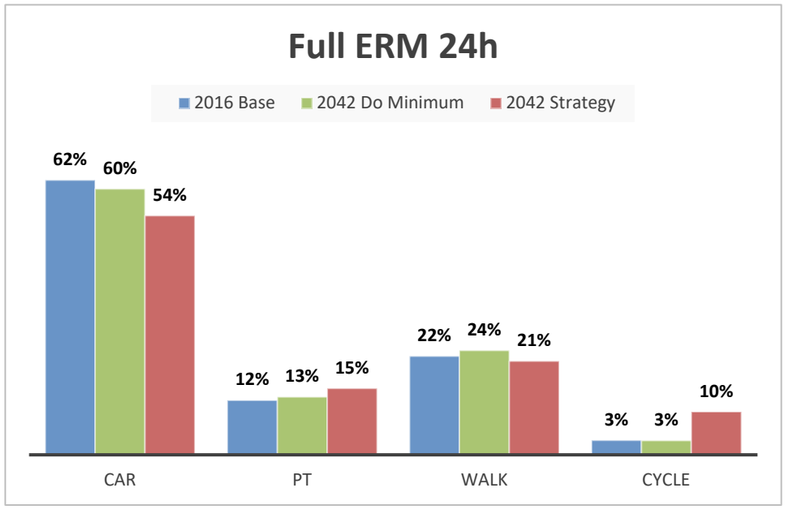


Figure 85 Mode Shares Metropolitan and Full GDA





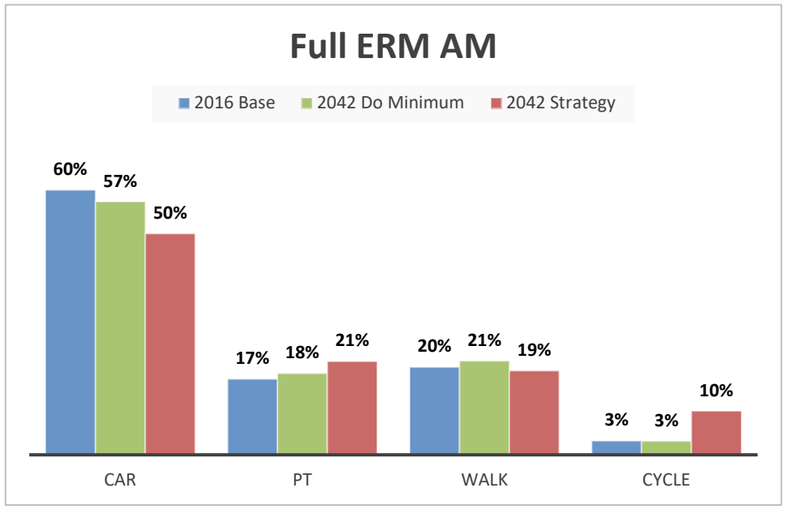
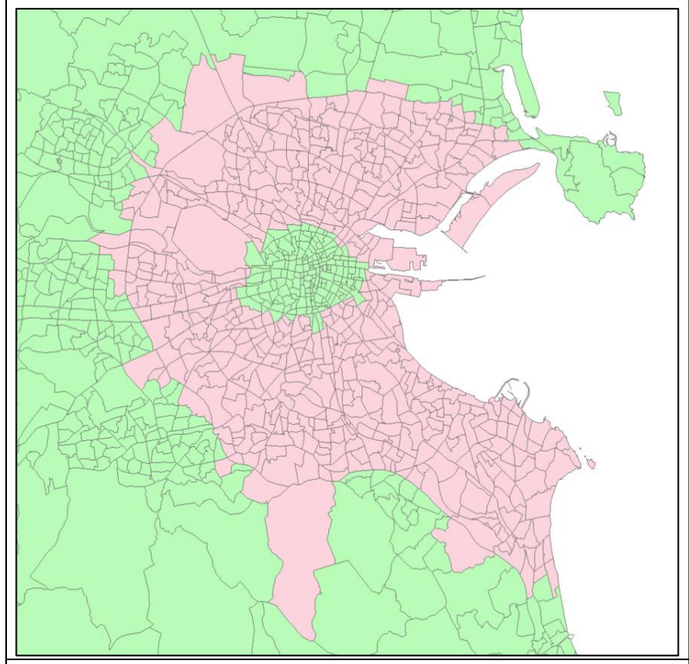
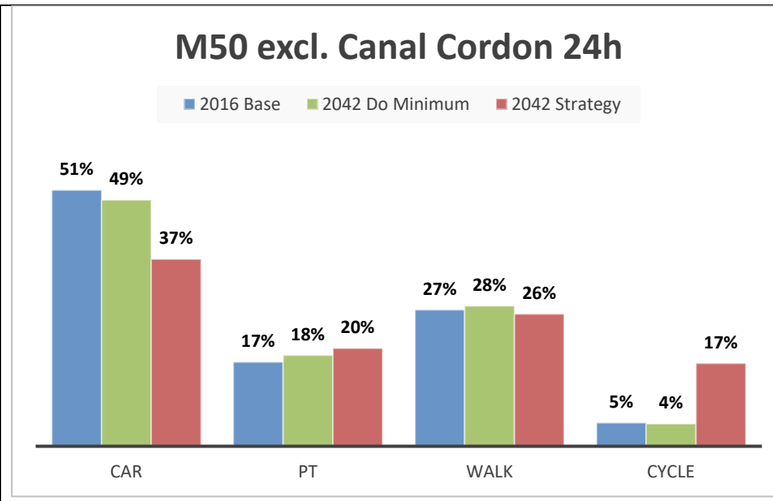


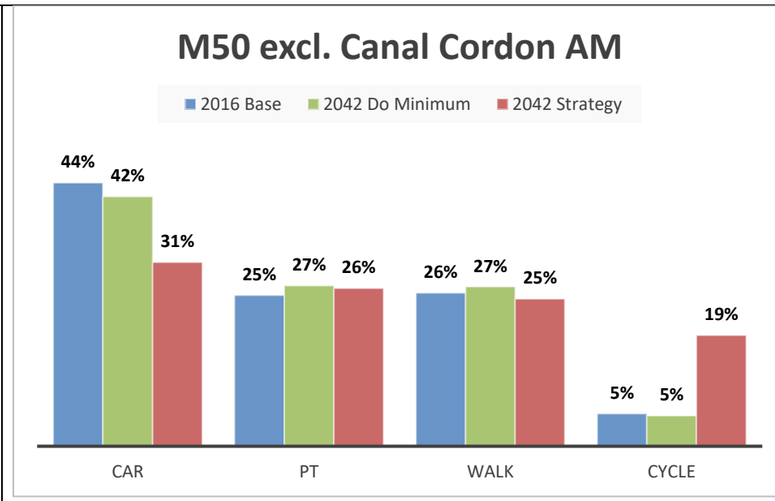
Figure 86 Mode Shares Full ERM

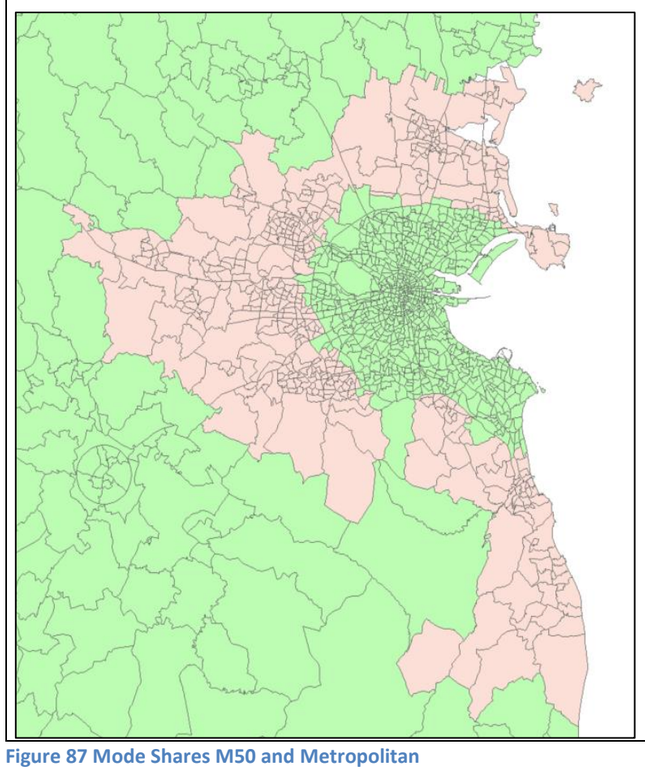
Table 6-5 Mode Shares M50, Metropolitan, Full GDA and Full ERM

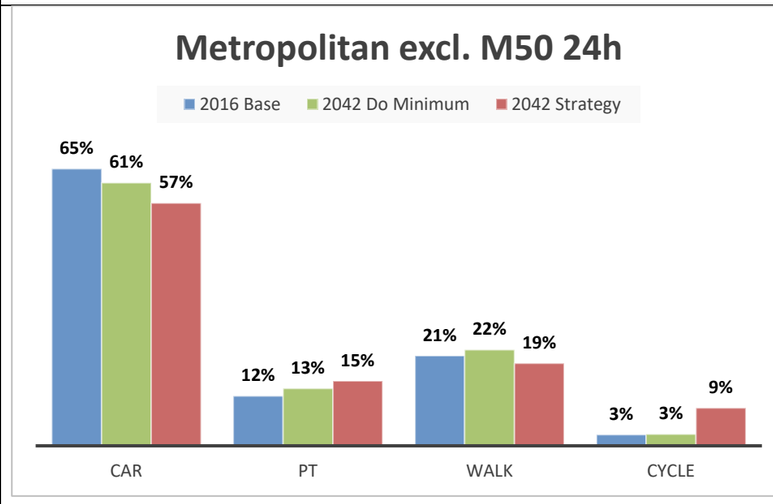
		24h									AM								
		Car	PT	Walk	Cycle	Total_24h	Car_ms	PT_ms	Wlk_ms	Cyc_ms	Car	PT	Walk	Cycle	Total	Car_ms	PT_ms	Wlk_ms	Cyc_ms
M50 excl. Canal Cordon	2016 Base	875,000	288,000	466,000	80,000	1,709,000	51%	17%	27%	5%	95,000	54,000	55,000	12,000	216,000	44%	25%	26%	5%
	2042 Do Minimum	942,000	348,000	537,000	86,000	1,912,000	49%	18%	28%	4%	95,000	61,000	61,000	12,000	229,000	42%	27%	27%	5%
	2042 Strategy	699,000	366,000	494,000	310,000	1,869,000	37%	20%	26%	17%	70,000	60,000	56,000	42,000	228,000	31%	26%	25%	19%
	Dif 2042 Do Minimum - 2016 Base	8%	21%	15%	7%	12%					0%	13%	10%	-1%	6%				
	Dif 2042 Strategy - 2042 Do Minimum	-26%	5%	-8%	261%	-2%					-27%	-2%	-8%	261%	-1%				
Metropolitan excl. M50	2016 Base	866,000	156,000	281,000	35,000	1,338,000	65%	12%	21%	3%	105,000	35,000	36,000	5,000	181,000	58%	19%	20%	3%
	2042 Do Minimum	997,000	217,000	364,000	44,000	1,622,000	61%	13%	22%	3%	114,000	47,000	46,000	6,000	213,000	54%	22%	21%	3%
	2042 Strategy	948,000	254,000	322,000	148,000	1,672,000	57%	15%	19%	9%	101,000	55,000	40,000	22,000	219,000	46%	25%	18%	10%
	Dif 2042 Do Minimum - 2016 Base	15%	39%	29%	26%	21%					8%	35%	27%	23%	17%				
	Dif 2042 Strategy - 2042 Do Minimum	-5%	17%	-12%	238%	3%					-12%	18%	-12%	257%	3%				
Full GDA excl. Metropolitan	2016 Base	760,000	59,000	151,000	15,000	985,000	77%	6%	15%	2%	108,000	14,000	17,000	2,000	141,000	76%	10%	12%	1%
	2042 Do Minimum	850,000	63,000	184,000	18,000	1,115,000	76%	6%	17%	2%	111,000	15,000	21,000	2,000	148,000	75%	10%	14%	1%
	2042 Strategy	833,000	103,000	173,000	24,000	1,133,000	74%	9%	15%	2%	106,000	25,000	20,000	3,000	153,000	69%	16%	13%	2%
	Dif 2042 Do Minimum - 2016 Base	12%	6%	22%	19%	13%					3%	5%	20%	17%	5%				
	Dif 2042 Strategy - 2042 Do Minimum	-2%	65%	-6%	30%	2%					-4%	67%	-6%	37%	3%				
Full ERM excl. GDA	2016 Base	970,000	46,000	201,000	22,000	1,239,000	78%	4%	16%	2%	124,000	10,000	22,000	2,000	159,000	78%	7%	14%	1%
	2042 Do Minimum	1,089,000	43,000	243,000	26,000	1,400,000	78%	3%	17%	2%	134,000	10,000	25,000	2,000	171,000	78%	6%	15%	1%
	2042 Strategy	1,044,000	78,000	231,000	39,000	1,393,000	75%	6%	17%	3%	126,000	18,000	24,000	4,000	172,000	73%	10%	14%	2%
	Dif 2042 Do Minimum - 2016 Base	12%	-5%	21%	17%	13%					7%	-1%	16%	9%	8%				
	Dif 2042 Strategy - 2042 Do Minimum	-4%	81%	-5%	53%	-1%					-5%	75%	-5%	70%	1%				











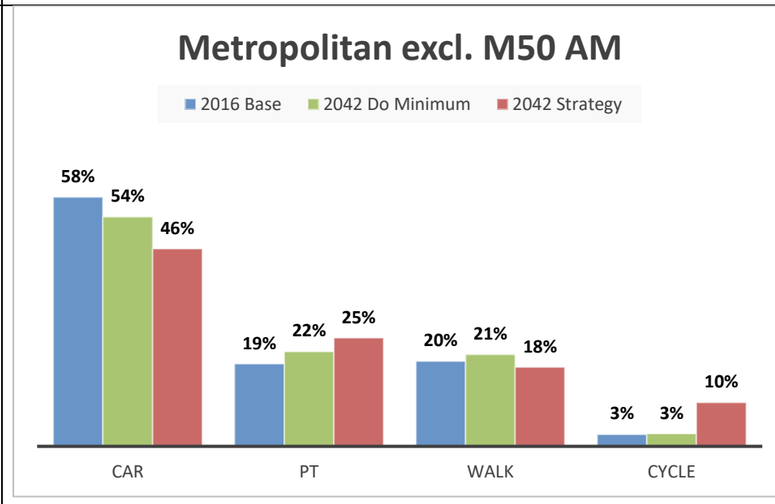
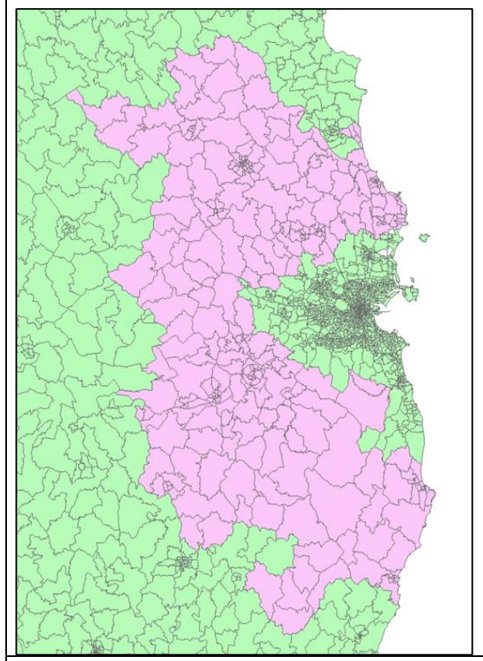
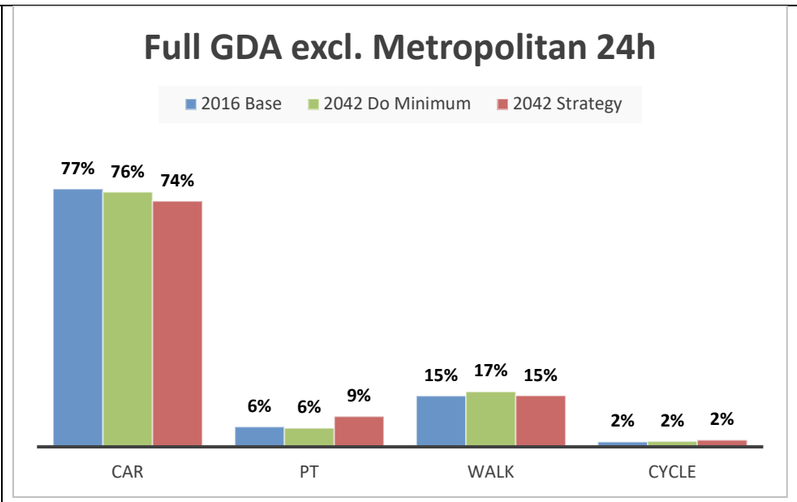
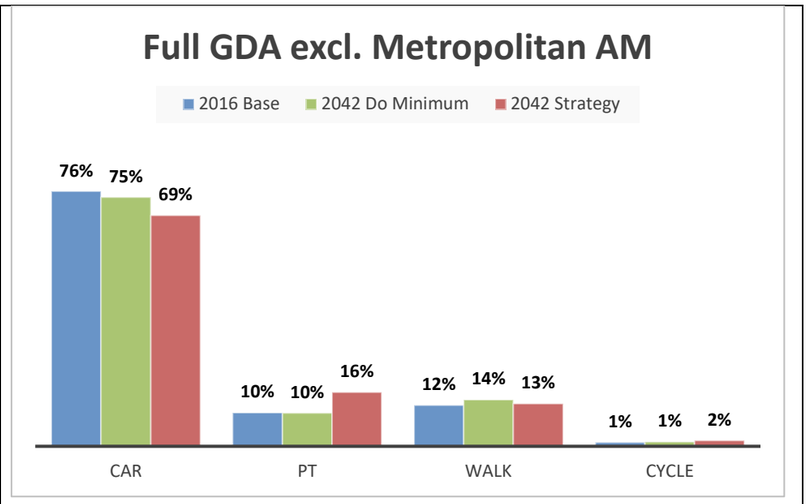
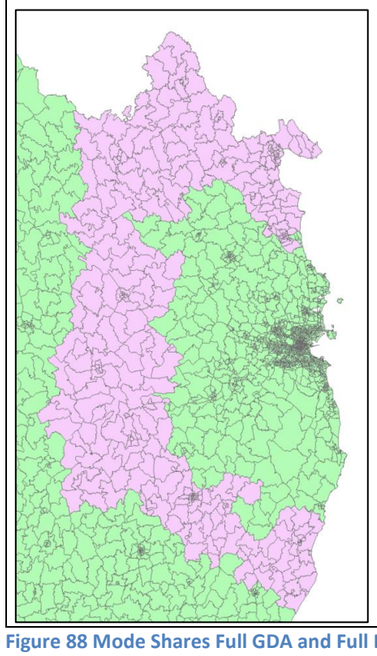


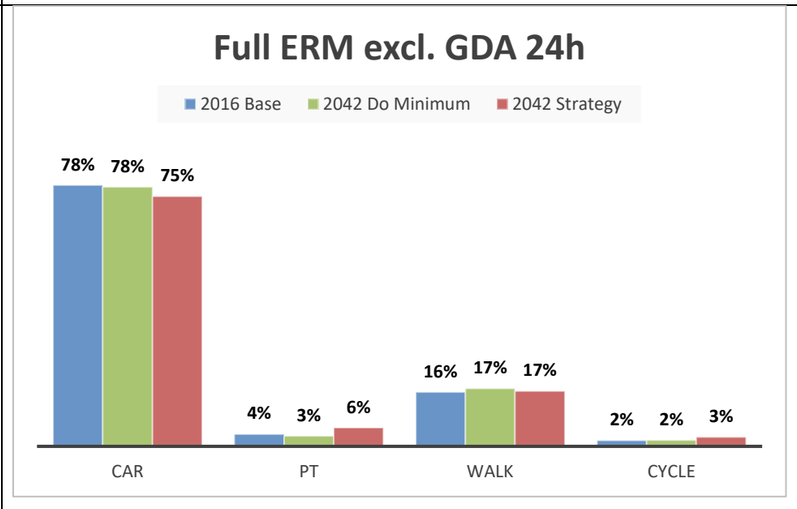
Figure 87 Mode Shares M50 and Metropolitan











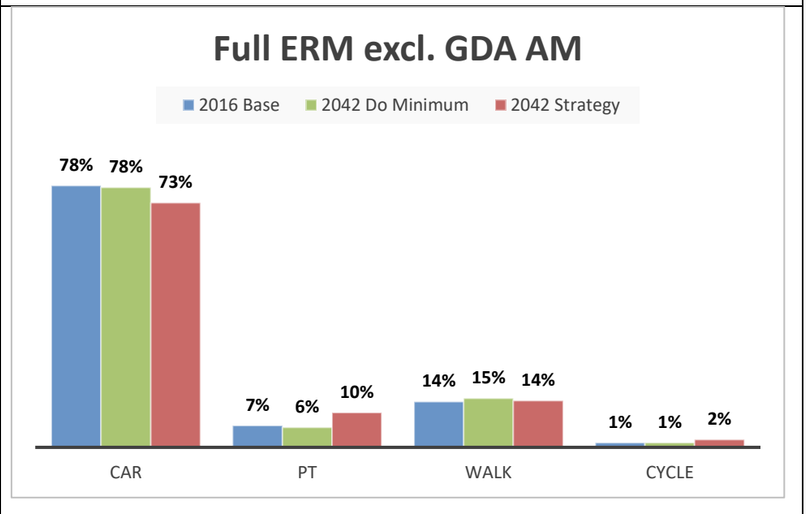


Figure 88 Mode Shares Full GDA and Full ERM

6.2.4 Vehicle kms (Env_4)

The Strategy shows a decrease in vehicle km as presented in Table 6-6, Figure 89 and Figure 90. It should be noted that the estimates assume no additional demand management of car usage throughout the GDA.

Table 6-6 Vehicle-kms 24h (rounded to the nearest thousands)

Description	Base	Do Minimum	Strategy
Business	4,764,000	4,854,000	4,368,000
Commute	8,533,000	8,443,000	6,958,000
Other	7,802,000	9,724,000	8,242,000
Education	265,000	197,000	150,000
Retired	860,000	1,026,000	829,000
Taxi	746,000	910,000	766,000
LGV	2,753,000	5,263,000	5,335,000
OGV1	1,234,000	2,271,000	2,244,000
OGV2_P	191,000	387,000	405,000
OGV2_NP	1,609,000	3,156,000	3,069,000
TOTAL	**28,800,000**	**36,200,000**	**32,400,000**

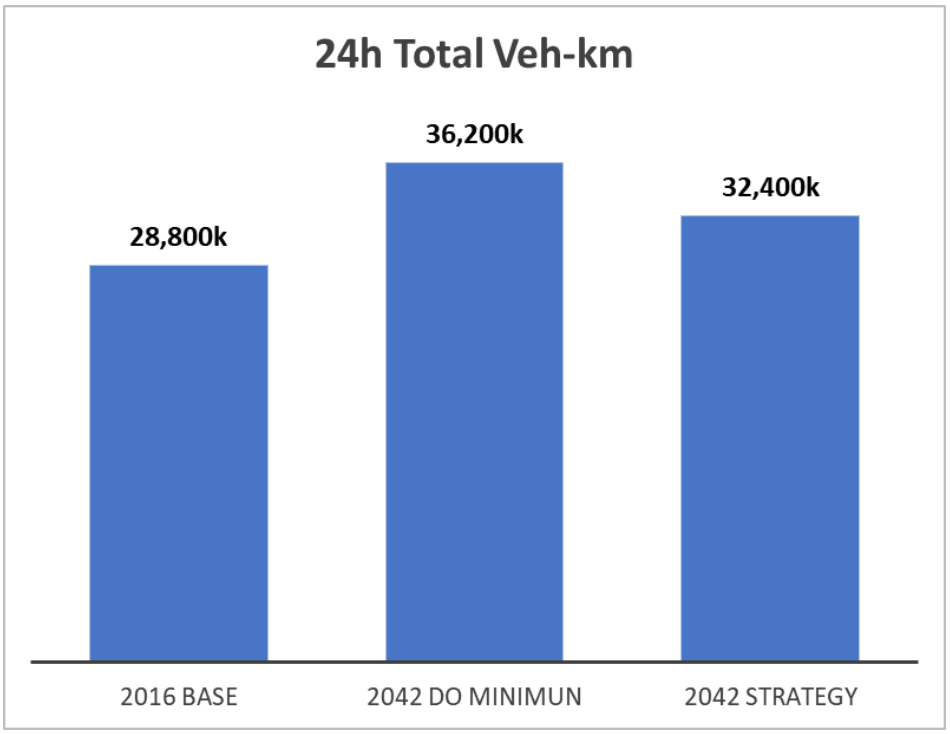


Figure 89 Vehicle kms AM (in 1000s)

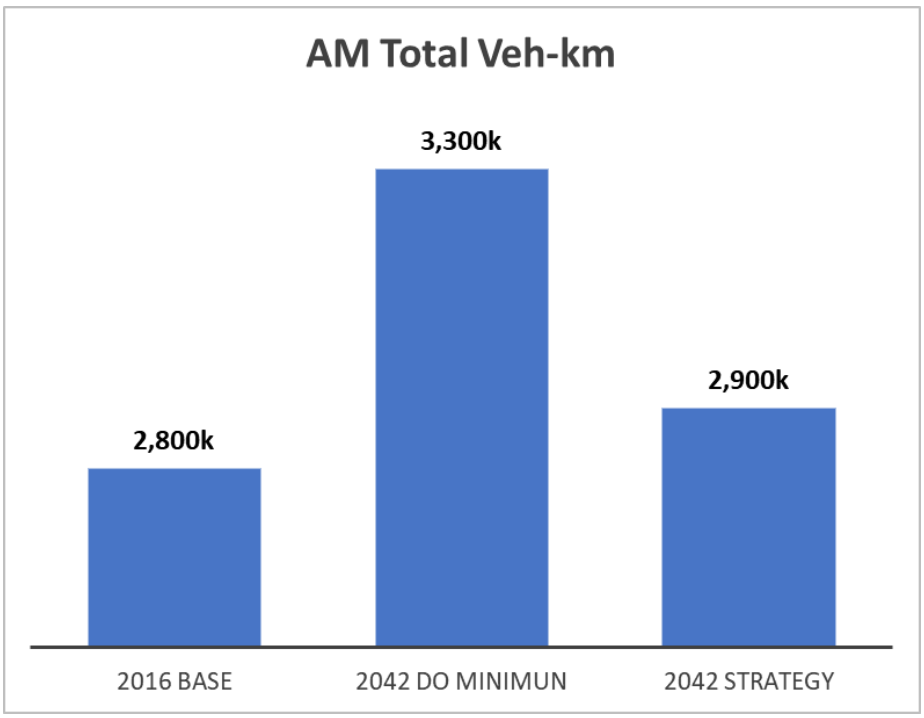


Figure 90 Vehicle kms 24h

6.3 Connected Communities and Better Quality of Life

Table 6-7 – Connected Communities

Wider Policy Objectives	Strategy Outcomes	Strategy Objectives	Indicators
NSO 2 – Enhanced Regional Accessibility NPO 27: Integration of safe and convenient alternatives to the car into the design of our communities NSO 4 – Sustainable Mobility NSO 8 – Transition to a Low-Carbon and Climate-Resilient Society National Climate Action Plan	Connected Communities and Better Quality of Life	To improve health and quality of life of our society by improving connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for active travel mobility.	- Reduction in commuting times - Number of people within 15 minutes travel time of key destinations (define destinations, regular trips/journeys?), out of peak activities, Logsum/PTALS/ASOS tool etc. Purpose of trip, is there areas which are poor etc. 15 mins defined primarily by walking and cycling. - Opportunities for interchange (can be measured from model, define this more clearly, quality of interchange and accessibility to areas, coverage of network, I-J pair – look at GC for car vs PT/walk/cycle - Mode share for walking and cycling (interventions could impact on walk/cycle mode share). Targeting solutions by distance bands etc. - Forecast numbers of accidents, deaths and serious injury from transport - Something on public perception / happiness index? Healthy Streets assessment ? - Journey time reliability / punctuality of PT services - Transport, health and wellbeing evidence review (DfT)

6.3.1 Number of people within 15 min travel time of City Centre, Major Town Centres, Universities & Major Hospitals (Con_1)

The Strategy shows an increase on number of people as presented in Table 6-8 to Table 6-11.

Table 6-8 2042 Population within 60min PT door to door travel time in the AM

	City Centre			Major Town			University			Hospital		
O Area	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff
Canal	149,000	149,000	0%	149,000	149,000	0%	149,000	149,000	0%	149,000	149,000	0%
M50	958,000	1,010,000	5%	1,028,000	1,036,000	1%	1,045,000	1,047,000	0%	1,022,000	1,040,000	2%
Metropolitan	1,261,000	1,488,000	18%	1,771,000	1,782,000	1%	1,616,000	1,702,000	5%	1,572,000	1,697,000	8%
GDA	1,266,000	1,513,000	19%	1,952,000	2,041,000	5%	1,641,000	1,750,000	7%	1,611,000	1,767,000	10%

Table 6-9 2042 Population within 45min PT door to door travel time in the AM

	City Centre			Major Town			University			Hospital		
O Area	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff
Canal	149,000	149,000	0%	139,000	149,000	7%	149,000	149,000	0%	149,000	149,000	0%
M50	605,000	766,000	27%	836,000	895,000	7%	932,000	993,000	7%	843,000	904,000	7%
Metropolitan	637,000	863,000	36%	1,466,000	1,565,000	7%	1,284,000	1,381,000	8%	1,186,000	1,340,000	13%
GDA	637,000	863,000	36%	1,530,000	1,680,000	10%	1,288,000	1,382,000	7%	1,186,000	1,341,000	13%

Table 6-10 2042 Population within 30min PT door to door travel time in AM

	City Centre			Major Town			University			Hospital		
O Area	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff
Canal	141,000	145,000	3%	8,000	41,000	398%	144,000	145,000	1%	147,000	148,000	1%
M50	275,000	316,000	15%	280,000	435,000	55%	507,000	628,000	24%	441,000	554,000	26%
Metropolitan	275,000	316,000	15%	656,000	858,000	31%	678,000	792,000	17%	572,000	737,000	29%
GDA	275,000	316,000	15%	677,000	896,000	32%	678,000	792,000	17%	572,000	737,000	29%

Table 6-11 2042 Population within 15min PT door to door travel time in the AM

	City Centre			Major Town			University			Hospital		
O Area	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff	Do Min	Strategy	% Diff
Canal	16,000	13,000	-18%	0	0	*0%*	27,000	37,000	35%	39,000	55,000	41%
M50	16,000	13,000	-18%	23,000	32,000	38%	51,000	71,000	39%	62,000	88,000	41%
Metropolitan	16,000	13,000	-18%	70,000	86,000	23%	67,000	96,000	42%	74,000	113,000	52%
GDA	16,000	13,000	-18%	70,000	89,000	28%	67,000	96,000	42%	74,000	113,000	52%

6.3.2 Map of journey time bands to the city centre by PT in the AM peak (Con_2)

Maps below show public transport journey times in the AM peak to access O'Connell Street, by 15min band. By comparing the DoMin and the Strategy maps, we can see that the light red area (<15min) has expanded with the strategy. It is also worth noting that almost all the area within the M50 can reach O'Connell St in less than 45min by public transport.

Table below quantifies what we intuitively see on the maps: the number of zones that can reach the city centre in less than 30 or 45min is greater in the Strategy.

Table 6-12: Percentage of zones in each time band

	2016 Base	2042 Do Minimum	2042 Strategy
0 min	0%	1%	0%
0 to 15 min	1%	1%	1%
15 to 30 min	11%	11%	13%
30 to 45 min	14%	13%	19%
45 to 60 min	21%	20%	21%
> 60 min	52%	53%	46%

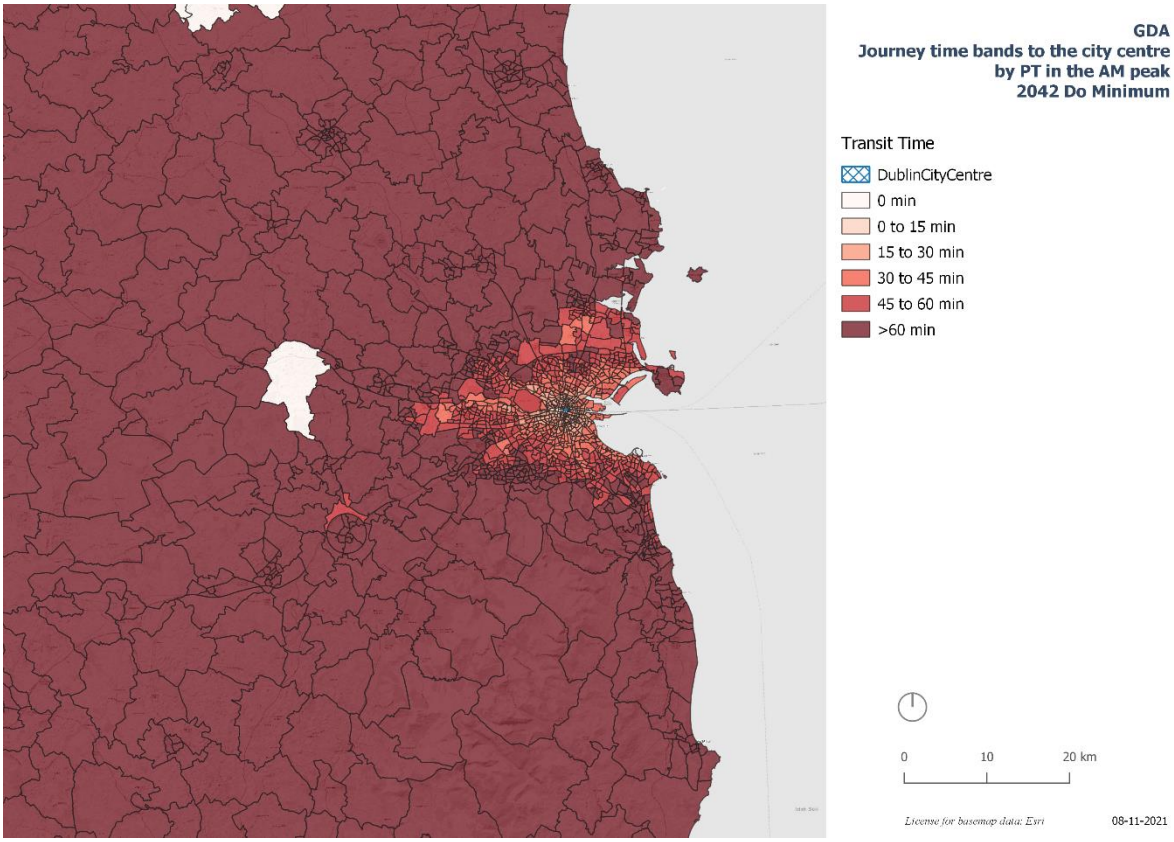


Figure 91 Do Minimum Map of journey times to the city centre by PT in the AM peak for GDA

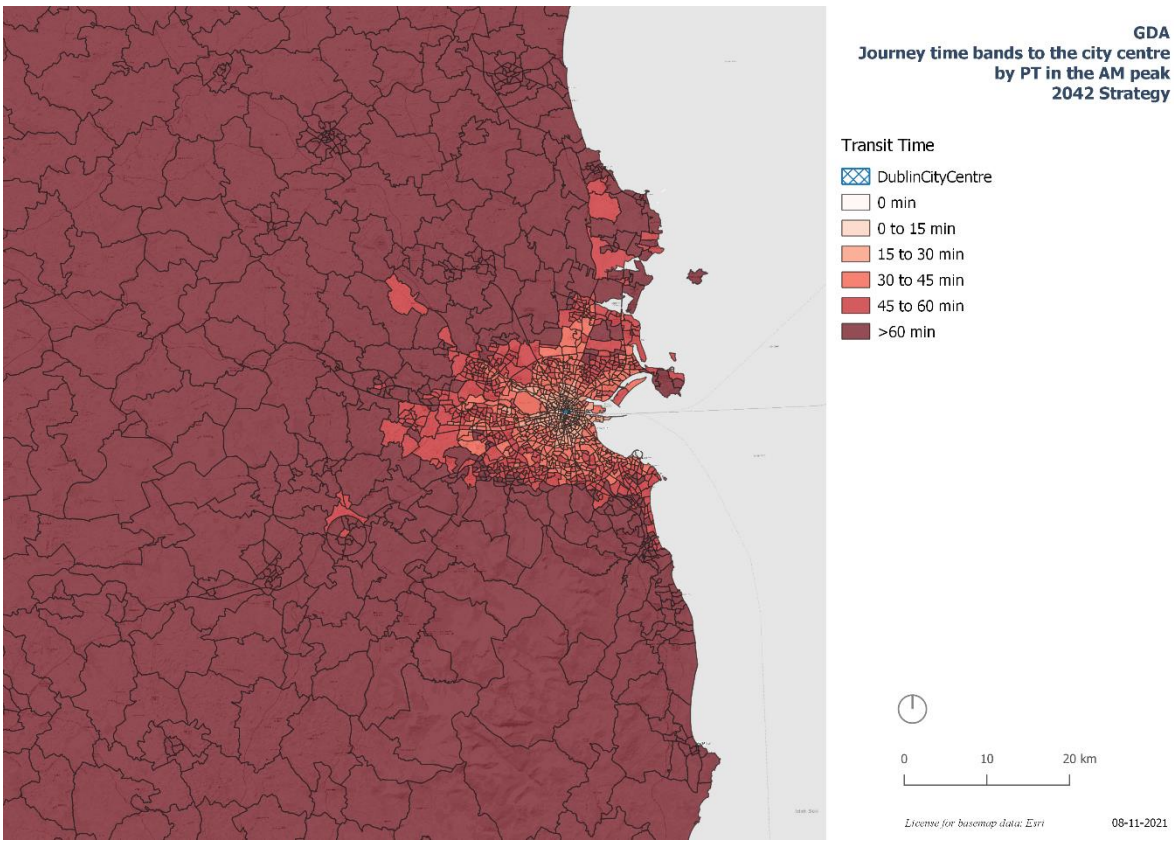


Figure 92 Strategy Map of journey times to the city centre by PT in the AM peak for GDA

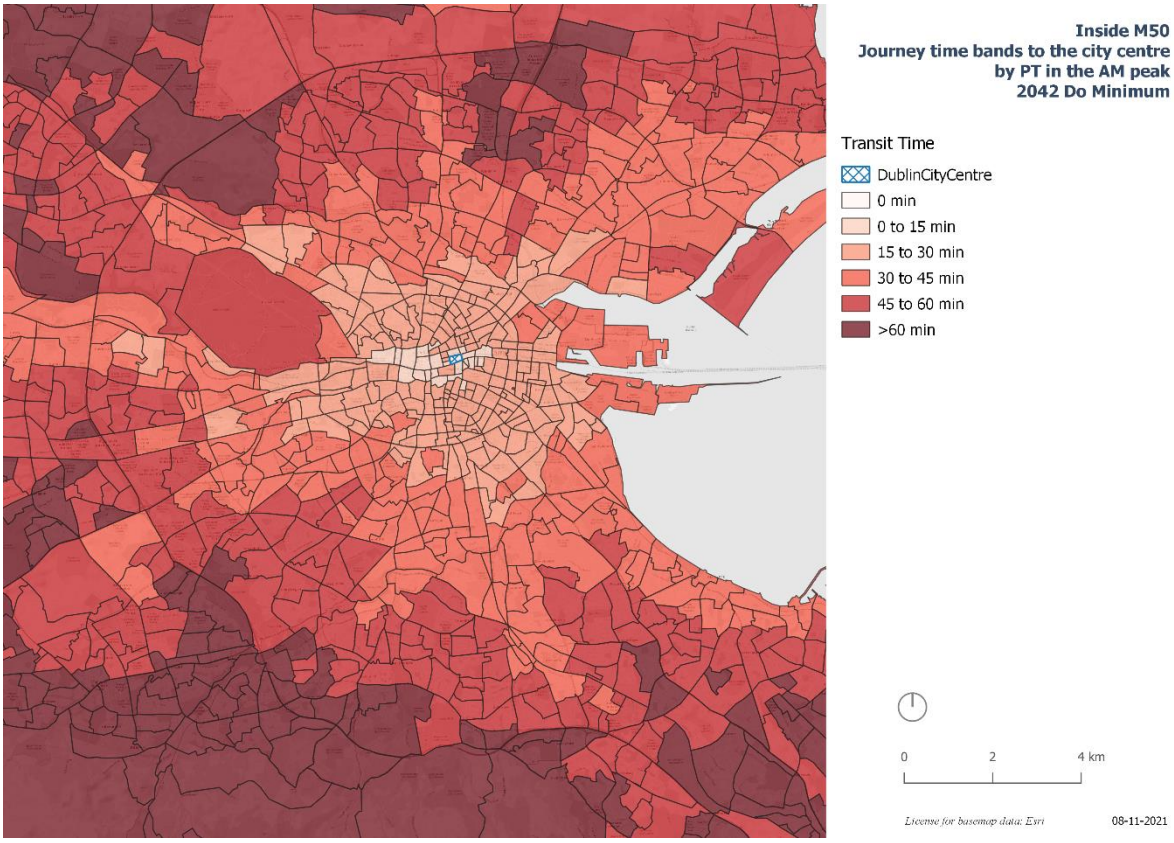


Figure 93 Do Minimum Map of journey times to the city centre by PT in the AM peak for Inside M50

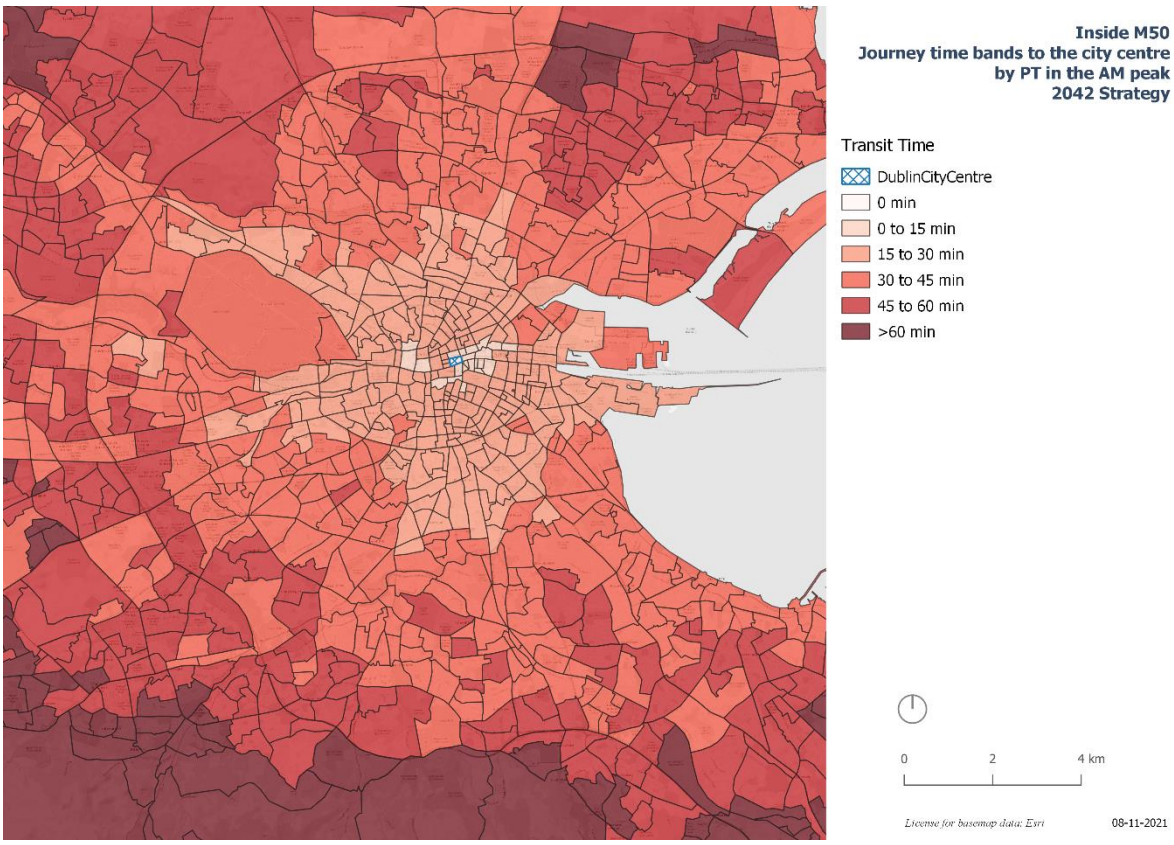


Figure 94 Strategy Map of journey times to the city centre by PT in the AM peak for Inside M50

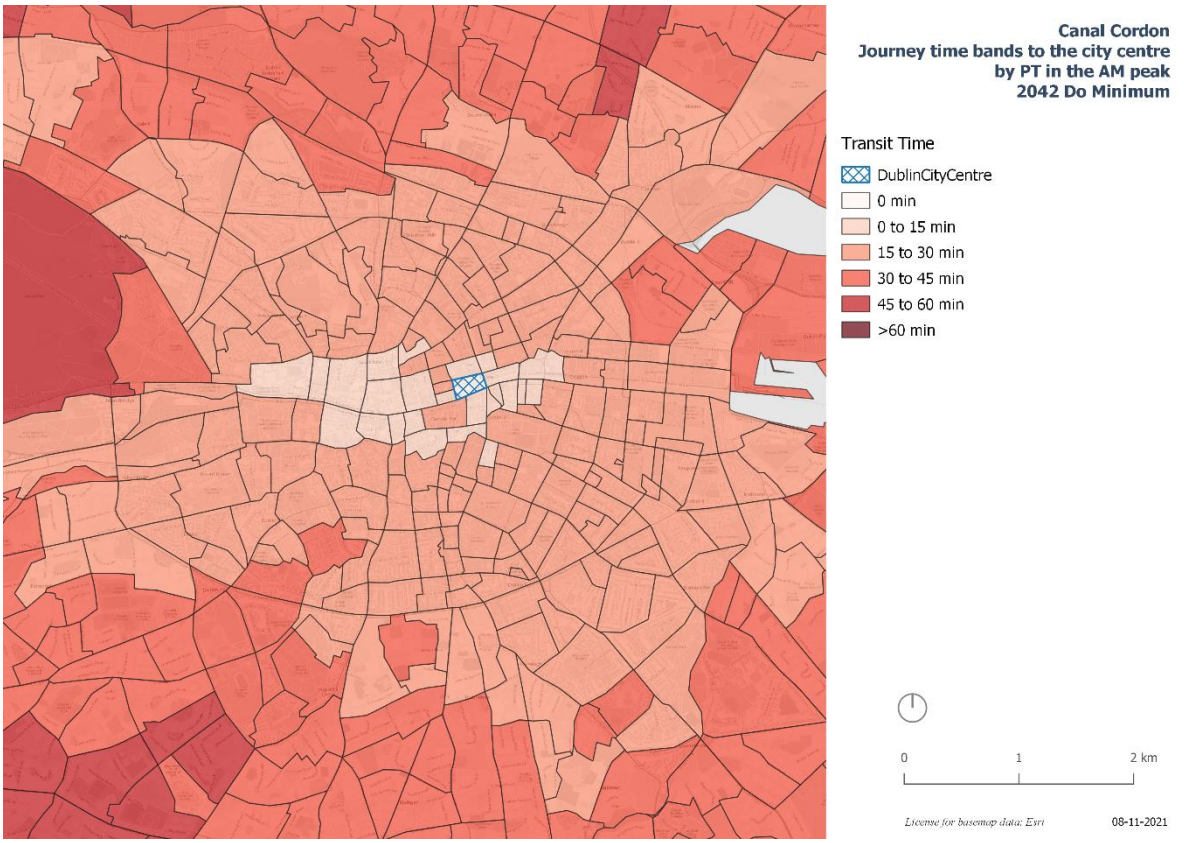


Figure 95 Do Minimum Map of journey times to the city centre by PT in the AM peak for Canal Cordon

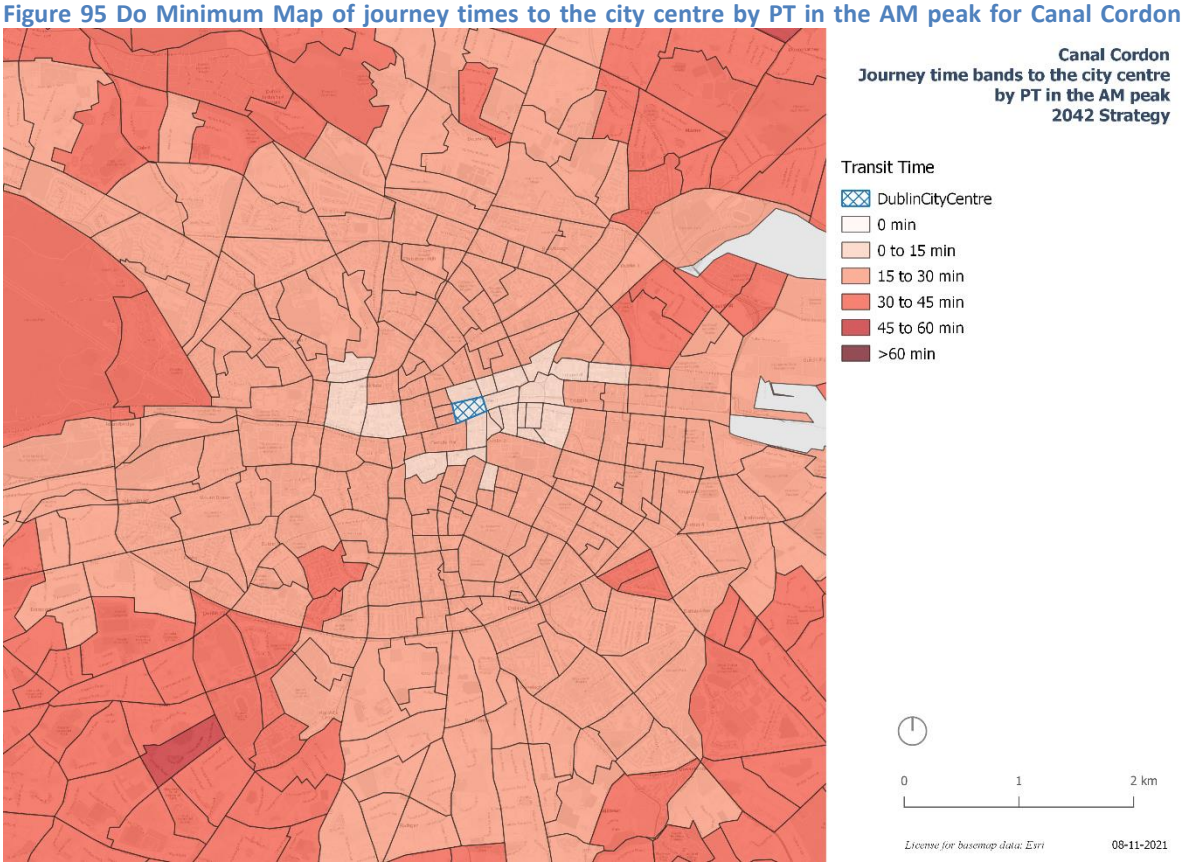


Figure 96 - Strategy Map of journey times to the city centre by PT in the AM peak for Canal Cordon

6.3.3 Walking and Cycling Mode Share (Con_3)

The Strategy shows a decrease in walk mode share as presented in Figure 97 and Figure 98.

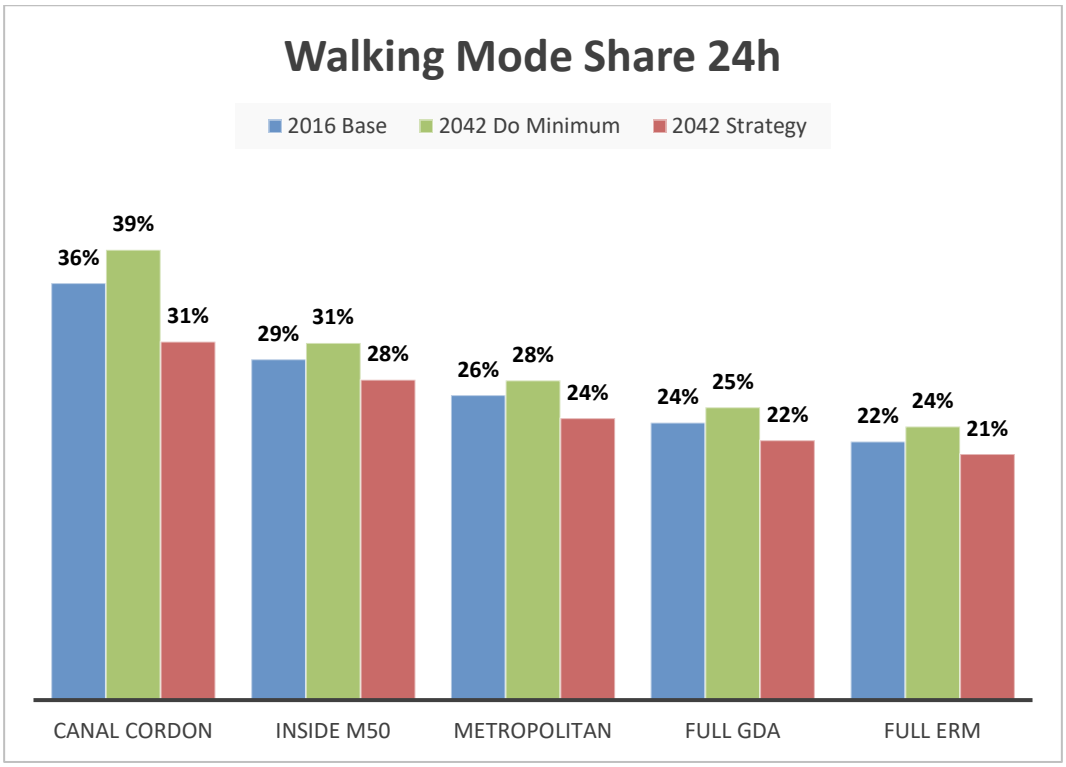


Figure 97 Walking Mode Share 24h

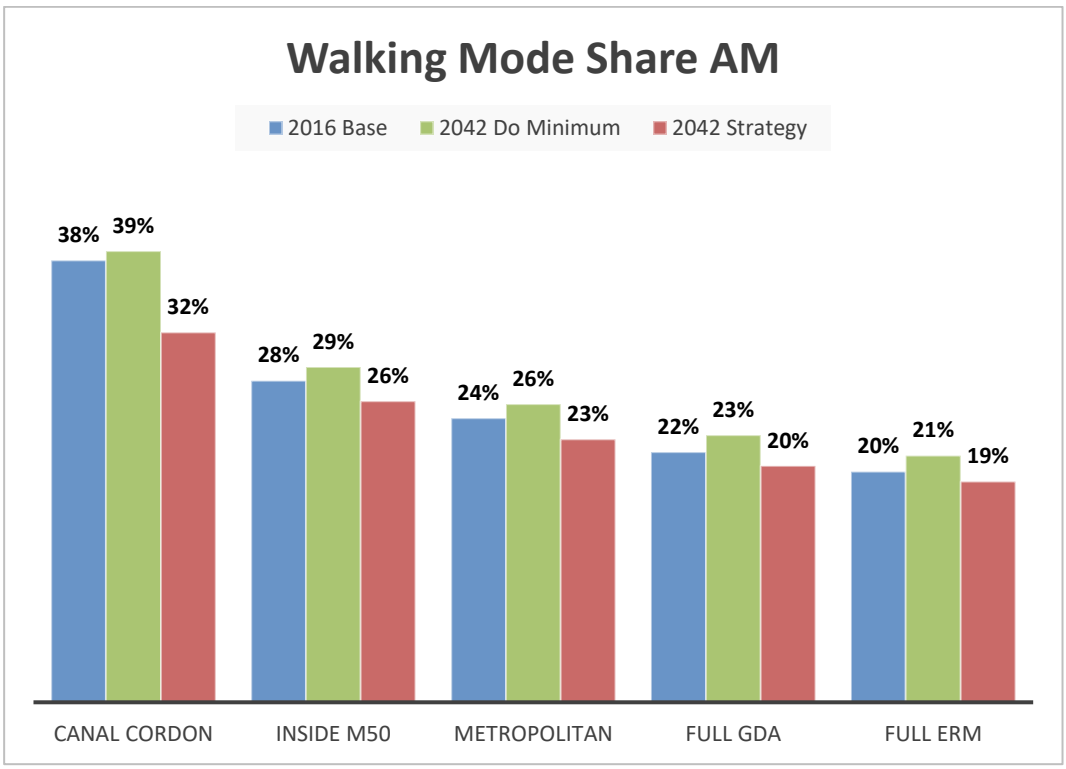


Figure 98 Walking Mode share AM

The Strategy shows an increase in mode share as presented in Figure 99 and Figure 100.

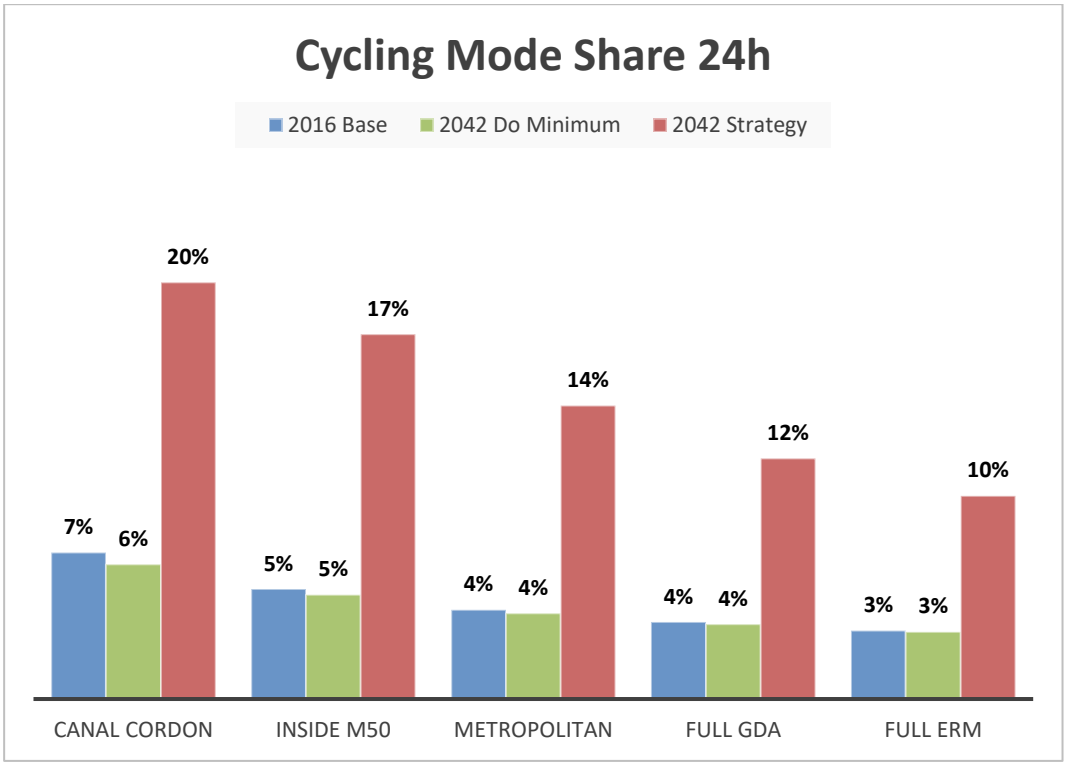


Figure 99 Cycling Mode share 24h

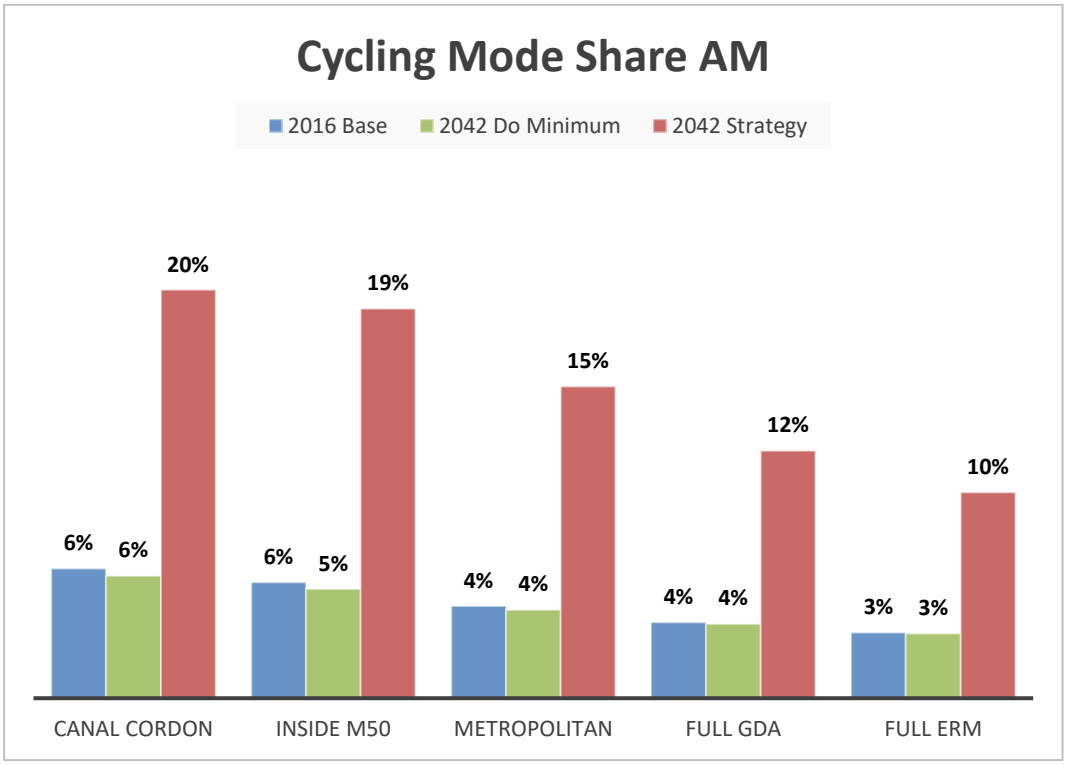


Figure 100 Cycling Mode share AM

6.3.4 KSI data

The Cost and Benefit to Accidents – Light Touch (COBALT) software was used to assess the impact of the Strategy on the number of fatal, serious, and slight casualties over a period from 2042 to 2071, assuming no growth in traffic during this period.

The annual summary output from the COBALT assessment is presented in Table 6-13.

Table 6-13 Road casualties estimation - E8R06, ACX & ADF

	Base (E8R06 2016)	Do Minimum (ACX 2042)	Strategy (ADF 2042)
Fatal Casualties	68	50	47
Serious Casualties	270	224	213
Slight Casualties	6,392	5,760	5,463
Fatal Casualty Saving v DM			3
Serious Casualty Saving v DM			11
Slight Casualty Saving v DM			297

The assessment indicates that the strategy will save approximately 3 fatal casualties per year between 2042 and 2071. The strategy will also save 11 serious casualties and 297 slight casualties per year over the same time period.

6.4 A Strong Sustainable Economy

Table 6-14 A Strong Sustainable Economy

Wider Policy Objectives	Strategy Outcomes	Strategy Objectives	Indicators
NSO 6 – High-Quality International Connectivity	A Strong Sustainable Economy	Supporting economic activity and growth by improving the opportunity for people to travel for work or business where and when they need to and facilitating the efficient movement of goods.	- Time taken for commuting and business trips - Travel time for goods vehicles (travel time metric from model sufficient to address this. National road network provides for HGV/LGV accessibility) - Average speeds on strategic routes as a proxy for congestion? - Travel time for trips to Dublin Port and Dublin Airport - Punctuality / reliability of PT services - % of s106 invested in sustainable transport - % of journey to work by sustainable modes - Number of jobs accessible by 30mins bus, compared with those accessible by car (could be specific to most deprived areas) – e.g. West Yorks transport strategy.

6.4.1 Journey times for business and commute trips

To assess the overall performance of the strategy across different users, the average journey times have been calculated for Business and Commuter trips and are presented in tables below.

The average journey times for business trips increase by 3% in the strategy.

Table 6-15 Business - Origin within GDA All Day

	DM			DS			%DIFF		
	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)
Road	177,000	100,000	33.7	155,000	87,000	33.8	-12%	-12%	0%	-9%
PT	44,000	37,000	49.7	66,000	53,000	48.0	50%	44%	-3%	-13%
Wlk	28,000	12,000	26.5	21,000	11,000	32.6	-24%	-7%	23%	-12%
Cyc	2,000	1,000	50.4	9,000	4,000	26.3	443%	183%	-48%	
TOT	**251,000**	**150,000**	**35.8**	**252,000**	**156,000**	**37.1**	**0%**	**4%**	**3%**	-25%

The average journey times for commute trips decrease by 2% in the strategy.

Table 6-16 Commute - Origin GDA All Day

	DM			DS			%DIFF		
	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)
Road	655,000	241,000	22.1	558,000	207,000	22.2	-15%	-14%	1%	-9%
PT	214,000	178,000	49.8	232,000	197,000	51.1	8%	11%	3%	-13%
Wlk	136,000	53,000	23.2	98,000	37,000	22.4	-28%	-31%	-4%	-12%
Cyc	65,000	26,000	23.4	222,000	63,000	17.0	240%	147%	-27%	
TOT	**1,070,000**	**496,000**	**27.8**	**1,110,000**	**504,000**	**27.2**	**4%**	**2%**	**-2%**	-25%

These differences are not significant and are more linked to mode shifting between the DoMin and the Strategy which impact the average journey times calculated across all modes.

6.4.2 Travel times for goods vehicles

Strategic movements such as goods vehicle journeys are monitored to ensure that the strategy works for all types of transport. The average journey times for goods vehicle has been calculated for both DoMin & Strategy are presented in table below.

The average journey times for goods vehicle goes up by 10% with the strategy in place. An increase was expected as road network capacity is reduced.

Table 6-17 Travel times for good vehicles with origin within GDA All Day

		DM			DS			%DIFF		
	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	
LGV	131,000	56,000	25.8	131,000	61,000	27.9	0%	8%	8%	-9%
OGV1	18,000	14,000	45.8	18,000	16,000	51.7	0%	13%	13%	-13%
OGV2_P	6,000	4,000	40.3	6,000	5,000	49.9	2%	26%	24%	-12%
OGV2_NP	33,000	26,000	46.4	33,000	28,000	51.0	0%	10%	10%	
TOT	**188,000**	**100,000**	**31.8**	**188,000**	**110,000**	**35.0**	**0%**	**10%**	**10%**	-25%

6.4.3 Travel time for trips to/from Dublin Airport and Port

Access to strategic infrastructure is essential and must be looked at as part of the strategy. The average journey times to access Dublin Airport and Dublin Port are presented in table below.

The average journey times to the airport is reduced by 12% with the strategy by car and by 19% by public transport. These reductions are due to Metrolink, which provides a fast public transport connection to the airport. It also switches a lot of car demand to public transport, making the road network locally faster.

Table 6-18 Travel time for trips to-from Dublin Airport with origin withing GDA All day

		DM			DS			%DIFF		
		Trips	Journey Times (person.hour	Av. JT per trip (min)	Trips	Journey Times (person.hour	Av. JT per trip (min)	Trips	Journey Times (person.hour	Av. JT per trip (min)
Road	Business	1,210	660	32.7	1,010	500	29.7	-17%	-24%	-9%
Road	Commuter	3,300	1,760	32.0	2,680	1,240	27.8	-19%	-30%	-13%
Road	Other	8,460	4,360	30.9	5,220	2,370	27.2	-38%	-46%	-12%
Road	Education	0	0	n/a	0	0	n/a			
Road	Retired	30	10	20.0	40	10	15.0	33%	0%	-25%
TOT ROAD		**13,000**	**6,790**	**31.3**	**8,950**	**4,120**	**27.6**	**-31%**	**-39%**	**-12%**
PT	Business	750	640	51.2	2,100	1,470	42.0	180%	130%	-18%
PT	Commuter	1,070	970	54.4	1,170	950	48.7	9%	-2%	-10%
PT	Other	9,220	9,160	59.6	13,140	10,540	48.1	43%	15%	-19%
PT	Education	1	1	105.6	1	1	116.3		0%	
PT	Retired	1	2	104.0	3	7	151.3	102%	193%	45%
TOT PT		**11,040**	**10,770**	**58.5**	**16,410**	**12,970**	**47.4**	**49%**	**20%**	**-19%**
TOT ROAD & PT		**24,040**	**17,550**	**43.8**	**25,360**	**17,090**	**40.4**	**5%**	**-3%**	**-8%**

The average journey times to the port increase by 11% for car and is reduced by 4% for public transport. The increase in road journey times is due to the road network capacity reductions in the strategy, while the reduction in public transport journey times is coming from the improvement to the public transport network.

Table 6-19 Travel time for trips to-from Dublin Port with origin within GDA All Day

		DM			DS			%DIFF		
		Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)	Trips	Journey Times (person.hours)	Av. JT per trip (min)
Road	Business	140	80	34.3	120	70	35.0	-14%	-13%	2%
Road	Commuter	140	80	34.3	70	40	34.3	-50%	-50%	0%
Road	Other	800	470	35.3	780	500	38.5	-3%	6%	9%
Road	LGV	570	260	27.4	570	350	36.8	0%	35%	35%
Road	OGV1	5,170	3,700	42.9	5,170	4,030	46.8	0%	9%	9%
Road	OGV2_P	2,170	1,050	29.0	2,170	1,300	35.9	0%	24%	24%
Road	OGV2_NP	9,950	7,700	46.4	9,950	8,400	50.7	0%	9%	9%
TOT ROAD		**18,940**	**13,340**	**42.3**	**18,830**	**14,690**	**46.8**	**-1%**	**10%**	**11%**
PT	Business	30	40	80.0	40	50	75.0	33%	25%	-6%
PT	Commuter	120	150	75.0	90	110	73.3	-25%	-27%	-2%
PT	Other	270	300	66.7	280	290	62.1	4%	-3%	-7%
TOT PT		**420**	**480**	**68.6**	**410**	**450**	**65.9**	**-2%**	**-6%**	**-4%**
TOT ROAD & PT		**19,360**	**13,820**	**42.8**	**19,240**	**15,140**	**47.2**	**-1%**	**10%**	**10%**

6.5 An Inclusive Transport System

Table 6-20 An Inclusive Transport System

Wider Policy Objectives	Strategy Outcomes	Strategy Objectives	Indicators
SDG11: Make cities and human settlements inclusive, safe, resilient and sustainable	An Inclusive Transport System	To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.	- Proportion of accessible public transport vehicles (check if model can provide information to support this) – by age, sex, disability - Qualitative assessment of strategy policies and objectives related to accessibility and inclusivity - Number of trips made in disadvantaged areas - Mode share in disadvantaged areas - Proximity to bus stop with high frequency services (10mins or less) - Awareness of transport options (quant/qual surveys?) - PT fare data / index of cost of travel to indicate affordability - Transport cost stress (% income dedicated to transport – UK uses ONS data) - Customer satisfaction surveys - Socio-distributional impacts (https://www.gov.uk/government/publications/tag-social-and-distributional-impacts-worksheets - Safety – KSIs / other accident metrics? Personal safety?

6.5.1 Number of jobs accessible by PT in 30 minutes

The Pobal HP Deprivation index is Ireland's most widely used social gradient metric, which scores each small area (50 – 200 households) in terms of affluence or disadvantage. The index uses information from Ireland's census, such as employment, age profile and educational attainment, to calculate this score.

The forecasted planning sheets include population and employment figures at the Cenus Small Area level. Using the NTA RMS, it is possible to extract the number of jobs accessible in less than 30min by Public Transport mode from every zone and then filter it by Pobal index "very disadvantaged" and "disadvantaged".

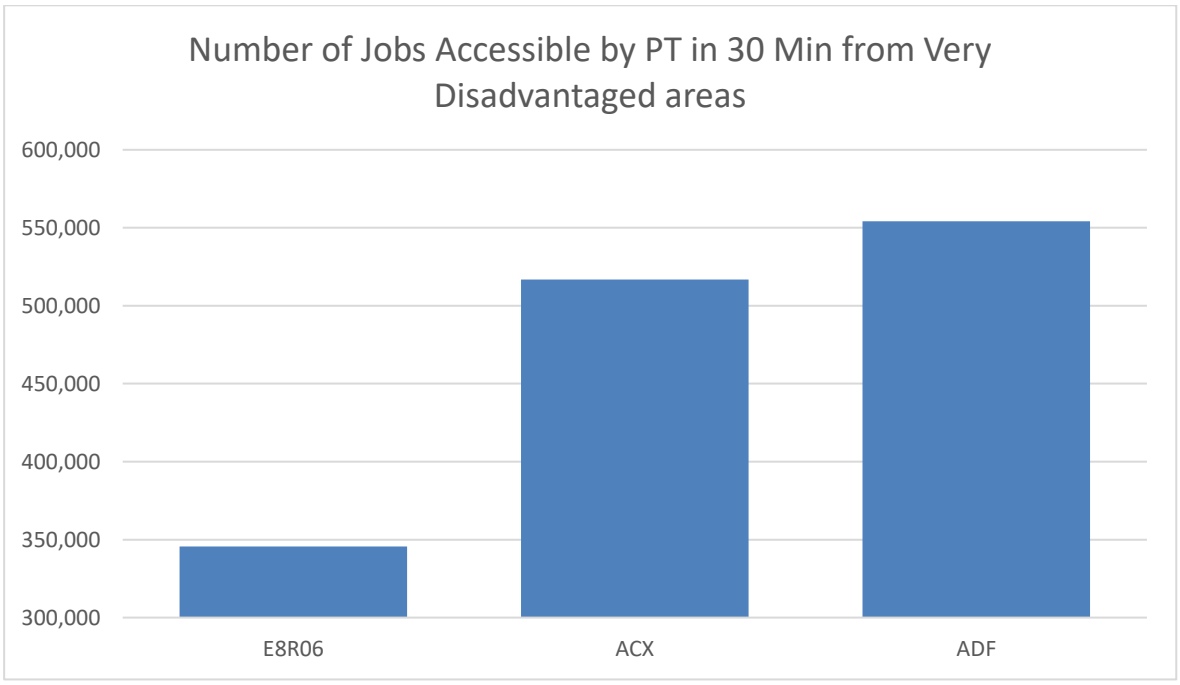


Figure 101 Number of jobs accessible by PT in 30 min from very disadvantaged areas

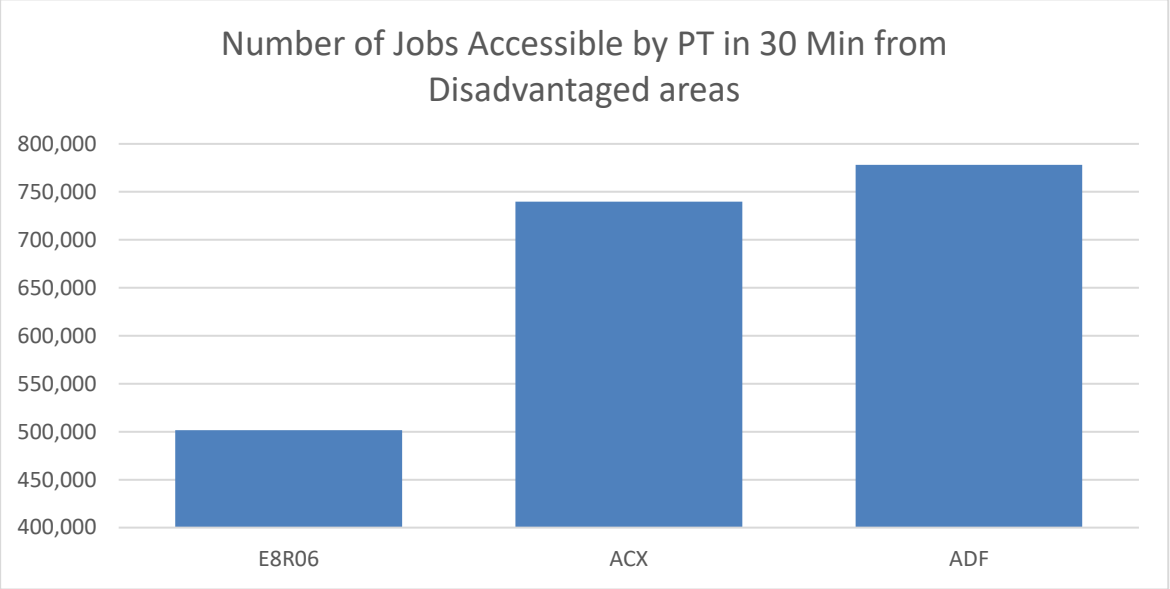


Figure 102 Number of jobs accessible by PT in 30 min from disadvantaged areas

Figure 103 shows the increases in the number of jobs accessible by public transport in 30 min from disadvantaged areas, relative to the base year, for scenarios ACX and ADF.

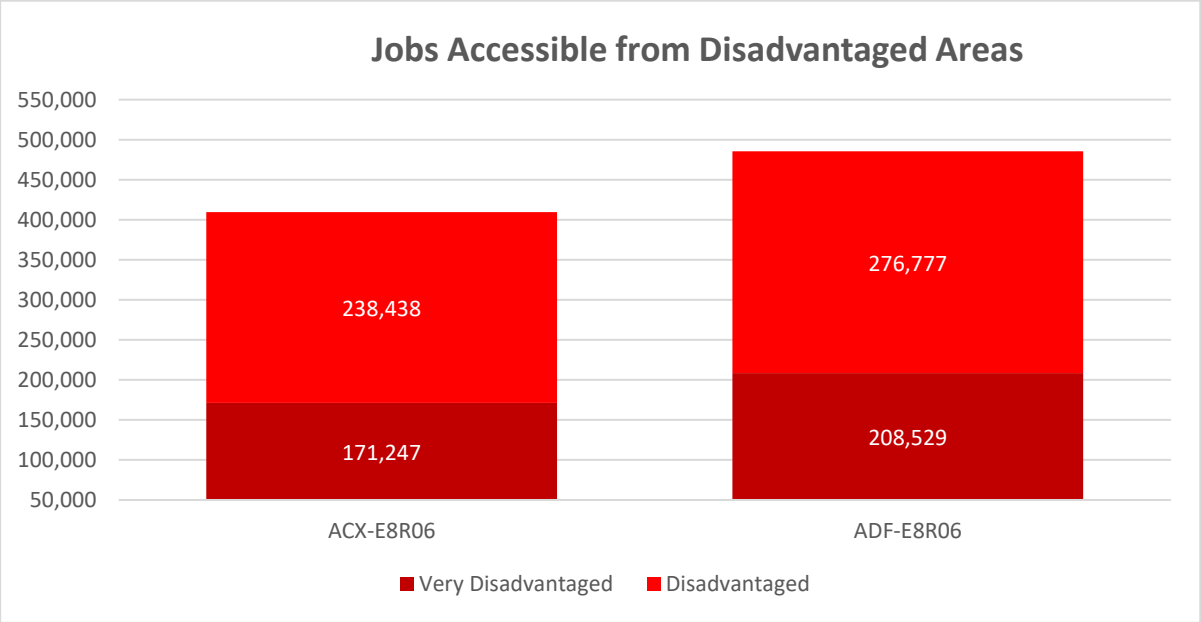


Figure 103 Impact to Disadvantaged group

6.5.2 Numbers living in proximity to transport service with better than 10-minute off-peak frequency

Population within 800m of selected public transport stops nodes with more than 20 services per hour in LT Stopping is presented in Table 6-21.

Table 6-21 Numbers living in proximity to transport service

	Pop within 800m of selected public transport stops
Do Minimum	1,028,991
Strategy	1,374,740
%Difference	34%

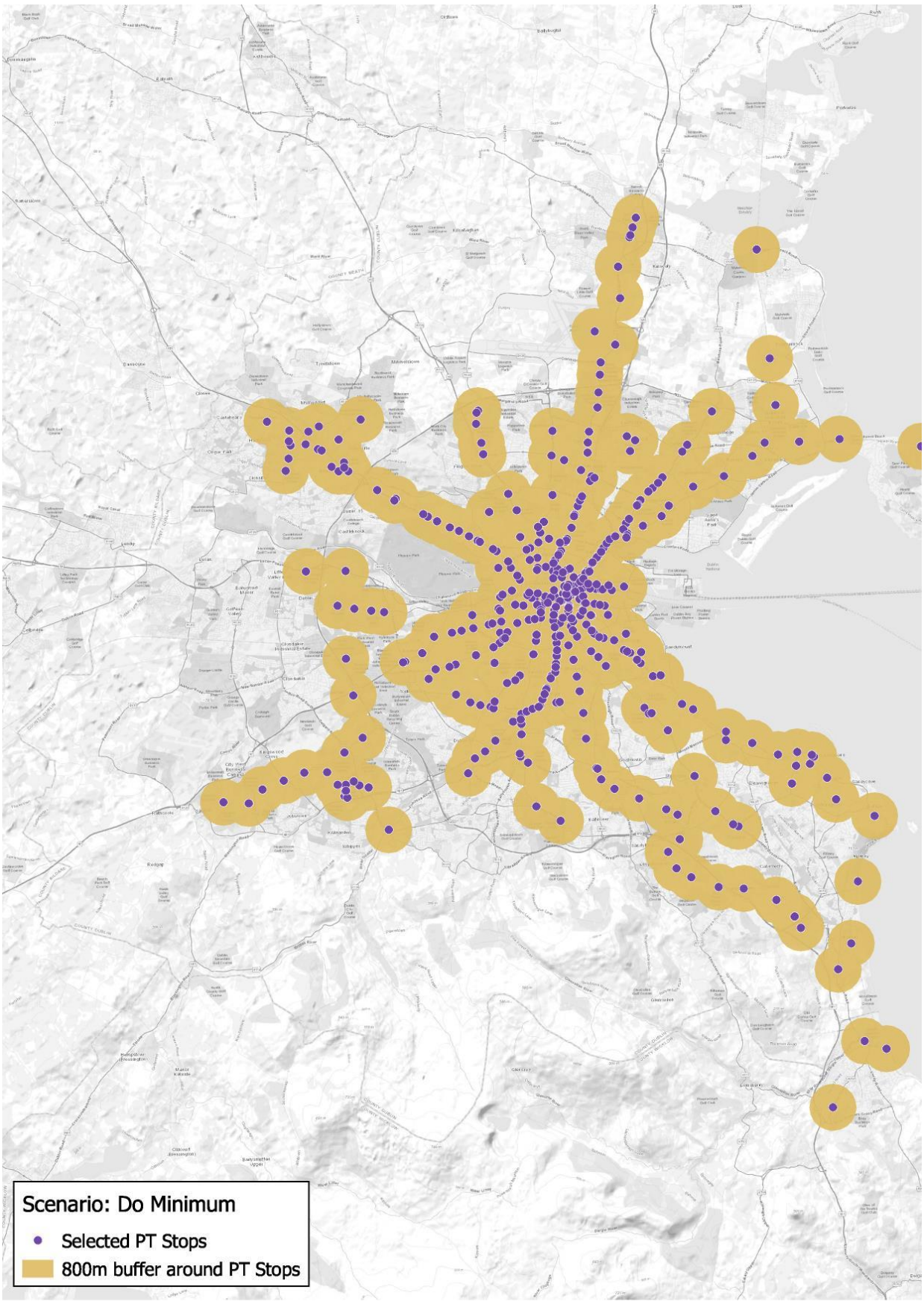


Figure 104 Do Minimum Selected PT stops

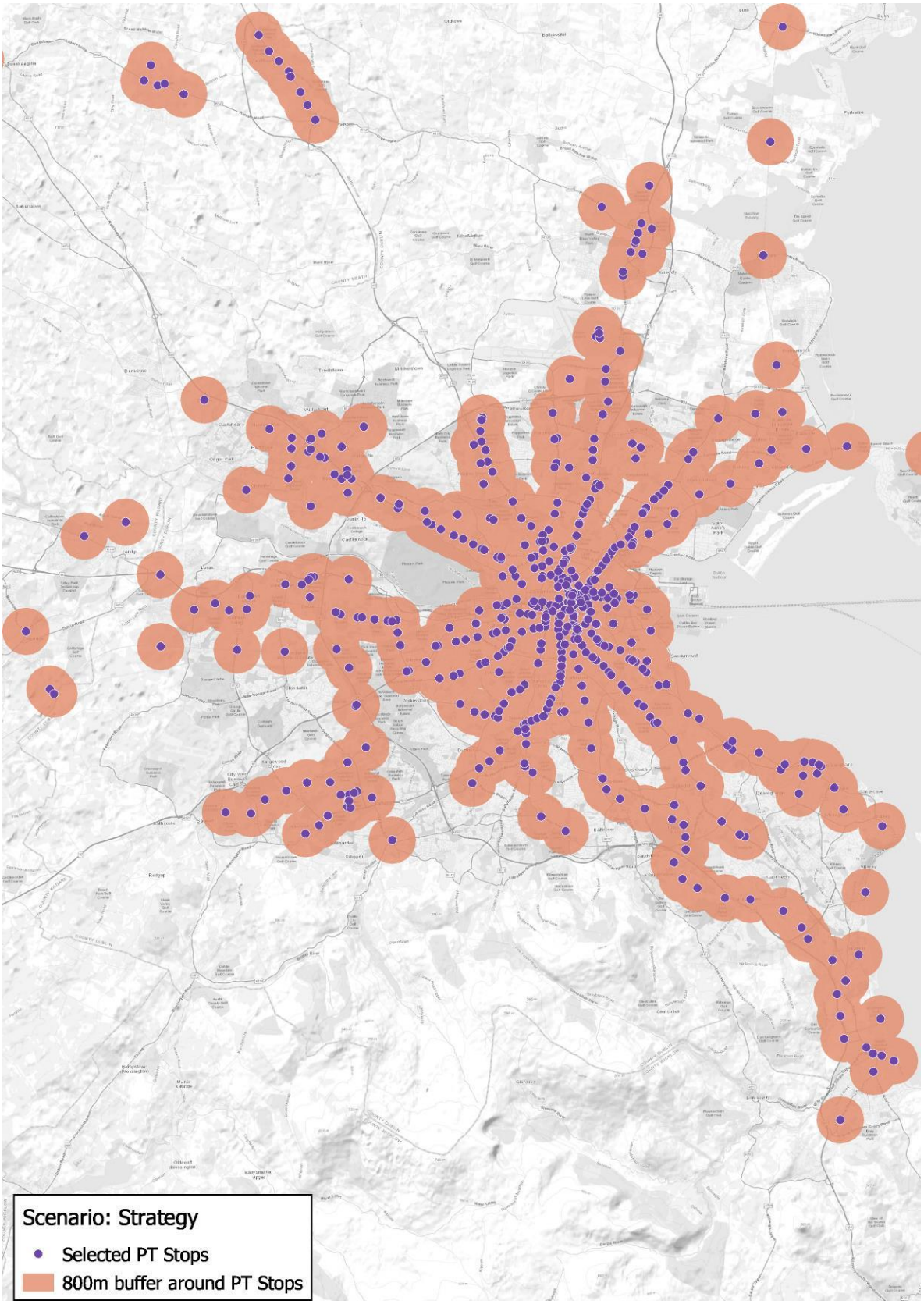


Figure 105 Strategy PT Selected Stops

6.6 Conclusion

The Strategy Development Process has focussed on the public transport network, sustainable mode priority measures and other supporting measures to deliver against the Strategy Objectives. The upper limit of what can be achieved by public transport has been identified within the GDA and this has been used as a guide to the development of the sustainable mode network capacity requirements and to identify levels of car demand management required to level the playing field between public transport and car.

A scenario planning approach has been adopted to consider the robustness of the strategy measures against plausible alternative future scenarios including business as usual growth, changing travel behaviours (as a result of the pandemic) which would reduce the need to travel and the impact of an expected ramp up in cycling to levels akin with those achieved internationally in places like Amsterdam and Copenhagen.

Lower demand for travel is seen as a more realistic / robust forecasting approach to benchmark the strategy development process against however the Strategy has looked at network requirements for higher demand (i.e. business as usual scenario) for robustness. Feasibility studies, therefore, are ear-marked for Light Rail schemes which would be required in the demand is higher and adjustments are needed for the Strategy. It is recommended that this should be monitored during the lifetime of the Strategy in advance of the next strategy update.

Climate change is a key consideration particularly in terms of what can be achieved by 2030 which has been a key focus on decisions and directions to take with regard to strategy development particularly in terms of maximising potential of early phase scheme delivery which can support achieving 2030 climate targets such as those measures which can be delivered by 2030 including - cycling, BusConnects programme, DART+ elements, supporting car demand management arrangements to support sustainable mobility and fleet changes (e.g. transitioning to electric vehicle fleet.

Annex 1 NTA Regional Modelling System

A1.1 Introduction

This section describes the NTA Regional Modelling System (RMS), outlining its scope, extent, components, functionality and its suitability for use in developing the Transport Strategy. The national remit of the NTA uses a system of regional models to help it deliver on its planning and appraisal needs. The NTA Regional Modelling System comprises five regional transport models covering the Republic of Ireland and centred on the five main cities of Dublin, Cork, Galway, Limerick, and Waterford as shown in Figure A1.

Each regional model has the following key attributes:

- Full geographic coverage of the relevant region;
- A detailed representation of the road network, particularly the impact of congestion on on-street public transport services and include modelling of residents' car trips by time period from origin to destination;
- A detailed representation of the public transport network and services, and can predict demand on the different public transport services within the regions;
- A representation of all major transport modes including active modes (walking and cycling) and includes accurate mode-choice modelling of residents;
- A detailed representation of travel demand, e.g. by journey purpose, car ownership/availability, mode of travel, person types, user classes and socio-economic classes, and representation of four-time periods (AM, Inter-Peak, PM and Off-Peak); and
- A prediction of changes in trip destination in response to changing traffic conditions, transport provision and/or policy.

The East Regional Model (ERM) has been used to support the development of the GDA Transport Strategy. Figure A1 on the following page illustrates the geographical extent of each of the Regional Models.

Figure A1 Modelling System Regional Areas

A1.2 Regional Modelling System Dimensions

The regional modelling system features or dimensions are defined in terms of:

- Zone system;
- Modes of travel represented;
- Base year;
- Time-periods; and
- Demand segmentation.

A1.2.1 Zone System

The zone system definitions for each of the regional models were based on Census Small Area (CSA) boundaries and Electoral Districts (EDs). The 2016 CSAs are the core base layer for each zoning system. CSAs are the smallest geographic unit of data available with which to define the model zone system. Each CSA is a defined geographic area associated with demographic data (e.g. population, age distribution, employment status), and the work / school travel characteristics of the population (via *Place of Work, School or College - Census of Anonymised Records* (POWSCAR)).

CSAs are subsets of EDs. ED boundaries are commonly used as the unit of geographic information in Ireland and as such it was desirable to maintain a transparent relationship between EDs and the model zone system. Regional Model zones can be smaller or larger than either of these units where required.

The criteria used for developing zone boundaries for the ERM and other regional models included:

- Population, Employment and Education – maximum values were specified for zone population, number of jobs and persons in education;
- Activity Levels – limits were applied to zone activity levels ensuring that zones with either very low, or very high, levels of trips were not created;
- Intra-zonal Trips – threshold values were applied to the proportion of intra-zonal trips, within each zone, to avoid an underestimation of flow, congestion and delay on the network;
- Land Use – zones were created with homogeneous land use and socio-economic characteristics where possible;
- Zone Size / Shape – thresholds were applied to zone size, and irregularity of shape, to avoid issues with inaccurate representation of route choice;
- Political Geography – as mentioned above, it is possible to aggregate all zones to ED level i.e. zone boundaries do not intersect ED boundaries; and
- Special Generators / Attractors – large generators / attractors of traffic such as Airports, Hospitals, shopping centres etc. were allocated to separate zones.

The ERM zone system includes a total of 1,953 zones which are illustrated in Figure A2 and Figure A3 overleaf. This includes three Special Zones covering demand to/from Dublin Port, Dublin Airport and Dun Laoghaire Port. Further information on the development of the ERM zone system can be found in the ERM Model Development Report.

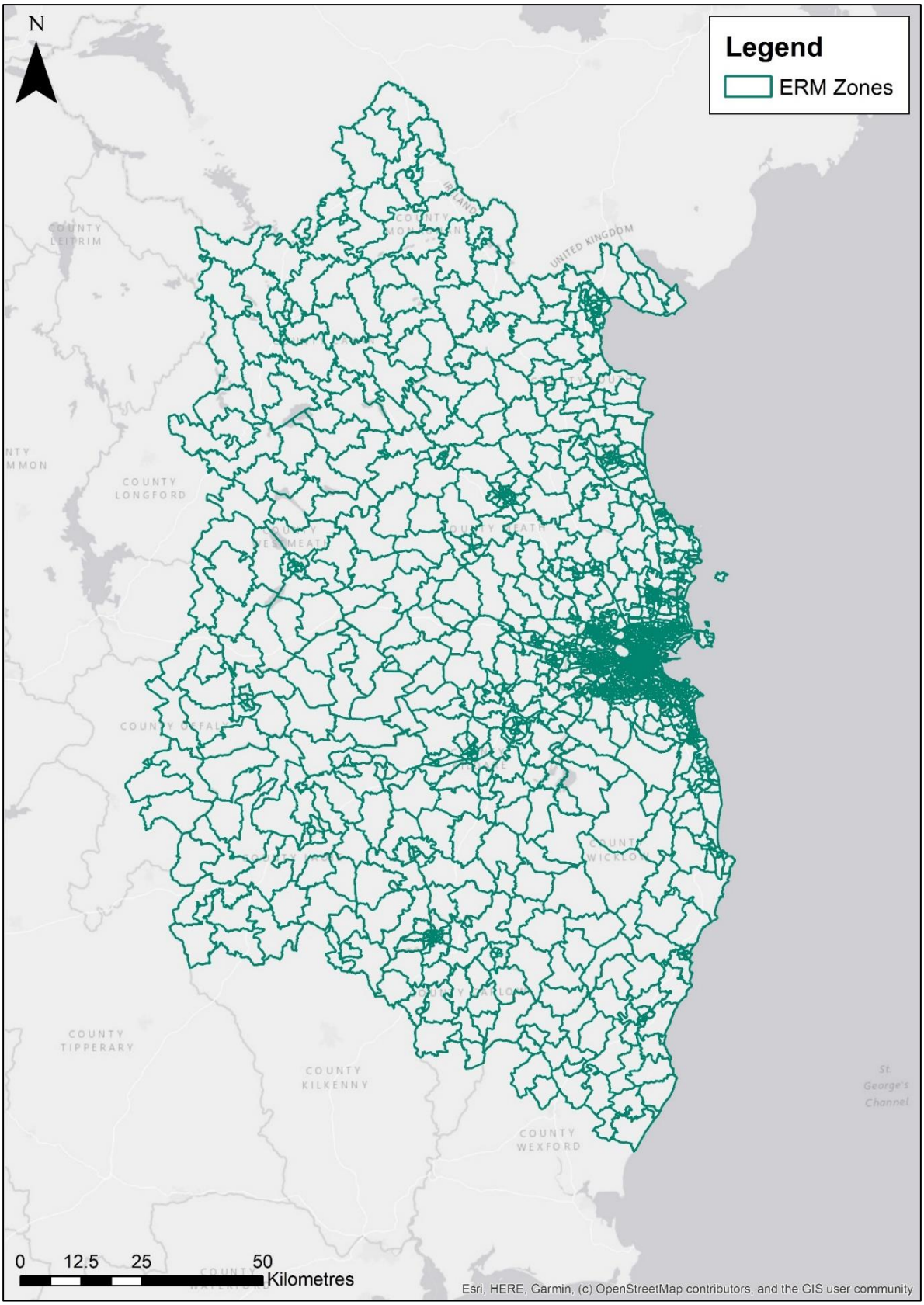


Figure A2 ERM Zone System – Full Model Area

Figure A3 ERM Zone System – Dublin Metropolitan Area

A1.2.2 Modes of Travel

The regional model system covers all major surface access modes for personal travel as detailed in Table A1 below.

Table A1 Modes of Travel

Mode	Standard Abbreviation	Notes
Road	Car	From the main Demand Model these include all personal trips (which include taxis) but the road assignment also includes goods trips.
Public Transport	PT	Public transport trips include trips made on bus, rail, Luas, or new PT modes as assigned in the PT assignment model.
Park and Ride	PnR	After the Park and Ride model, these trips are differentiated into individual road and PT legs and so are never assigned as PnR or are distinguishable from other road or PT trips
Walk	Wlk	Walk trips are made up of a combination of pure end-to-end walk trips and also the walk component of Parking Distribution trips. Walk trips do not include the walk components of public transport trips which are generated and assigned during the PT assignment.
Cycle	Cyc	Cycle forms part of the active modes assignment.

The model also includes representation of Goods vehicles (LGV and OGV). These do not behave in the same way as other trips with regards to trip generation and distribution. They are also subject to more stringent restrictions with regards to which roads they can use. The derivation of light and heavy goods vehicle matrixes is therefore handled in a separate process from the personal travel modes listed above.

A1.2.3 Base Year

The current release version of the ERM has been calibrated to data from the 2017 National Household Travel Survey (NHTS) and 2016 Census, as well as traffic counts and public transport count data. The demand utilises the latest available 2016 census data on population and social demographics at a CSO Small Area level.

A1.2.4 Time Periods

The model represents an average weekday. The day is split into five-time periods considered within each of the regional models, detailed in Table A2 below. The periods allow the relative difference in travel cost between time periods to be represented.

Assignment models are considered using a peak hour rather than a period, and the definitions for those peak hours are also provided. Conversion from the peak period to peak hour is done using a factor derived from survey count data for each time period.

For further information regarding time periods, including the peak hour factors, please see the Peak Hour Specification Report.

Table A2 Time Periods

Time Period	Standard Abbreviation	Demand Model Period	Demand Model Duration	Road Assignment Model Peak Hour	PT Assignment Model Peak Hour	Active Assignment Model Peak Hour
Morning peak	AM	0700 – 1000	3 hours	0800 – 0900	0800 – 0900	0800 – 0900
Lunch time	LT	1000 – 1300	3 hours	1200 – 1300	1200 – 1300	1200 – 1300
School run	SR	1300 – 1600	3 hours	1500 – 1600	1500 – 1600	1500 – 1600
Evening peak	PM	1600 – 1900	3 hours	1700 – 1800	1700 – 1800	1700 – 1800
Off-peak	OP	1900 – 0700	12 hours	2000 – 2100	2000 – 2100	2000 – 2100

A1.2.5 Demand Segmentation

Groups of people with similar travel behaviours (for example, commuters who own a car) are represented by distinct demand segments in the regional modelling system. This allows those groups to be treated differently in the regional demand model according to their behaviour.

An extensive scoping exercise was undertaken prior to model development which considered the balance between:

- An increased number of demand segments which could lead to over-complexity, low samples of data, and increased runtimes; against
- A reduced number of demand segments which might not efficiently capture the full complexity of different travel patterns and travel behaviour, and therefore might fail to respond adequately during forecasting.

The key principles of this scoping exercise were to ensure that:

- Chosen segments should reflect significant variations of value of time, availability of travel options or sensitivity of travel choices;
- Each segment should represent a significant proportion of overall demand;
- The model should consider different levels of segmentation at different stages of the modelling process, with only the relevant segmentation retained at each step; and
- The model should include segmentation of demand by journey purpose, Home-Based (HB) vs Non-Home-Based (NHB), access to free parking and car availability segmentation.

It should be noted that, with the exception of trips to/from ports and airports, tourists are not explicitly modelled by the RMS.

A description of the demand segmentations used in the ERM is provided in Table A3.

Table A3 Demand Segments

DS	Purpose (1-29 are home-based)	Car Availability	Third Level of Segmentation	Code	User Class
1	Commute	Available	Blue collar	COM_BC_CAV	COM
2	Commute	Available	White collar	COM_WC_CAV	COM
3	Commute	Not available	Blue collar	COM_BC_NCA	COM
4	Commute	Not available	White collar	COM_WC_NCA	COM
5	Education	Available	Primary	EDU_P_CAV	EDU
6	Education	Available	Secondary	EDU_S_CAV	EDU
7	Education	Available	Tertiary	EDU_T_CAV	EDU
8	Education	Not available	Primary	EDU_P_NCA	EDU
9	Education	Not available	Secondary	EDU_S_NCA	EDU
10	Education	Not available	Tertiary	EDU_T_NCA	EDU
11	Escort to education	Available	Primary	ESC_P_CAV	OTH
12	Escort to education	Available	Secondary	ESC_S_CAV	OTH
13	Escort to education	Available	Tertiary	ESC_T_CAV	OTH
14	Escort to education	Not available	Primary	ESC_P_NCA	OTH
15	Escort to education	Not available	Secondary	ESC_S_NCA	OTH
16	Escort to education	Not available	Tertiary	ESC_T_NCA	OTH
17	Other	Available	Employed	OTH_CAV	OTH
18	Other	Available	Non-working	OTH_CAV	OTH
19	Other	Not available	Employed	OTH_NCA	OTH
20	Other	Not available	Non-working	OTH_NCA	OTH
21	Shopping – food	Available	Employed	FSH_CAV	OTH
22	Shopping – food	Available	Non-working	FSH_CAV	OTH
23	Shopping – food	Not available	All	FSH_NCA	OTH
24	Visit friends / relatives	Available	Employed	VIS_CAV	OTH
25	Visit friends / relatives	Available	Non-working	VIS_CAV	OTH
26	Visit friends / relatives	Not available	All	VIS_NCA	OTH
27	Emp Business	All	All	EMP_All	EMP
28	All	Available	Retired	RET_CAV	RET
29	All	Not Available	Retired	RET_NCA	RET
30	One-way business	Available	All	NHBEB_CAV	NHBEB
31	One-way business	Not available	All	NHBEB_NCA	NHBEB
32	One-way other	Available	All	NHBOT_CAV	NHBOT
33	One-way other	Not available	All	NHBOT_NCA	NHBOT

A1.3 ERM Structure

A1.3.1 Overarching RMS Structure

The general structure of the NTA's Regional Modelling System (RMS) is outlined in Figure A4. The National Demand Forecasting Model generates travel demand based on planning information on population, employment and education. This travel demand is then fed into the Regional Model (in our case the ERM) where mode and destination choice is undertaken, and it is then assigned to the road, public transport and active (walking and cycling) networks. The model represents a neutral weekday/month in 2016, and the following sections provide a brief overview of the key elements of the RMS.

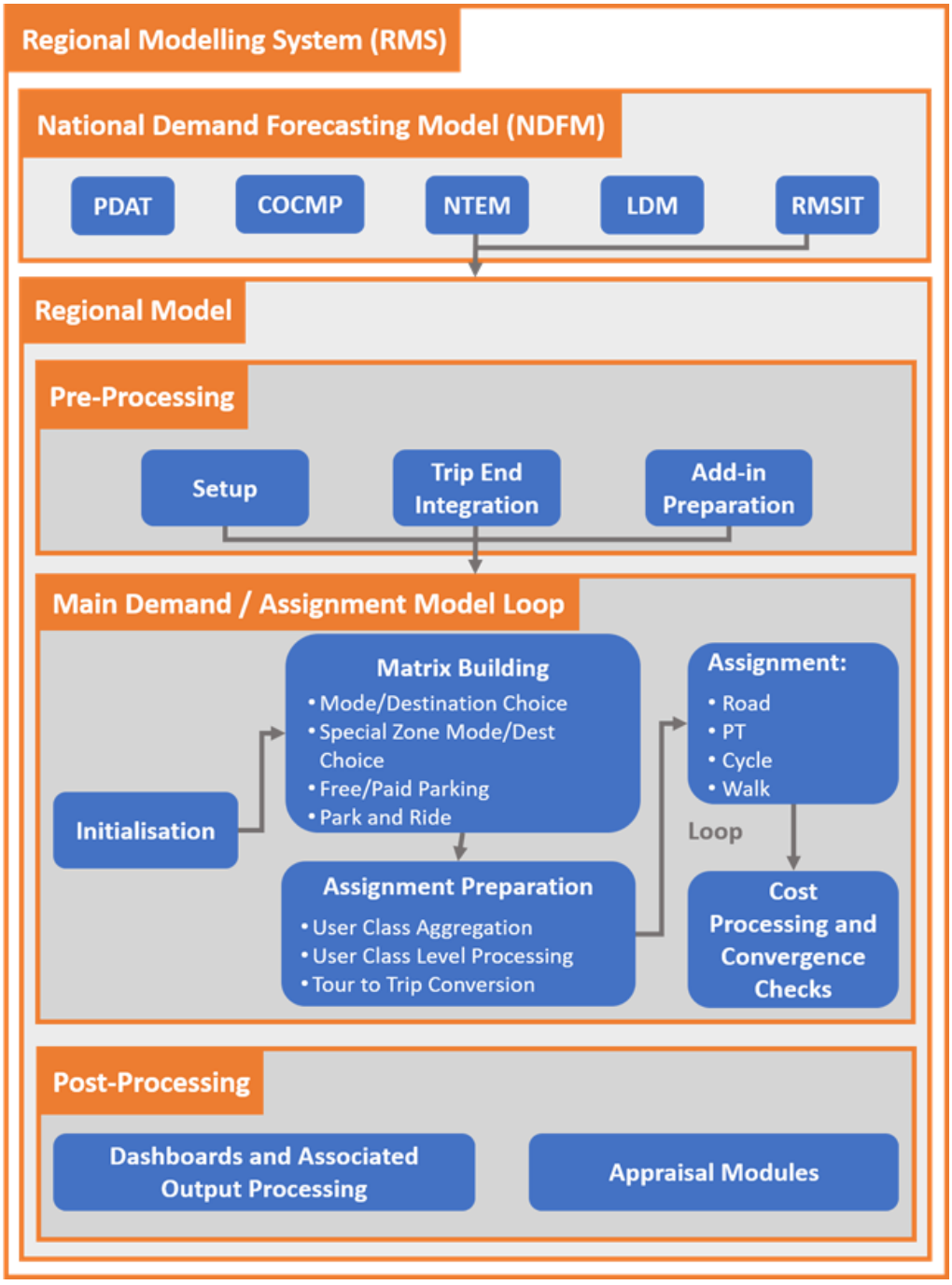


Figure A4 Model Structure

A1.3.2 National Demand and Forecasting Model

The ERM receives its trip ends and inter-regional demand from the National Demand Forecasting Model (NDFM). The NDFM is a national modelling system that estimates the total quantity of travel demand generated by and attracted to every Census Small Area (CSA) daily. The level of demand from, and to, each zone (referred to as 'trip ends') is related to characteristics such as population, number of employees and land-use data.

There are five main processes in the NDFM which contribute to the calculation of a regional model's trip ends and inter-regional demand:

- **Planning Data Adjustment Tool (PDAT**), which controls the planning data inputs to the core NDFM system. The planning data consists of a range of variables related to the population by CSA, such a total population, age bands, employment status etc. PDAT is used to amend planning data to represent the combination of general changes over time and the relevant land-use planning scenarios. Further details can be found in the *PDAT Report*;
- **Car Ownership/Car Competition Models (COCMP)**, which estimates the number of cars owned in each CSA and subsequently categorising the number of households in each CSA with no car, the number of households with fewer cars than adults and the number with at least as many cars as adults. Further details on both models can be found in the *Car Ownership Report*;
- **National Trip-End Model (NTEM)**, which converts the planning data into person trips by car availability for each of 33 demand segments. Further details of the model can be found in the *NTEM Report*;
- **Long Distance Model (LDM),** which derives:
    - Residents travel demand by mode between settlements and ports/airports;
    - Visitors travel demand by mode between settlements and ports/airports; and
    - Goods vehicle demand between settlements and ports.
    - Further details of this model can be found in the *LDM Report*; and
- **Regional Model Strategic Integration Tool (RMSIT)**, which works out which trips from the LDM travel demand matrices would be "inter-regional" (i.e. travelling into, out of, or through each of the regional models). It then converts this inter-regional travel demand into the relevant zone systems of the regional models. Details of this tool can be found in the *RMSIT Report*.

A1.3.3 ERM Demand Model

This **Demand Model** replicates travel behaviour and is actually a collection of several sub-models and processes. In combination, these models and processes, take all-day travel demand from the NDFM in the form of trip ends, and output origin-destination travel matrices by mode and time period to be used by each of the assignment models.

The Demand Model consists of the following stages, which have all been developed in Cube Voyager (version 6.4.2):

- Pre-processing stages;
    - Trip End Integration: Converts the 24-hour trip ends supplied from NDFM into the appropriate zone system and time period disaggregation for the ERM; and
    - Add-in Preparation: Takes the inter-regional trip matrices from NDFM, factors it if necessary, and converts it into the zone system and time period disaggregation required by the ERM. In addition, it also reads in internal goods movements and adjust the internal regional trip ends to account for the inter-regional trips.

- Demand / assignment loop;
    - Mode and Destination Choice: Calculates where each production trip end will match with an attraction trip end, and by what mode the trip will be made, given the time when the trip will take place;
    - Free Workplace Parking: For journey purposes which may have access to free workplace parking, the initial mode and destination choice does not include parking charges. This module takes the initial output car demand and decides whether it can be accommodated in the available free workplace parking spaces. For the proportion of the car matrix which cannot be accommodated, and for the corresponding proportions of the other mode matrices, it undertakes a secondary mode split including parking charges;
    - Park and Ride: Takes the trips assigned to Park and Ride during the mode and destination choice stage and works out which Park and Ride site they will use;
    - Parking Distribution: This allows car trips to park remotely from their destination, which is critical where parking capacity is limited. The module gives car trips the choice to park in alternative zones, based on the total trip cost. It outputs the car and walk legs of each trip as well as information to be used in the calculation of the generalised costs;
    - Special Zone Trip Distribution and Mode Choice: Calculates the trip distribution and mode used for trips to zones such as ports and airports which cannot be derived directly from the standard destination and mode choice stages;
    - Taxi: This external model calculates the number of taxi trips as a proportion of car trips, based on the origin/destination of the trips. The output trip matrix produced by this process is retained as a separate user class for the road assignment model, which treats taxi vehicles differently to private vehicles;
    - Goods Vehicles: Produces light and heavy goods vehicle matrices for use in the road assignment model;
    - Greenfield Sites: The standard destination and mode choice models assume trip-making behaviour in the future will be similar to current observed behaviours. However, where there are large changes in land-use, this assumption is no longer valid. The Greenfield Sites module allows the user to apply new assumption or to make adjustments to zones where large developments or other major changes are expected to take place; and
- Assignment Preparation: This module undertakes a number of transformations on the output demand matrices to convert them for use in the assignment models. This includes aggregating journey purposes into user classes, splitting tour-based trips, into separate outbound and return legs, adding in the additional matrices (inter-regional trips, taxis, goods vehicles, specials zones, etc), and applying vehicle occupancy and period to peak hour factors as appropriate. It also applies incremental adjustments.

Following calculation of the output origin-destination travel matrices by the demand model, these are then passed to the assignment models (described below). Updated travel costs are extracted from the assignment models and the demand modelling is undertaken again using the updated costs. This demand - assignment loop is repeated iteratively for a set number of loops and convergence is monitored throughout.

A1.3.4 ERM Road Assignment Model

The **Road Assignment Model** is implemented in SATURN and includes capacity restraint whereby travel times are recalculated in response to changes in assigned flows. The main purpose of the model is to assign road users to routes between their origin and destination zones. The cost of travel is then calculated for input to the demand model and economic appraisal.

It should be noted that SATURN is a macroscopic model and considers the aggregate behaviour of traffic flows. It does provide detail on junction delay and queueing along links, however, it is a strategic model used to look at impacts across a wider area. Whilst suitable for the purposes of this strategic assessment it is not suitable for detailed junction modelling which consider the interaction of individual vehicles which should be undertaken using a microscopic model such as VISSIM or PARAMICs.

The inputs to the Road Assignment model from the demand model are the road assignment matrices from the assignment preparation stage. The outputs from the Road Assignment model for the demand model processes consist of generalised costs skims by time period and assigned road networks in CUBE Voyager format which are passed on to the Public Transport model.

In addition to these requirements for demand model processes, there are a series of standard SATURN outputs that are produced for use in the specific interrogation of the road networks for scheme and/or scenario assessment.

A1.3.5 ERM Public Transport Assignment Model

To generate costs to update the choice model processes, a Public Transport assignment must be undertaken to establish new generalised costs. The **Public Transport Assignment Model** (PTAM) is implemented in Voyager and is used to allocate public transport users to services between their origin and destination zones. The model includes a representation of the public transport network and services for existing and planned modes within the modelled area. The model includes:

- Rail;
- DART;
- Luas;
- Metro.
- Urban Bus;
- Inter-Urban Bus; and
- Bus Rapid Transit (BRT).

The outputs of the public transport assignment model fall into two categories, those required by the demand model, and those produced for reporting and analysis purposes.

The outputs from the Public Transport Assignment model for the demand model processes consist of the assigned networks which are passed on to active mode assignment as the starting point for their network build procedure, and generalised cost skim matrices by user class for each of the assigned time periods that feed back into the main Mode and Destination choice demand model loop.

6.7 ERM Active Modes Model

The Regional Modelling System represents active modes (i.e. walking and cycling) within the demand model to improve the realism of travel choices. To generate costs to update the choice model processes, an **active modes assignment** must take place to establish new generalised costs. This active mode assignment assumes no crowding or delays.

The inputs for the active assignment model are the output CUBE format Public Transport networks, the demand model produced assignment matrices and separate input pedestrian only links and cycle lanes. The outputs of this process include an assigned network with walk and cycle flows by user class, and a set of generalised cost skims. The active assignment is a CUBE-based lowest cost path assignment model with no junction modelling based purely on distance and a constant speed by mode.

Walk speeds are taken as 5.1km/h, independent of link type, for Employee (EMP), Commuter (COM) and Others (OTH) user classes. In the case of the Education and Retired user classes, this default walk speed is factored (by 0.94 for EDU and by 0.92 for RET). For cycling, a rule-based system was developed during model specification to assign speeds based on link type. Hence, where information on Quality of Service, and/or descriptions of other characteristics (e.g. road type, presence of marked cycle lanes, etc.) is available, speeds of between 14.1km/h and 22.2km/h have been assigned based on the quality of the link. Improvements to cycling mode provision are included through associating improvements to cycling Quality of Service to increases in service user speeds.

Annex 2 Forecast Population, Employment and Education Growth

A2.1 Overview

In June 2021, the NTA, in association with Dublin City Council (DCC), Dún Laoghaire–Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC), Meath County Council (MCC) and Wicklow County Council (WCC) prepared an initial Planning Datasheet for the 2042 Baseline Land-use Scenario for the application within the GDA Transport Strategy. This Planning Datasheet has been used for the purpose of the following analysis.

The Planning Datasheet contains data at a Central Statistics Office (CSO) Small Area (SA) level on population, employment and education. This section provides a summary of the 2042 Planning Sheet demographics at a city, county, metropolitan and settlement level and the growth from 2016-2042.

A2.2 2042 Summary Growth

The section below presents population, employment and education numbers for the derived 2042 Baseline Land Use Scenario at a high level for counties Dublin, Fingal, Meath, Kildare and Wicklow. Comparison between 2016 and 2042 scenario are also made to present the growth between the two scenarios. Figure A5 outlines the Greater Dublin Area consisting of defined County Dublin boundary with counties Meath, Kildare and Wicklow.

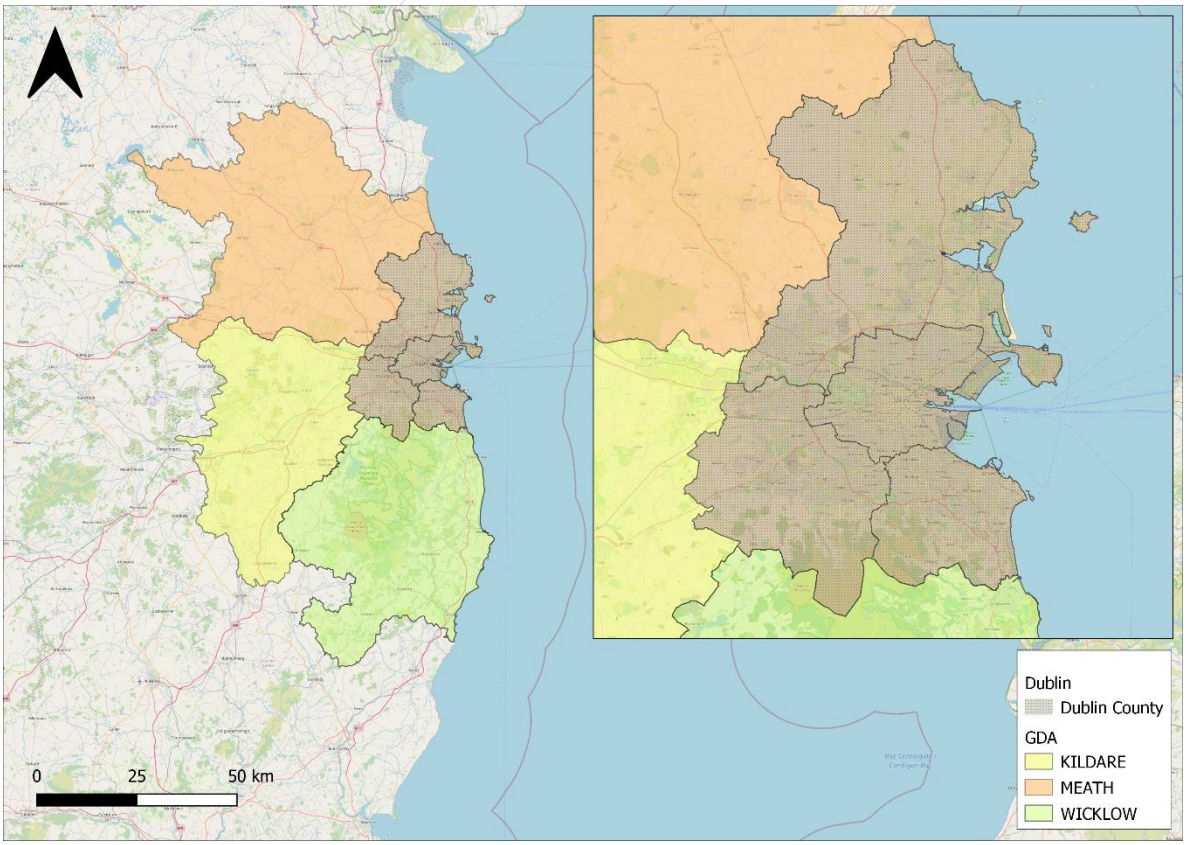


Figure A5 Greater Dublin Area Boundaries

A2.2.1 Population

Table A4 provides a comparison between the 2016 and the 2042 population for Greater Dublin Area, which covers the County Dublin, along with the defined metropolitan area including counties of Meath, Kildare and Wicklow. It is expected that the population of the CSO defined Greater Dublin Area will increase by 25% between 2016 and 2042. This is in-line with targets set out in the Project Ireland 2040 National Planning Framework (NPF) which outlines a population growth of 490,000 – 540,000 people for Eastern and Midland Region.

One of the core Regional Planning Guidelines for The Greater Dublin Area objectives is to consolidate development within the existing urban footprint of the Metropolitan Area to achieve a more compact urban form, accommodating greater population then at present. The 2042 population levels in Table A4 are in-line with this objective, with evened growth rates in all GDA counties.

With 25% in the County Dublin and remaining GDA of 26%, the population increase is in-line with targets set out in the RPG. A more detailed breakdown of population growth by area is provided later in this chapter.

Table A4 Population Comparison

County	Population		Population Growth	
	2016	2042	2016 to 2042	
Fingal (Dublin)	297,446	372,586	75,140	25%
South Dublin	248,231	307,076	58,845	24%
Dublin City	524,674	655,677	131,003	25%
Dun Laoghaire Rathdown (Dublin)	199,346	253,953	54,607	27%
Metropolitan Areas				
County Meath	223,202	280,377	57,175	26%
County Kildare	241,754	305,624	63,870	26%
County Wicklow	143,083	177,121	34,038	24%

A2.2.2 Employment

Table A5 provides a comparison between the 2016 and the 2042 Planning Datasheet employment levels for the Greater Dublin Area including County Dublin with counties Meath, Kildare and Wicklow. The employment within the Greater Dublin Area is expected to increase by 26%, representing 218,445 additional jobs in 2042 which is in-line with targets set out in the NPF. This growth will be driven by the infill targets to make better use of under-utilised, brownfield, vacant and public lands. The high level of employment growth in the Remaining Greater Dublin Area is primarily driven by proposed and ongoing public transport and housing investments.

Table A5 Job Comparison

County	Employment		Employment Growth	
	2016	2042	2016 to 2042	
Fingal (Dublin)	134,523	169,846	35,323	26%
South Dublin	105,847	132,206	26,359	25%
Dublin City	249,358	313,106	63,748	26%
Dun Laoghaire Rathdown (Dublin)	87,923	112,866	24,943	28%
Metropolitan Areas				
County Meath	93,935	118,697	24,762	26%
County Kildare	104,901	133,301	28,400	27%
County Wicklow	61,015	75,925	14,910	24%

A2.2.3 Education

Table A6 provides a comparison between the 2016 and the 2042 Planning Datasheets for education places which includes primary, secondary and tertiary education. Education places within the overall Greater Dublin Area are expected to increase by 23%, representing an additional 40,280 students in 2042. This growth will be evenly distributed in the urban locations of the Greater Dublin Area as education places within counties excluding Dublin are expected to grow by 13,890 (+26%) in 2042.

Table A6 Education Comparison

County	Education		Education Growth	
	2016	2042	2016 to 2042	
Fingal (Dublin)	24,406	30,053	5,647	23%
South Dublin	21,578	25,205	3,627	17%
Dublin City	50,220	61,605	11,385	23%
Dun Laoghaire Rathdown (Dublin)	23,951	29,681	5,730	24%
Metropolitan Areas				
County Meath	18,839	23,597	4,758	25%
County Kildare	22,490	28,893	6,403	28%
County Wicklow	11,973	14,701	2,728	23%

A2.3 2042 Settlement Level Growth Distribution

The sections below present population, job and education numbers for the 2042 Baseline Land Use Scenario at a more granular detail, showing the distribution of growth at a settlement level. Comparison between the 2016 base and the 2042 scenario are also made to present the growth between the two scenarios.

A2.3.1 Greater Dublin Area Settlements

The population, employment and education data at its most disaggregated form consists of 6,762 Census Small Areas (CSAs) while the ERM is consisted of 1,854 zones. In the interest of simplicity, these CSAs were grouped into specific settlements that allowed for sensible analysis of demographic information. The settlements, illustrated in Figure A6, do not match Electoral District boundaries but are defined based on a best match between the Eastern Regional Model Zoning System and the planning data at a CSA level.

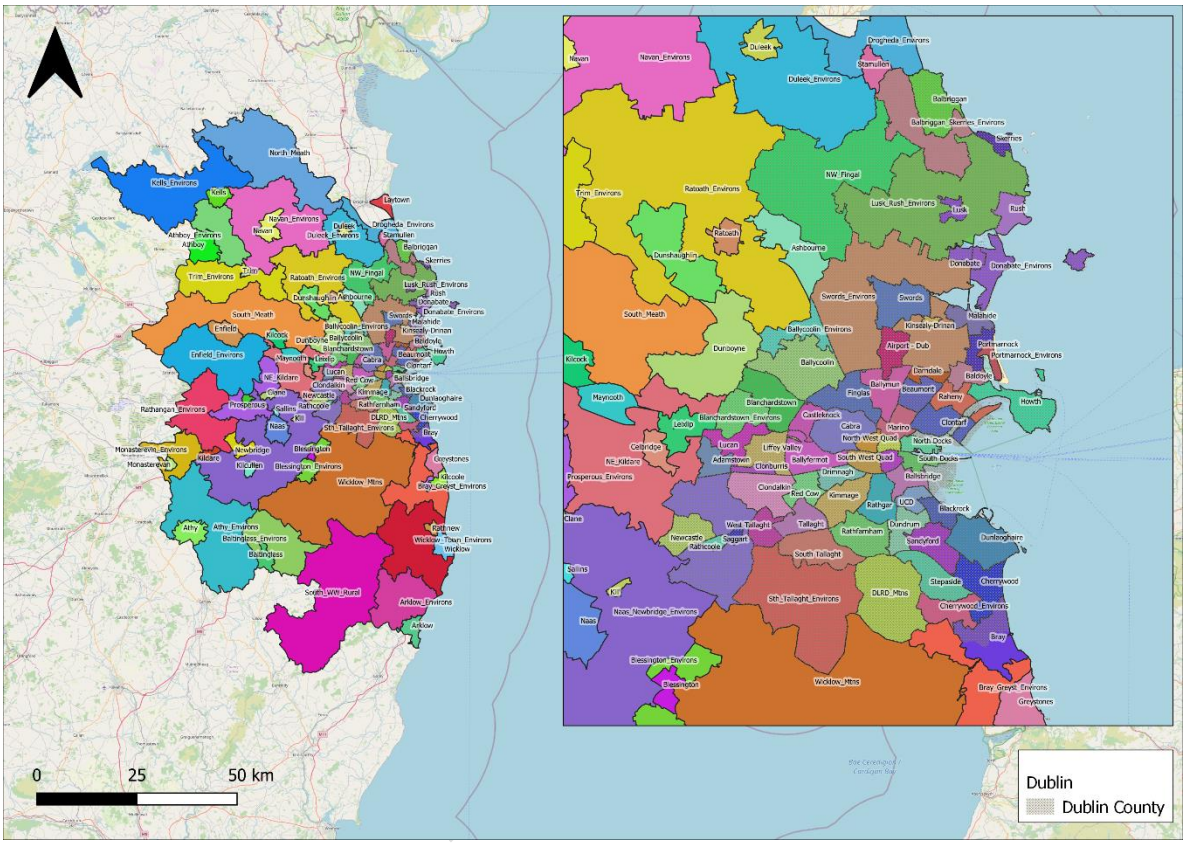


Figure A6 Greater Dublin Area Settlements

A2.3.2 Population

Table A7 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the Fingal County. As shown, the highest levels of absolute growth in population are planned in Swords (18,545 people), Ballymun (14,987 people) and Baldoyle (14,251 people). In terms of percentage growth, Swords Environs (79%), Baldoyle (78%), Ballycoolin Environs (53%) and Swords (52%) experience the highest increases from 2016 levels. The significant planned population growth at Swords, Ballymun and Baldoyle support the development of a more balanced concentric region.

Table A7 Population Comparison at a Settlement Level for Fingal County

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Airport - Dublin	2091	2245	154	7%
Balbriggan	22850	27371	4521	20%
Balbriggan Skerries Environs	2468	2657	189	8%
Baldoyle	18280	32531	14251	78%
Ballycoolin	23496	29718	6222	26%
Ballycoolin Environs	1638	2505	867	53%
Ballymun	40789	55776	14987	37%
Blanchardstown	72217	82826	10609	15%
Blanchardstown Environs	2489	2766	277	11%

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Castleknock	9038	12063	3025	33%
Donabate	6399	7858	1459	23%
Donabate Environs	2684	3041	357	13%
Finglas	42825	50161	7336	17%
Howth	18723	20544	1821	10%
Kinsealy-Drinan	6116	7183	1067	17%
Lusk	7682	8803	1121	15%
Lusk Rush Environs	6204	6916	712	11%
Malahide	13799	16504	2705	20%
NW Fingal	3862	4261	399	10%
Portmarnock	6337	7063	726	11%
Portmarnock Environs	2386	3291	905	38%
Rush	9921	11622	1701	17%
Skerries	8858	10359	1501	17%
Swords	35745	54290	18545	52%
Swords Environs	14521	26021	11500	79%
Total	381418	488370	106952	28%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A7 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Baldoyle, Ballymun, Blanchardstown, Swords and Swords Environs.

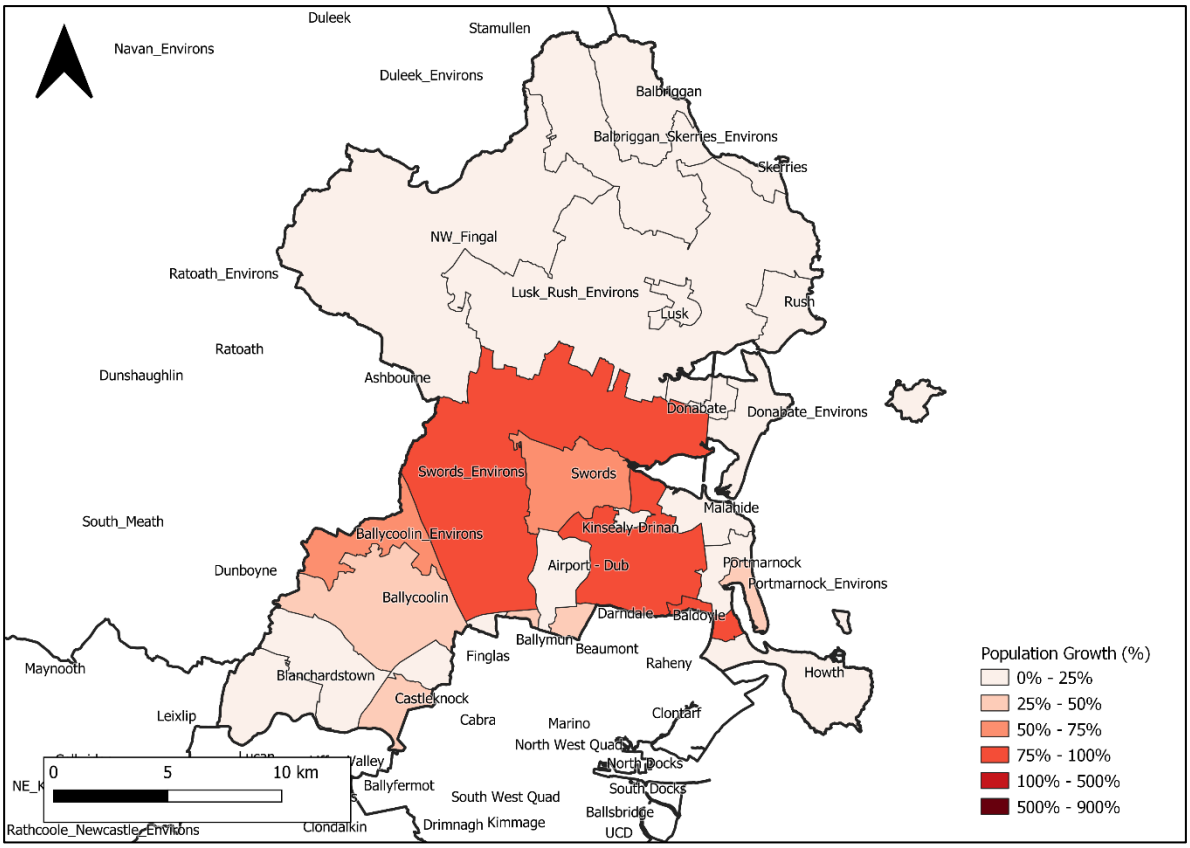


Figure A7 Population Growth 2016 to 2042 in Fingal

Table A8 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the South Dublin. As shown, the highest levels of absolute growth in population are planned in Ballyfermot (11,484 people), Clonburris (10,770), Tallaght (10,544) and Adamstown (10,309). In terms of percentage growth, Clonburris (812%), Adamstown (314%), Red Cow (185%), Saggart (129%) and Newcastle (124%), experience the highest increases from 2016 levels. The significant planned population growth at Adamstown, Clonburris, Red Cow, Saggart and Newcastle support the development of a more balanced concentric city.

Table A8 Population Comparison at a Settlement Level for South Dublin

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Adamstown	3288	13597	10309	314%
Ballyfermot	43755	55239	11484	26%
Clonburris	1326	12096	10770	812%
Clondalkin	29921	34451	4530	15%
Kimmage	48582	52295	3713	8%
Liffey Valley	41155	42530	1375	3%
Lucan	17904	21148	3244	18%
Newcastle	1424	3190	1766	124%
Rathcoole	4280	5870	1590	37%
Rathcoole Newcastle Environs	6294	6774	480	8%
Rathfarnham	44492	48396	3904	9%

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Rathgar	43818	47517	3699	8%
Red Cow	3318	9464	6146	185%
Saggart	1908	4375	2467	129%
South Tallaght	42856	47893	5037	12%
South Tallaght Environs	1924	2012	88	5%
Tallaght	31938	42482	10544	33%
West Tallaght	23055	31043	7988	35%
Total	391238	480372	89134	23%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A8 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Adamstown, Clonburris, Red Cow, Saggart and Newcastle.

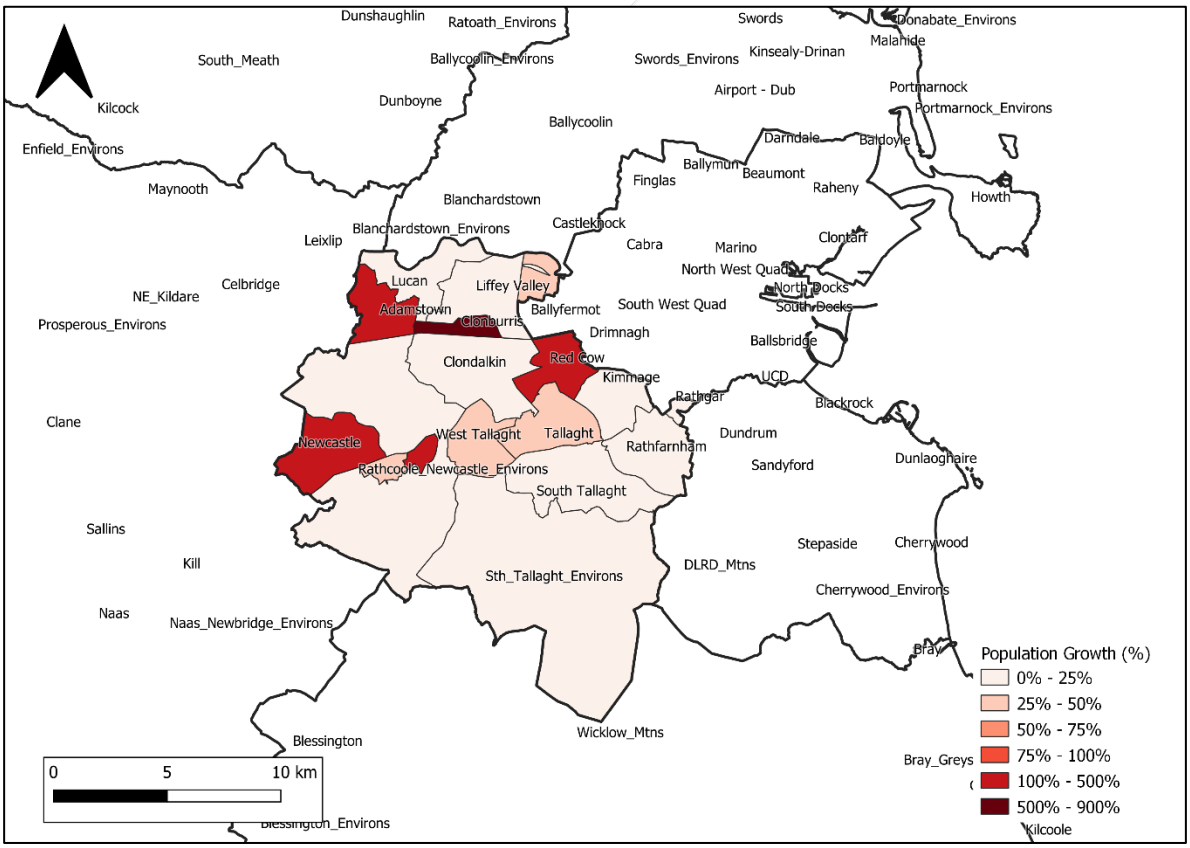


Figure A8 Population Growth 2016 to 2042 in South Dublin

Table A9 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the Dublin City. As shown, the highest levels of absolute growth in population are planned in South West Quadrant (16,651 people), South Docks (15,062 people), Ballymun (14,987 people), Baldoyle (14,251 people), Ballyfermot (11,484 people) and North West Quad (10,635 people). In terms of percentage growth, Red Cow (185%), North Docks (88%), South Docks (84%), and Baldoyle (78%), experience the highest increases from 2016 levels. The significant planned population growth at Red Cow, North and South Docks, and Baldoyle support the development of a more balanced concentric city.

Table A9 Population Comparison at a Settlement Level for Dublin City

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Baldoyle	18280	32531	14251	78%
Ballsbridge	26571	30979	4408	17%
Ballyfermot	43755	55239	11484	26%
Ballymun	40789	55776	14987	37%
Beaumont	35248	39792	4544	13%
Cabra	38068	42652	4584	12%
Clontarf	28013	31110	3097	11%
Darndale	9200	10675	1475	16%
Drimnagh	25534	32587	7053	28%
Finglas	42825	50161	7336	17%
Kimmage	48582	52295	3713	8%
Marino	35565	40144	4579	13%
North Docks	7695	14470	6775	88%
North East Quad	27643	33769	6126	22%
North West Quad	25526	36161	10635	42%
Raheny	33029	36199	3170	10%
Rathgar	43818	47517	3699	8%
Red Cow	3318	9464	6146	185%
South Docks	18024	33086	15062	84%
South East Quad	14995	17790	2795	19%
South West Quad	44966	61617	16651	37%
UCD	10434	12110	1676	16%
Total	621878	776121	154243	25%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A9 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Red Cow, North and South Docks, and Baldoyle.

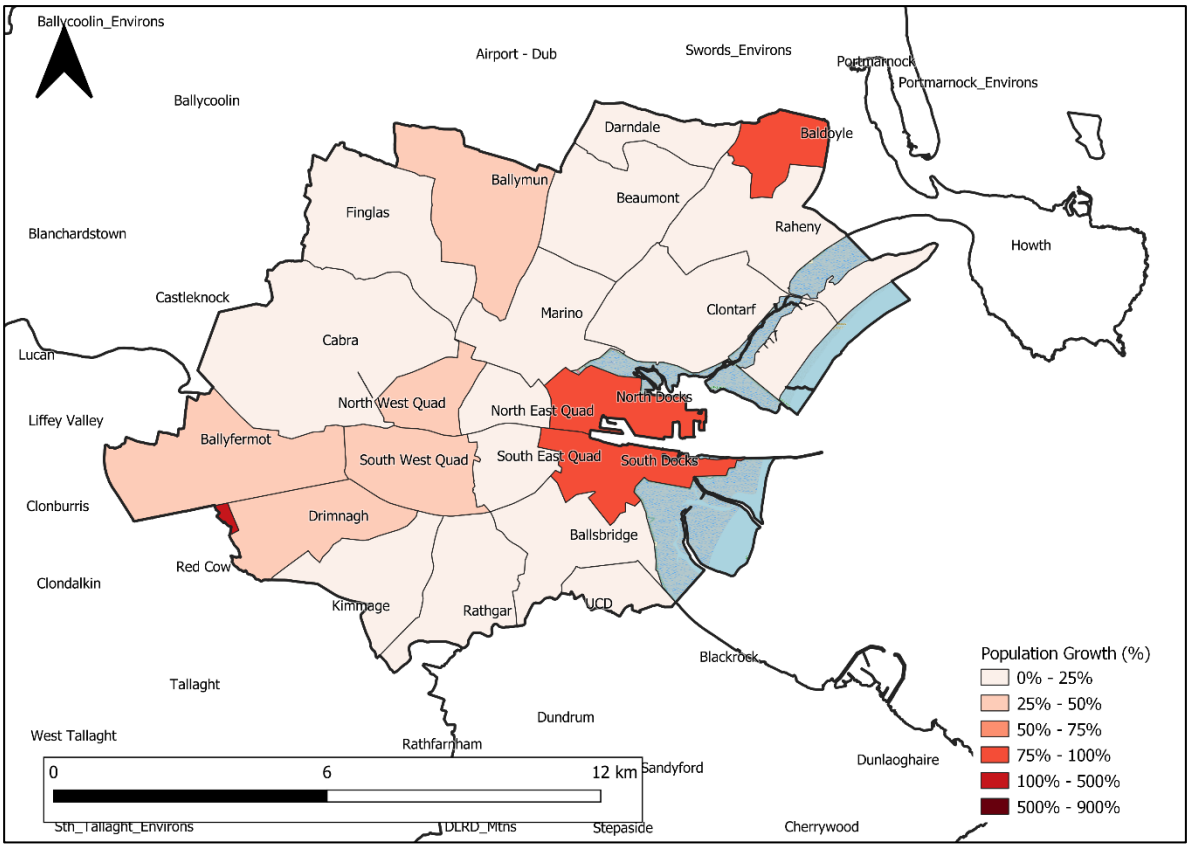


Figure A9 Population Growth 2016 to 2042 in Dublin City

Table A10 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the Dún Laoghaire–Rathdown. As shown, the highest levels of absolute growth in population are planned in Bray (24,507 people), Cherrywood (17,628 people), and the Stepaside (11,503 people). In terms of percentage growth, Cherrywood Environs (82%), Bray (72%), Cherrywood (67%), and DLRD Mountains (66%), experience the highest increases from 2016 levels. The significant planned population growth at Cherrywood and Bray supports the development of a more balanced concentric city.

Table A10 Population Comparison at a Settlement Level for Dún Laoghaire–Rathdown

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Blackrock	17370	18558	1188	7%
Bray	34179	58686	24507	72%
Cherrywood	26183	43811	17628	67%
Cherrywood Environs	683	1246	563	82%
DLRD Mountains	2488	4132	1644	66%
Dundrum	31028	34694	3666	12%
Dun Laoghaire	59716	64814	5098	9%
Rathfarnham	44492	48396	3904	9%
Rathgar	43818	47517	3699	8%
Sandyford	29271	34418	5147	18%
Stepaside	21567	33070	11503	53%

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
UCD	10434	12110	1676	16%
Total	321229	401452	80223	25%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A10 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Cherrywood and Bray.

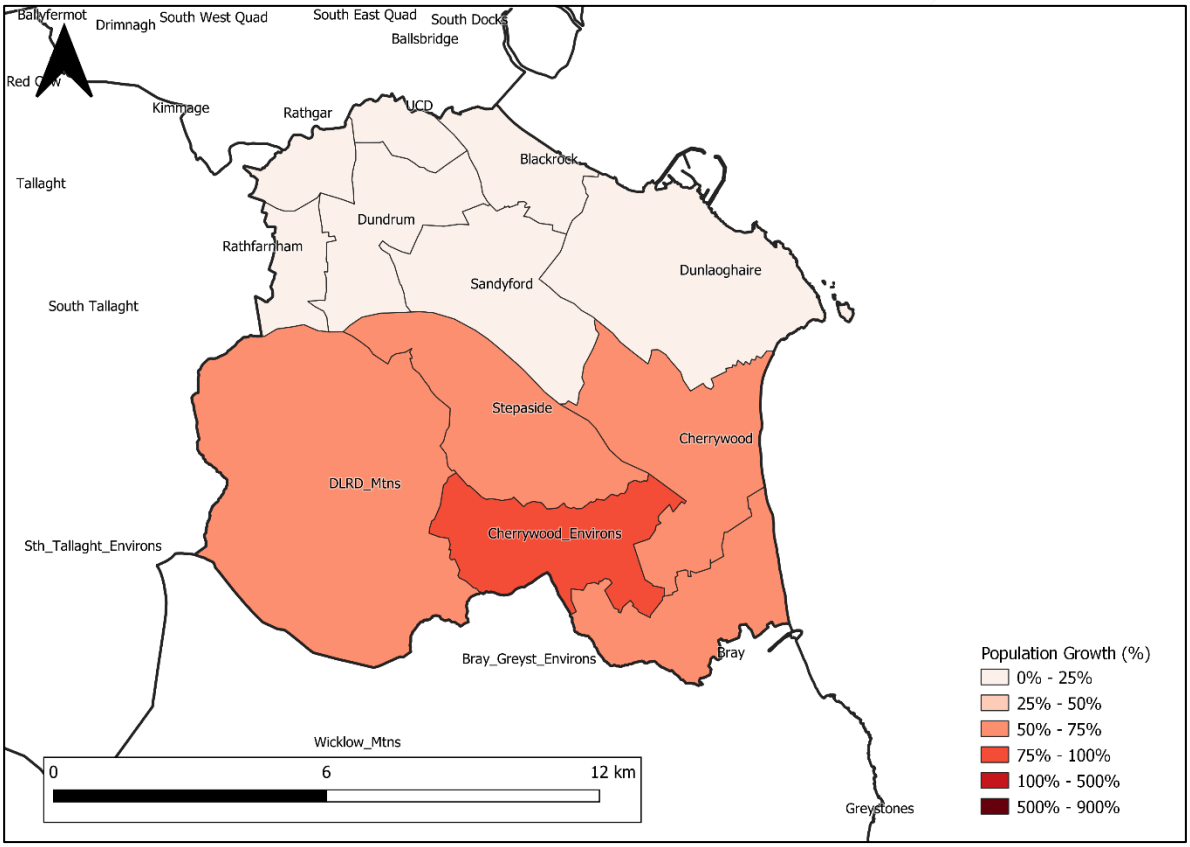


Figure A10 Population Growth 2016 to 2042 in Dún Laoghaire–Rathdown

Table A11 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the County Meath. As shown, the highest levels of absolute growth in population are planned in Drogheda (11,210 people) and Navan (10,613 people). In terms of percentage growth, Dunshaughlin (79%), Dunboyne (66%), Kilcock (63%), Trim (48%), Stamullen (46%) and Duleek (43%), experience the highest increases from 2016 levels. The significant planned population growth at Dunshaughlin, Dunboyne, Kilcock, Trim, Stamullen and Duleek support the development of a more balanced concentric city.

Table A11 Population Comparison at a Settlement Level for County Meath

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Ashbourne	13143	16447	3304	25%
Athboy	3847	4403	556	14%
Athboy Environs	3134	3311	177	6%

Drogheda	42051	53261	11210	27%
Drogheda Environs	2380	2514	134	6%
Duleek	3912	5605	1693	43%
Duleek Environs	4594	4875	281	6%
Dunboyne	9080	15047	5967	66%
Dunshaughlin	5365	9626	4261	79%
Enfield	4343	5522	1179	27%
Kells	6786	8533	1747	26%
Kells Environs	9390	9920	530	6%
Kilcock	2788	4557	1769	63%
Laytown	12307	15051	2744	22%
Navan	28890	39503	10613	37%
Navan Environs	15433	16682	1249	8%
North Meath	10434	11022	588	6%
Ratoath	9198	10727	1529	17%
Ratoath Environs	9465	10844	1379	15%
South Meath	14259	17017	2758	19%
Stamullen	3628	5280	1652	46%
Trim	2835	4201	1366	48%
Trim Environs	14418	18246	3828	27%
Total	231680	292195	60515	26%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A11 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Dunshaughlin, Dunboyne, Kilcock, Trim, Stamullen and Duleek.

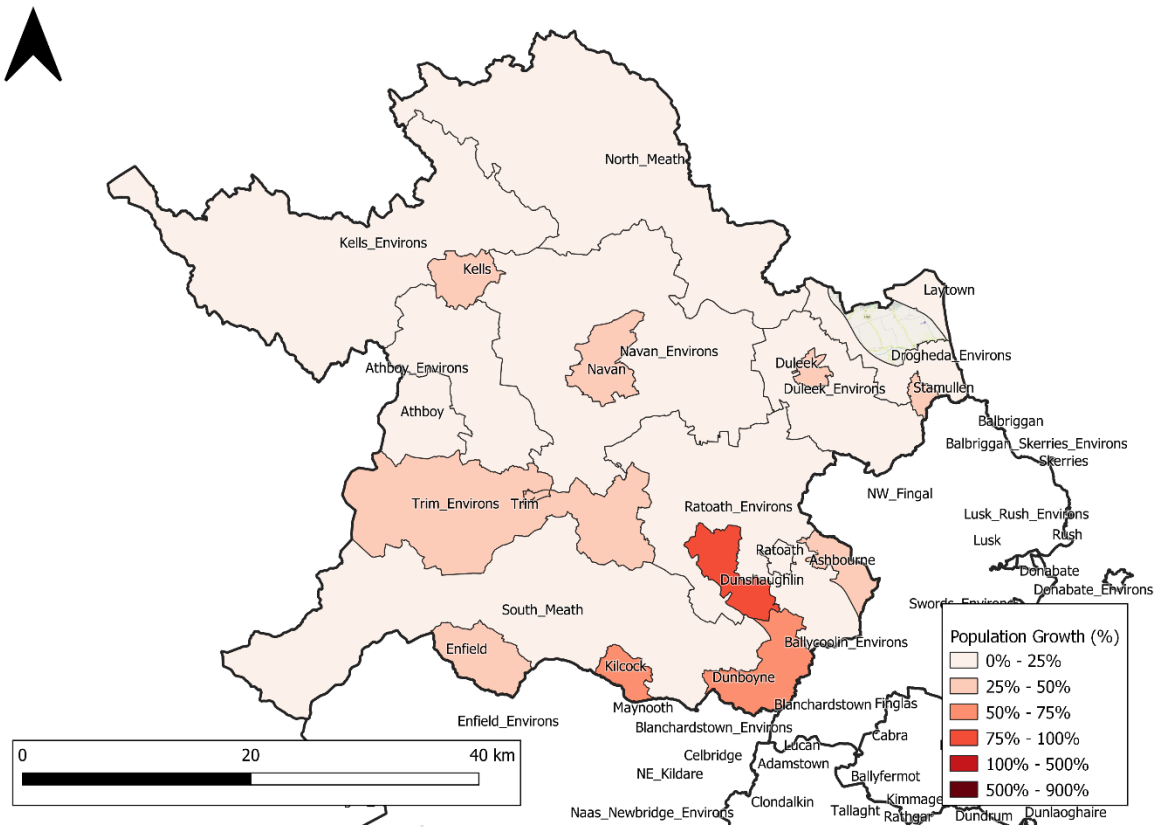


Figure A11 Population Growth 2016 to 2042 in Meath

Table A12 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the County Kildare. As shown, the highest levels of absolute growth in population are planned in Maynooth (14,874 people), Newbridge (5,558 people), Leixlip (5,053) and Celbridge (4,739 people). In terms of percentage growth, Maynooth (119%) and Kilcock (63%), experience the highest increases from 2016 levels. The significant planned population growth at Maynooth and Kilcock support the development of a more balanced concentric city.

Table A12 Population Comparison at a Settlement Level for County Kildare

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Athy	10715	13147	2432	23%
Athy Environs	13572	15189	1617	12%
Celbridge	17267	22006	4739	27%
Clane	7546	8836	1290	17%
Enfield Environs	10319	11548	1229	12%
Kilcock	2788	4557	1769	63%
Kilcullen	2920	3754	834	29%
Kildare	4876	6745	1869	38%
Kill	3129	3791	662	21%
Leixlip	15474	20527	5053	33%
Maynooth	12526	27400	14874	119%
Monasterevan	3821	5107	1286	34%

Monasterevin Environs	3024	3367	343	11%
Naas	24336	32113	7777	32%
Naas Newbridge Environs	32938	37235	4297	13%
NE Kildare	14855	17799	2944	20%
Newbridge	19945	25503	5558	28%
Prosperous	2029	2355	326	16%
Prosperous Environs	7629	8538	909	12%
Rathangan Environs	9734	11076	1342	14%
Sallins	3522	4106	584	17%
Total	222965	284700	61735	28%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A12 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Maynooth, Newbridge, Leixlip and Celbridge.

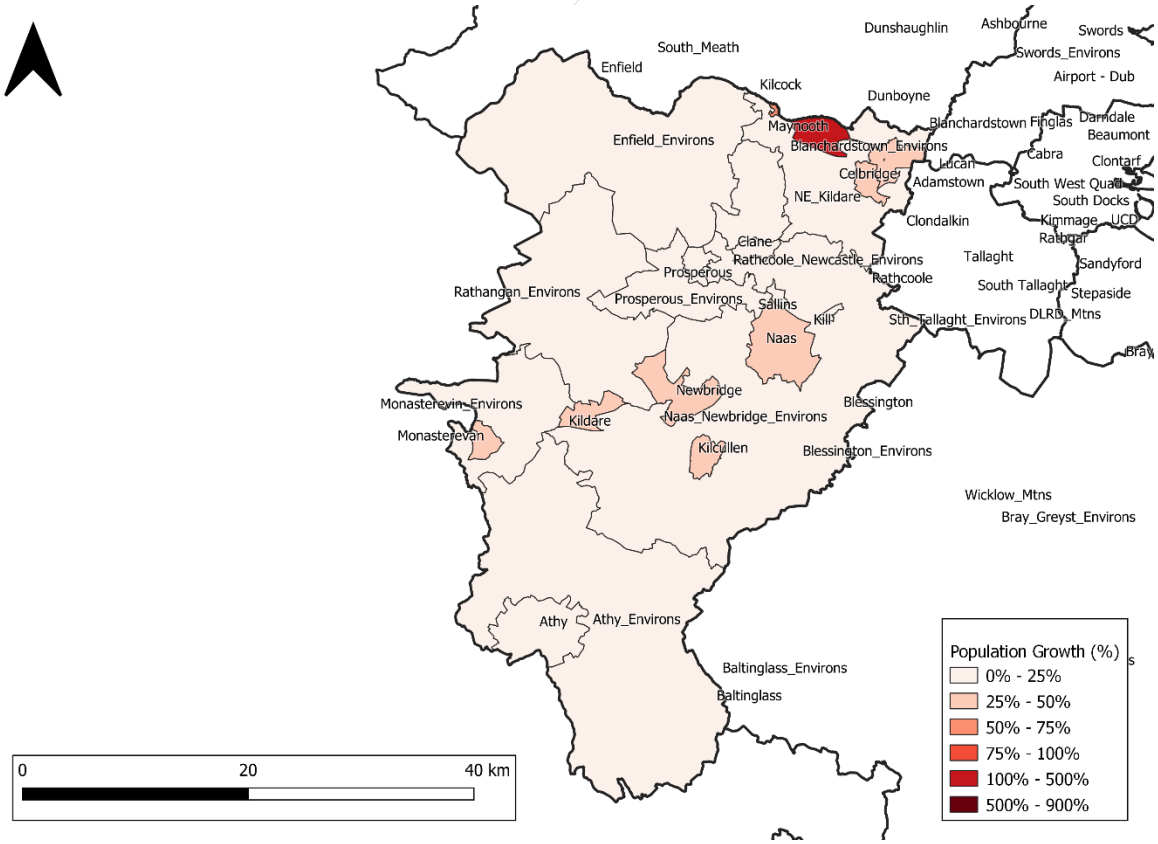


Figure A12 Population Growth 2016 to 2042 in Kildare

Table A13 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for population of the County Wicklow. As shown, the highest levels of absolute growth in population are planned in Bray (24,507 people), Greystones (2,567 people) and Wicklow (2,417 people). In terms of percentage growth, Bray (72%) and Newtown Mount Kennedy (24%), experience the highest increases from 2016 levels. The significant planned population growth at Bray and Newtown Mount Kennedy supports the development of a more balanced concentric city.

Table A13 Population Comparison at a Settlement Level for County Wicklow

Metro Settlements	Population		Population Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Arklow	13462	15251	1789	13%
Arklow Environs	5142	5865	723	14%
Baltinglass	2720	3023	303	11%
Baltinglass Environs	3357	3648	291	9%
Blessington	5100	5821	721	14%
Blessington Environs	1150	1250	100	9%
Bray	34179	58686	24507	72%
Bray Greyst Environs	10947	12311	1364	12%
Greystones	18079	20646	2567	14%
Kilcoole	5341	5938	597	11%
Newtownmountkennedy	3412	4217	805	24%
Rathnew	3402	4048	646	19%
South WW Rural	11420	12408	988	9%
Wicklow	12322	14739	2417	20%
Wicklow Mountains	8985	9763	778	9%
Wicklow Town Environs	9293	10401	1108	12%
Total	148311	188015	39704	27%

The population growth distribution between 2016 and 2042 is shown at the Small Area level in Figure A13 below. It indicates the consolidation of existing neighbourhoods and the establishment of new suburban neighbourhoods in areas such as Bray, Newtown Mount Kennedy and Wicklow.

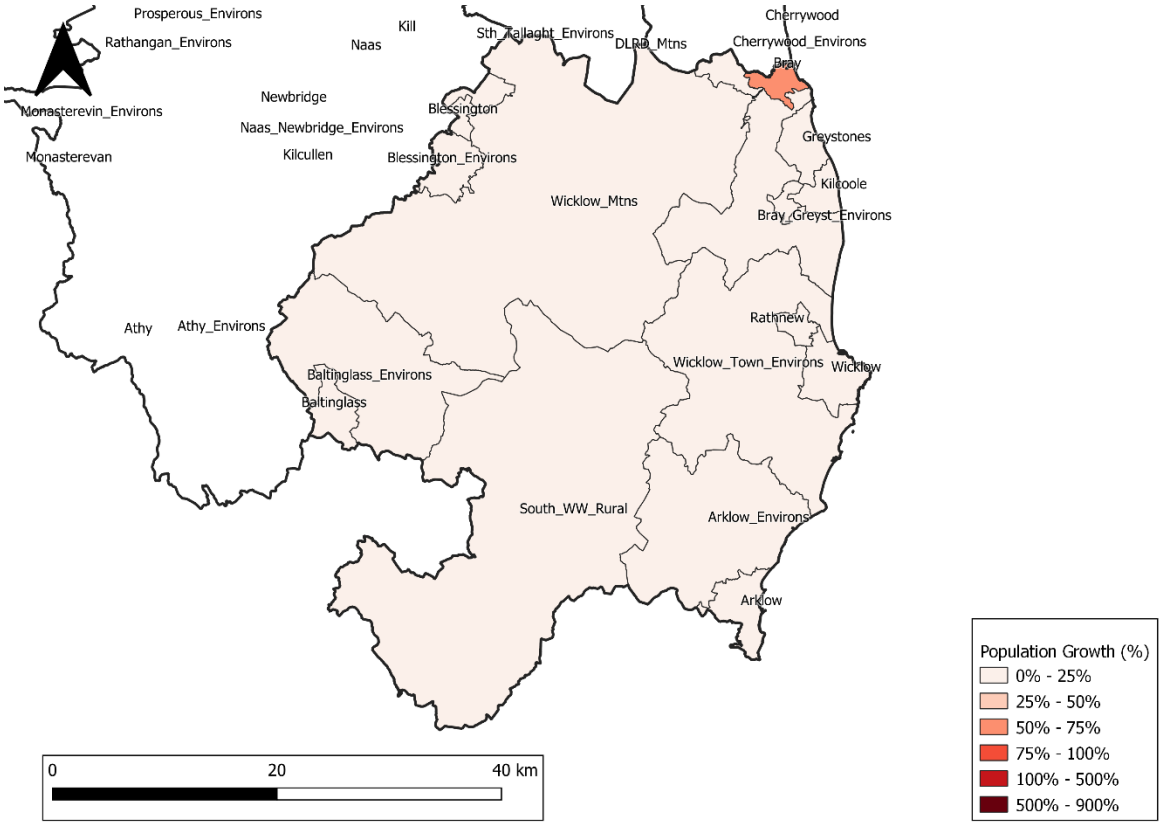


Figure A13 Population Growth 2016 to 2042 in Wicklow

A2.3.3 Employment

A14 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in the Fingal County. The greatest percentage growth is seen in Baldoyle, where the number of jobs is expected to grow by 79%, representing an additional 6,927 jobs in 2042. There is also significant employment growth in Swords City and environs, Portmarnock Environs, Ballycoolin Environs and Ballymun.

In terms of absolute employment numbers in 2042, Blanchardstown remains the largest employer with 37,835 jobs. Existing industrial and commercial zones within Swords, Ballymun, Finglas, Baldoyle and Ballycoolin also remain significant employers in 2042.

Table A14 Job Comparison at a Settlement Level for Fingal County

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Airport - Dublin	982	1060	78	8%
Balbriggan	8891	10788	1897	21%
Balbriggan Skerries Environs	991	1072	81	8%
Baldoyle	8724	15651	6927	79%
Ballycoolin	9910	13127	3217	32%
Ballycoolin Environs	792	1211	419	53%
Ballymun	16612	22855	6243	38%

Blanchardstown	33067	37835	4768	14%
Blanchardstown Environs	1083	1205	122	11%
Castleknock	4432	5780	1348	30%
Donabate	2893	3539	646	22%
Donabate Environs	1167	1334	167	14%
Finglas	17763	20662	2899	16%
Howth	7590	8223	633	8%
Kinsealy-Drinan	3268	3831	563	17%
Lusk	3417	3904	487	14%
Lusk Rush Environs	2518	2807	289	11%
Malahide	6112	7326	1214	20%
NW Fingal	1717	1894	177	10%
Portmarnock	2932	3290	358	12%
Portmarnock Environs	970	1353	383	39%
Rush	4313	5052	739	17%
Skerries	3740	4386	646	17%
Swords	17785	27872	10087	57%
Swords Environs	6883	11735	4852	70%
Total	168552	217792	49240	29%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A14, overleaf. As outlined in Table A14, Swords, Ballymun, Finglas, Baldoyle and Ballycoolin are highlighted as the largest employment growth areas.

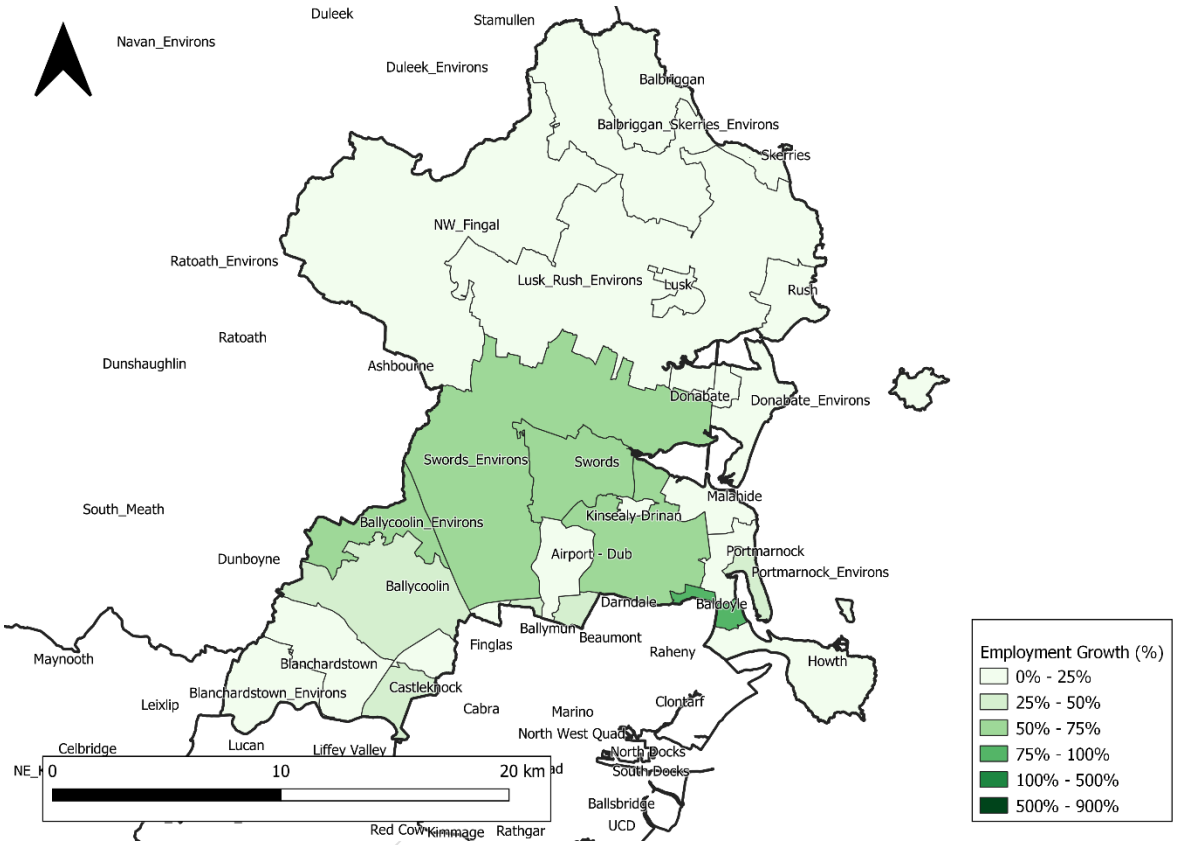


Figure A14 Job Growth 2016 to 2042 in Fingal

Table A15 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in South Dublin County. The greatest percentage growth is seen in Clonburris, where the number of jobs is expected to grow by 807%, representing an additional 3,607 jobs in 2042. There is also significant employment growth in Adamstown (361%), Red Cow (173%), Saggart (137%) and Newcastle (128%).

In terms of absolute employment numbers in 2042, Rathgar remains the largest employer with 25,037 jobs. Existing industrial and commercial sites in Ballyfermot, Clondalkin, Kimmage, Rathfarnham and Tallaght also remain significant employers in 2042.

Table A15 Job Comparison at a Settlement Level for South Dublin County

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Adamstown	1481	6831	5350	361%
Ballyfermot	18714	22704	3990	21%
Clonburris	447	4054	3607	807%
Clondalkin	12968	15162	2194	17%
Kimmage	21628	23285	1657	8%
Liffey Valley	17104	17689	585	3%
Lucan	8004	9678	1674	21%
Newcastle	673	1535	862	128%

Rathcoole	2007	2690	683	34%
Rathcoole Newcastle Environs	2866	3074	208	7%
Rathfarnham	19856	21755	1899	10%
Rathgar	23187	25037	1850	8%
Red Cow	1666	4556	2890	173%
Saggart	971	2305	1334	137%
South Tallaght	18105	20724	2619	14%
South Tallaght Environs	794	830	36	5%
Tallaght	13715	17513	3798	28%
West Tallaght	8286	11689	3403	41%
Total	172472	211110	38638	22%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A15, overleaf. As outlined in Table A15, Adamstown, Red Cow, Saggart and Newcastle are highlighted as the largest employment growth areas.

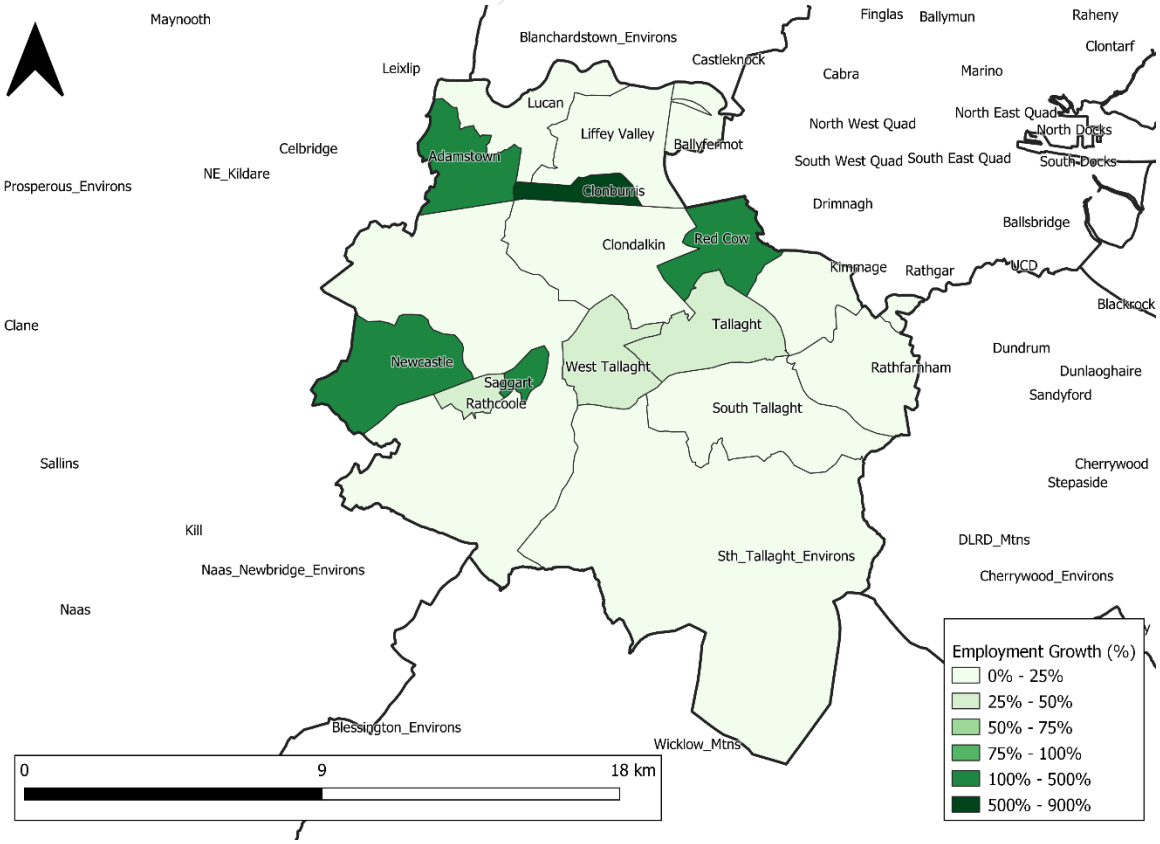


Figure A15 Job Growth 2016 to 2042 in South Dublin

Table A16 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in Dublin City. The greatest percentage growth is seen in Red Cow, where the number of jobs is expected to grow by 173%, representing an additional 2,890 jobs in 2042. There is also significant employment growth in North Docks, South Docks, and Baldoyle.

In terms of absolute employment numbers in 2042, South West Quadrant remains the largest employer with 31,839 jobs. Existing industrial, educational and commercial sites in Ballsbridge, Ballyfermot, Ballymun, Rathgar and Kimmage also remain significant employers in 2042.

Table A16 Job Comparison at a Settlement Level for Dublin City

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Baldoyle	8724	15651	6927	79%
Ballsbridge	15260	17936	2676	18%
Ballyfermot	18714	22704	3990	21%
Ballymun	16612	22855	6243	38%
Beaumont	14485	16471	1986	14%
Cabra	18640	21122	2482	13%
Clontarf	12780	14170	1390	11%
Darndale	3367	3840	473	14%
Drimnagh	10728	14273	3545	33%
Finglas	17763	20662	2899	16%
Kimmage	21628	23285	1657	8%
Marino	18068	20445	2377	13%
North Docks	4865	9529	4664	96%
North East Quad	15221	18108	2887	19%
North West Quad	13460	18256	4796	36%
Raheny	13344	14678	1334	10%
Rathgar	23187	25037	1850	8%
Red Cow	1666	4556	2890	173%
South Docks	10904	20064	9160	84%
South East Quad	8782	10431	1649	19%
South West Quad	23719	31839	8120	34%
UCD	3648	4463	815	22%
Total	295565	370372	74807	25%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A16, overleaf. As outlined in Table 16, Red Cow, North Docks, South Docks and Baldoyle are highlighted as the largest employment growth areas.

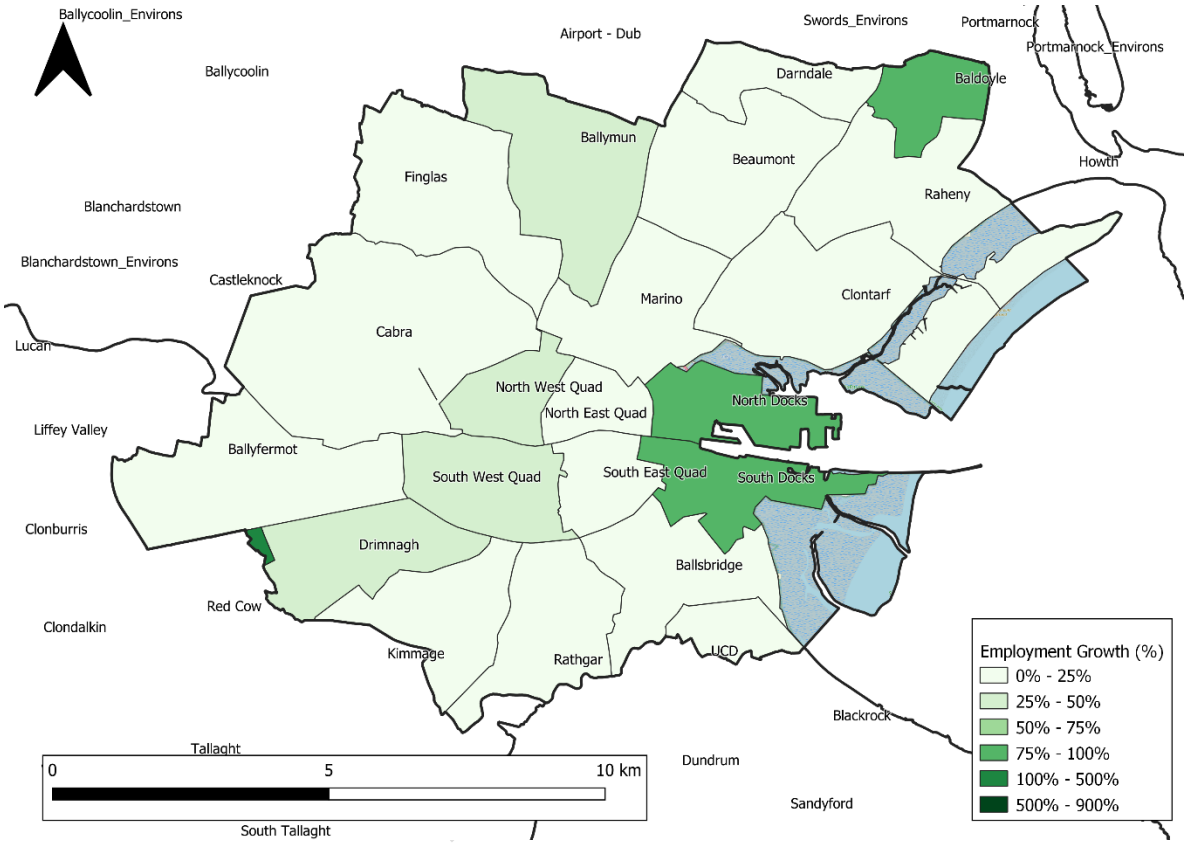


Figure A16 Job Growth 2016 to 2042 in Dublin City

Table A17 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in Dún Laoghaire–Rathdown. The greatest percentage growth is seen in Cherrywood Environs, where the number of jobs is expected to grow by 82%, representing an additional 251 jobs in 2042. There is also significant employment growth in Bray, Cherrywood, DLRD Mountains, and Stepaside.

In terms of absolute employment numbers in 2042, Dún Laoghaire remains the largest employer with 27,195 jobs. Existing industrial and commercial sites in Bray, Cherrywood, Dundrum, Rathfarnham, Rathgar and Sandyford also remain significant employers in 2042.

Table A17 Job Comparison at a Settlement Level for Dún Laoghaire–Rathdown

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Blackrock	7882	8408	526	7%
Bray	14656	25751	11095	76%
Cherrywood	11323	19609	8286	73%
Cherrywood Environs	304	555	251	82%
DLRD Mountains	1010	1644	634	63%
Dundrum	14070	15660	1590	11%
Dun Laoghaire	24998	27195	2197	9%
Rathfarnham	19856	21755	1899	10%
Rathgar	23187	25037	1850	8%

Sandyford	13308	15473	2165	16%
Stepaside	10917	16299	5382	49%
UCD	3648	4463	815	22%
Total	145159	181849	36690	25%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A17, overleaf. As outlined in Table A17, Bray, Cherrywood city and environs, DLRD Mountains, and Stepaside are highlighted as the largest employment growth areas.

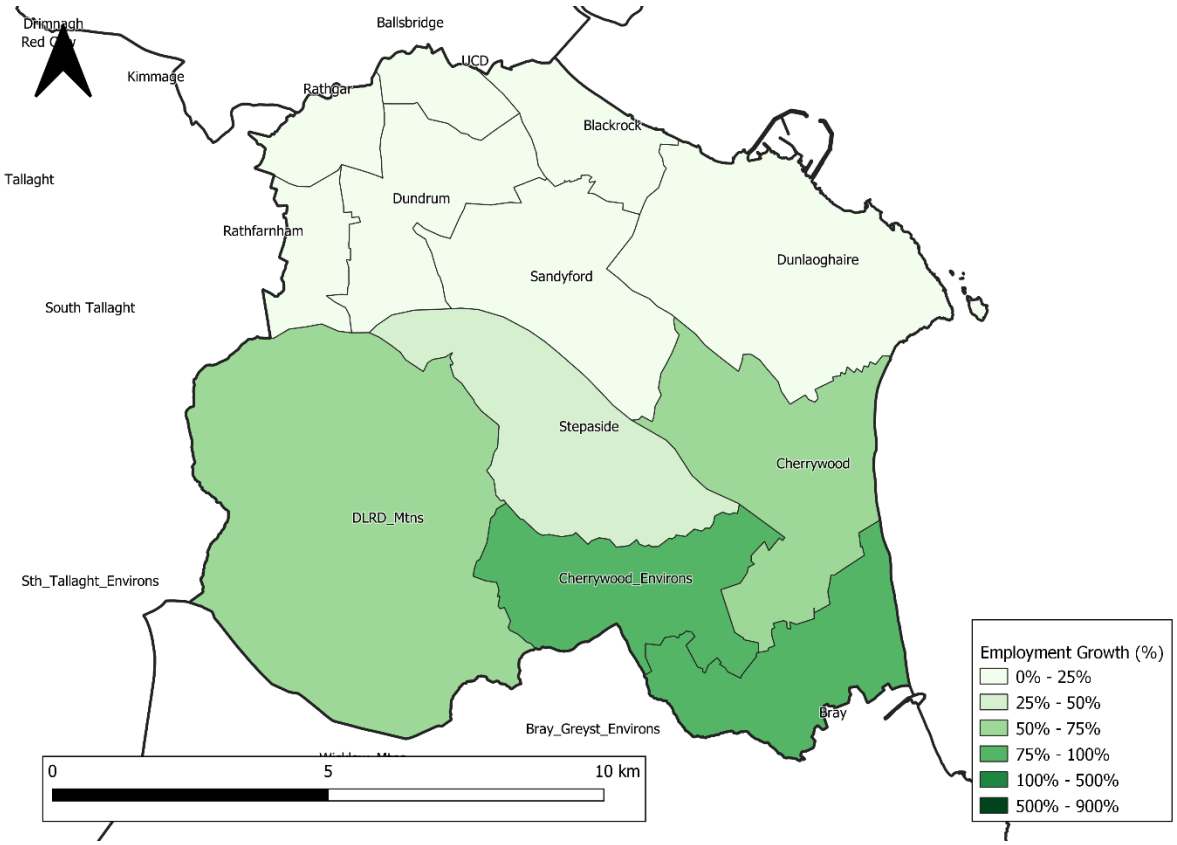


Figure A17 Job Growth 2016 to 2042 in Dún Laoghaire–Rathdown

Table A18 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in County Meath. The greatest percentage growth is seen in Dunshaughlin, where the number of jobs is expected to grow by 83%, representing an additional 1,995 jobs in 2042. There is also significant employment growth in Dunboyne, Kilcock, Trim, Stamullen and Duleek.

In terms of absolute employment numbers in 2042, Drogheda remains the largest employer with 21,397 jobs. Existing industrial and commercial sites in Navan, Ashbourne, South Meath and Trim also remain significant employers in 2042.

Table A18 Job Comparison at a Settlement Level for County Meath

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %

Ashbourne	6397	7938	1541	24%
Athboy	1575	1808	233	15%
Athboy Environs	1345	1421	76	6%
Drogheda	16713	21397	4684	28%
Drogheda Environs	825	872	47	6%
Duleek	1582	2275	693	44%
Duleek Environs	2010	2132	122	6%
Dunboyne	4301	7063	2762	64%
Dunshaughlin	2410	4405	1995	83%
Enfield	1895	2415	520	27%
Kells	2570	3267	697	27%
Kells Environs	3798	4012	214	6%
Kilcock	1244	1964	720	58%
Laytown	4920	6094	1174	24%
Navan	11698	16118	4420	38%
Navan Environs	6691	7243	552	8%
North Meath	4412	4661	249	6%
Ratoath	4131	4837	706	17%
Ratoath Environs	4093	4647	554	14%
South Meath	6151	7282	1131	18%
Stamullen	1569	2314	745	47%
Trim	1268	1885	617	49%
Trim Environs	6024	7590	1566	26%
Total	97622	123637	26015	27%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A18, overleaf. As outlined in Table A18, Dunshaughlin, Dunboyne, Kilcock and Trim and are highlighted as the largest employment growth areas.

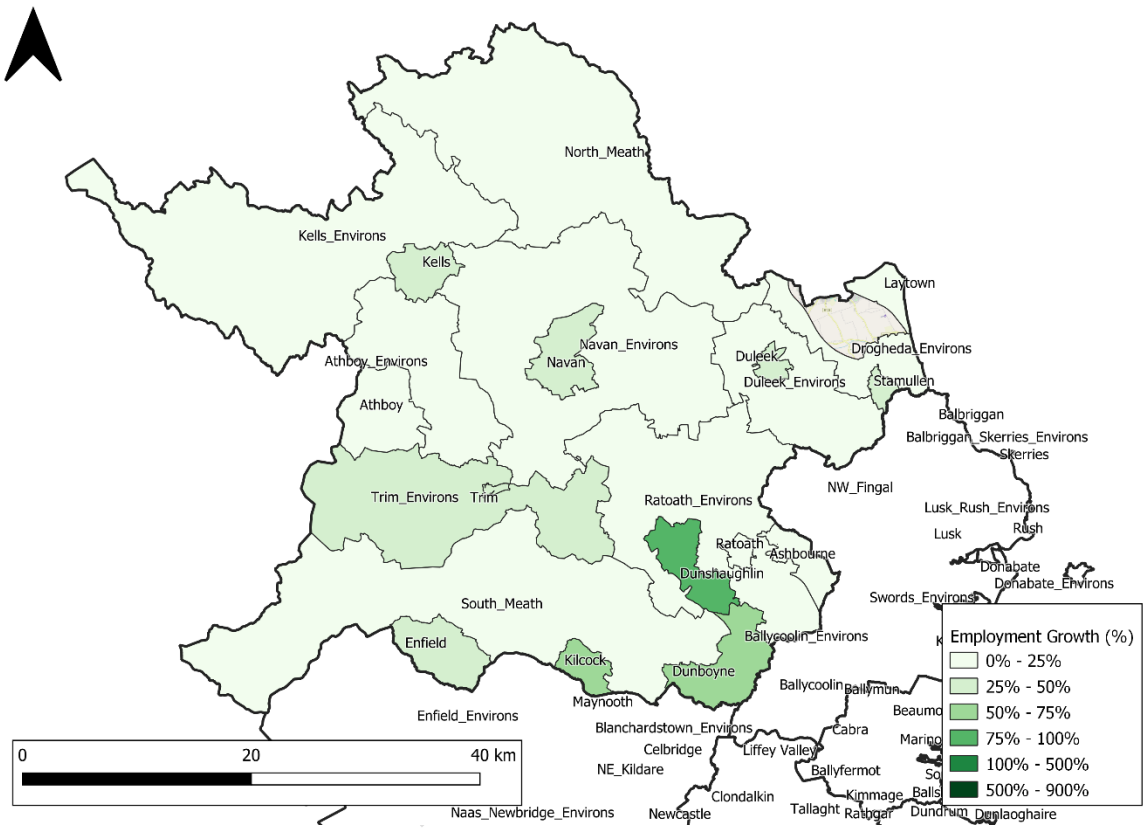


Figure A18 Job Growth 2016 to 2042 in Meath

Table A19 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in County Kildare. The greatest percentage growth is seen in Maynooth, where the number of jobs is expected to grow by 124%, representing an additional 6,803 jobs in 2042. There is also significant employment growth in Kilcock, Kildare, Monasterevan and Leixlip.

In terms of absolute employment numbers in 2042, Naas Newbridge Environs remains the largest employer with 16,185 jobs. Existing industrial and commercial sites in Celbridge, Naas, Newbridge, Leixlip and Maynooth also remain significant employers in 2042.

Table A19 Job Comparison at a Settlement Level for County Kildare

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Athy	3537	4336	799	23%
Athy Environs	5397	6040	643	12%
Celbridge	8038	10191	2153	27%
Clane	3502	4084	582	17%
Enfield Environs	4313	4827	514	12%
Kilcock	1244	1964	720	58%
Kilcullen	1201	1536	335	28%
Kildare	2003	2835	832	42%
Kill	1436	1739	303	21%

Leixlip	7177	9460	2283	32%
Maynooth	5465	12268	6803	124%
Monasterevan	1488	2000	512	34%
Monasterevan Environs	1203	1340	137	11%
Naas	11394	14984	3590	32%
Naas Newbridge Environs	14264	16185	1921	13%
NE Kildare	6639	7997	1358	20%
Newbridge	8509	10890	2381	28%
Prosperous	771	902	131	17%
Prosperous Environs	2992	3348	356	12%
Rathangan Environs	3989	4540	551	14%
Sallins	1564	1848	284	18%
Total	96126	123314	27188	28%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A19, overleaf. As outlined in Table A19, Maynooth, Kilcock, Kildare, Monasterevan and Leixlip are highlighted as the largest employment growth areas.

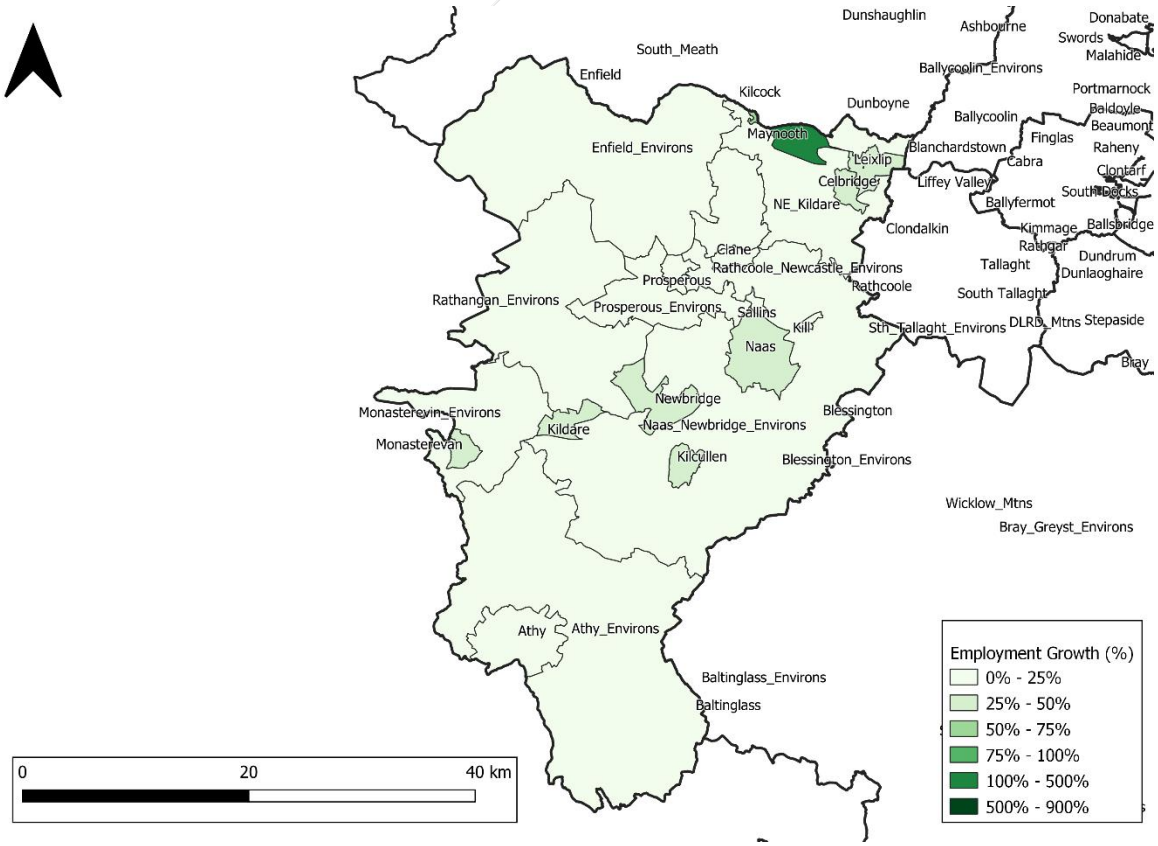


Figure A19 Job Growth 2016 to 2042 in Kildare

Table A20 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for employment in County Wicklow. The greatest percentage growth is seen in Bray, where the number of jobs is expected to grow by 76%, representing an additional 11,095 jobs in

2042. There is also significant employment growth in Newtown Mount Kennedy, Wicklow, Rathnew and Blessington.

In terms of absolute employment numbers in 2042, Bray remains the largest employer with 25,751 jobs. Existing industrial and commercial sites in Greystones, Wicklow and Arklow, also remain significant employers in 2042.

Table A20 Job Comparison at a Settlement Level for County Wicklow

Metro Settlements	Employment		Employment Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Arklow	4994	5635	641	13%
Arklow Environs	1997	2258	261	13%
Baltinglass	1002	1121	119	12%
Baltinglass Environs	1486	1615	129	9%
Blessington	2225	2551	326	15%
Blessington Environs	479	520	41	9%
Bray	14656	25751	11095	76%
Bray Greystones Environs	4709	5355	646	14%
Greystones	7780	8870	1090	14%
Kilcoole	2368	2645	277	12%
Newtown Mount Kennedy	1521	1898	377	25%
Rathnew	1239	1466	227	18%
South WW Rural	4564	4959	395	9%
Wicklow	4982	5992	1010	20%
Wicklow Mountains	3967	4310	343	9%
Wicklow Town Environs	3834	4309	475	12%
Total	61803	79255	17452	28%

The employment growth distribution between 2016 and 2042 is represented by CSO small area in Figure A20, overleaf. As outlined in Table A20, Bray, Newtown Mount Kennedy, Wicklow, Rathnew and Blessington.

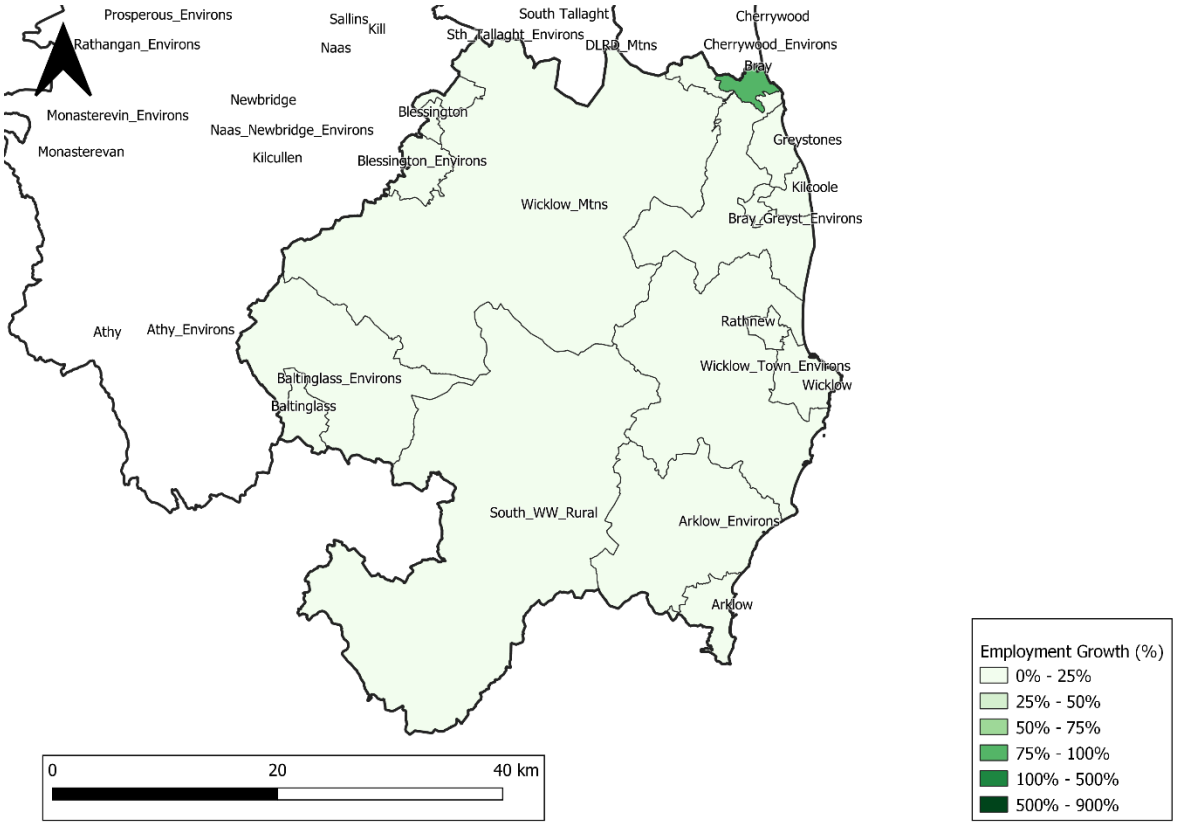


Figure A20 Job Growth 2016 to 2042 in Wicklow

A2.3.4 Education

Table A21 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Fingal. The highest absolute growth in education places occurs in Ballymun, with an increase of 1,565 in 2042 which is primarily driven by the growth of Dublin City University (DCU).

Other areas experiencing significant increases in education places are Swords, Baldoyle and Blanchardstown. This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A21 to clearly represent areas with a lower number of students.

Table A21 Education Comparison at a Settlement Level in Fingal

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Airport - Dublin	260	271	11	4%
Balbriggan	1797	2151	354	20%
Balbriggan Skerries Environs	269	290	21	8%
Baldoyle	1418	2394	976	69%
Ballycoolin	1791	2168	377	21%
Ballycoolin Environs	127	179	52	41%

Ballymun	4768	6333	1565	33%
Blanchardstown	6208	7089	881	14%
Blanchardstown Environs	163	181	18	11%
Castleknock	739	1015	276	37%
Donabate	628	771	143	23%
Donabate Environs	216	239	23	11%
Finglas	3334	3991	657	20%
Howth	1733	1892	159	9%
Kinsealy-Drinan	335	406	71	21%
Lusk	496	583	87	18%
Lusk Rush Environs	631	703	72	11%
Malahide	1338	1577	239	18%
NW_Fingal	309	341	32	10%
Portmarnock	479	517	38	8%
Portmarnock Environs	189	269	80	42%
Rush	840	987	147	17%
Skerries	799	924	125	16%
Swords	2672	3782	1110	42%
Swords Environs	1180	2131	951	81%
Total	32719	41184	8465	26%

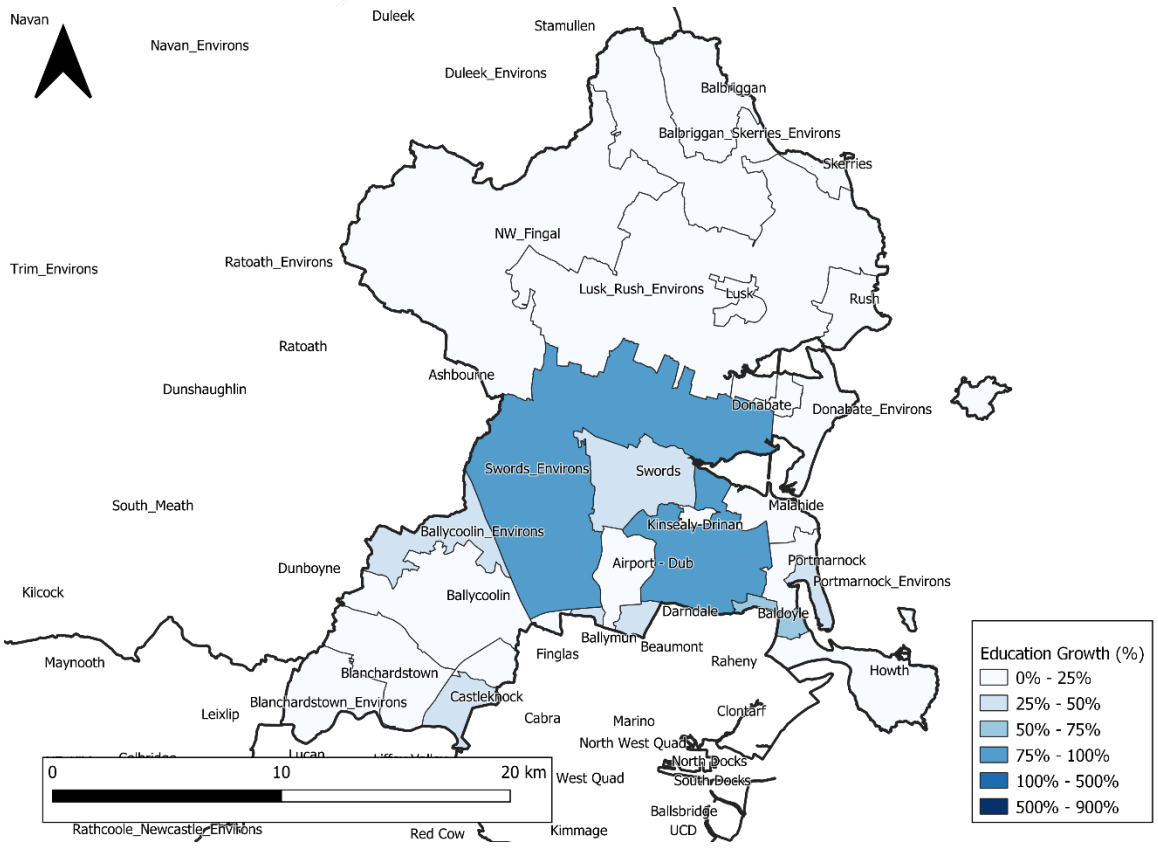


Figure A21 Education Growth 2016 to 2042 in Fingal

Table A22 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in South Dublin. The highest absolute (and relative) growth in education places occurs in Clonburris, with an increase of 1,001 (878%) in 2042 which is primarily driven by the growth of primary and secondary education alongside residential development.

Other areas experiencing significant increases in education places are Adamstown (232%), Red Cow (176%), Saggart (113%), Newcastle (75%) and Rathcoole (53%). This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A22 to clearly represent areas with a lower number of students.

Table A22 Education Comparison at a Settlement Level in South Dublin

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Adamstown	253	840	587	232%
Ballyfermot	3390	4037	647	19%
Clonburris	114	1115	1001	878%
Clondalkin	2289	2565	276	12%
Kimmage	4061	4335	274	7%
Liffey Valley	3942	4094	152	4%
Lucan	1555	1757	202	13%
Newcastle	97	170	73	75%
Rathcoole	192	293	101	53%
Rathcoole Newcastle Environs	372	397	25	7%
Rathfarnham	4618	5044	426	9%
Rathgar	5196	5628	432	8%
Red Cow	257	710	453	176%
Saggart	90	192	102	113%
South Tallaght	3676	3920	244	7%
South Tallaght Environs	156	163	7	5%
Tallaght	2217	2778	561	25%
West Tallaght	1896	2214	318	17%
Total	34371	40252	5881	17%

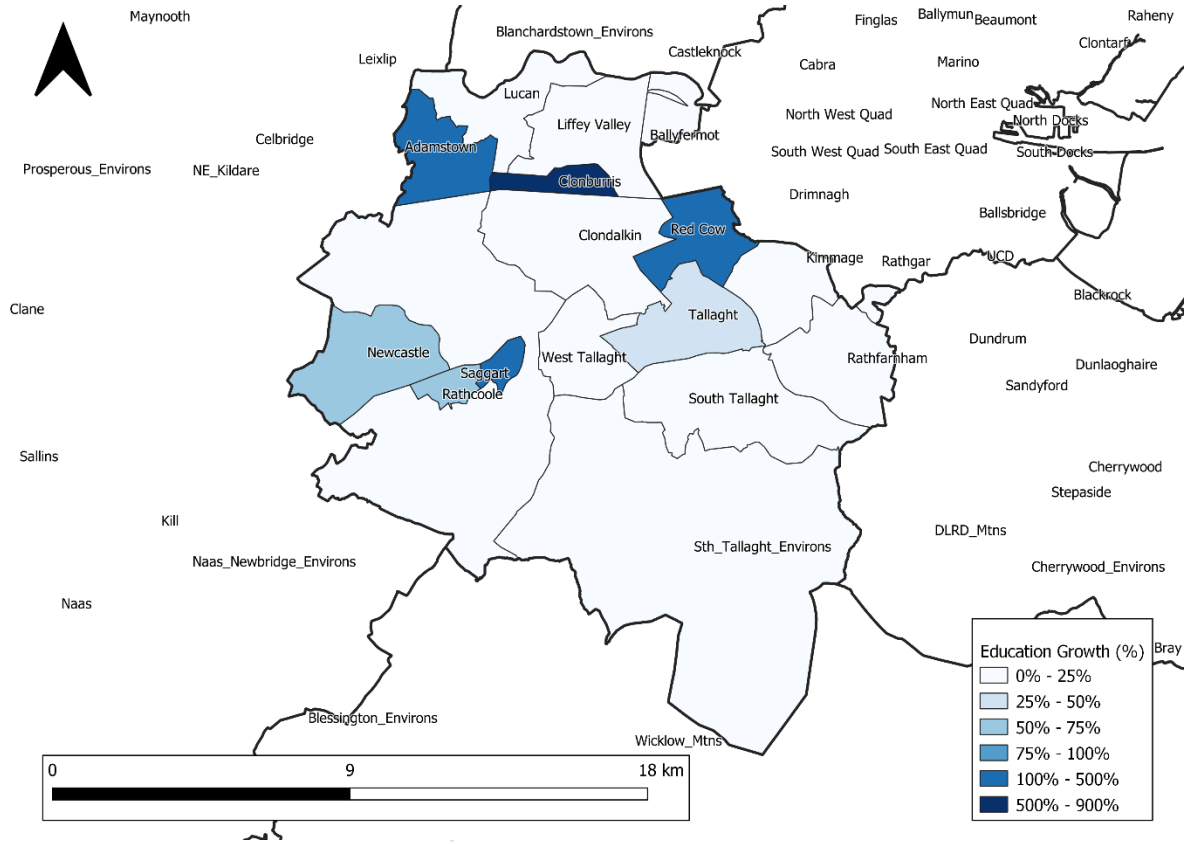


Figure A22 Education Growth 2016 to 2042 in South Dublin

Table A23 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Dublin City. The highest absolute growth in education places occurs in South West Quadrant, with an increase of 1,885 in 2042 which is primarily driven by the growth of Dublin International Foundation College.

Other areas experiencing significant increases in education places are Ballymun, South Docks, North West Quadrant and Baldoyle. This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A23 to clearly represent areas with a lower number of students.

Table A23 Education Comparison at a Settlement Level in Dublin City

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Baldoyle	1418	2394	976	69%
Ballsbridge	2432	2768	336	14%
Ballyfermot	3390	4037	647	19%
Ballymun	4768	6333	1565	33%
Beaumont	2913	3236	323	11%
Cabra	3347	3625	278	8%
Clontarf	2583	2898	315	12%
Darndale	747	869	122	16%
Drimnagh	2045	2521	476	23%

Finglas	3334	3991	657	20%
Kimmage	4061	4335	274	7%
Marino	3704	4097	393	11%
North Docks	592	958	366	62%
North East Quad	3254	3988	734	23%
North West Quad	2667	3729	1062	40%
Raheny	2733	2995	262	10%
Rathgar	5196	5628	432	8%
Red Cow	257	710	453	176%
South Docks	1295	2380	1085	84%
South East Quad	1817	2218	401	22%
South West Quad	5222	7107	1885	36%
UCD	3106	3373	267	9%
Total	60881	74188	13307	22%

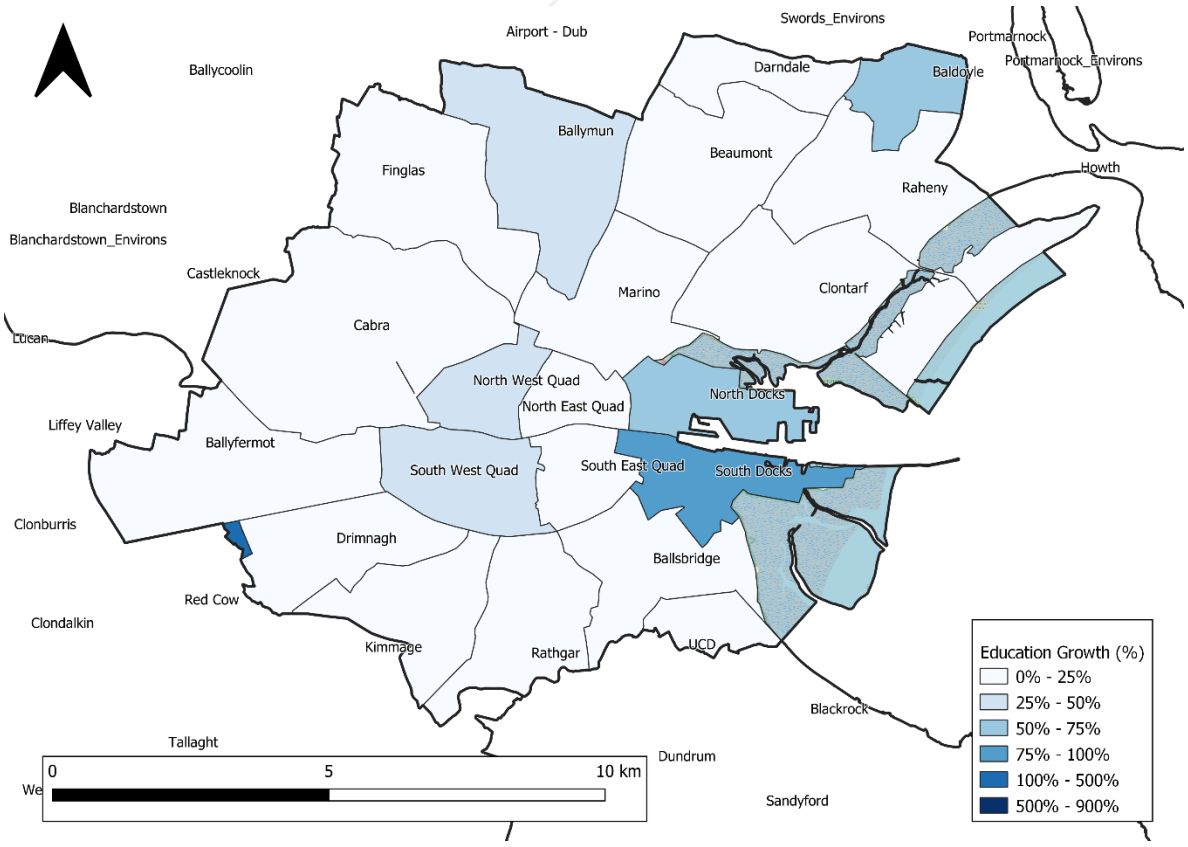


Figure A23 Education Growth 2016 to 2042 in Dublin City

Table A24 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Dún Laoghaire–Rathdown. The highest absolute growth in education places occurs in Cherrywood, with an increase of 2,169 in 2042 which is primarily driven by the growth of residential development.

Other areas experiencing significant increases in education places are Cherrywood Environs, Bray, DLRD Mountains and Stepaside. This is primarily driven by the provision of primary and second level

schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A24 to clearly represent areas with a lower number of students.

Table A24 Education Comparison at a Settlement Level in Dún Laoghaire–Rathdown

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Blackrock	2609	2758	149	6%
Bray	3114	5180	2066	66%
Cherrywood	2664	4833	2169	81%
Cherrywood Environs	75	137	62	82%
DLRD Mountains	372	641	269	72%
Dundrum	3549	3966	417	12%
Dun Laoghaire	5947	6417	470	8%
Rathfarnham	4618	5044	426	9%
Rathgar	5196	5628	432	8%
Sandyford	3533	4063	530	15%
Stepaside	1944	2785	841	43%
UCD	3106	3373	267	9%
Total	36727	44824	8097	22%

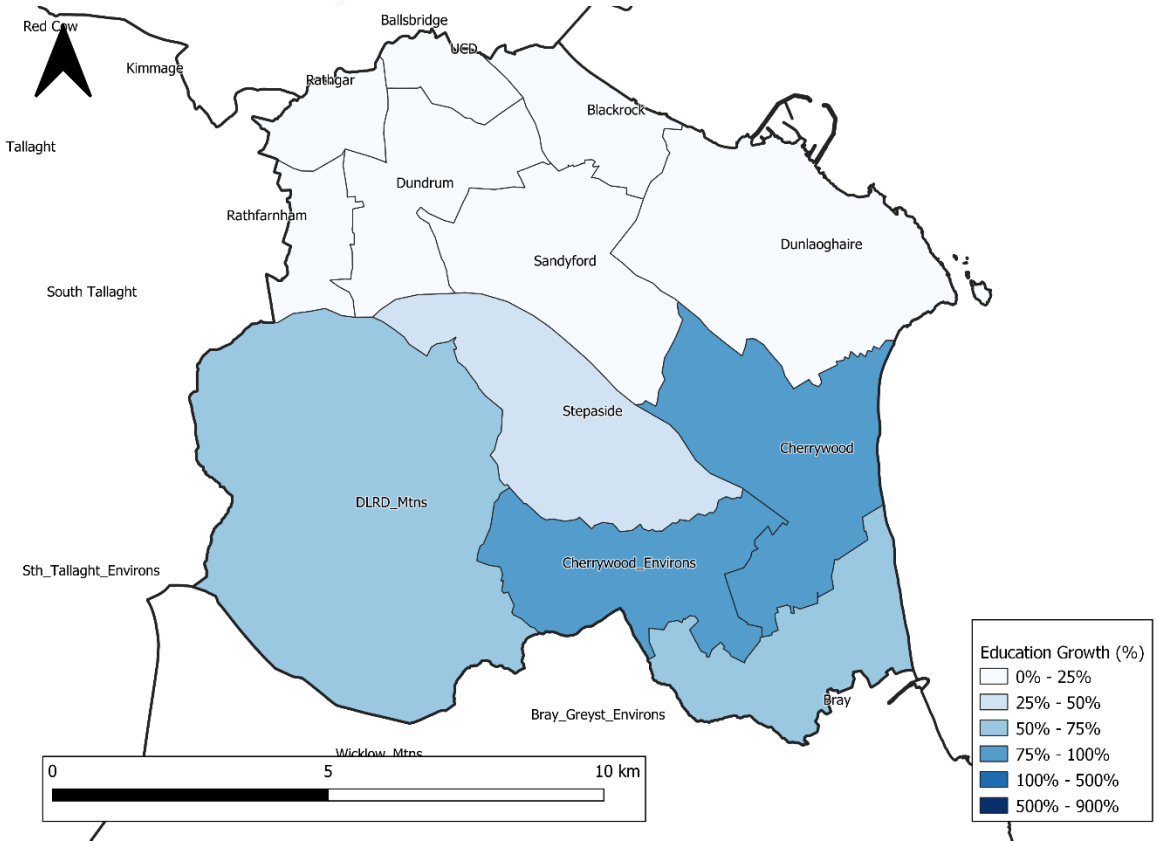


Figure A24 Education Growth 2016 to 2042 in Dún Laoghaire–Rathdown

Table A25 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Meath. The highest absolute growth in education places occurs in Dunboyne, with an increase of 767 in 2042 which is primarily driven by the growth of Dunboyne College of Further Education (DCFE).

Other areas experiencing significant increases in education places are Drogheda, Navan, Dunshaughlin and Ashbourne. This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A25 to clearly represent areas with a lower number of students.

Table A25 Education Comparison at a Settlement Level in Meath

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Ashbourne	889	1158	269	30%
Athboy	331	377	46	14%
Athboy Environs	277	293	16	6%
Drogheda	3184	3864	680	21%
Drogheda Environs	212	224	12	6%
Duleek	285	398	113	40%
Duleek Environs	329	350	21	6%
Dunboyne	937	1704	767	82%
Dunshaughlin	582	1001	419	72%
Enfield	284	368	84	30%
Kells	513	632	119	23%
Kells Environs	778	822	44	6%
Kilcock	197	369	172	87%
Laytown	930	1097	167	18%
Navan	2209	2963	754	34%
Navan Environs	1344	1452	108	8%
North Meath	788	832	44	6%
Ratoath	932	1046	114	12%
Ratoath Environs	931	1071	140	15%
South Meath	1181	1422	241	20%
Stamullen	245	357	112	46%
Trim	221	343	122	55%
Trim Environs	1179	1483	304	26%
Total	18758	23627	4869	26%

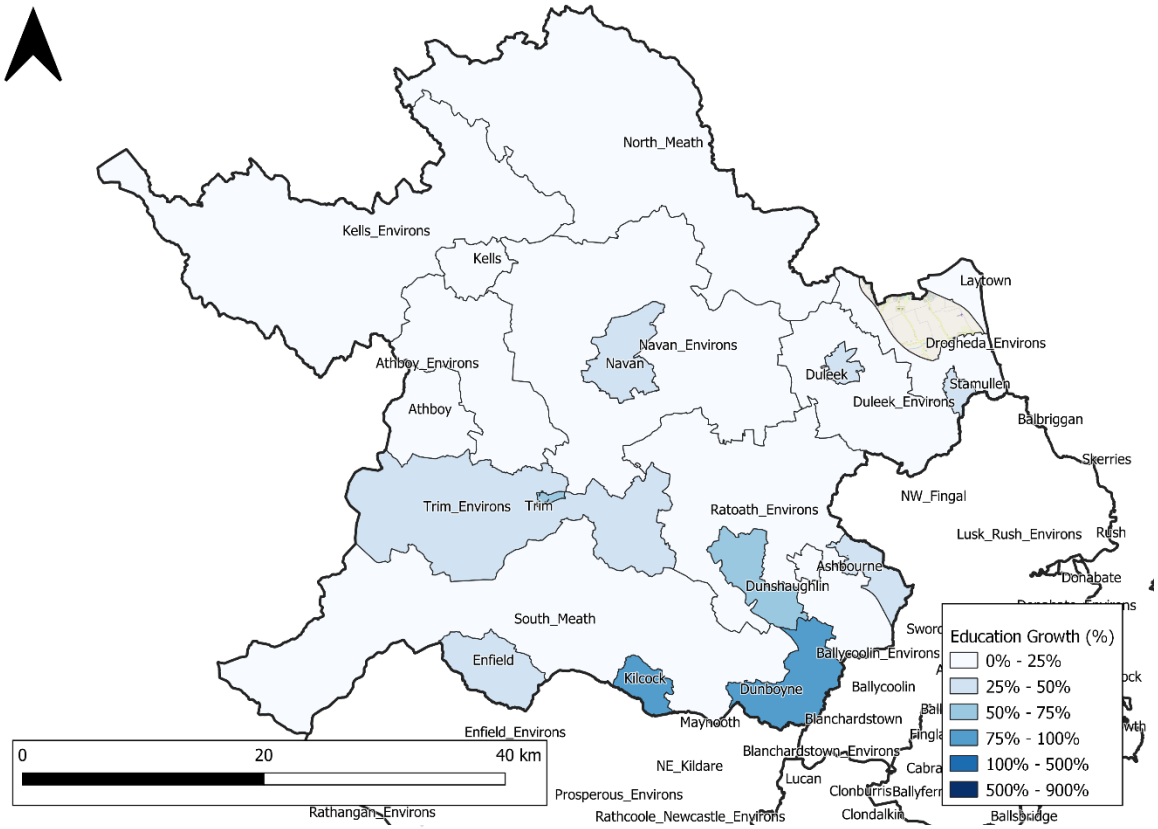


Figure A25 Education Growth 2016 to 2042 in Meath

Table A26 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Kildare. The highest absolute growth in education places occurs in Maynooth, with an increase of 2,524 in 2042 which is primarily driven by the growth of Maynooth University.

Other areas experiencing significant increases in education places are Naas, Newbridge, Leixlip and Celbridge. This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A26 to clearly represent areas with a lower number of students.

Table A26 Education Comparison at a Settlement Level in Kildare

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Athy	797	964	167	21%
Athy Environs	1155	1293	138	12%
Celbridge	1549	1929	380	25%
Clane	652	767	115	18%
Enfield Environs	884	989	105	12%
Kilcock	197	369	172	87%
Kilcullen	229	276	47	21%
Kildare	391	509	118	30%

Kill	238	281	43	18%
Leixlip	1352	1724	372	27%
Maynooth	2584	5108	2524	98%
Monasterevan	236	320	84	36%
Monasterevin Environs	274	305	31	11%
Naas	1926	2484	558	29%
Naas Newbridge Environs	2958	3324	366	12%
NE Kildare	1505	1786	281	19%
Newbridge	1534	1930	396	26%
Prosperous	191	220	29	15%
Prosperous Environs	903	1011	108	12%
Rathangan Environs	747	845	98	13%
Sallins	307	354	47	15%
Total	20609	26786	6177	30%

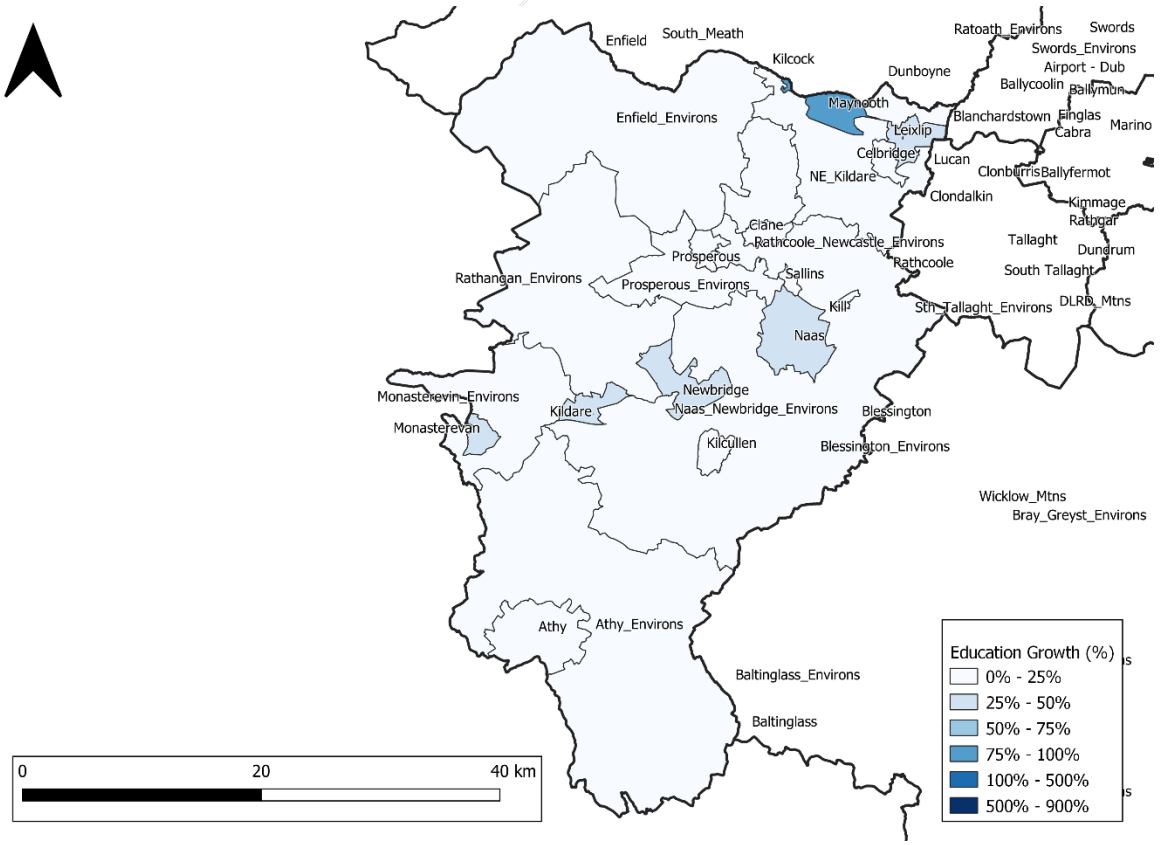


Figure A26 Education Growth 2016 to 2042 in Kildare

Table A27 provides a comparison between the 2016 and the 2042 Planning Datasheets at a settlement level for education in Wicklow. The highest absolute growth in education places occurs in Bray, with an increase of 2,066 in 2042 which is primarily driven by the growth of Bray Institute of Further Education (BIFE).

Other areas experiencing significant increases in education places are Greystones, Wicklow and Arklow. This is primarily driven by the provision of primary and second level schools to support proposed residential development in these areas. The absolute growth in education places rather than percentage growth between 2016 and 2042 is illustrated in Figure A27 to clearly represent areas with a lower number of students.

Table A27 Education Comparison at a Settlement Level in Wicklow

Metro Settlements	Education		Education Growth	
	2016	2042	2016 to 2042	2016 to 2042 %
Arklow	1020	1142	122	12%
Arklow Environs	370	415	45	12%
Baltinglass	248	275	27	11%
Baltinglass Environs	219	238	19	9%
Blessington	395	451	56	14%
Blessington Environs	91	99	8	9%
Bray	3114	5180	2066	66%
Bray Greystones Environs	1058	1158	100	9%
Greystones	1502	1723	221	15%
Kilcoole	444	488	44	10%
Newtownmountkennedy	295	370	75	26%
Rathnew	243	289	46	19%
South WW Rural	819	890	71	9%
Wicklow	1059	1259	200	19%
Wicklow Mtns	789	857	68	9%
Wicklow Town Environs	791	890	99	12%
Total	12457	15723	3266	26%

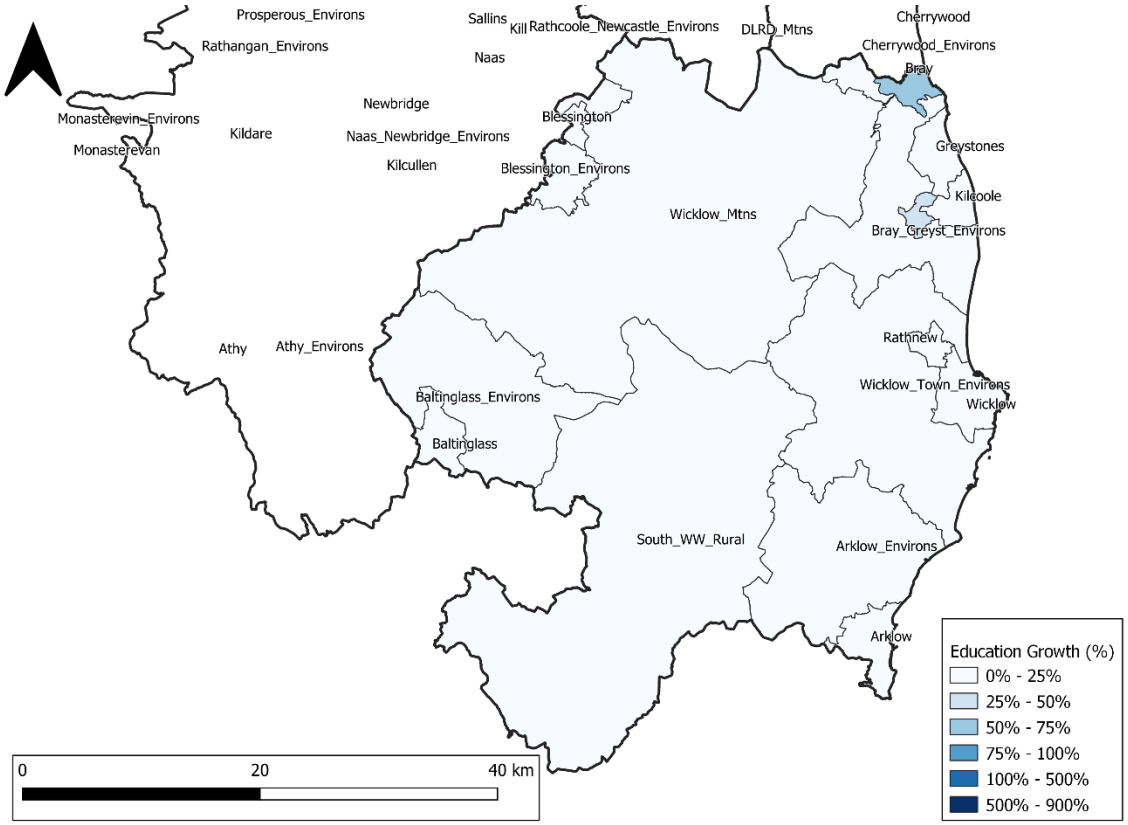


Figure A27 Education Growth 2016 to 2042 in Wicklow

Annex 3 Strategy Development Model Run Log

Run ID	Year	Name	Description
AAA	2042	GDA Strategy	Current GDA Strategy (from the 2016-2035 Transport Strategy) - coding from Bus Connects modelling
AAB	2042	Do Representative	AAA with high "ideal" PT (1min frequency & unlimited capacity on all routes, bus speed minimum set to 20kph) - transfer penalties reduced to 5min
AAC	2042	Do Representative No fare	Same as AAB with all fares set to 0
AAD	2042	Do Representative - Bus 25kph	Same as AAB with bus speed minimum set to 25kph
AAE	2042	Do Representative - Realistic Bus PLD	Same as AAB with AAA bus flows on the road (instead of 100's of buses in AAB due to the 1min frequency)
AAF	2042	Do Representative with Buses Only	Same as AAB without light and heavy rail routes
AAG	2016	Do Representative	Same approach as AAB on the 2016 Base Year network
AAH	2042	Strategy with increase PPK (+25%)	Sensitivity test to road costs
AAI	2016	Coding Test	Check compaticility of v61 coding on v74 model
AAJ	2042	Reference	Do Min
AAK	2042	Luas Test v1	Test with Luas to serve corridor demand
AAL	2042	Metro Test v1	Test with Metro to serve corridor demand
AAM	2042	Do Nothing	Do Nothing
AAN	2042	Do Luas Test v2	Luas option (No DU)
AAO	2042	Do Metro Test v2	Metro option (No DU)
AAP	2042	AAN with different model version	Upgrade to v3.0.74I
AAQ	2042	AAN inputs & AAP costs	Run with 2040 DS input costs
AAR	2042	Do Minimum	2020 networks + BC network
AAS	2042	Emerging Strategy A	2 luas Option SWQ
AAT	2042	Emerging Strategy A + LCY 60s (DM)	AAS + LCY 60s (DM)

Run ID	Year	Name	Description
AAU	2042	Emerging Strategy B	3 Luas Option SWQ
AAV	2042	Emerging Strategy B + LCY 60s (DM)	AAU + LCY 60s (DM)
AAW	2042	Luas Test	Same as AAN + Dart Underground
AAX	2042	Metro Test	Same as AAO + Dart Underground
AAY	2042	Emerging Strategy A	Same as AAS + Dart Underground
AAZ	2042	merging Strategy A + LCY 60s (DM)	Same as AAT + Dart Underground
ABA	2042	Emerging Strategy B	Same as AAU + Dart Underground
ABB	2042	ABA + LCY 60s (DM)	Same as AAV + Dart Underground
ABC	2042	AAV+	Same as AAV + Speed Flow Curves change + Navan Railway Line
ABD	2042	AAV++	Same as AAV + Speed Flow Curves change
ABE	2042	AAV+++	Same as AAV + Speed Flow Curves change
ABF	2042	AAV++++	Same as AAV + Speed Flow Curves change
ABG	2042	AAV+++++	Same as AAV + Speed Flow Curves change + All measures in ABD, ABE, and ABF
ABH	2042	ABA+	Same as ABA + Speed Flow Curves change
ABI	2042	Same as ABC	Same as ABC
ABJ	2042	Same as ABH	Same as ABH
ABK	2042	Same as ABE	Same as ABE
ABL	2042	Same as ABH	Same as ABH
ABM	2042	Same as ABE	Same as ABE
ABN	2042	ABJ + PT corrections	ABJ + PT corrections
ABO	2042	ABJ + mask Bus Connects	ABJ + mask Bus Connects
ABP	2042	ABJ + mask Bus Connects + PT corrections	ABJ + mask Bus Connects + PT corrections
ABQ	2042	ABJ with Incrementals from ME7.8	ABJ with Incrementals from ME7.8
ABR	2042	ABP with latest road network	ABP with latest road network

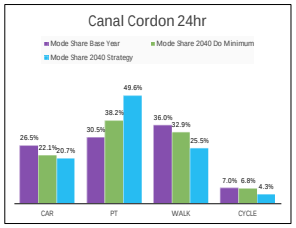
Run ID	Year	Name	Description
ABS	2042	As ABP with latest PT network	As ABP with latest PT network
ABT	2042	As ABP with both road & PT networks	As ABP with both road & PT networks
ABU	2042	Core	All GDA strategy schemes included
ABV	2042	Core no DU	No Dart Underground
ABW	2042	Core no Luas Orbital	No Luas Orbital
ABX	2042	Core + DM(1)	Demand Management (v1) included
ABY	2042	Core (no PT crowding)	Test without PT crowding
ABZ	2042	Core + DM(2)	Demand Management (v2) included
ACA	2042	Core + DM(3)	Demand Management (v3) included
ACB	2042	Do Minimum	2020 networks + BC network
ACC	2042	Strategy	Revised Strategy
ACD	2042	Strategy + DM	As ACC + No FWPP + Reduced PDist + 10€ parking charge
ACE	2042	Strategy + DM2	As ACD with FWPP included
ACF	2042	Strategy + Area-based studies schemes	ACC+List of measures from the area-based studies implemented.
ACG	2042	Strategy (incl. DM) & 20kph cycle Metro	ACD + 20kph cycle speed on all links within Metro
ACH	2042	ACH with 2035 Strat tolling	ACH with 2035 Strat tolling
ACI	2030	Reference	Reference for Traffic management measures
ACJ	2030	Reference Core demand	As ACI with core demand instead of alternative future
ACK	2030	Fuel 50%	Test with fuel increase (+50%)
ACL	2030	Fuel 100%	Test with fuel increase (+100%)
ACM	2030	Radials 2€	Test with 2€ tolling on radial key routes
ACN	2030	Radials 3€	Test with 3€ tolling on radial key routes

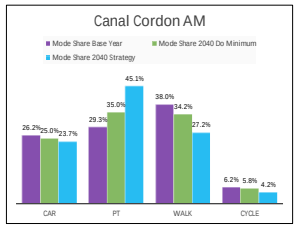
Run ID	Year	Name	Description
ACO	2030	M50 2€	Test with 2€ tolling on M50 btw key jcts
ACP	2030	M50 3€	Test with 3€ tolling on M50 btw key jcts
ACQ	2030	M50 + Radials 2€	Test with 2€ tolling on M50 btw key jcts & radial key routes
ACR	2042	Core Demand	All schemes included
ACS	2042	Alt Future Demand	Alternative Future demand
ACT	2042	Cycle Prop + Tolls	"High" Cycle propensity scenario & Alternative Future demand
ACU	2042	Cycle Prop + Reduced Pking Mgmt	"High" Cycle propensity scenario & Alternative Future demand & Relaxed Parking
ACV	2042	Cycle Prop + No Pking Mgmt	"High" Cycle propensity scenario & Alternative Future demand & No Parking mgmt
ACW	2042	Cycle Prop + No Pking Mgmt + Tolls	Alt. Demand + 2030 Traffic Mgmt + "High" Cycle prop.
ACX	2042	DO MIN	2020 networks + BC network
ACY	2042	STRATEGY	Strategy with Cycle propensity
ACZ	2042	STRATEGY HARDCODED BUS SPEED	As ACZ with hardcoded bus speeds on BC corridors
ADA	2042	STRATEGY REDUCED IVT factor	IVT factor on bus spine route reduced from 1.5 to 1.0 to represent attractiveness of long single decker buses
ADB	2042	Strategy	As ACZ with reduced Cyc prop params
ADC	2042	Strategy - 60% cyc prop	As ADB with lower cyc prop (60%)
ADD	2042	Strategy - reducd IVT fac	As ADB with Luas IVT fac on Bus spines
ADE	2042	Strategy - no hardcoding bus speed	As ADB without hardcoding of bus speeds
ADF	2042	Strategy - no DART UG	As ADB without DART UG

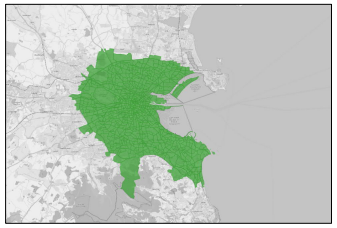
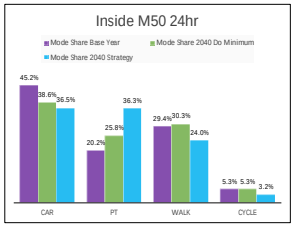
Annex 4 Modelling Output KPIs

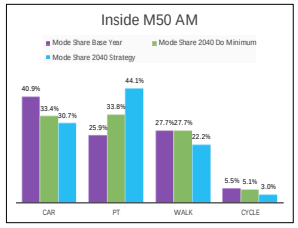
Phase 1, Iteration 2
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAE (2040)

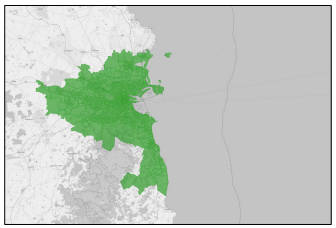
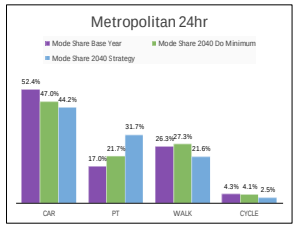
Cumulative Mode Share By Area

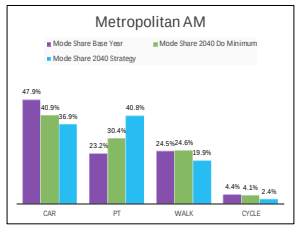



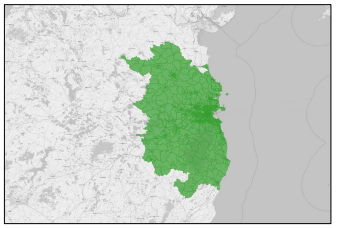
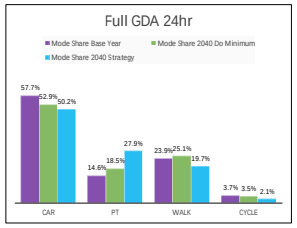


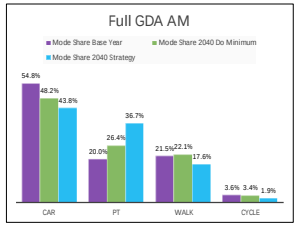



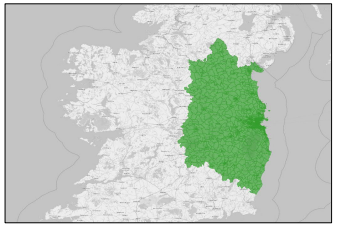
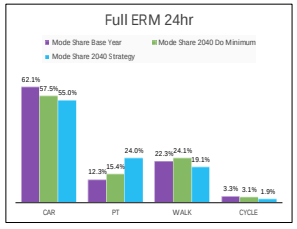


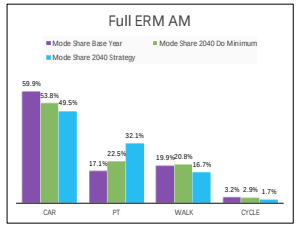





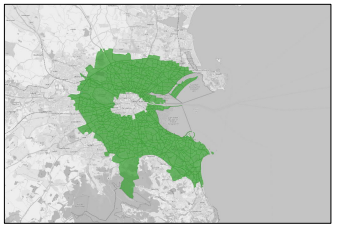
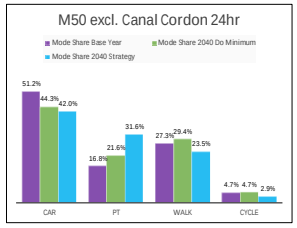



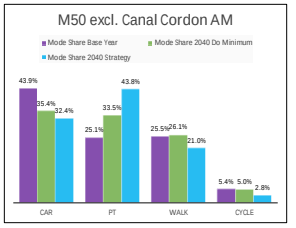


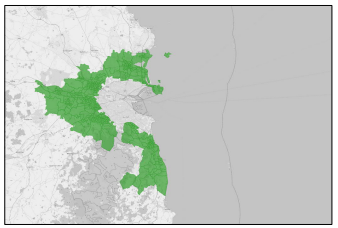
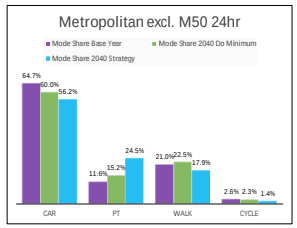



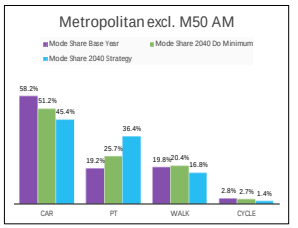


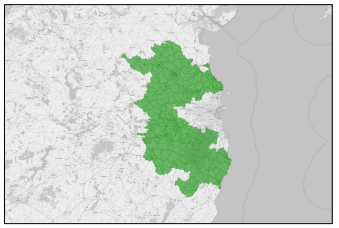
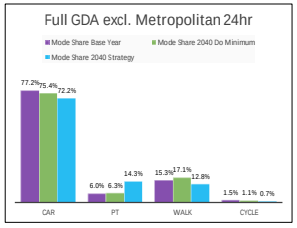
Mode Share By Individual Area

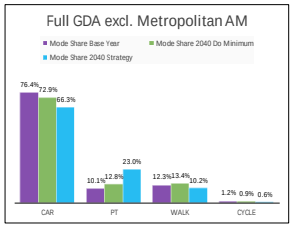



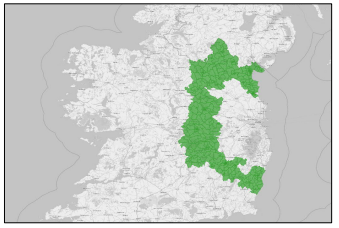
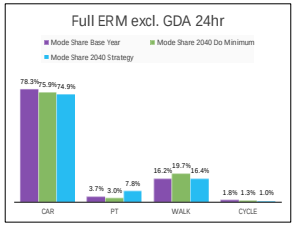


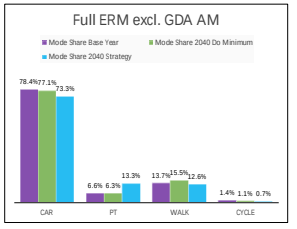





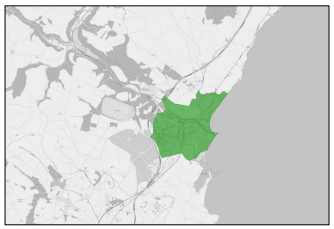


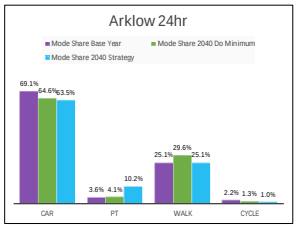



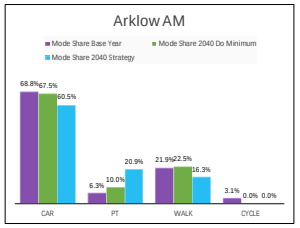


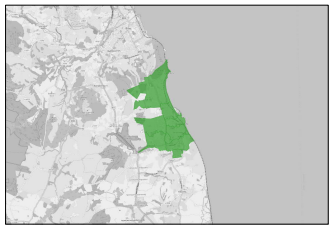
Phase 1, Iteration 2
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAE (2040)

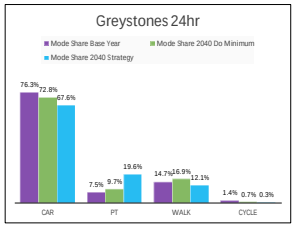
Cumulative Mode Share By Area (Towns)

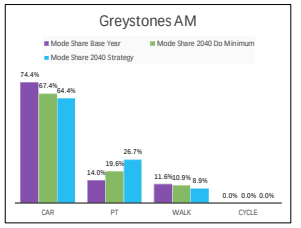


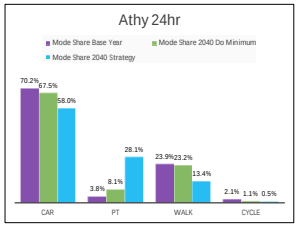


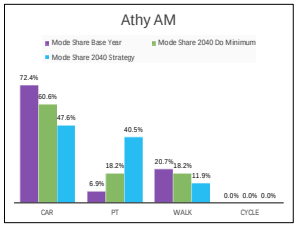


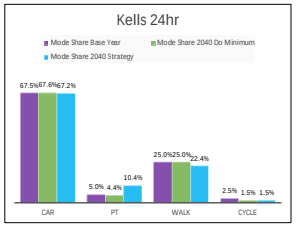


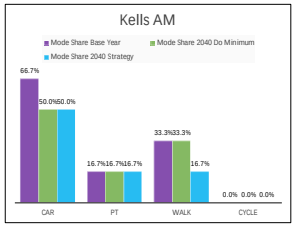


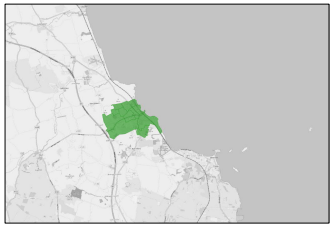


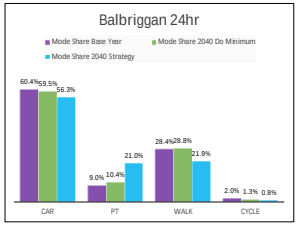


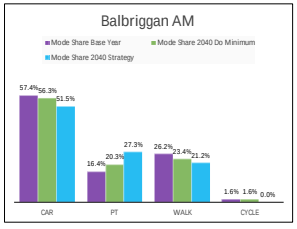


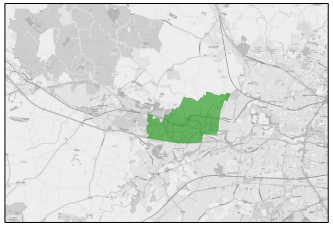


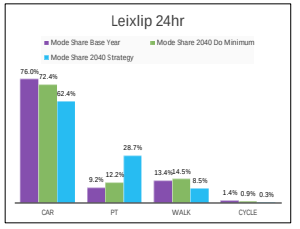


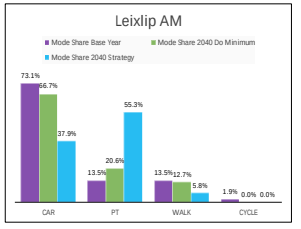


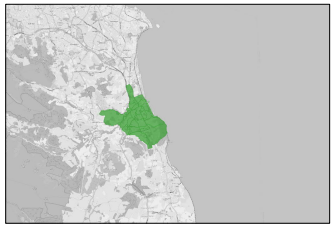


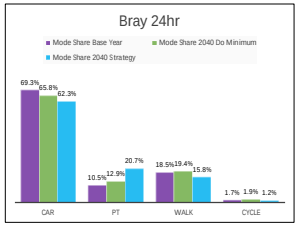


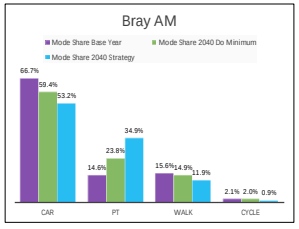


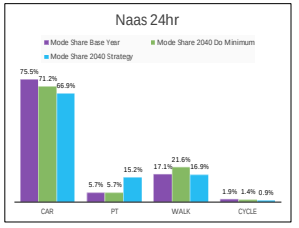


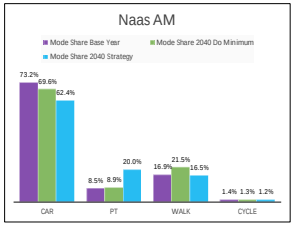


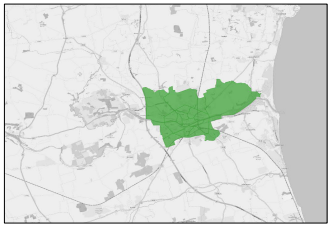


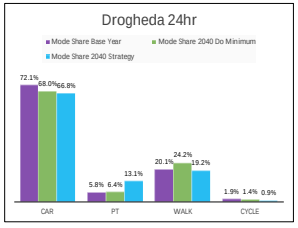


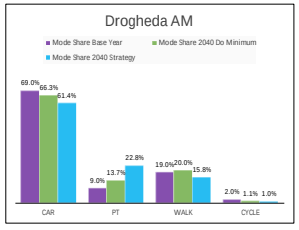


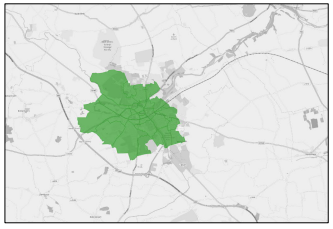


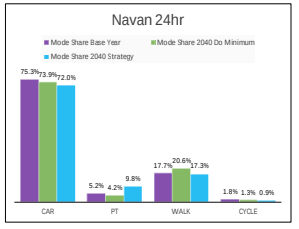


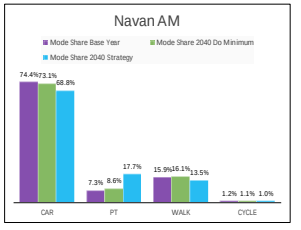








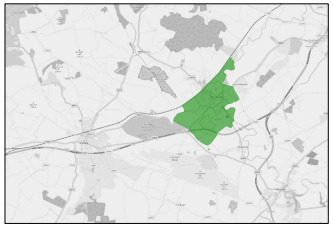


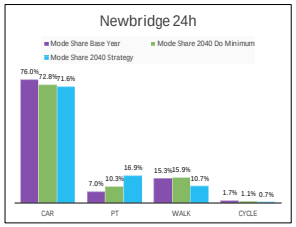


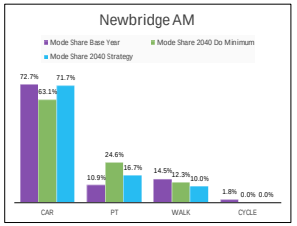
Phase 1, Iteration 2

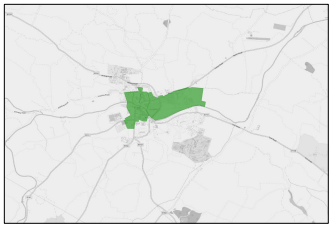
Base Model:	E8R06 (2016)
Do Minimum Model:	AAA (2040)
Strategy Model:	AAE (2040)

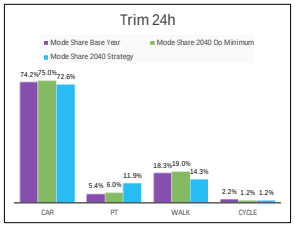
Cumulative Mode Share By Area (Towns)

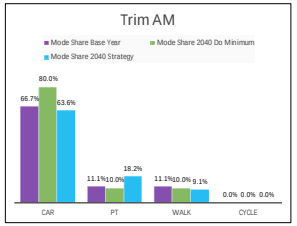


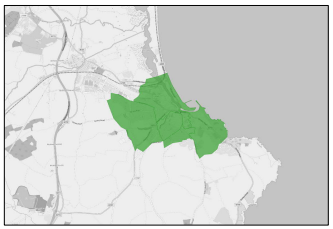


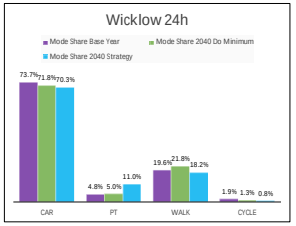


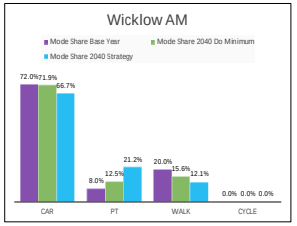






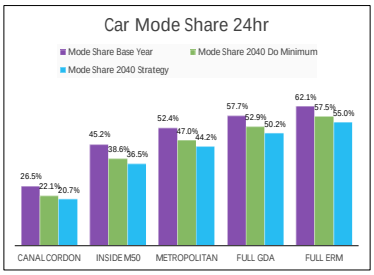


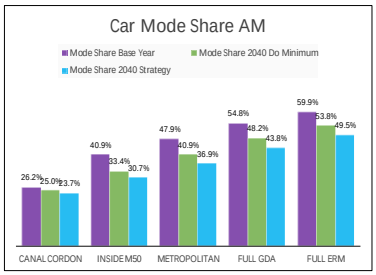


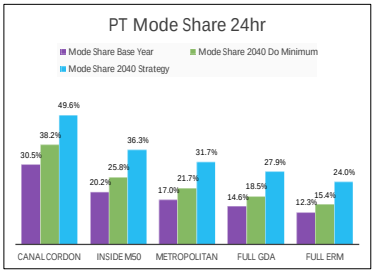


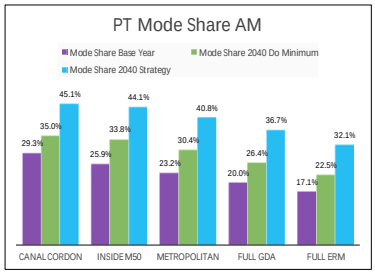
Phase 1, Iteration 2
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAE (2040)

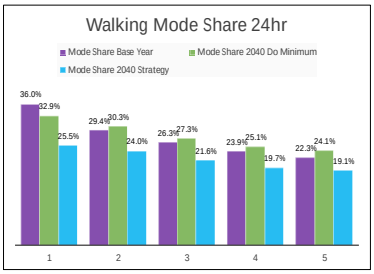
Mode Share By Area

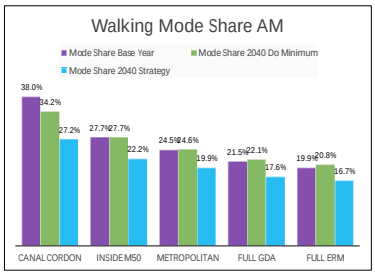


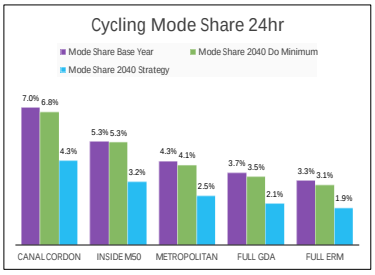


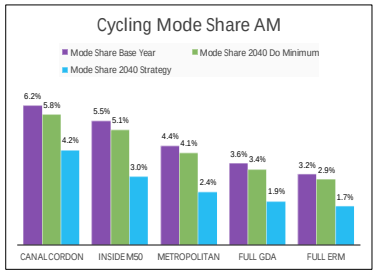












Phase 1, Iteration 2
Base Model: EBR06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAE (2040)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	133,800	230,600	198,900	41,000	604,300	22.1%	38.2%	32.9%	6.8%	13,700	19,200	18,800	3,200	54,900	25.0%	35.0%	34.2%	5.8%
	Mode Share 2040 Strategy	130,000	311,700	160,100	27,000	628,900	20.7%	49.6%	25.5%	4.3%	13,400	25,500	15,400	2,400	56,600	23.7%	45.1%	27.2%	4.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-9.3%	35.9%	-0.6%	5.1%	8.6%					16.1%	45.5%	9.9%	14.3%	22.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.8%	35.2%	-19.5%	-34.1%	4.1%					-2.2%	32.8%	-18.1%	-25.0%	3.1%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	921,300	614,200	722,900	125,300	2,383,700	38.6%	25.8%	30.3%	5.3%	95,400	96,500	79,100	14,700	285,900	33.4%	33.8%	27.7%	5.1%
	Mode Share 2040 Strategy	880,100	875,000	580,100	78,200	2,413,400	36.5%	36.3%	24.0%	3.2%	90,800	130,300	65,700	9,000	295,800	30.7%	44.1%	22.2%	3.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-9.9%	34.3%	8.5%	4.9%	5.2%					-10.7%	42.5%	9.3%	1.4%	9.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.5%	42.5%	-19.8%	-37.6%	1.2%					-4.8%	35.0%	-16.9%	-38.8%	3.5%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	1,836,900	846,400	1,065,500	159,900	3,908,600	47.0%	21.7%	27.3%	4.1%	201,400	149,700	121,300	20,200	492,700	40.9%	30.4%	24.6%	4.1%
	Mode Share 2040 Strategy	1,751,400	1,255,100	857,100	99,500	3,963,000	44.2%	31.7%	21.6%	2.5%	188,600	208,600	101,800	12,100	511,200	36.9%	40.8%	19.9%	2.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-2.8%	38.1%	12.5%	3.7%	8.5%					-5.1%	45.9%	11.9%	3.1%	11.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.7%	48.3%	-19.6%	-37.8%	1.4%					-6.4%	39.3%	-16.1%	-40.1%	3.8%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	2,614,900	911,900	1,242,400	171,600	4,940,800	52.9%	18.5%	25.1%	3.5%	307,700	168,300	140,800	21,600	638,500	48.2%	26.4%	22.1%	3.4%
	Mode Share 2040 Strategy	2,537,800	1,411,100	996,600	107,200	5,052,700	50.2%	27.9%	19.7%	2.1%	291,700	244,400	117,600	13,000	666,700	43.8%	36.7%	17.6%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-1.3%	35.7%	13.2%	1.3%	7.7%					-3.8%	44.1%	12.0%	1.4%	9.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.9%	54.7%	-19.8%	-37.5%	2.3%					-5.2%	45.2%	-16.5%	-39.8%	4.4%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	3,536,100	948,600	1,482,000	187,800	6,154,500	57.5%	15.4%	24.1%	3.1%	427,100	178,100	164,800	23,300	793,300	53.8%	22.5%	20.8%	2.9%
	Mode Share 2040 Strategy	3,455,200	1,506,400	1,197,400	119,100	6,278,100	55.0%	24.0%	19.1%	1.9%	409,300	265,700	137,800	14,300	827,100	49.5%	32.1%	16.7%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-2.3%	32.2%	14.1%	-1.8%	5.6%					-3.9%	40.1%	11.8%	-0.9%	6.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.3%	58.8%	-19.2%	-36.6%	2.0%					-4.2%	49.2%	-16.4%	-38.6%	4.3%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	787,500	383,600	524,000	84,300	1,779,400	44.3%	21.6%	29.4%	4.7%	81,700	77,400	60,300	11,500	230,900	35.4%	33.5%	26.1%	5.0%
	Mode Share 2040 Strategy	750,100	563,300	420,000	51,200	1,784,500	42.0%	31.6%	23.5%	2.9%	77,500	104,800	50,300	6,700	239,200	32.4%	43.8%	21.0%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-10.0%	33.4%	12.4%	5.0%	4.1%					-14.0%	42.3%	9.0%	-1.7%	6.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.7%	46.8%	-19.8%	-39.3%	0.3%					-5.1%	35.4%	-16.6%	-41.7%	3.6%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	915,500	232,200	342,700	34,600	1,524,900	60.0%	15.2%	22.5%	2.3%	106,000	53,200	42,200	5,500	206,900	51.2%	25.7%	20.4%	2.7%
	Mode Share 2040 Strategy	871,200	380,100	277,000	21,300	1,549,600	56.2%	24.5%	17.9%	1.4%	97,800	78,300	36,200	3,100	215,300	45.4%	36.4%	16.8%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	5.7%	48.9%	21.8%	-0.6%	13.9%					0.5%	52.4%	17.2%	7.8%	14.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.8%	63.7%	-19.2%	-38.4%	1.6%					-7.7%	47.2%	-14.2%	-43.6%	4.1%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	778,000	65,500	176,900	11,700	1,032,100	75.4%	6.3%	17.1%	1.1%	106,300	18,600	19,500	1,300	145,800	72.9%	12.8%	13.4%	0.9%
	Mode Share 2040 Strategy	786,500	156,000	139,500	7,800	1,089,700	72.2%	14.3%	12.8%	0.7%	103,100	35,700	15,800	900	155,500	66.3%	23.0%	10.2%	0.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	2.4%	10.8%	17.5%	-22.5%	4.8%					-1.2%	31.0%	12.7%	-23.5%	3.6%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	1.1%	138.2%	-21.1%	-33.3%	5.6%					-3.0%	91.9%	-19.0%	-30.8%	6.7%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	921,200	36,700	239,500	16,200	1,213,700	75.9%	3.0%	19.7%	1.3%	119,400	9,800	24,000	1,700	154,800	77.1%	6.3%	15.5%	1.1%
	Mode Share 2040 Strategy	917,300	95,400	200,800	11,900	1,225,400	74.9%	7.8%	16.4%	1.0%	117,600	21,300	20,200	1,200	160,400	73.3%	13.3%	12.6%	0.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-5.1%	-19.5%	19.1%	-26.4%	-2.0%					-4.0%	-5.8%	10.6%	-22.7%	-2.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.4%	159.9%	-16.2%	-26.5%	1.0%					-1.5%	117.3%	-15.8%	-29.4%	3.6%				

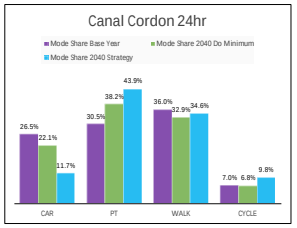
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	20,300	1,300	9,300	400	31,400	64.6%	4.1%	29.6%	1.3%	2,700	400	900	N/A	4,000	67.5%	10.0%	22.5%	0.0%
	Mode Share 2040 Strategy	20,000	3,200	7,900	300	31,500	63.5%	10.2%	25.1%	1.0%	2,600	900	700	N/A	4,300	60.5%	20.9%	16.3%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	6.8%	30.0%	34.8%	-33.3%	14.2%					22.7%	100.0%	28.6%	-100.0%	25.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-1.5%	146.2%	-15.1%	-25.0%	0.3%					-3.7%	125.0%	-22.2%	0.0%	7.5%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	18,300	2,200	6,300	300	27,100	67.5%	8.1%	23.2%	1.1%	2,000	600	600	N/A	3,300	60.6%	18.2%	18.2%	0.0%
	Mode Share 2040 Strategy	22,100	10,700	5,100	200	38,100	58.0%	28.1%	13.4%	0.5%	2,000	1,700	500	N/A	4,200	47.6%	40.5%	11.9%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	9.6%	144.4%	10.5%	-40.0%	13.9%					-4.8%	200.0%	0.0%	0.0%	13.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	20.8%	386.4%	-19.0%	-33.3%	40.6%					0.0%	183.3%	-16.7%	0.0%	27.3%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	28,100	4,900	13,600	600	47,200	59.5%	10.4%	28.8%	1.3%	3,600	1,300	1,500	100	6,400	56.3%	20.3%	23.4%	1.6%
	Mode Share 2040 Strategy	29,800	11,100	11,600	400	52,900	56.3%	21.0%	21.9%	0.8%	3,400	1,800	1,400	N/A	6,600	51.5%	27.3%	21.2%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	1.8%	19.5%	4.6%	-33.3%	3.3%					2.9%	30.0%	-6.3%	0.0%	4.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	6.0%	126.5%	-14.7%	-33.3%	12.1%					-5.6%	38.5%	-6.7%	-100.0%	3.1%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	49,400	9,700	14,600	1,400	75,100	65.8%	12.9%	19.4%	1.9%	6,000	2,400	1,500	200	10,100	59.4%	23.8%	14.9%	2.0%
	Mode Share 2040 Strategy	48,100	16,000	12,200	900	77,200	62.3%	20.7%	15.8%	1.2%	5,800	3,800	1,300	100	10,900	53.2%	34.9%	11.9%	0.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	2.5%	32.9%	13.2%	16.7%	7.9%					-6.3%	71.4%	0.0%	0.0%	5.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.6%	64.9%	-16.4%	-35.7%	2.8%					-3.3%	58.3%	-13.3%	-50.0%	7.9%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	57,400	5,400	20,400	1,200	84,400	68.0%	6.4%	24.2%	1.4%	6,300	1,300	1,900	100	9,500	66.3%	13.7%	20.0%	1.1%
	Mode Share 2040 Strategy	57,100	11,200	16,400	800	85,500	66.8%	13.1%	19.2%	0.9%	6,200	2,300	1,600	100	10,100	61.4%	22.8%	15.8%	1.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-11.7%	3.8%	12.7%	-29.4%	-6.3%					-8.7%	44.4%	15.8%	-50.0%	-5.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.5%	107.4%	-19.6%	-33.3%	1.3%					-1.6%	76.9%	-15.8%	0.0%	5.3%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	21,100	2,800	4,900	200	29,000	72.8%	9.7%	16.9%	0.7%	3,100	900	500	N/A	4,600	67.4%	19.6%	10.9%	0.0%
	Mode Share 2040 Strategy	21,700	6,300	3,900	100	32,100	67.6%	19.6%	12.1%	0.3%	2,900	1,200	400	N/A	4,500	64.4%	26.7%	8.9%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-0.9%	33.3%	19.5%	-50.0%	3.9%					-3.1%	50.0%	0.0%	0.0%	7.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	2.8%	125.0%	-20.4%	-50.0%	10.7%					-6.5%	33.3%	-20.0%	0.0%	-2.2%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	4,600	300	1,700	100	6,800	67.6%	4.4%	25.0%	1.5%	300	100	200	N/A	600	50.0%	16.7%	33.3%	0.0%
	Mode Share 2040 Strategy	4,500	700	1,500	100	6,700	67.2%	10.4%	22.4%	1.5%	300	100	100	N/A	600	50.0%	16.7%	16.7%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-14.8%	-25.0%	-15.0%	-50.0%	-15.0%					-25.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.2%	133.3%	-11.8%	0.0%	-1.5%					0.0%	0.0%	-50.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	31,400	5,300	6,300	400	43,400	72.4%	12.2%	14.5%	0.9%	4,200	1,300	800	N/A	6,300	66.7%	20.6%	12.7%	0.0%
	Mode Share 2040 Strategy	35,800	16,500	4,900	200	57,400	62.4%	28.7%	8.5%	0.3%	3,900	5,700	600	N/A	10,300	37.9%	55.3%	5.8%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.4%	60.6%	31.3%	-20.0%	21.2%					10.5%	85.7%	14.3%	-100.0%	21.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	14.0%	211.3%	-22.2%	-50.0%	32.3%					-7.1%	338.5%	-25.0%	0.0%	63.5%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	44,800	3,600	13,600	900	62,900	71.2%	5.7%	21.6%	1.4%	5,500	700	1,700	100	7,900	69.6%	8.9%	21.5%	1.3%
	Mode Share 2040 Strategy	42,700	9,700	10,800	600	63,800	66.9%	15.2%	16.9%	0.9%	5,300	1,700	1,400	100	8,500	62.4%	20.0%	16.5%	1.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	0.2%	5.9%	34.7%	-18.2%	6.3%					5.8%	16.7%	41.7%	0.0%	11.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.7%	169.4%	-20.6%	-33.3%	1.4%					-3.6%	142.9%	-17.6%	0.0%	7.6%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	56,000	3,200	15,600	1,000	75,800	73.9%	4.2%	20.6%	1.3%	6,800	800	1,500	100	9,300	73.1%	8.6%	16.1%	1.1%
	Mode Share 2040 Strategy	54,400	7,400	13,100	700	75,600	72.0%	9.8%	17.3%	0.9%	6,600	1,700	1,300	100	9,600	68.8%	17.7%	13.5%	1.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.9%	-8.6%	31.1%	-16.7%	13.0%					11.5%	33.3%	15.4%	0.0%	13.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.9%	131.3%	-16.0%	-30.0%	-0.3%					-2.9%	112.5%	-13.3%	0.0%	3.2%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	38,100	5,400	8,300	600	52,300	72.8%	10.3%	15.9%	1.1%	4,100	1,600	800	N/A	6,500	63.1%	24.6%	12.3%	0.0%
	Mode Share 2040 Strategy	42,300	10,000	6,300	400	59,100	71.6%	16.9%	10.7%	0.7%	4,300	1,000	600	N/A	6,000	71.7%	16.7%	10.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	3.8%	58.8%	12.2%	-25.0%	8.3%					2.5%	166.7%	0.0%	-100.0%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	11.0%	85.2%	-24.1%	-33.3%	13.0%					4.9%	-37.5%	-25.0%	0.0%	-7.7%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	1,600	100	8,400	75.0%	6.0%	19.0%	1.2%	800	100	100	N/A	1,000	80.0%	10.0%	10.0%	0.0%
	Mode Share 2040 Strategy	6,100	1,000	1,200	100	8,400	72.6%	11.9%	14.3%	1.2%	700	200	100	N/A	1,100	63.6%	18.2%	9.1%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-8.7%	0.0%	-5.9%	-50.0%	-9.7%					33.3%	0.0%	0.0%	0.0%	11.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-3.2%	100.0%	-25.0%	0.0%	0.0%					-12.5%	100.0%	0.0%	0.0%	10.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	17,100	1,200	5,200	300	23,800	71.8%	5.0%	21.8%	1.3%	2,300	400	500	N/A	3,200	71.9%	12.5%	15.6%	0.0%
	Mode Share 2040 Strategy	16,600	2,600	4,300	200	23,600	70.3%	11.0%	18.2%	0.8%	2,200	700	400	N/A	3,300	66.7%	21.2%	12.1%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	11.0%	20.0%	26.8%	-25.0%	13.9%					27.8%	100.0%	0.0%	0.0%	28.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.9%	116.7%	-17.3%	-33.3%	-0.8%					-4.3%	75.0%	-20.0%	0.0%	3.1%				

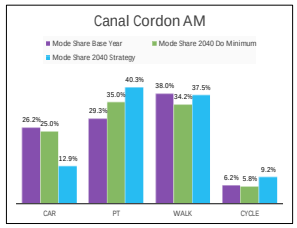
Phase 1, Iteration 2
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAE (2040)

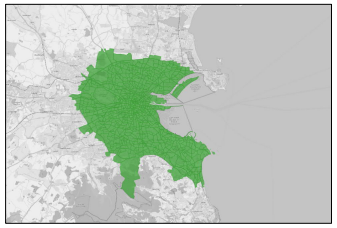
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	22.1%	38.6%	47.0%	52.9%	57.5%	25.0%	33.4%	40.9%	48.2%	53.8%
Mode Share 2040 Strategy	20.7%	36.5%	44.2%	50.2%	55.0%	23.7%	30.7%	36.9%	43.8%	49.5%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	38.2%	25.8%	21.7%	18.5%	15.4%	35.0%	33.8%	30.4%	26.4%	22.5%
Mode Share 2040 Strategy	49.6%	36.3%	31.7%	27.9%	24.0%	45.1%	44.1%	40.8%	36.7%	32.1%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	32.9%	30.3%	27.3%	25.1%	24.1%	34.2%	27.7%	24.6%	22.1%	20.8%
Mode Share 2040 Strategy	25.5%	24.0%	21.6%	19.7%	19.1%	27.2%	22.2%	19.9%	17.6%	16.7%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	6.8%	5.3%	4.1%	3.5%	3.1%	5.8%	5.1%	4.1%	3.4%	2.9%
Mode Share 2040 Strategy	4.3%	3.2%	2.5%	2.1%	1.9%	4.2%	3.0%	2.4%	1.9%	1.7%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	133,800	921,300	1,836,900	2,614,900	3,536,100	13,700	95,400	201,400	307,700	427,100
Mode Share 2040 Strategy	130,000	880,100	1,751,400	2,537,800	3,455,200	13,400	90,800	188,600	291,700	409,300

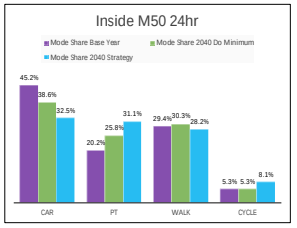
Phase 1, Iteration 3
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

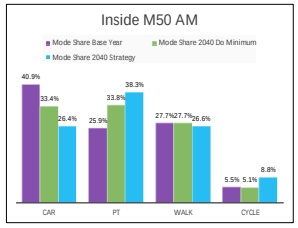
Cumulative Mode Share By Area

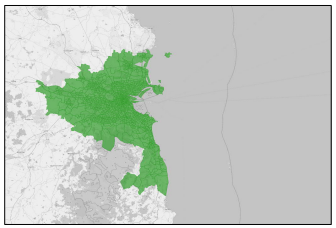


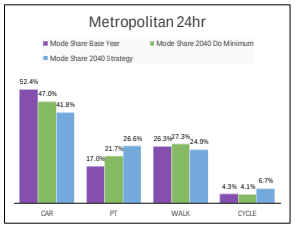


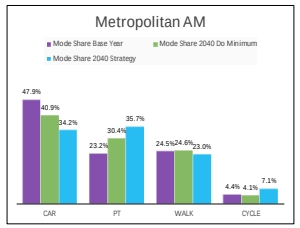


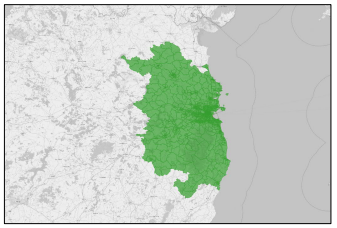


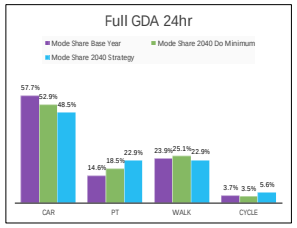


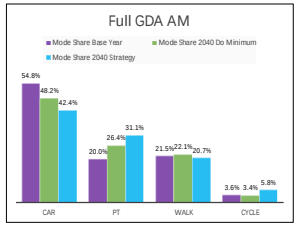


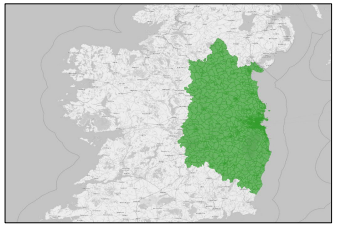


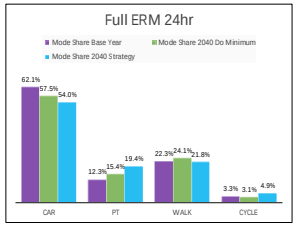


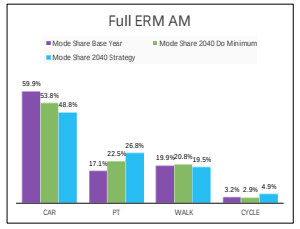




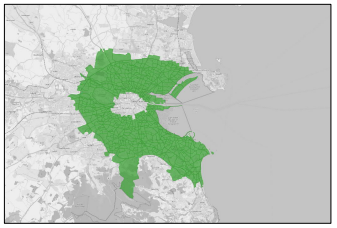


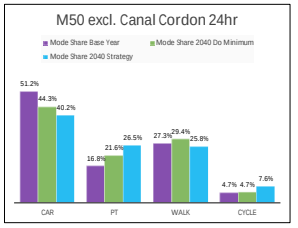


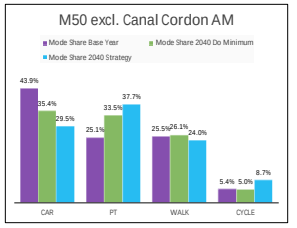


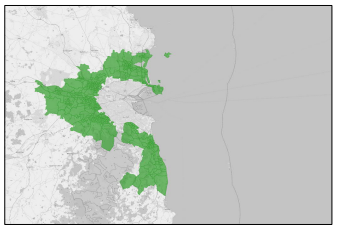


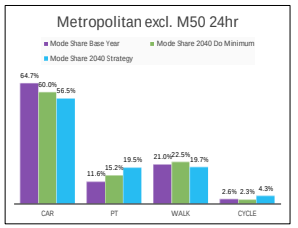
Mode Share By Individual Area

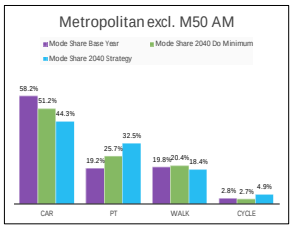


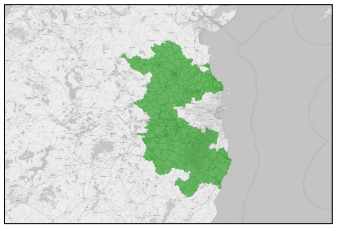


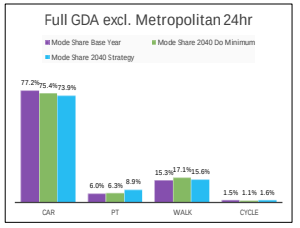


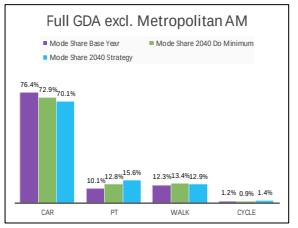


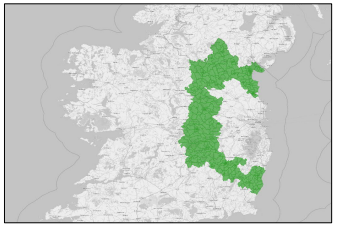


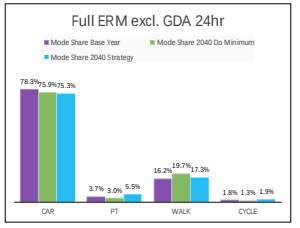


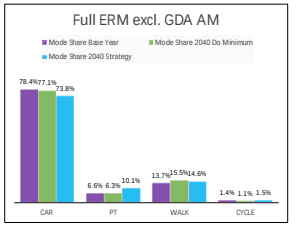






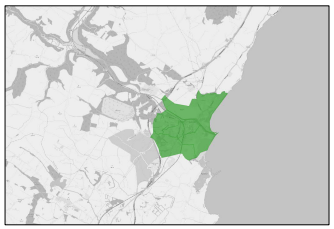


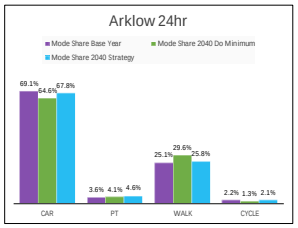


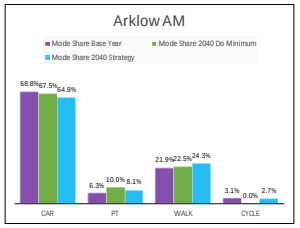


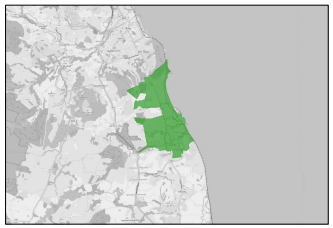
Phase 1, Iteration 3
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

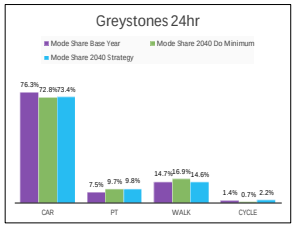
Cumulative Mode Share By Area (Towns)

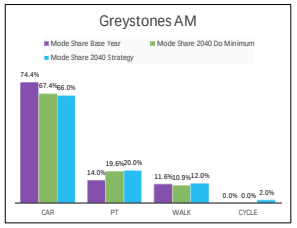


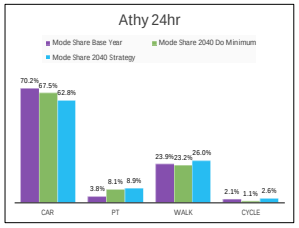


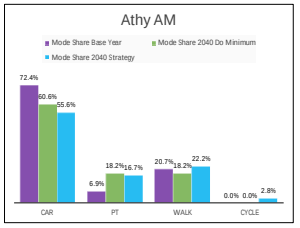


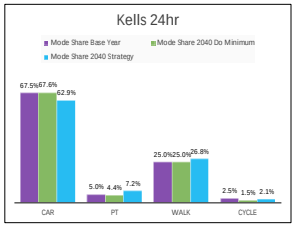


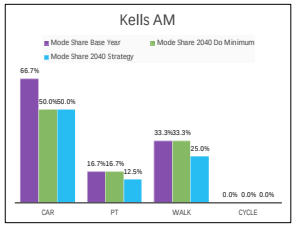


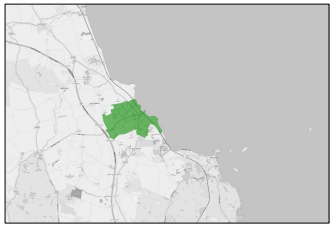


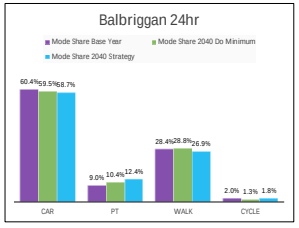


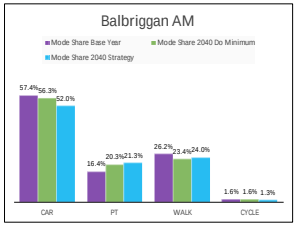


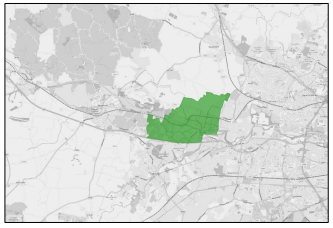


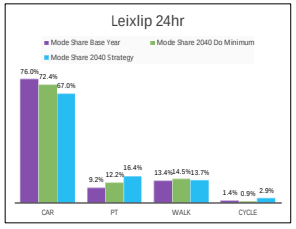


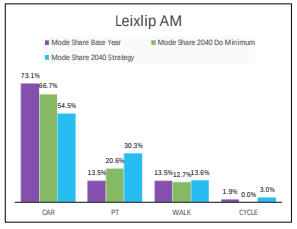


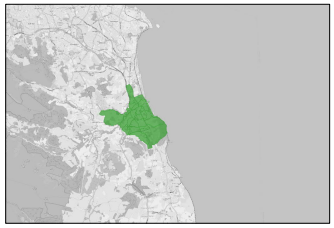


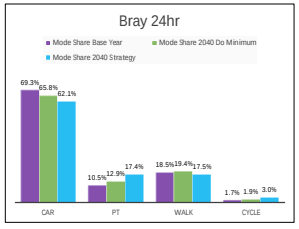


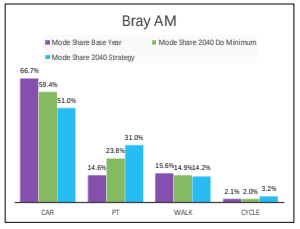


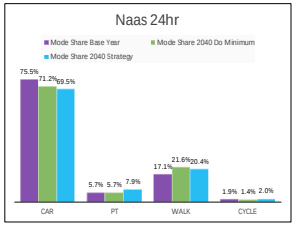


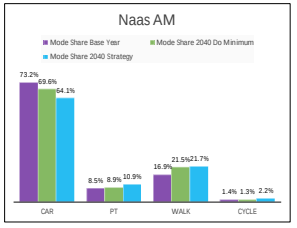


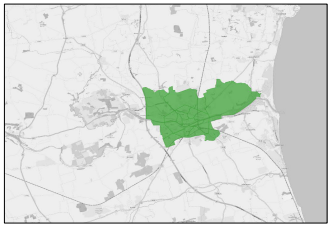


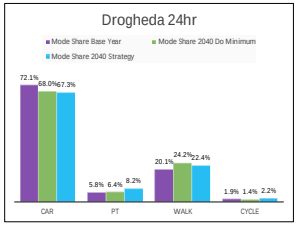


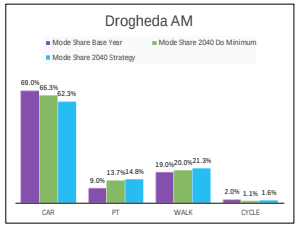


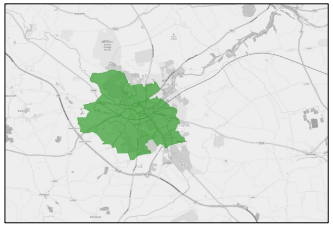


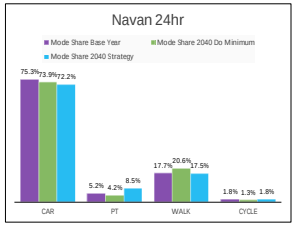


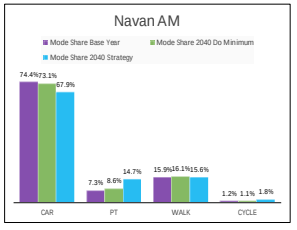






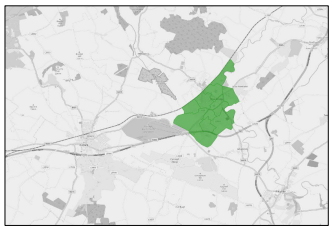


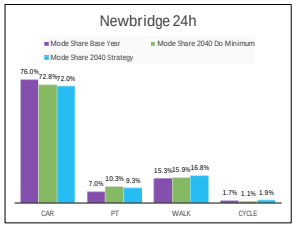


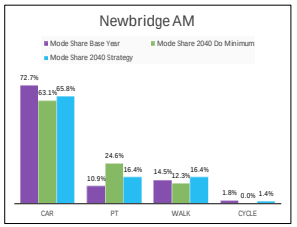


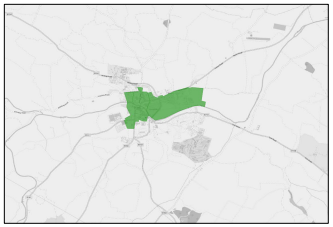
Phase 1, Iteration 3
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

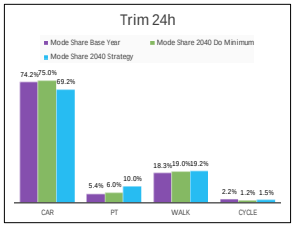
Cumulative Mode Share By Area (Towns)

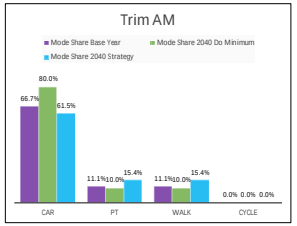


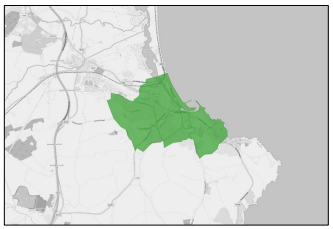


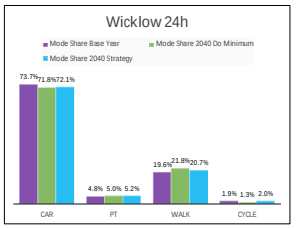


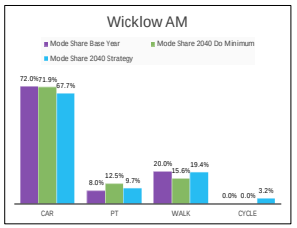






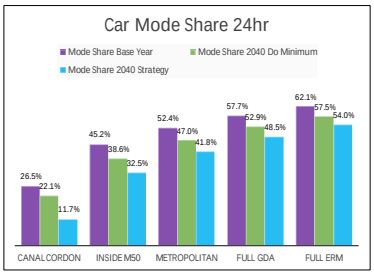


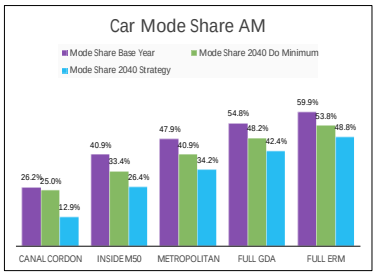


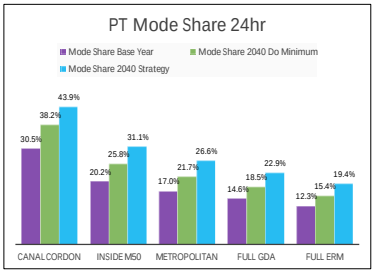


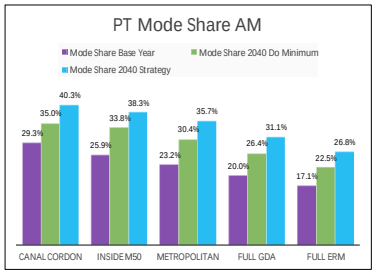
Phase 1, Iteration 3
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

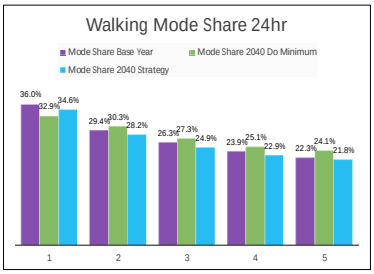
Mode Share By Area

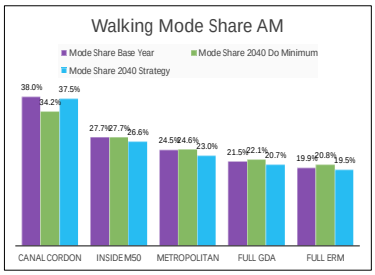


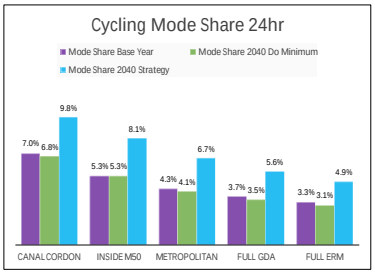


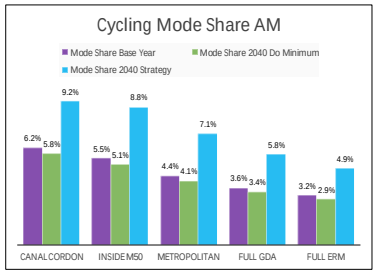












Phase 1, Iteration 3
Base Model: EBR06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	133,800	230,600	198,900	41,000	604,300	22.1%	38.2%	32.9%	6.8%	13,700	19,200	18,800	3,200	54,900	25.0%	35.0%	34.2%	5.8%
	Mode Share 2040 Strategy	87,200	327,600	257,800	72,800	745,400	11.7%	43.9%	34.6%	9.8%	7,900	24,600	22,900	5,600	61,100	12.9%	40.3%	37.5%	9.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-9.3%	35.9%	-0.6%	5.1%	8.6%					16.1%	45.5%	9.9%	14.3%	22.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-34.8%	42.1%	29.8%	77.6%	23.3%					-42.3%	28.1%	21.8%	75.0%	11.3%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	921,300	614,200	722,900	125,300	2,383,700	38.6%	25.8%	30.3%	5.3%	95,400	96,500	79,100	14,700	285,800	33.4%	33.8%	27.7%	5.1%
	Mode Share 2040 Strategy	907,000	868,000	784,800	227,100	2,786,900	32.5%	31.1%	28.2%	8.1%	85,300	123,600	85,900	28,400	323,100	26.4%	38.3%	26.6%	8.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-9.9%	34.3%	8.5%	4.9%	5.2%					-10.7%	42.5%	9.3%	1.4%	9.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-1.6%	41.3%	8.6%	81.2%	16.9%					-10.6%	28.1%	8.6%	93.2%	13.1%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	1,836,900	846,400	1,065,500	159,900	3,908,600	47.0%	21.7%	27.3%	4.1%	201,400	149,700	121,300	20,200	492,700	40.9%	30.4%	24.6%	4.1%
	Mode Share 2040 Strategy	1,901,600	1,210,600	1,131,100	302,500	4,545,700	41.8%	26.6%	24.9%	6.7%	195,100	204,000	131,400	40,500	571,000	34.2%	35.7%	23.0%	7.1%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-2.8%	38.1%	12.5%	3.7%	8.5%					-5.1%	45.9%	11.9%	3.1%	11.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	3.5%	43.0%	6.2%	89.2%	16.3%					-3.1%	36.3%	8.3%	100.5%	15.9%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	2,614,900	911,900	1,242,400	171,600	4,940,800	52.9%	18.5%	25.1%	3.5%	307,700	168,300	140,800	21,600	638,500	48.2%	26.4%	22.1%	3.4%
	Mode Share 2040 Strategy	2,783,900	1,316,800	1,317,100	321,600	5,739,400	48.5%	22.9%	22.9%	5.6%	313,900	230,500	153,400	42,800	740,600	42.4%	31.1%	20.7%	5.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-1.3%	35.7%	13.2%	1.3%	7.7%					-3.8%	44.1%	12.0%	1.4%	9.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	6.5%	44.4%	6.0%	87.4%	16.2%					2.0%	37.0%	8.9%	98.1%	16.0%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	3,536,100	948,600	1,482,000	187,800	6,154,500	57.5%	15.4%	24.1%	3.1%	427,100	178,100	164,800	23,300	793,300	53.8%	22.5%	20.8%	2.9%
	Mode Share 2040 Strategy	3,890,700	1,397,500	1,570,700	350,000	7,209,000	54.0%	19.4%	21.8%	4.9%	453,700	249,700	180,900	45,600	930,000	48.8%	26.8%	19.5%	4.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-2.3%	32.2%	14.1%	-1.8%	5.6%					-3.9%	40.1%	11.8%	-0.9%	6.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	10.0%	47.3%	6.0%	86.4%	17.1%					6.2%	40.2%	9.8%	95.7%	17.2%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	787,500	383,600	524,000	84,300	1,779,400	44.3%	21.6%	29.4%	4.7%	81,700	77,400	60,300	11,500	230,900	35.4%	33.5%	26.1%	5.0%
	Mode Share 2040 Strategy	819,800	540,500	527,100	154,200	2,041,500	40.2%	26.5%	25.8%	7.6%	77,400	98,900	63,000	22,700	262,000	29.5%	37.7%	24.0%	8.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-10.0%	33.4%	12.4%	5.0%	4.1%					-14.0%	42.3%	9.0%	-1.7%	6.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	4.1%	40.9%	0.6%	82.9%	14.7%					-5.3%	27.8%	4.5%	97.4%	13.5%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	915,500	232,200	342,700	34,600	1,524,900	60.0%	15.2%	22.5%	2.3%	106,000	53,200	42,200	5,500	206,900	51.2%	25.7%	20.4%	2.7%
	Mode Share 2040 Strategy	994,600	342,500	346,300	75,400	1,758,800	56.5%	19.5%	19.7%	4.3%	109,800	80,500	45,600	12,100	248,000	44.3%	32.5%	18.4%	4.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	5.7%	48.9%	21.8%	-0.6%	13.9%					0.5%	52.4%	17.2%	7.8%	14.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	8.6%	47.5%	1.1%	117.9%	15.3%					3.6%	51.3%	8.1%	120.0%	19.9%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	778,000	65,500	176,900	11,700	1,032,100	75.4%	6.3%	17.1%	1.1%	106,300	18,600	19,500	1,300	145,800	72.9%	12.8%	13.4%	0.9%
	Mode Share 2040 Strategy	882,400	106,200	186,000	19,100	1,193,700	73.9%	8.9%	15.6%	1.6%	118,900	26,500	21,900	2,300	169,600	70.1%	15.6%	12.9%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	2.4%	10.8%	17.5%	-22.5%	4.8%					-1.2%	31.0%	12.7%	-23.5%	3.6%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	13.4%	62.1%	5.1%	63.2%	15.7%					11.9%	42.5%	12.3%	76.9%	16.3%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	921,200	36,700	239,500	16,200	1,213,700	75.9%	3.0%	19.7%	1.3%	119,400	9,800	24,000	1,700	154,800	77.1%	6.3%	15.5%	1.1%
	Mode Share 2040 Strategy	1,106,800	80,800	253,600	28,400	1,469,500	75.3%	5.5%	17.3%	1.9%	139,700	19,200	27,600	2,800	189,300	73.8%	10.1%	14.6%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-5.1%	-19.5%	19.1%	-26.4%	-2.0%					-4.0%	-5.8%	10.6%	-22.7%	-2.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	20.1%	120.2%	5.9%	75.3%	21.1%					17.0%	95.9%	15.0%	64.7%	22.3%				

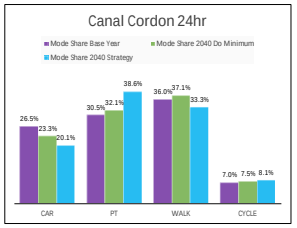
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	20,300	1,300	9,300	400	31,400	64.6%	4.1%	29.6%	1.3%	2,700	400	900	N/A	4,000	67.5%	10.0%	22.5%	0.0%
	Mode Share 2040 Strategy	22,100	1,500	8,400	700	32,600	67.8%	4.6%	25.8%	2.1%	2,400	300	900	100	3,700	64.9%	8.1%	24.3%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	6.8%	30.0%	34.8%	-33.3%	14.2%					22.7%	100.0%	28.6%	-100.0%	25.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	8.9%	15.4%	-9.7%	75.0%	3.8%					-11.1%	-25.0%	0.0%	0.0%	-7.5%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	18,300	2,200	6,300	300	27,100	67.5%	8.1%	23.2%	1.1%	2,000	600	600	N/A	3,300	60.6%	18.2%	18.2%	0.0%
	Mode Share 2040 Strategy	19,100	2,700	7,900	800	30,400	62.8%	8.9%	26.0%	2.6%	2,000	600	800	100	3,600	55.6%	16.7%	22.2%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	9.6%	144.4%	10.5%	-40.0%	13.9%					-4.8%	200.0%	0.0%	0.0%	13.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	4.4%	22.7%	25.4%	166.7%	12.2%					0.0%	0.0%	33.3%	0.0%	9.1%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	28,100	4,900	13,600	600	47,200	59.5%	10.4%	28.8%	1.3%	3,600	1,300	1,500	100	6,400	56.3%	20.3%	23.4%	1.6%
	Mode Share 2040 Strategy	32,700	6,900	15,000	1,000	55,700	58.7%	12.4%	26.9%	1.8%	3,900	1,600	1,800	100	7,500	52.0%	21.3%	24.0%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	1.8%	19.5%	4.6%	-33.3%	3.3%					2.9%	30.0%	-6.3%	0.0%	4.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	16.4%	40.8%	10.3%	66.7%	18.0%					8.3%	23.1%	20.0%	0.0%	17.2%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	49,400	9,700	14,600	1,400	75,100	65.8%	12.9%	19.4%	1.9%	6,000	2,400	1,500	200	10,100	59.4%	23.8%	14.9%	2.0%
	Mode Share 2040 Strategy	65,600	18,400	18,500	3,200	105,700	62.1%	17.4%	17.5%	3.0%	7,900	4,800	2,200	500	15,500	51.0%	31.0%	14.2%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	2.5%	32.9%	13.2%	16.7%	7.9%					-6.3%	71.4%	0.0%	0.0%	5.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	32.8%	89.7%	26.7%	128.6%	40.7%					31.7%	100.0%	46.7%	150.0%	53.5%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	57,400	5,400	20,400	1,200	84,400	68.0%	6.4%	24.2%	1.4%	6,300	1,300	1,900	100	9,500	66.3%	13.7%	20.0%	1.1%
	Mode Share 2040 Strategy	73,400	8,900	24,400	2,400	109,100	67.3%	8.2%	22.4%	2.2%	7,600	1,800	2,600	200	12,200	62.3%	14.8%	21.3%	1.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-11.7%	3.8%	12.7%	-29.4%	-6.3%					-8.7%	44.4%	21.0%	-50.0%	-5.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	27.9%	64.8%	19.6%	100.0%	29.3%					20.6%	38.5%	36.8%	100.0%	28.4%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	21,100	2,800	4,900	200	29,000	72.8%	9.7%	16.9%	0.7%	3,100	900	500	N/A	4,600	67.4%	19.6%	10.9%	0.0%
	Mode Share 2040 Strategy	23,200	3,100	4,600	700	31,600	73.4%	9.8%	14.6%	2.2%	3,300	1,000	600	100	5,000	66.0%	20.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-0.9%	33.3%	19.5%	-50.0%	3.9%					-3.1%	50.0%	0.0%	0.0%	7.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	10.0%	10.7%	-6.1%	250.0%	9.0%					6.5%	11.1%	20.0%	0.0%	8.7%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	4,600	300	1,700	100	6,800	67.6%	4.4%	25.0%	1.5%	300	100	200	N/A	600	50.0%	16.7%	33.3%	0.0%
	Mode Share 2040 Strategy	6,100	700	2,600	200	9,700	62.9%	7.2%	26.8%	2.1%	400	100	200	N/A	800	50.0%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-14.8%	-25.0%	-15.0%	-50.0%	-15.0%					-25.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	32.6%	133.3%	52.9%	100.0%	42.6%					33.3%	0.0%	0.0%	0.0%	33.3%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	31,400	5,300	6,300	400	43,400	72.4%	12.2%	14.5%	0.9%	4,200	1,300	800	N/A	6,300	66.7%	20.6%	12.7%	0.0%
	Mode Share 2040 Strategy	31,900	7,800	6,500	1,400	47,600	67.0%	16.4%	13.7%	2.9%	3,600	2,000	900	200	6,600	54.5%	30.3%	13.6%	3.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.4%	60.6%	31.3%	-20.0%	21.2%					10.5%	85.7%	14.3%	-100.0%	21.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	1.6%	47.2%	3.2%	250.0%	9.7%					-14.3%	53.8%	12.5%	0.0%	4.8%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	44,800	3,600	13,600	900	62,900	71.2%	5.7%	21.6%	1.4%	5,500	700	1,700	100	7,900	69.6%	8.9%	21.5%	1.3%
	Mode Share 2040 Strategy	54,300	6,200	15,900	1,600	78,100	69.5%	7.9%	20.4%	2.0%	5,900	1,000	2,000	200	9,200	64.1%	10.9%	21.7%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	0.2%	5.9%	34.7%	-18.2%	6.3%					5.8%	16.7%	41.7%	0.0%	11.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	21.2%	72.2%	16.9%	77.8%	24.2%					7.3%	42.9%	17.6%	100.0%	16.5%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	56,000	3,200	15,600	1,000	75,800	73.9%	4.2%	20.6%	1.3%	6,800	800	1,500	100	9,300	73.1%	8.6%	16.1%	1.1%
	Mode Share 2040 Strategy	63,600	7,500	15,400	1,600	88,100	72.2%	8.5%	17.5%	1.8%	7,400	1,600	1,700	200	10,900	67.9%	14.7%	15.6%	1.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.9%	-8.6%	31.1%	-16.7%	13.0%					11.5%	33.3%	15.4%	0.0%	13.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	13.6%	134.4%	-1.3%	60.0%	16.2%					8.8%	100.0%	13.3%	100.0%	17.2%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	38,100	5,400	8,300	600	52,300	72.8%	10.3%	15.9%	1.1%	4,100	1,600	800	N/A	6,500	63.1%	24.6%	12.3%	0.0%
	Mode Share 2040 Strategy	45,500	5,900	10,600	1,200	63,200	72.0%	9.3%	16.8%	1.9%	4,800	1,200	1,200	100	7,300	65.8%	16.4%	16.4%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	3.8%	58.8%	12.2%	-25.0%	8.3%					2.5%	166.7%	0.0%	-100.0%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	19.4%	9.3%	27.7%	100.0%	20.8%					17.1%	-25.0%	50.0%	0.0%	12.3%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	1,600	100	8,400	75.0%	6.0%	19.0%	1.2%	800	100	100	N/A	1,000	80.0%	10.0%	10.0%	0.0%
	Mode Share 2040 Strategy	9,000	1,300	2,500	200	13,000	69.2%	10.0%	19.2%	1.5%	800	200	200	N/A	1,300	61.5%	15.4%	15.4%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	-8.7%	0.0%	-5.9%	-50.0%	-9.7%					33.3%	0.0%	0.0%	0.0%	11.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	42.9%	160.0%	56.3%	100.0%	54.8%					0.0%	100.0%	100.0%	0.0%	30.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	17,100	1,200	5,200	300	23,800	71.8%	5.0%	21.8%	1.3%	2,300	400	500	N/A	3,200	71.9%	12.5%	15.6%	0.0%
	Mode Share 2040 Strategy	18,100	1,300	5,200	500	25,100	72.1%	5.2%	20.7%	2.0%	2,100	300	600	100	3,100	67.7%	9.7%	19.4%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	11.0%	20.0%	26.8%	-25.0%	13.9%					27.8%	100.0%	0.0%	0.0%	28.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	5.8%	8.3%	0.0%	66.7%	5.5%					-8.7%	-25.0%	20.0%	0.0%	-3.1%				

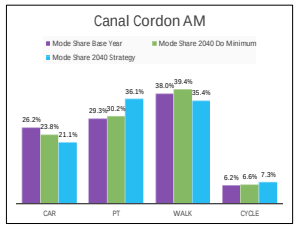
Phase 1, Iteration 3
Base Model: E8R06 (2016)
Do Minimum Model: AAA (2040)
Strategy Model: AAB (2040)

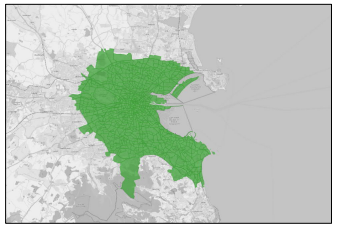
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	22.1%	38.6%	47.0%	52.9%	57.5%	25.0%	33.4%	40.9%	48.2%	53.8%
Mode Share 2040 Strategy	11.7%	32.5%	41.8%	48.5%	54.0%	12.9%	26.4%	34.2%	42.4%	48.8%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	38.2%	25.8%	21.7%	18.5%	15.4%	35.0%	33.8%	30.4%	26.4%	22.5%
Mode Share 2040 Strategy	43.9%	31.1%	26.6%	22.9%	19.4%	40.3%	38.3%	35.7%	31.1%	26.8%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	32.9%	30.3%	27.3%	25.1%	24.1%	34.2%	27.7%	24.6%	22.1%	20.8%
Mode Share 2040 Strategy	34.6%	28.2%	24.9%	22.9%	21.8%	37.5%	26.6%	23.0%	20.7%	19.5%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	6.8%	5.3%	4.1%	3.5%	3.1%	5.8%	5.1%	4.1%	3.4%	2.9%
Mode Share 2040 Strategy	9.8%	8.1%	6.7%	5.6%	4.9%	9.2%	8.8%	7.1%	5.8%	4.9%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	133,800	921,300	1,836,900	2,614,900	3,536,100	13,700	95,400	201,400	307,700	427,100
Mode Share 2040 Strategy	87,200	907,000	1,901,600	2,783,900	3,890,700	7,900	85,300	195,100	313,900	453,700

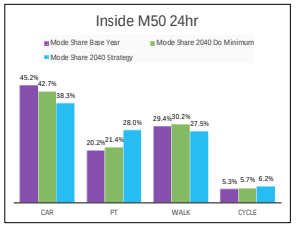
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

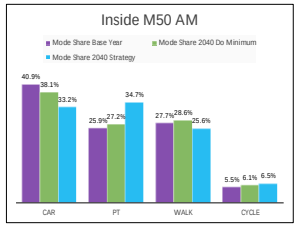
Cumulative Mode Share By Area

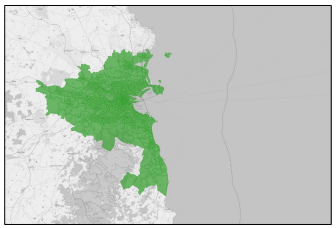


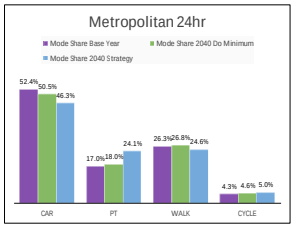


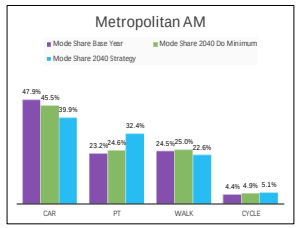


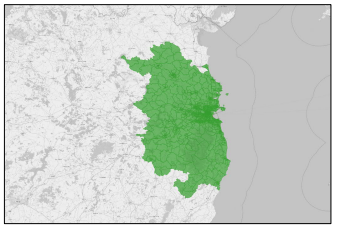


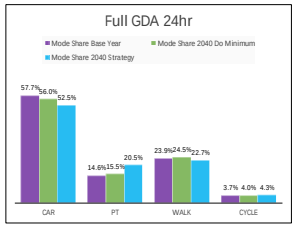


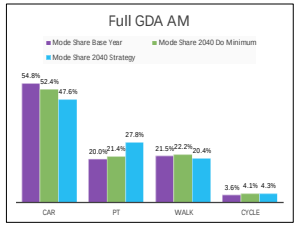


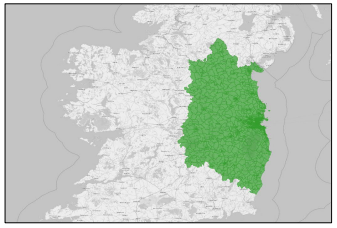


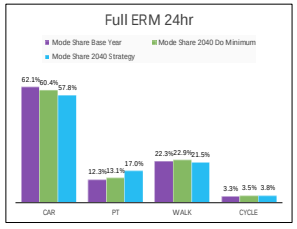


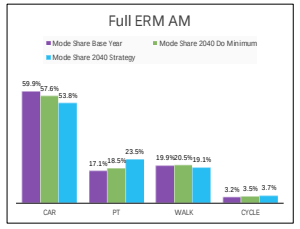




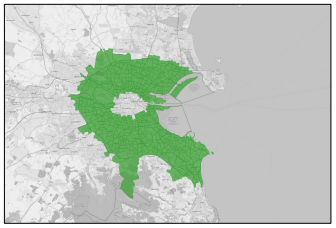


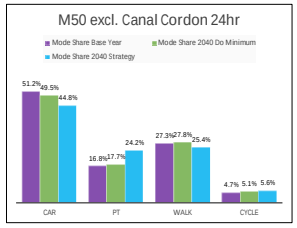


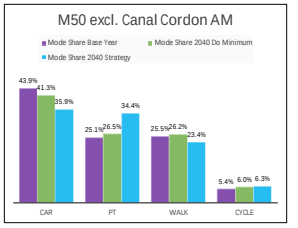


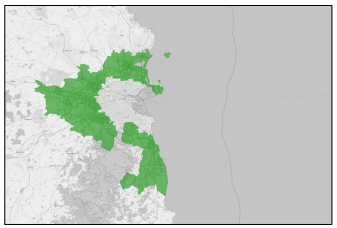


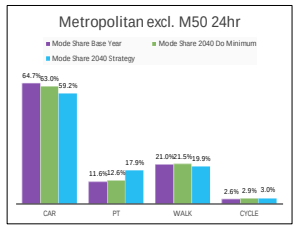
Mode Share By Individual Area

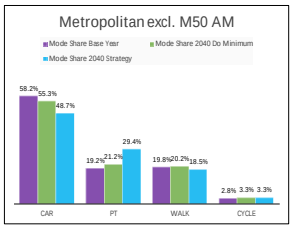


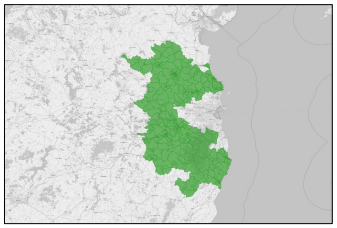


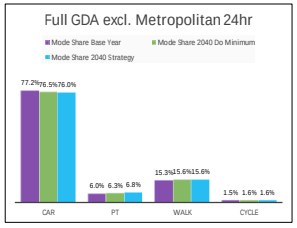


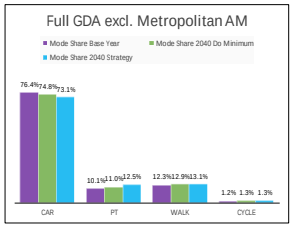


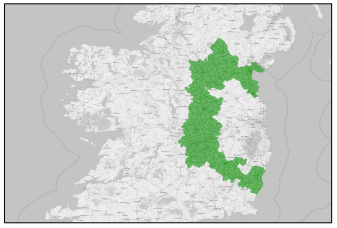


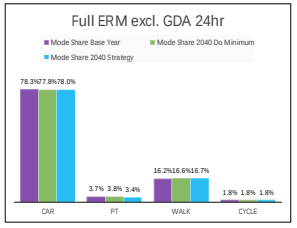


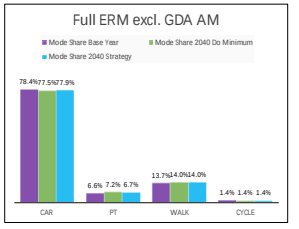






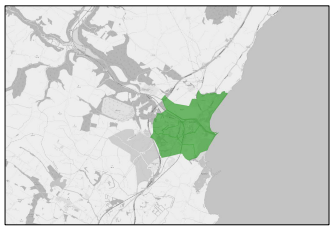


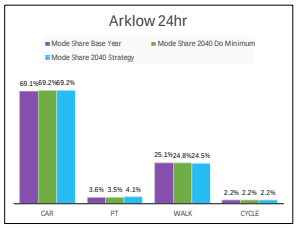


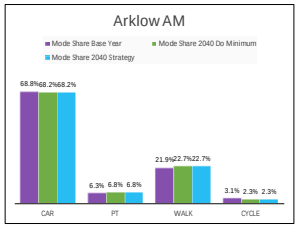


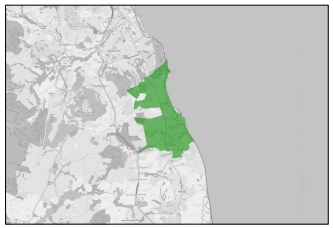
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

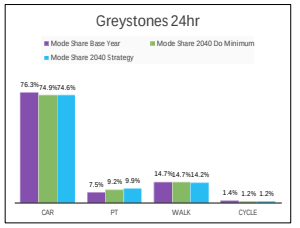
Cumulative Mode Share By Area (Towns)

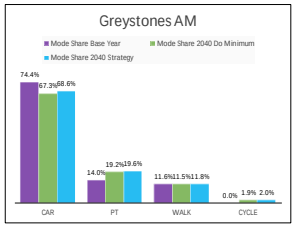


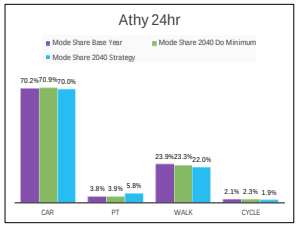


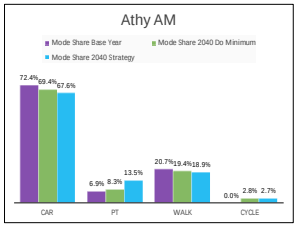


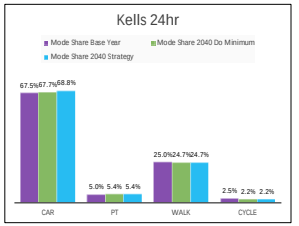


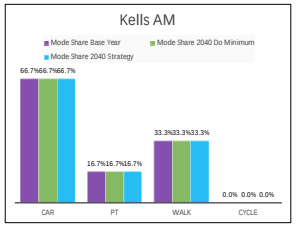


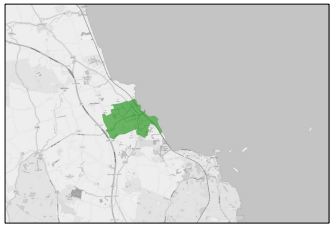


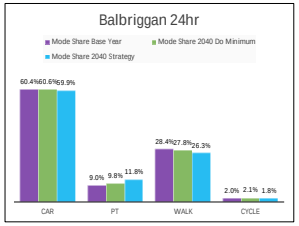


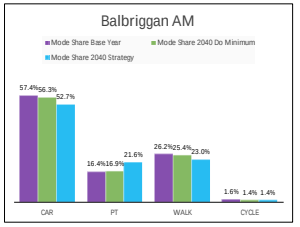


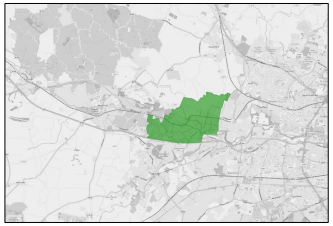


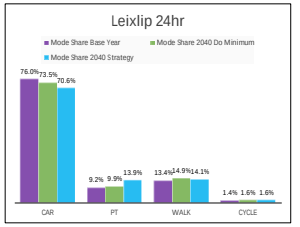


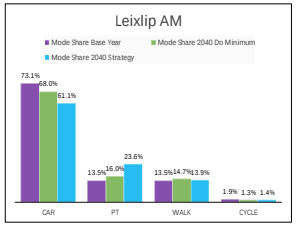


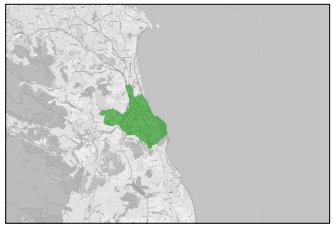


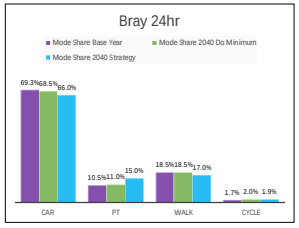


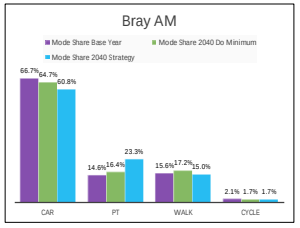


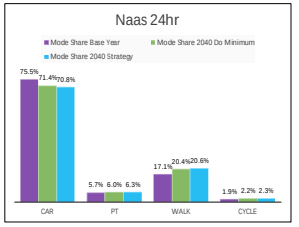


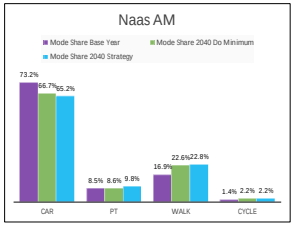


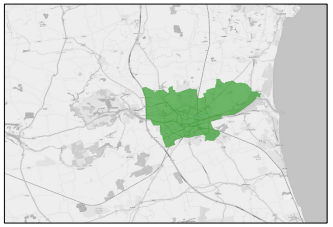


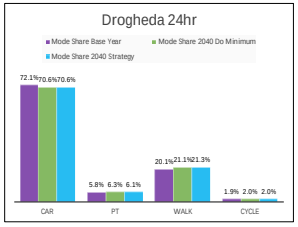


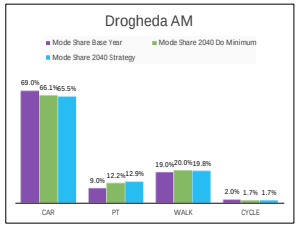


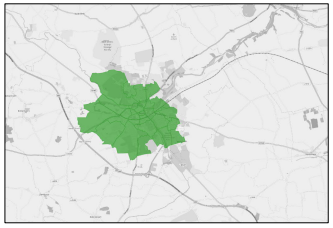


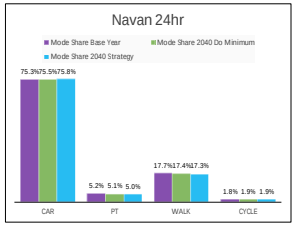


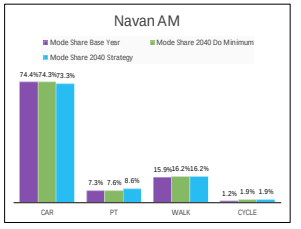






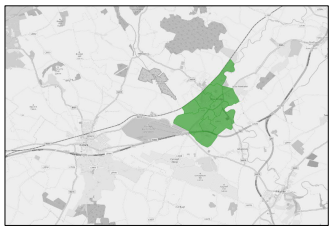


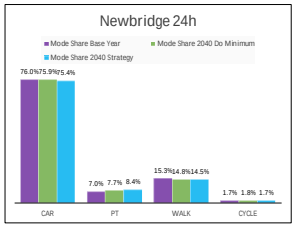


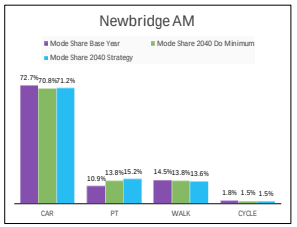


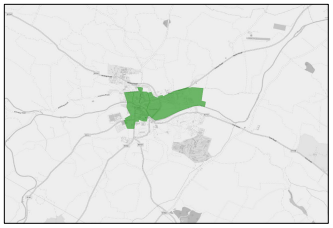
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

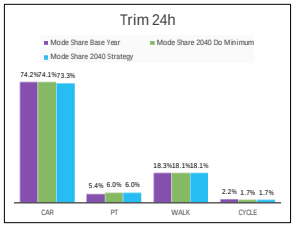
Cumulative Mode Share By Area (Towns)

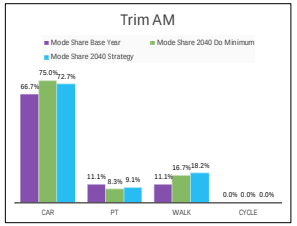


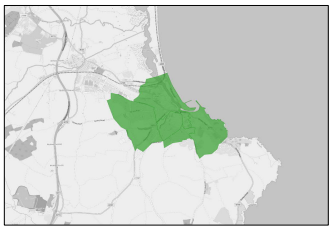


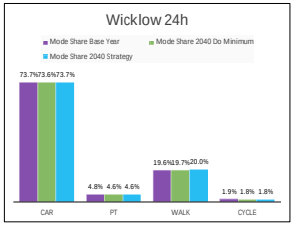


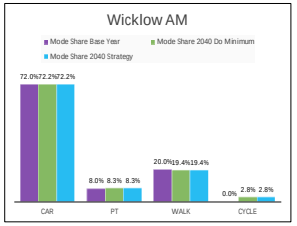






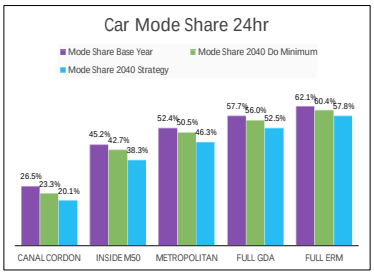


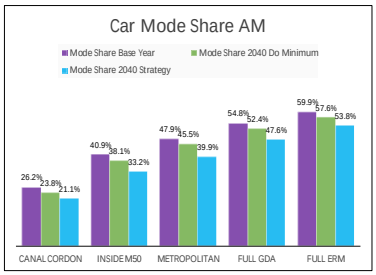


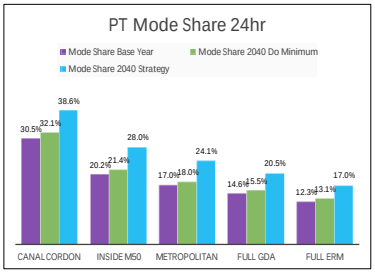


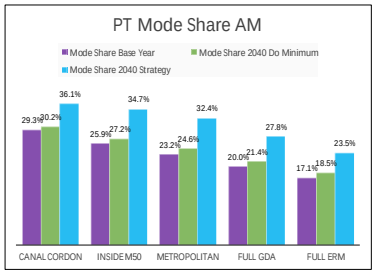
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

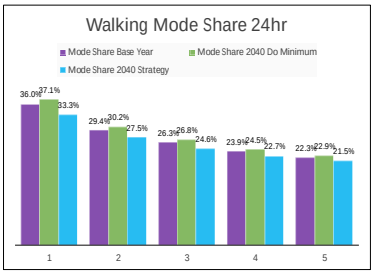
Mode Share By Area

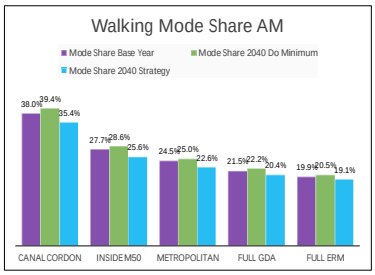


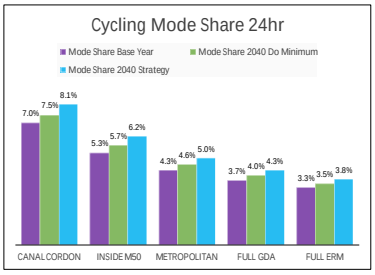


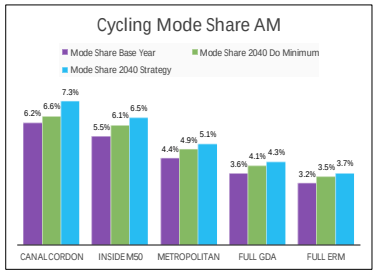












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2040 Strategy	144,300	277,500	239,500	58,000	719,300	20.1%	38.6%	33.3%	8.1%	12,100	20,700	20,300	4,200	57,300	21.1%	36.1%	35.4%	7.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-11.7%	23.2%	-8.1%	10.7%	2.5%					-9.7%	21.8%	-8.6%	13.5%	1.8%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2040 Strategy	1,036,700	758,200	745,700	168,900	2,709,500	38.3%	28.0%	27.5%	6.2%	104,000	108,500	80,100	20,300	312,900	33.2%	34.7%	25.6%	6.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-10.3%	30.9%	-8.8%	9.4%	0.1%					-11.7%	29.3%	-9.3%	7.4%	1.3%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2040 Strategy	2,027,500	1,056,900	1,079,200	218,800	4,382,400	46.3%	24.1%	24.6%	5.0%	219,200	178,100	124,000	28,300	549,600	39.9%	32.4%	22.6%	5.1%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-8.7%	33.4%	-8.6%	7.7%	-0.3%					-11.3%	33.4%	-8.5%	6.8%	1.3%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2040 Strategy	2,916,100	1,135,900	1,262,100	237,500	5,551,600	52.5%	20.5%	22.7%	4.3%	340,000	198,700	145,600	30,400	714,800	47.6%	27.8%	20.4%	4.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-6.4%	31.3%	-7.4%	7.0%	-0.2%					-8.4%	31.0%	-7.3%	5.9%	0.9%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2040 Strategy	4,037,500	1,185,000	1,502,800	263,500	6,988,900	57.8%	17.0%	21.5%	3.8%	483,600	211,100	171,500	33,000	899,100	53.8%	23.5%	19.1%	3.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.5%	28.8%	-6.1%	6.5%	-0.1%					-5.8%	28.0%	-6.0%	6.1%	0.8%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2040 Strategy	892,400	480,700	506,200	110,900	1,990,200	44.8%	24.2%	25.4%	5.6%	91,800	87,800	59,800	16,200	255,600	35.9%	34.4%	23.4%	6.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-10.0%	35.9%	-9.1%	8.8%	-0.7%					-12.1%	31.2%	-9.5%	6.6%	1.1%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2040 Strategy	990,800	298,700	333,500	49,900	1,672,900	59.2%	17.9%	19.9%	3.0%	115,300	69,600	43,800	7,900	236,600	48.7%	29.4%	18.5%	3.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-7.0%	40.3%	-8.1%	2.0%	-1.0%					-10.8%	40.3%	-7.2%	3.9%	1.2%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2040 Strategy	888,600	79,100	182,900	18,600	1,169,200	76.0%	6.8%	15.6%	1.6%	120,800	20,600	21,700	2,200	165,200	73.1%	12.5%	13.1%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.6%	7.9%	0.1%	-0.5%	0.1%					-2.7%	13.2%	1.4%	4.8%	-0.4%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2040 Strategy	1,121,400	49,100	240,700	26,000	1,437,300	78.0%	3.4%	16.7%	1.8%	143,600	12,400	25,800	2,500	184,300	77.9%	6.7%	14.0%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.6%	-10.2%	1.1%	1.6%	0.3%					0.9%	-6.1%	0.8%	0.0%	0.4%				

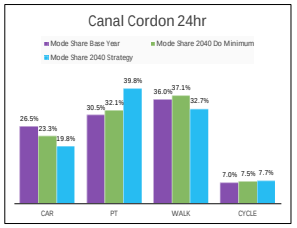
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2040 Strategy	25,400	1,500	9,000	800	36,700	69.2%	4.1%	24.5%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	15.4%	-1.1%	0.0%	0.0%					0.0%	0.0%	0.0%	0.0%	0.0%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2040 Strategy	21,900	1,800	6,900	600	31,300	70.0%	5.8%	22.0%	1.9%	2,500	500	700	100	3,700	67.6%	13.5%	18.9%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	50.0%	-4.2%	-14.3%	1.3%					0.0%	66.7%	0.0%	0.0%	2.8%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2040 Strategy	32,500	6,400	14,300	1,000	54,300	59.9%	11.8%	26.3%	1.8%	3,900	1,600	1,700	100	7,400	52.7%	21.6%	23.0%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.6%	23.1%	-3.4%	-9.1%	1.9%					-2.5%	33.3%	-5.6%	0.0%	4.2%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2040 Strategy	57,700	13,100	14,900	1,700	87,400	66.0%	15.0%	17.0%	1.9%	7,300	2,800	1,800	200	12,000	60.8%	23.3%	15.0%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.5%	37.9%	-6.9%	0.0%	1.2%					-2.7%	47.4%	-10.0%	0.0%	3.4%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2040 Strategy	74,100	6,400	22,300	2,100	104,900	70.6%	6.1%	21.3%	2.0%	7,600	1,500	2,300	200	11,600	65.5%	12.9%	19.8%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	-3.0%	0.5%	0.0%	-0.1%					0.0%	7.1%	0.0%	0.0%	0.9%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2040 Strategy	24,100	3,200	4,600	400	32,300	74.6%	9.9%	14.2%	1.2%	3,500	1,000	600	100	5,100	68.6%	19.6%	11.8%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-1.6%	6.7%	-4.2%	0.0%	-1.2%					0.0%	0.0%	0.0%	0.0%	-1.9%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Strategy	6,400	500	2,300	200	9,300	68.8%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	1.6%	0.0%	0.0%	0.0%	0.0%					0.0%	0.0%	0.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2040 Strategy	34,600	6,800	6,900	800	49,000	70.6%	13.9%	14.1%	1.6%	4,400	1,700	1,000	100	7,200	61.1%	23.6%	13.9%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.9%	38.8%	-6.8%	0.0%	-1.0%					-13.7%	41.7%	-9.1%	0.0%	-4.0%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2040 Strategy	55,300	4,900	16,100	1,800	78,100	70.8%	6.3%	20.6%	2.3%	6,000	900	2,100	200	9,200	65.2%	9.8%	22.8%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.9%	4.3%	1.3%	5.9%	0.0%					-3.2%	12.5%	0.0%	0.0%	-1.1%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2040 Strategy	65,200	4,300	14,900	1,600	86,000	75.8%	5.0%	17.3%	1.9%	7,700	900	1,700	200	10,500	73.3%	8.6%	16.2%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.5%	-2.3%	-0.7%	0.0%	0.0%					-1.3%	12.5%	0.0%	0.0%	0.0%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2040 Strategy	43,200	4,800	8,300	1,000	57,300	75.4%	8.4%	14.5%	1.7%	4,700	1,000	900	100	6,600	71.2%	15.2%	13.6%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	9.1%	-1.2%	0.0%	0.7%					2.2%	11.1%	0.0%	0.0%	1.5%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2040 Strategy	8,500	700	2,100	200	11,600	73.3%	6.0%	18.1%	1.7%	800	100	200	N/A	1,100	72.7%	9.1%	18.2%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-1.2%	0.0%	0.0%	0.0%	0.0%					-11.1%	0.0%	0.0%	0.0%	-8.3%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2040 Strategy	21,000	1,300	5,700	500	28,500	73.7%	4.6%	20.0%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.5%	0.0%	1.8%	0.0%	0.4%					0.0%	0.0%	0.0%	0.0%	0.0%				

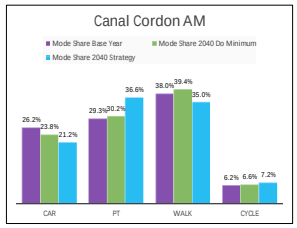
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAN (2040)

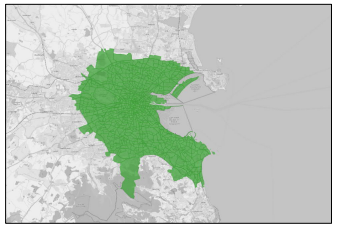
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2040 Strategy	20.1%	38.3%	46.3%	52.5%	57.8%	21.1%	33.2%	39.9%	47.6%	53.8%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2040 Strategy	38.6%	28.0%	24.1%	20.5%	17.0%	36.1%	34.7%	32.4%	27.8%	23.5%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2040 Strategy	33.3%	27.5%	24.6%	22.7%	21.5%	35.4%	25.6%	22.6%	20.4%	19.1%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2040 Strategy	8.1%	6.2%	5.0%	4.3%	3.8%	7.3%	6.5%	5.1%	4.3%	3.7%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2040 Strategy	144,300	1,036,700	2,027,500	2,916,100	4,037,500	12,100	104,000	219,200	340,000	483,600

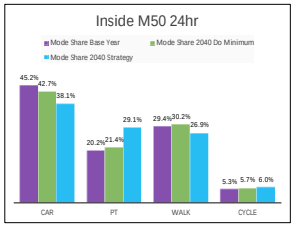
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

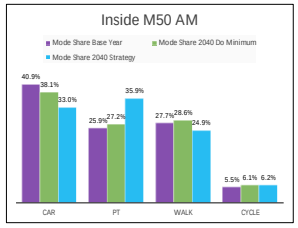
Cumulative Mode Share By Area

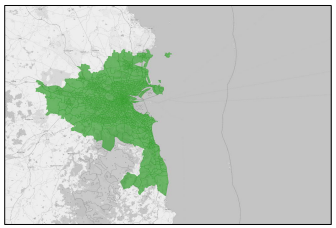


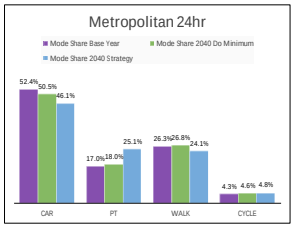


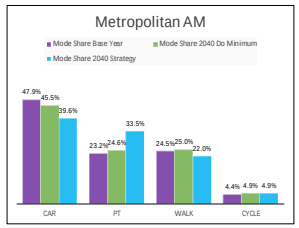


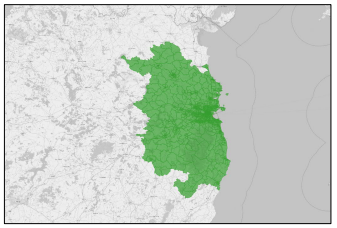


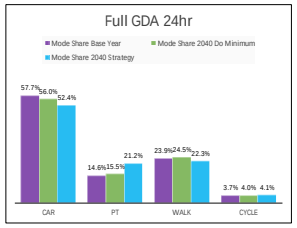


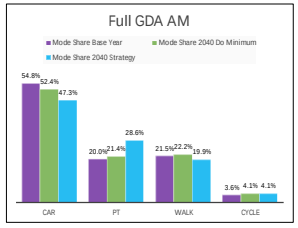


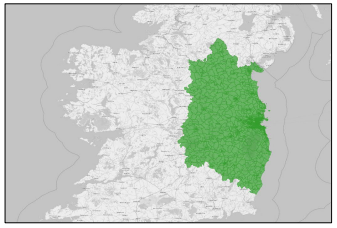


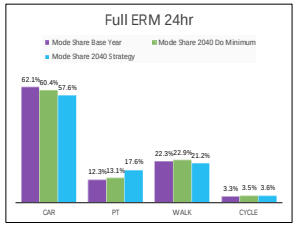


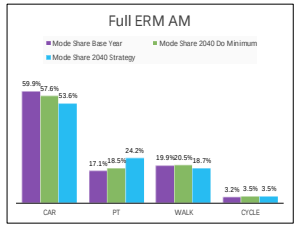




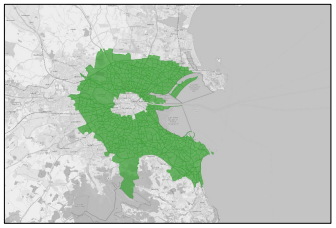


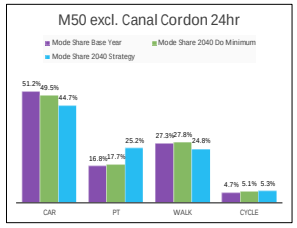


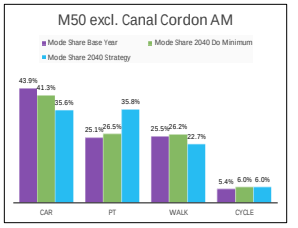


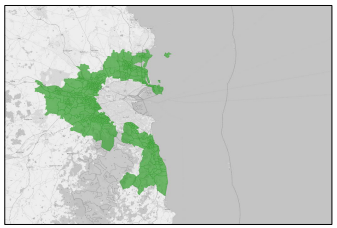


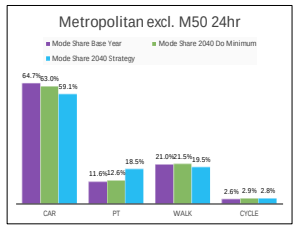
Mode Share By Individual Area

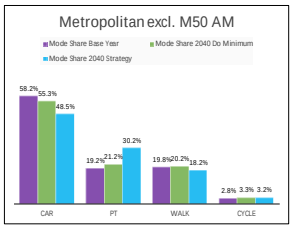


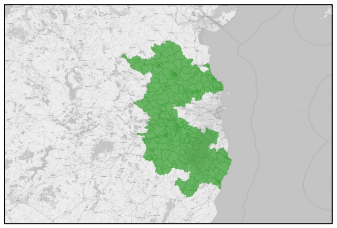


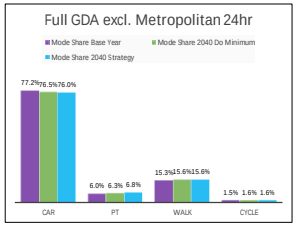


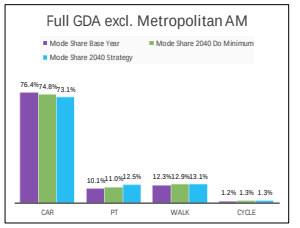


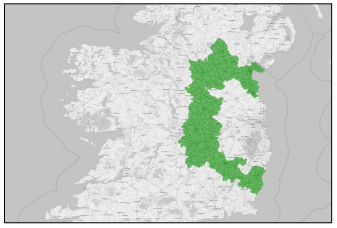


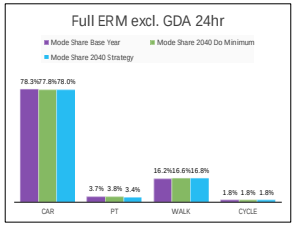


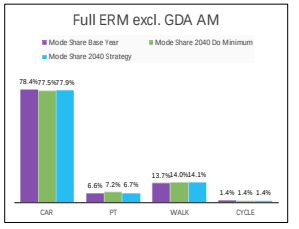






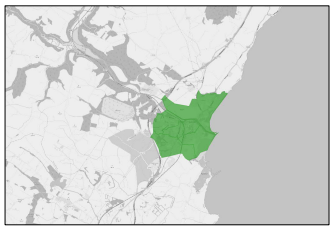


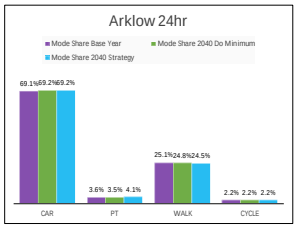


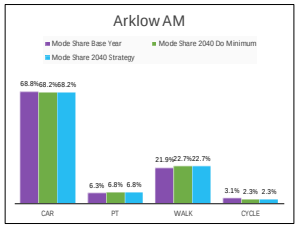


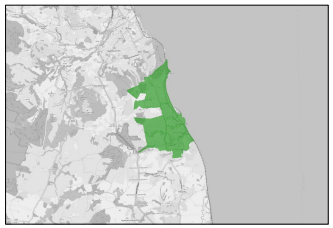
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

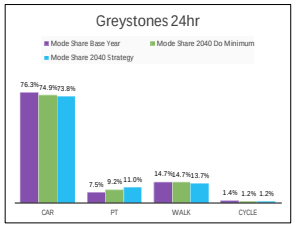
Cumulative Mode Share By Area (Towns)

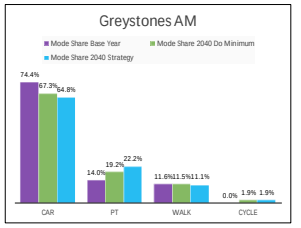


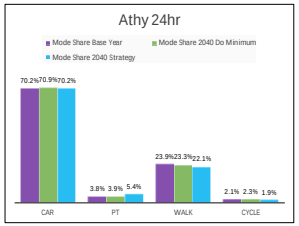


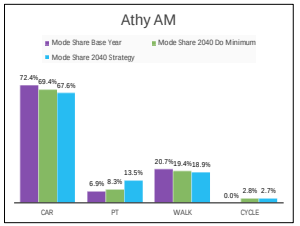


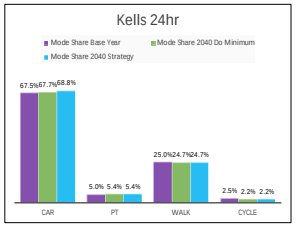


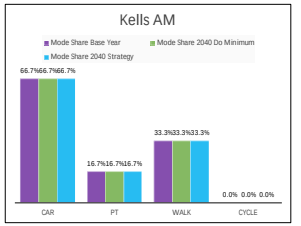


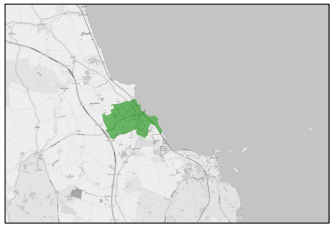


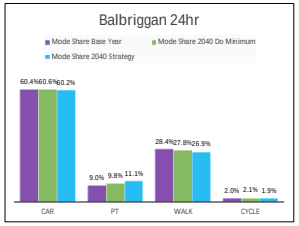


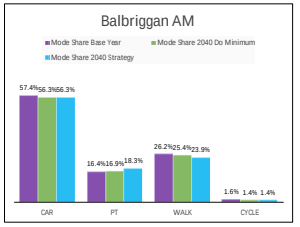


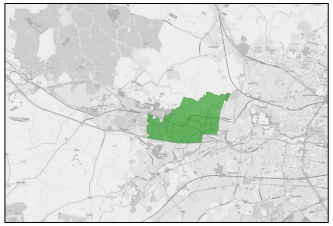


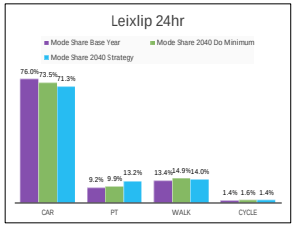


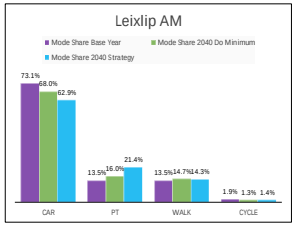


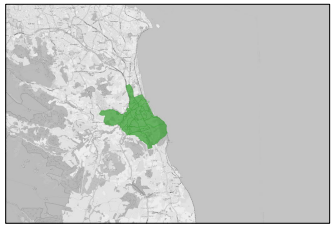


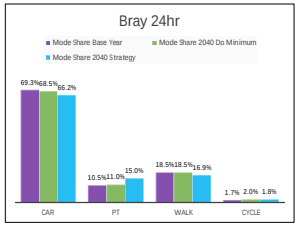


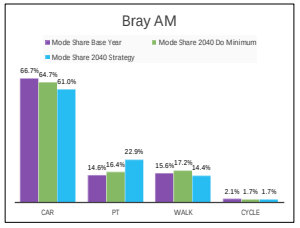


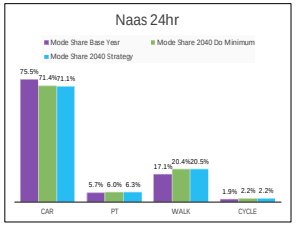


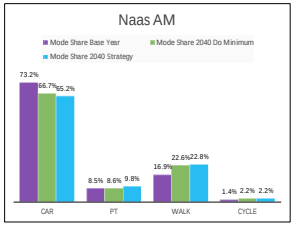


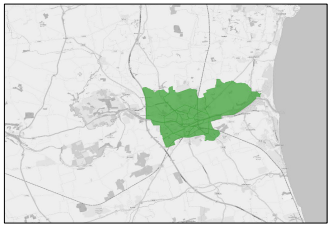


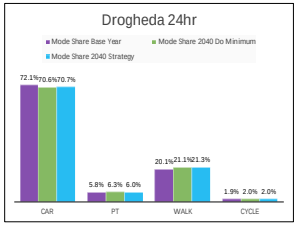


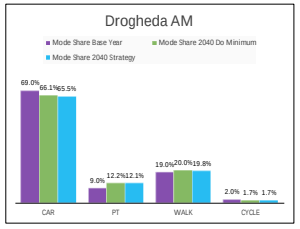


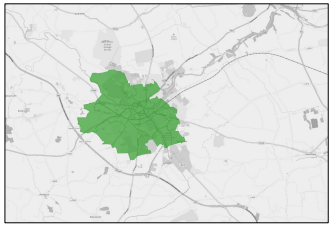


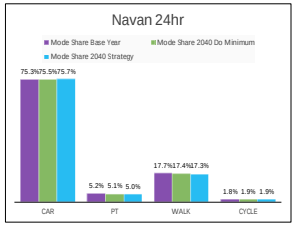


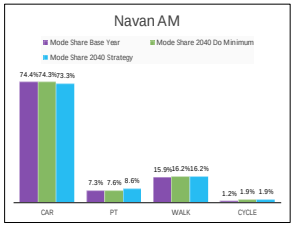






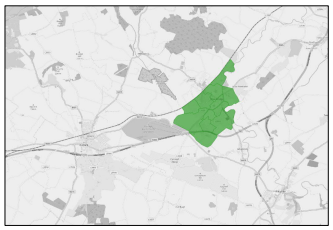


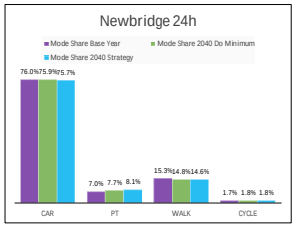


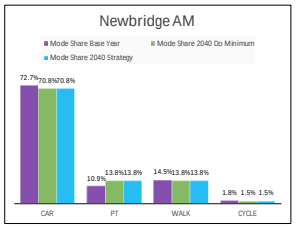


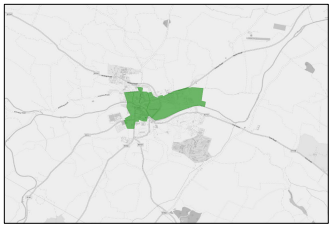
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

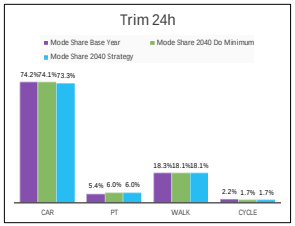
Cumulative Mode Share By Area (Towns)

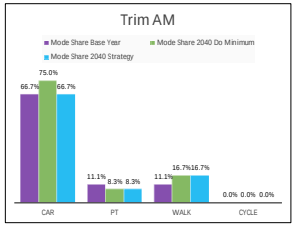


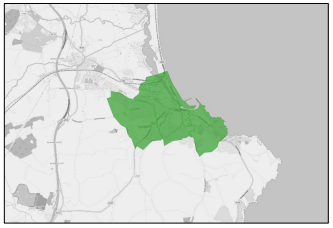


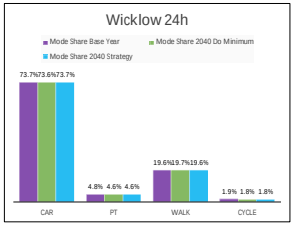


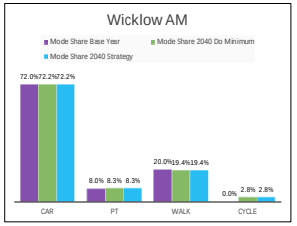






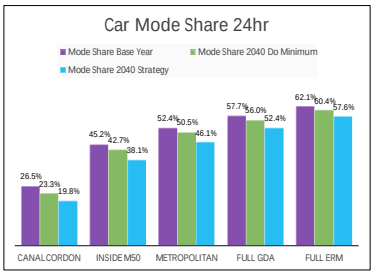


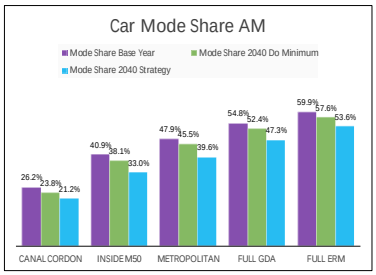


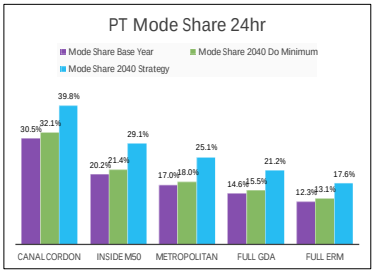


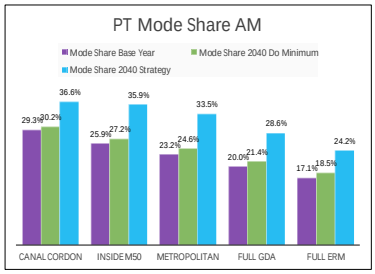
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

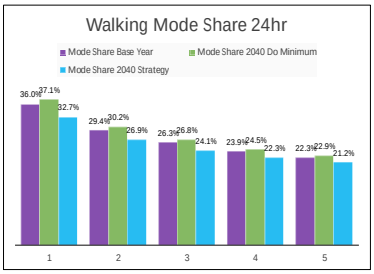
Mode Share By Area

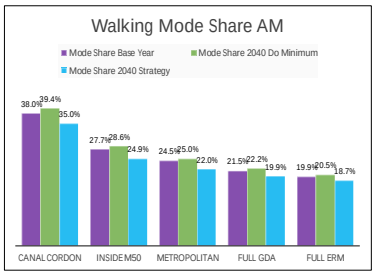


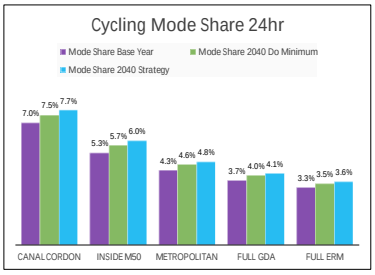


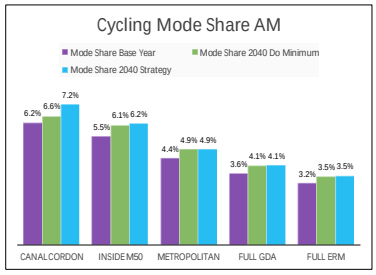












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2040 Strategy	143,000	287,100	236,000	55,800	721,900	19.8%	39.8%	32.7%	7.7%	12,100	20,900	20,000	4,100	57,100	21.2%	36.6%	35.0%	7.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-12.5%	27.5%	-9.5%	6.5%	2.9%					-9.7%	22.9%	-9.9%	10.8%	1.4%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2040 Strategy	1,035,100	789,600	730,400	162,500	2,717,600	38.1%	29.1%	26.9%	6.0%	103,800	113,100	78,400	19,500	314,800	33.0%	35.9%	24.9%	6.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-10.4%	36.3%	-10.7%	5.2%	0.4%					-11.9%	34.8%	-11.2%	3.2%	1.9%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2040 Strategy	2,022,300	1,099,400	1,057,000	210,000	4,388,800	46.1%	25.1%	24.1%	4.8%	218,700	184,800	121,400	27,000	551,900	39.6%	33.5%	22.0%	4.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-8.9%	38.8%	-10.4%	3.3%	-0.2%					-11.5%	38.4%	-10.4%	1.9%	1.7%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2040 Strategy	2,911,400	1,179,000	1,239,400	228,600	5,558,400	52.4%	21.2%	22.3%	4.1%	339,600	205,500	143,000	29,200	717,400	47.3%	28.6%	19.9%	4.1%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-6.5%	36.3%	-9.1%	3.0%	-0.1%					-8.5%	35.5%	-8.9%	1.7%	1.3%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2040 Strategy	4,032,600	1,227,800	1,480,200	254,700	6,995,400	57.6%	17.6%	21.2%	3.6%	483,200	217,800	168,900	31,700	901,600	53.6%	24.2%	18.7%	3.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-4.7%	33.5%	-7.6%	2.9%	0.0%					-5.9%	32.1%	-7.5%	1.9%	1.1%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2040 Strategy	892,100	502,500	494,400	106,700	1,995,700	44.7%	25.2%	24.8%	5.3%	91,800	92,200	58,400	15,400	257,800	35.6%	35.8%	22.7%	6.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-10.1%	42.0%	-11.2%	4.7%	-0.4%					-12.1%	37.8%	-11.6%	1.3%	2.0%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2040 Strategy	987,200	309,800	326,600	47,500	1,671,200	59.1%	18.5%	19.5%	2.8%	114,900	71,700	43,100	7,500	237,100	48.5%	30.2%	18.2%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-7.4%	45.5%	-10.0%	-2.9%	-1.1%					-11.1%	44.6%	-8.7%	-1.3%	1.5%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2040 Strategy	889,100	79,500	182,400	18,600	1,169,600	76.0%	6.8%	15.6%	1.6%	120,900	20,700	21,600	2,200	165,400	73.1%	12.5%	13.1%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.5%	8.5%	-0.2%	-0.5%	0.1%					-2.6%	13.7%	0.9%	4.8%	-0.3%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2040 Strategy	1,121,200	48,800	240,800	26,100	1,437,000	78.0%	3.4%	16.8%	1.8%	143,600	12,300	25,900	2,500	184,300	77.9%	6.7%	14.1%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.6%	-10.8%	1.2%	2.0%	0.3%					0.9%	-6.8%	1.2%	0.0%	0.4%				

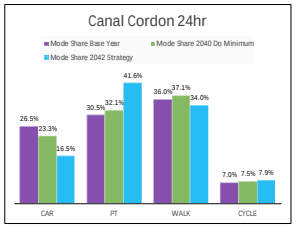
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2040 Strategy	25,400	1,500	9,000	800	36,700	69.2%	4.1%	24.5%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	15.4%	-1.1%	0.0%	0.0%					0.0%	0.0%	0.0%	0.0%	0.0%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2040 Strategy	21,900	1,700	6,900	600	31,200	70.2%	5.4%	22.1%	1.9%	2,500	500	700	100	3,700	67.6%	13.5%	18.9%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.0%	41.7%	-4.2%	-14.3%	1.0%					0.0%	66.7%	0.0%	0.0%	2.8%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2040 Strategy	32,000	5,900	14,300	1,000	53,200	60.2%	11.1%	26.9%	1.9%	4,000	1,300	1,700	100	7,100	56.3%	18.3%	23.9%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.9%	13.5%	-3.4%	-9.1%	-0.2%					0.0%	8.3%	-5.6%	0.0%	0.0%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2040 Strategy	57,500	13,000	14,700	1,600	86,800	66.2%	15.0%	16.9%	1.8%	7,200	2,700	1,700	200	11,800	61.0%	22.9%	14.4%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-2.9%	36.8%	-8.1%	-5.9%	0.5%					-4.0%	42.1%	-15.0%	0.0%	1.7%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2040 Strategy	74,000	6,300	22,300	2,100	104,700	70.7%	6.0%	21.3%	2.0%	7,600	1,400	2,300	200	11,600	65.5%	12.1%	19.8%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.1%	-4.5%	0.5%	0.0%	-0.3%					0.0%	0.0%	0.0%	0.0%	0.9%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2040 Strategy	24,800	3,700	4,600	400	33,600	73.8%	11.0%	13.7%	1.2%	3,500	1,200	600	100	5,400	64.8%	22.2%	11.1%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	1.2%	23.3%	-4.2%	0.0%	2.8%					0.0%	20.0%	0.0%	0.0%	3.8%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Strategy	6,400	500	2,300	200	9,300	68.8%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	1.6%	0.0%	0.0%	0.0%	0.0%					0.0%	0.0%	0.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2040 Strategy	34,500	6,400	6,800	700	48,400	71.3%	13.2%	14.0%	1.4%	4,400	1,500	1,000	100	7,000	62.9%	21.4%	14.3%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-5.2%	30.6%	-8.1%	-12.5%	-2.2%					-13.7%	25.0%	-9.1%	0.0%	-6.7%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2040 Strategy	55,500	4,900	16,000	1,700	78,100	71.1%	6.3%	20.5%	2.2%	6,000	900	2,100	200	9,200	65.2%	9.8%	22.8%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.5%	4.3%	0.6%	0.0%	0.0%					-3.2%	12.5%	0.0%	0.0%	-1.1%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2040 Strategy	65,100	4,300	14,900	1,600	86,000	75.7%	5.0%	17.3%	1.9%	7,700	900	1,700	200	10,500	73.3%	8.6%	16.2%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.3%	-2.3%	-0.7%	0.0%	0.0%					-1.3%	12.5%	0.0%	0.0%	0.0%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2040 Strategy	43,000	4,600	8,300	1,000	56,800	75.7%	8.1%	14.6%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-0.5%	4.5%	-1.2%	0.0%	-0.2%					0.0%	0.0%	0.0%	0.0%	0.0%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2040 Strategy	8,500	700	2,100	200	11,600	73.3%	6.0%	18.1%	1.7%	800	100	200	N/A	1,200	66.7%	8.3%	16.7%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	-1.2%	0.0%	0.0%	0.0%	0.0%					-11.1%	0.0%	0.0%	0.0%	0.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2040 Strategy	21,000	1,300	5,600	500	28,500	73.7%	4.6%	19.6%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2040 Strategy - Mode Share 2040 Do Minimum	0.5%	0.0%	0.0%	0.0%	0.4%					0.0%	0.0%	0.0%	0.0%	0.0%				

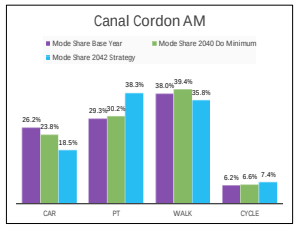
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAO (2040)

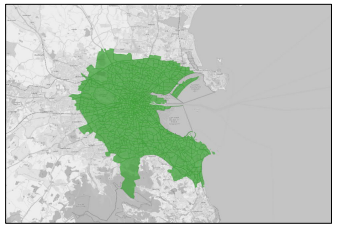
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2040 Strategy	19.8%	38.1%	46.1%	52.4%	57.6%	21.2%	33.0%	39.6%	47.3%	53.6%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2040 Strategy	39.8%	29.1%	25.1%	21.2%	17.6%	36.6%	35.9%	33.5%	28.6%	24.2%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2040 Strategy	32.7%	26.9%	24.1%	22.3%	21.2%	35.0%	24.9%	22.0%	19.9%	18.7%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2040 Strategy	7.7%	6.0%	4.8%	4.1%	3.6%	7.2%	6.2%	4.9%	4.1%	3.5%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2040 Strategy	143,000	1,035,100	2,022,300	2,911,400	4,032,600	12,100	103,800	218,700	339,600	483,200

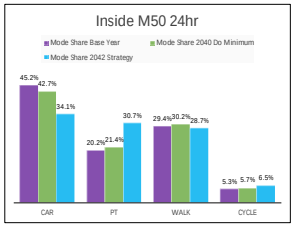
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

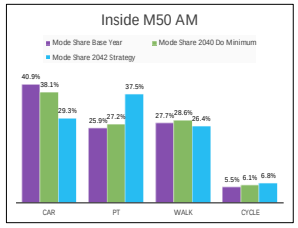
Cumulative Mode Share By Area

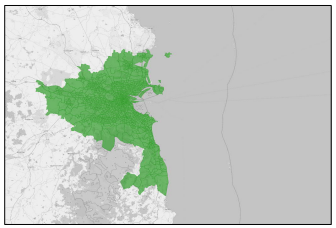


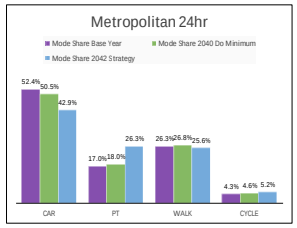


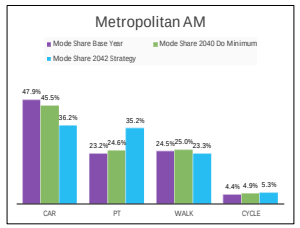


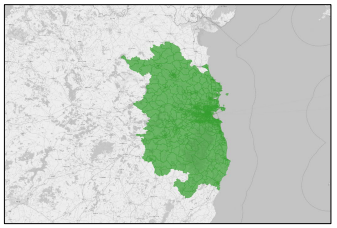


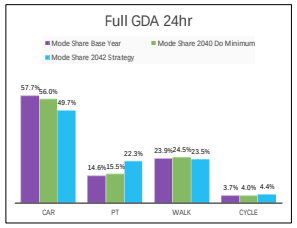


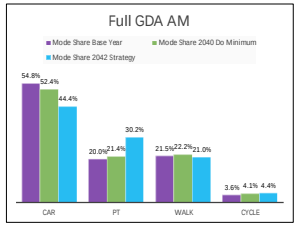


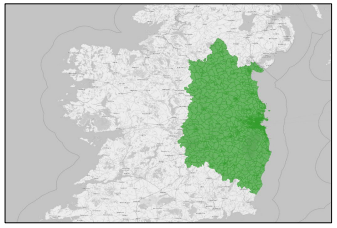


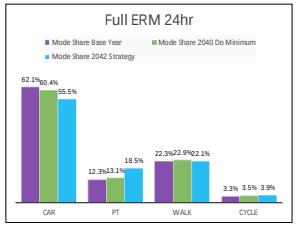


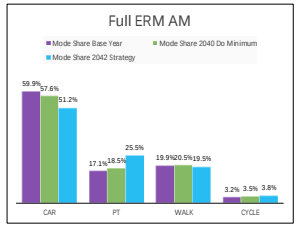




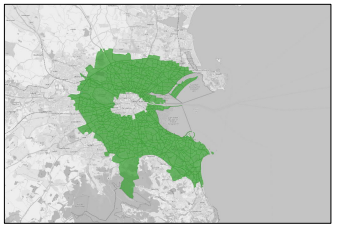


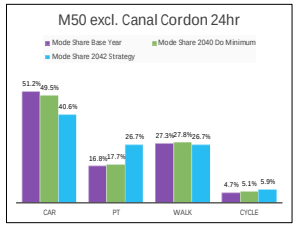


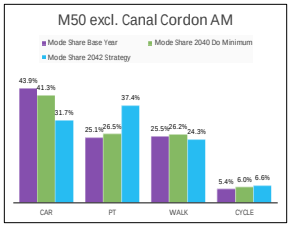


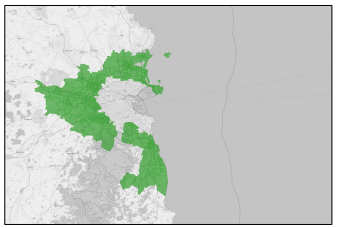


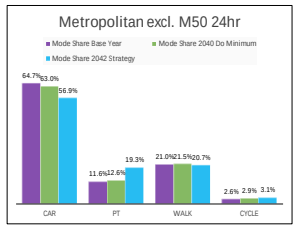
Mode Share By Individual Area

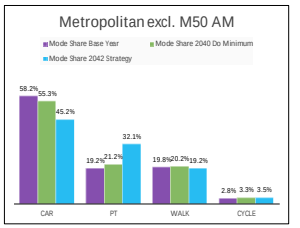


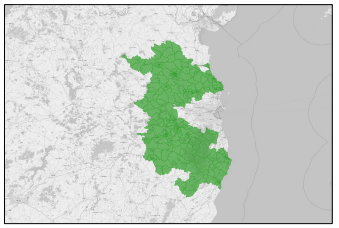


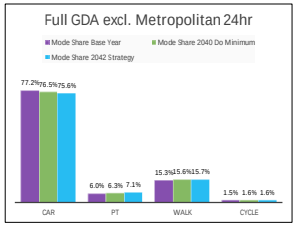


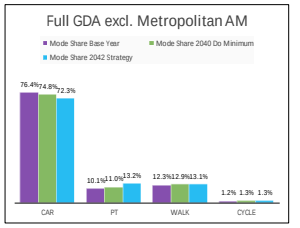


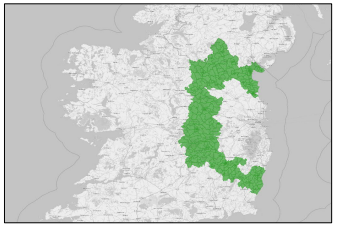


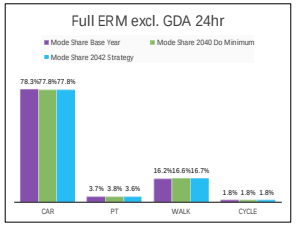


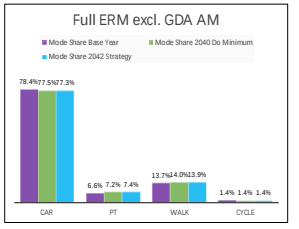






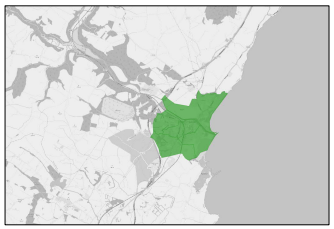


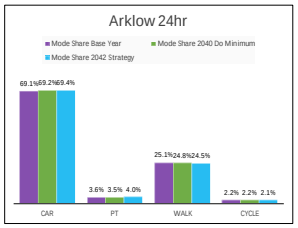


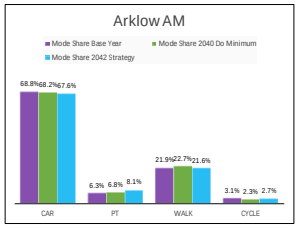


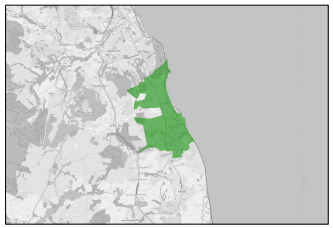
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

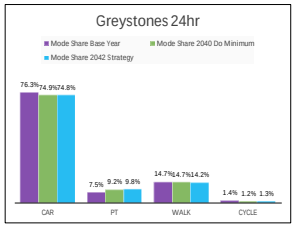
Cumulative Mode Share By Area (Towns)

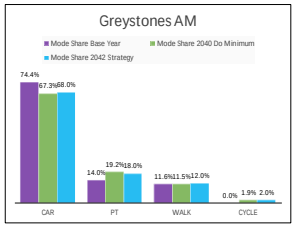


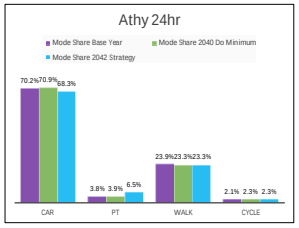


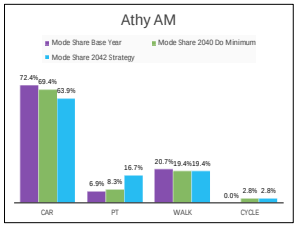


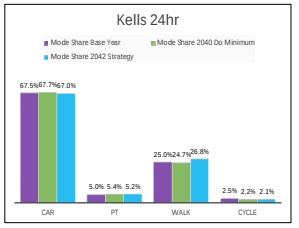


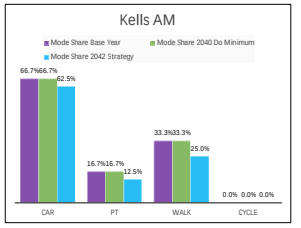


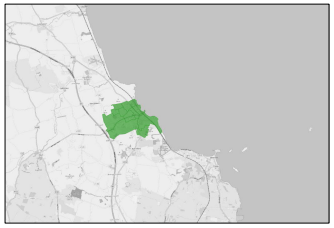


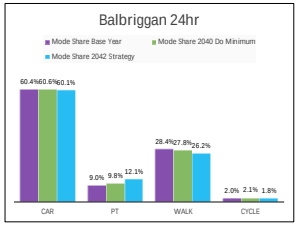


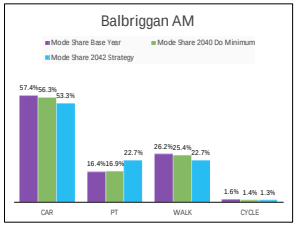


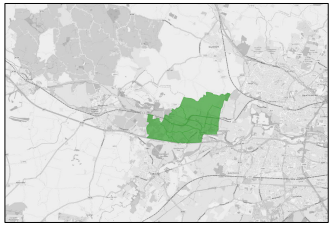


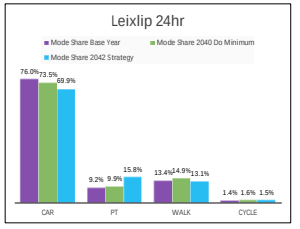


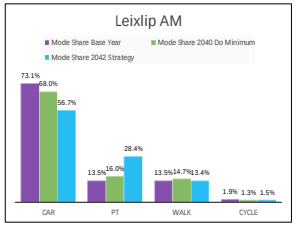


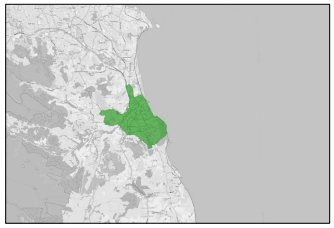


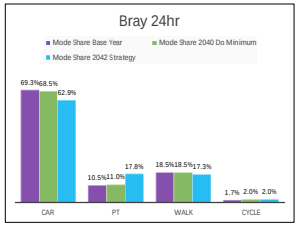


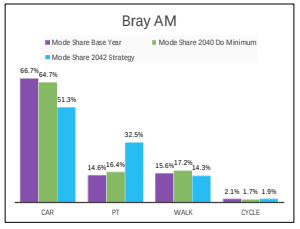


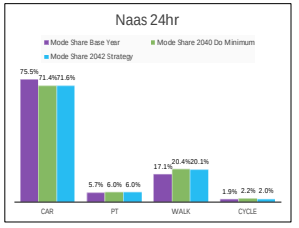


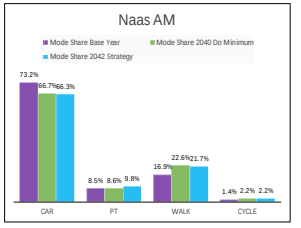


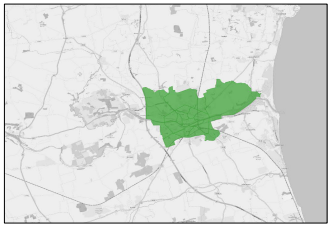


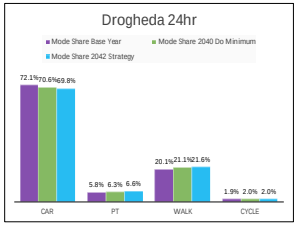


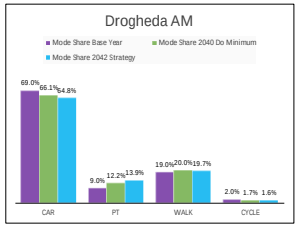


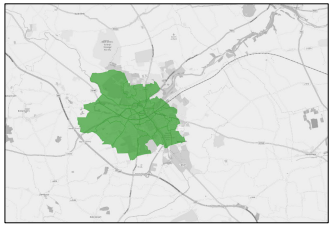


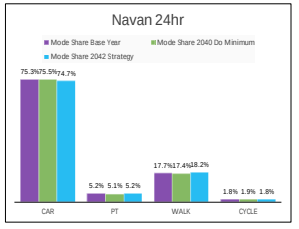


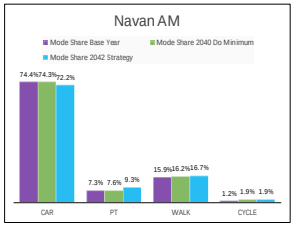






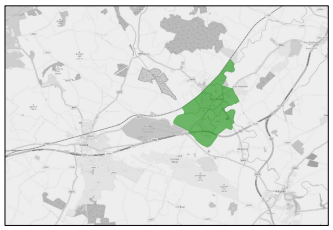


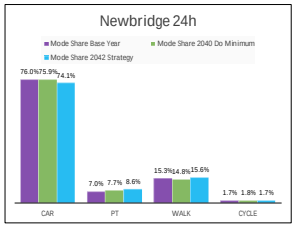


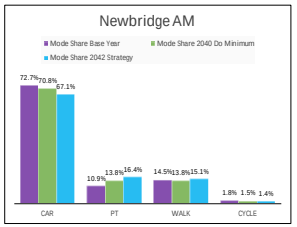


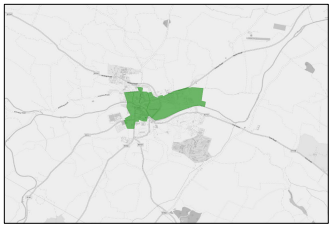
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

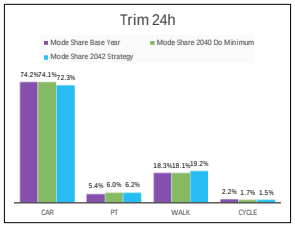
Cumulative Mode Share By Area (Towns)

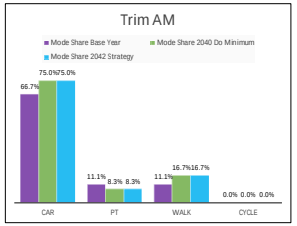


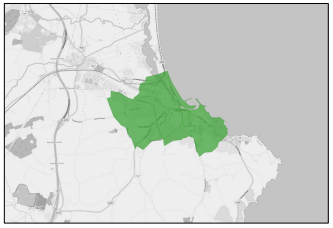


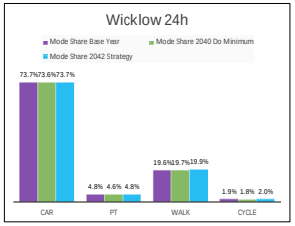


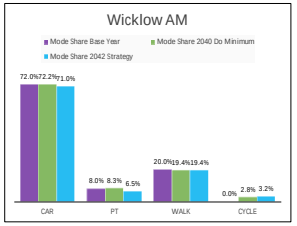






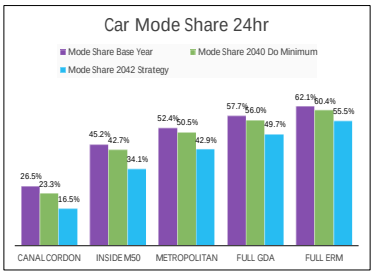


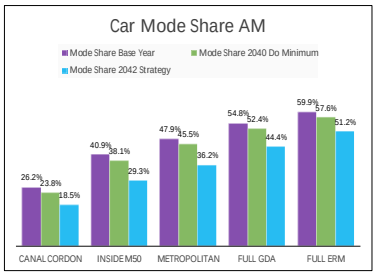


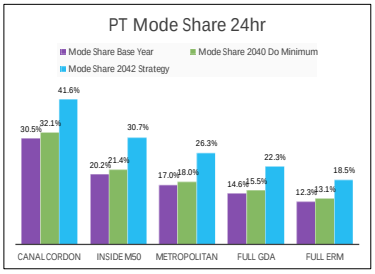


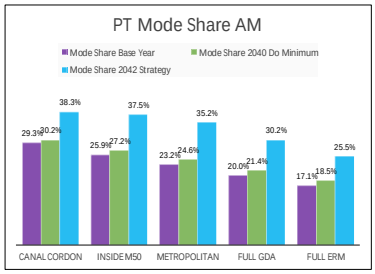
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

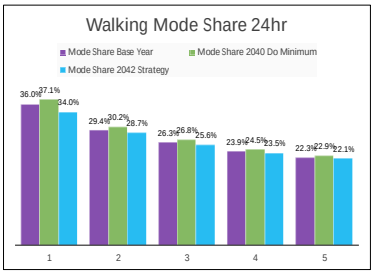
Mode Share By Area

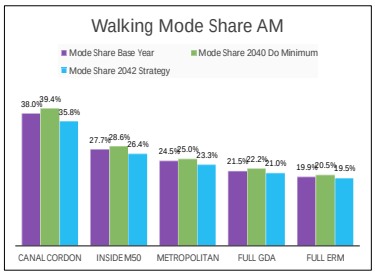


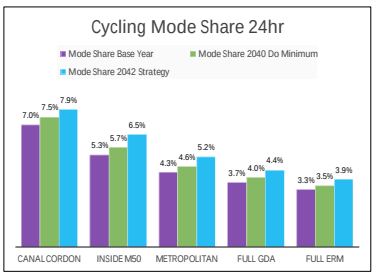


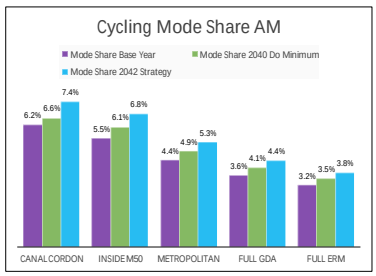












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2042 Strategy	123,700	312,800	255,400	59,300	751,100	16.5%	41.6%	34.0%	7.9%	11,200	23,200	21,700	4,500	60,600	18.5%	38.3%	35.8%	7.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-24.3%	38.9%	-2.0%	13.2%	7.0%					-16.4%	36.5%	-2.3%	21.6%	7.6%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2042 Strategy	952,900	857,800	800,300	180,300	2,791,400	34.1%	30.7%	28.7%	6.5%	94,500	121,200	85,400	21,900	323,000	29.3%	37.5%	26.4%	6.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-17.5%	48.1%	-2.1%	16.8%	3.2%					-19.8%	44.5%	-3.3%	15.9%	4.6%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2042 Strategy	1,949,700	1,196,600	1,163,100	234,400	4,543,700	42.9%	26.3%	25.6%	5.2%	206,500	200,800	132,800	30,500	570,600	36.2%	35.2%	23.3%	5.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-12.2%	51.1%	-1.5%	15.4%	3.4%					-16.4%	50.4%	-2.0%	15.1%	5.2%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2042 Strategy	2,852,500	1,280,800	1,351,100	253,300	5,737,700	49.7%	22.3%	23.5%	4.4%	328,300	223,100	154,900	32,600	739,000	44.4%	30.2%	21.0%	4.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-8.4%	48.0%	-0.9%	14.2%	3.1%					-11.6%	47.1%	-1.3%	13.6%	4.3%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2042 Strategy	4,009,200	1,335,000	1,599,900	280,100	7,224,200	55.5%	18.5%	22.1%	3.9%	476,200	237,300	181,500	35,200	930,200	51.2%	25.5%	19.5%	3.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-5.2%	45.1%	-0.1%	13.2%	3.2%					-7.3%	43.9%	-0.5%	13.2%	4.3%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2042 Strategy	829,200	545,000	544,900	121,100	2,040,300	40.6%	26.7%	26.7%	5.9%	83,300	98,100	63,700	17,400	262,400	31.7%	37.4%	24.3%	6.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-16.4%	54.0%	-2.1%	18.8%	1.8%					-20.2%	46.6%	-3.6%	14.5%	3.8%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2042 Strategy	996,800	338,800	362,800	54,100	1,752,300	56.9%	19.3%	20.7%	3.1%	112,000	79,600	47,500	8,600	247,600	45.2%	32.1%	19.2%	3.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-6.5%	59.1%	0.0%	10.6%	3.7%					-13.4%	60.5%	0.6%	13.2%	5.9%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2042 Strategy	902,800	84,300	188,000	18,900	1,194,000	75.6%	7.1%	15.7%	1.6%	121,800	22,300	22,100	2,200	168,400	72.3%	13.2%	13.1%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.0%	15.0%	2.8%	1.1%	2.2%					-1.9%	22.5%	3.3%	4.8%	1.5%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2042 Strategy	1,156,800	54,200	248,800	26,800	1,486,600	77.8%	3.6%	16.7%	1.8%	147,900	14,200	26,600	2,600	191,300	77.3%	7.4%	13.9%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.8%	-0.9%	4.5%	4.7%	3.7%					3.9%	7.6%	3.9%	4.0%	4.3%				

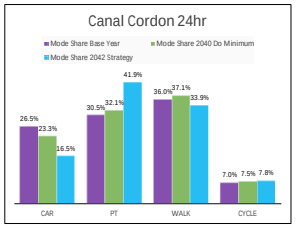
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2042 Strategy	22,700	1,300	8,000	700	32,700	69.4%	4.0%	24.5%	2.1%	2,500	300	800	100	3,700	67.6%	8.1%	21.6%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.6%	0.0%	-12.1%	-12.5%	-10.9%					-16.7%	0.0%	-20.0%	0.0%	-15.9%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	21,100	2,000	7,200	700	30,900	68.3%	6.5%	23.3%	2.3%	2,300	600	700	100	3,600	63.9%	16.7%	19.4%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.7%	66.7%	0.0%	0.0%	0.0%					-8.0%	100.0%	0.0%	0.0%	0.0%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2042 Strategy	33,300	6,700	14,500	1,000	55,400	60.1%	12.1%	26.2%	1.8%	4,000	1,700	1,700	100	7,500	53.3%	22.7%	22.7%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.1%	28.8%	-2.0%	-9.1%	3.9%					0.0%	41.7%	-5.6%	0.0%	5.6%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2042 Strategy	66,300	18,800	18,200	2,100	105,400	62.9%	17.8%	17.3%	2.0%	7,900	5,000	2,200	300	15,400	51.3%	32.5%	14.3%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	12.0%	97.9%	13.8%	23.5%	22.0%					5.3%	163.2%	10.0%	50.0%	32.8%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2042 Strategy	76,400	7,200	23,700	2,200	109,500	69.8%	6.6%	21.6%	2.0%	7,900	1,700	2,400	200	12,200	64.8%	13.9%	19.7%	1.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.1%	9.1%	6.8%	4.8%	4.3%					3.9%	21.4%	4.3%	0.0%	6.1%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2042 Strategy	23,700	3,100	4,500	400	31,700	74.8%	9.8%	14.2%	1.3%	3,400	900	600	100	5,000	68.0%	18.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.3%	3.3%	-6.3%	0.0%	-3.1%					-2.9%	-10.0%	0.0%	0.0%	-3.8%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Strategy	6,500	500	2,600	200	9,700	67.0%	5.2%	26.8%	2.1%	500	100	200	N/A	800	62.5%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.2%	0.0%	13.0%	0.0%	4.3%					25.0%	0.0%	0.0%	0.0%	33.3%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2042 Strategy	33,700	7,600	6,300	700	48,200	69.9%	15.8%	13.1%	1.5%	3,800	1,900	900	100	6,700	56.7%	28.4%	13.4%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-7.4%	55.1%	-14.9%	-12.5%	-2.6%					-25.5%	58.3%	-18.2%	0.0%	-10.7%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2042 Strategy	56,000	4,700	15,700	1,600	78,200	71.6%	6.0%	20.1%	2.0%	6,100	900	2,000	200	9,200	66.3%	9.8%	21.7%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	0.4%	0.0%	-1.3%	-5.9%	0.1%					-1.6%	12.5%	-4.8%	0.0%	-1.1%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2042 Strategy	65,700	4,600	16,000	1,600	87,900	74.7%	5.2%	18.2%	1.8%	7,800	1,000	1,800	200	10,800	72.2%	9.3%	16.7%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.2%	4.5%	6.7%	0.0%	2.2%					0.0%	25.0%	5.9%	0.0%	2.9%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2042 Strategy	47,100	5,500	9,900	1,100	63,600	74.1%	8.6%	15.6%	1.7%	4,900	1,200	1,100	100	7,300	67.1%	16.4%	15.1%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	9.0%	25.0%	17.9%	10.0%	11.8%					6.5%	33.3%	22.2%	0.0%	12.3%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2042 Strategy	9,400	800	2,500	200	13,000	72.3%	6.2%	19.2%	1.5%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	9.3%	14.3%	19.0%	0.0%	12.1%					0.0%	0.0%	0.0%	0.0%	0.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	18,500	1,200	5,000	500	25,100	73.7%	4.8%	19.9%	2.0%	2,200	200	600	100	3,100	71.0%	6.5%	19.4%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.5%	-7.7%	-10.7%	0.0%	-11.6%					-15.4%	-33.3%	-14.3%	0.0%	-13.9%				

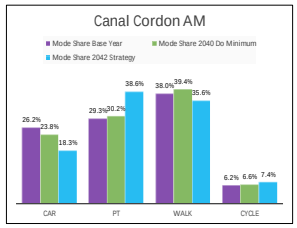
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: AAZ (2042)

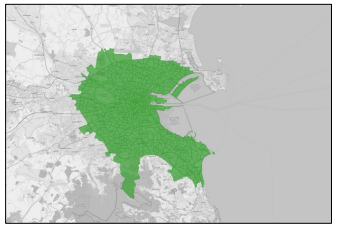
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2042 Strategy	16.5%	34.1%	42.9%	49.7%	55.5%	18.5%	29.3%	36.2%	44.4%	51.2%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2042 Strategy	41.6%	30.7%	26.3%	22.3%	18.5%	38.3%	37.5%	35.2%	30.2%	25.5%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2042 Strategy	34.0%	28.7%	25.6%	23.5%	22.1%	35.8%	26.4%	23.3%	21.0%	19.5%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2042 Strategy	7.9%	6.5%	5.2%	4.4%	3.9%	7.4%	6.8%	5.3%	4.4%	3.8%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2042 Strategy	123,700	952,900	1,949,700	2,852,500	4,009,200	11,200	94,500	206,500	328,300	476,200

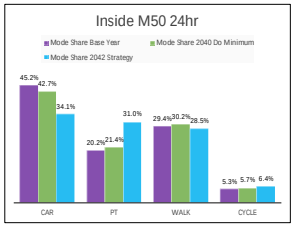
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABB (2042)

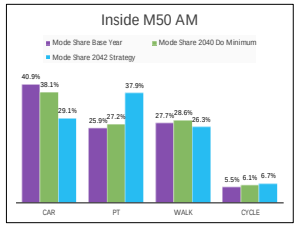
Cumulative Mode Share By Area

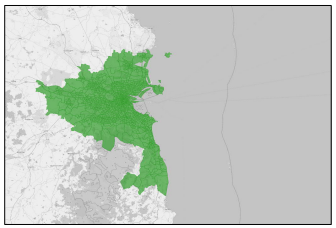


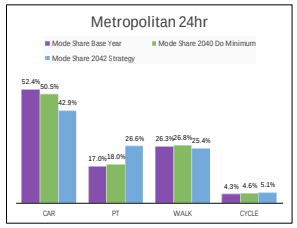


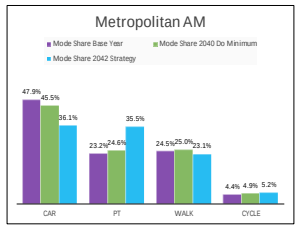


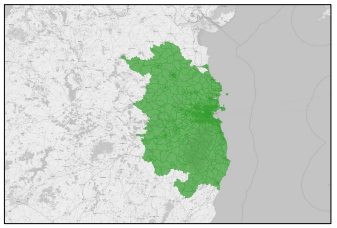


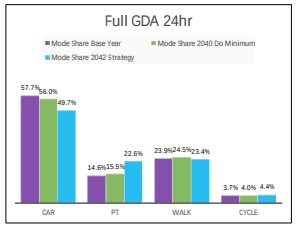


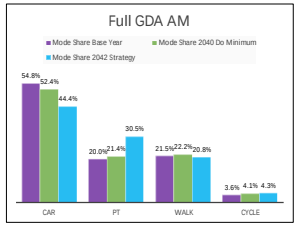


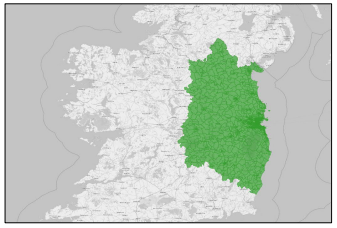


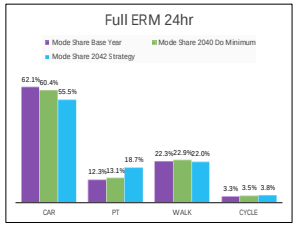


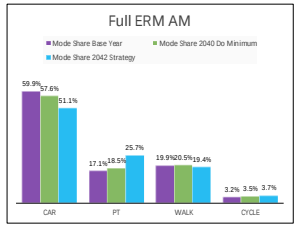




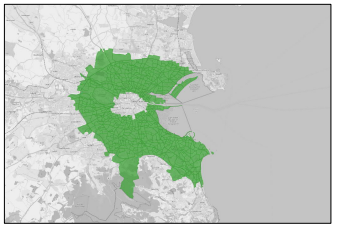


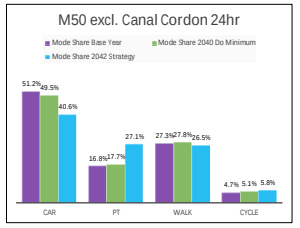


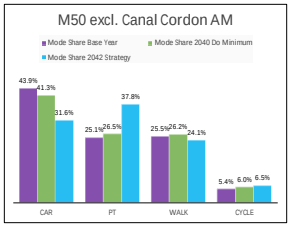


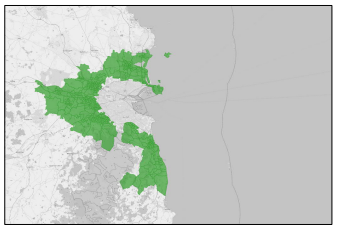


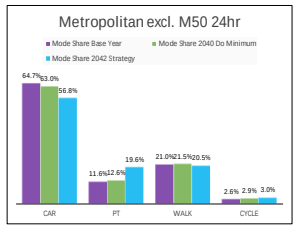
Mode Share By Individual Area

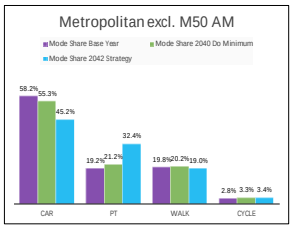


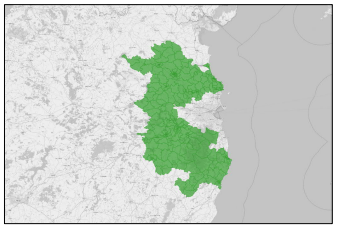


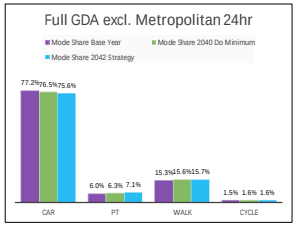


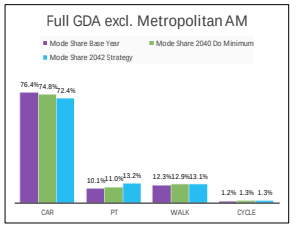


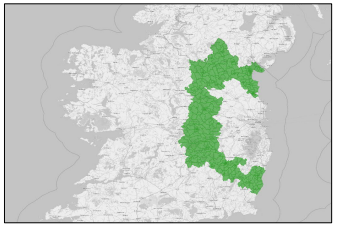


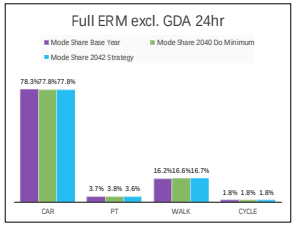


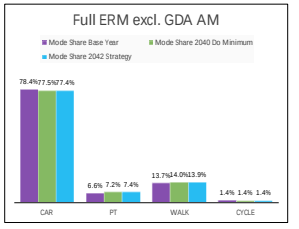






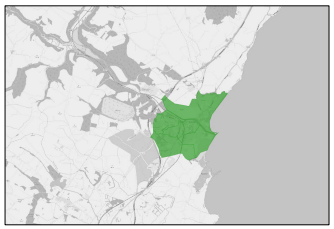


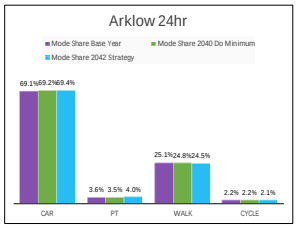


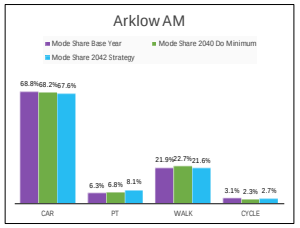


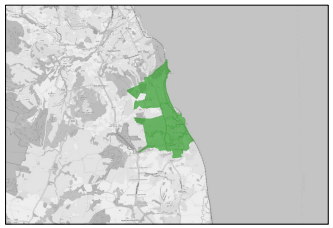
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABB (2042)

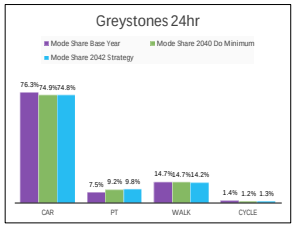
Cumulative Mode Share By Area (Towns)

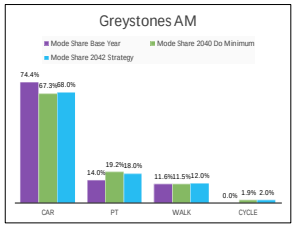


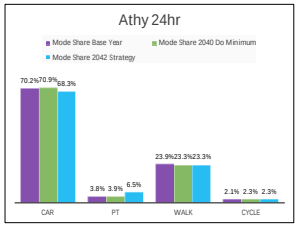


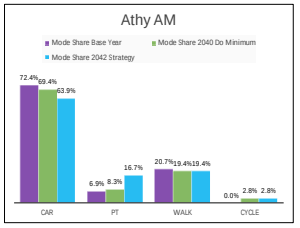


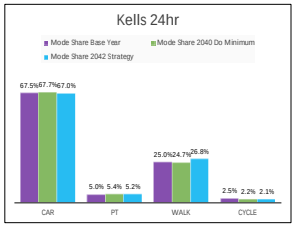


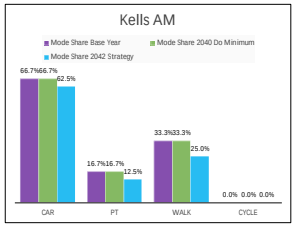


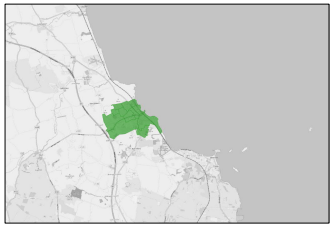


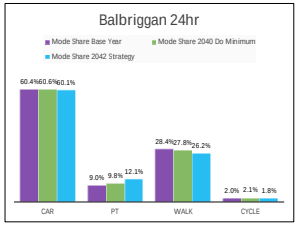


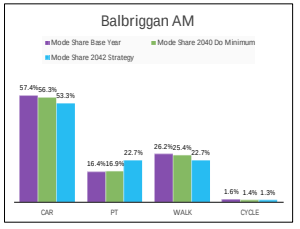


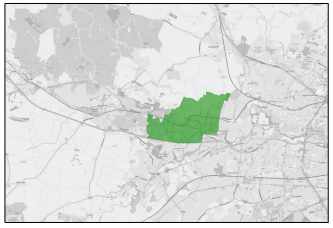


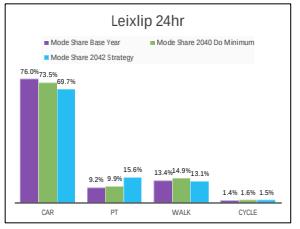


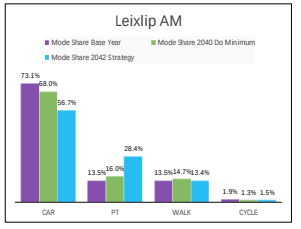


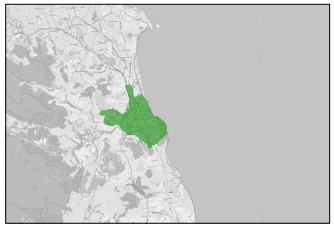


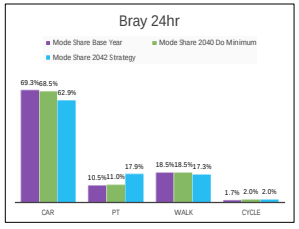


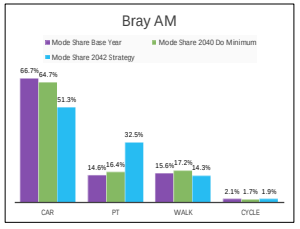


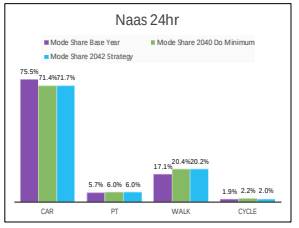


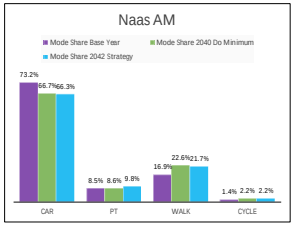


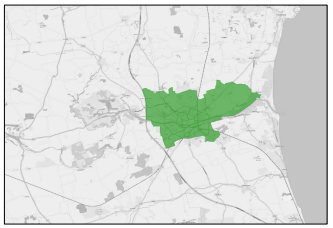


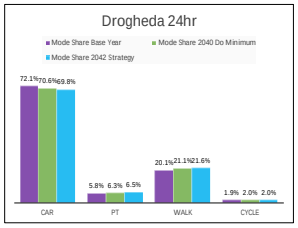


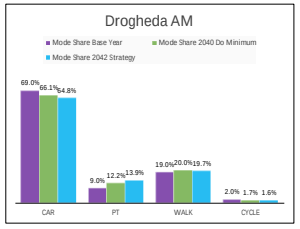


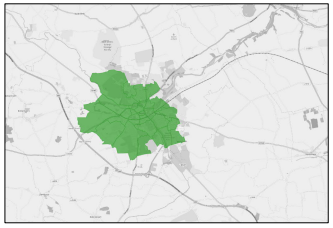


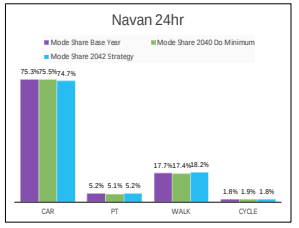


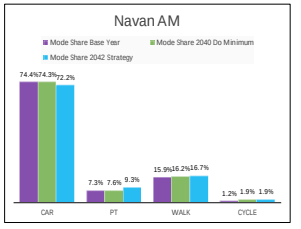








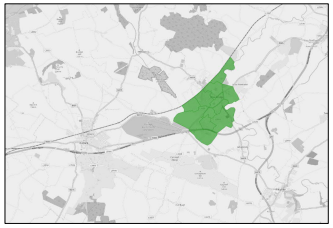


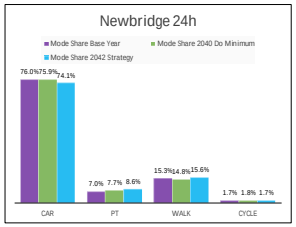


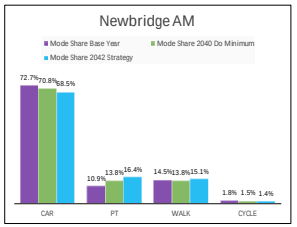
Phase 2, Iteration 1

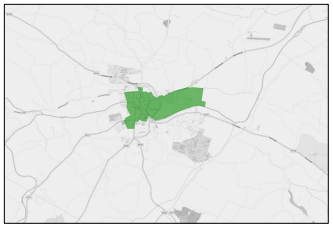
Base Model:	E8R06 (2016)
Do Minimum Model:	AAM (2040)
Strategy Model:	ABB (2042)

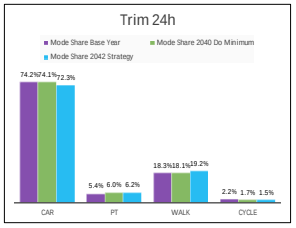
Cumulative Mode Share By Area (Towns)

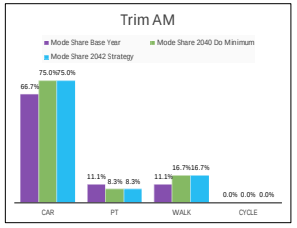


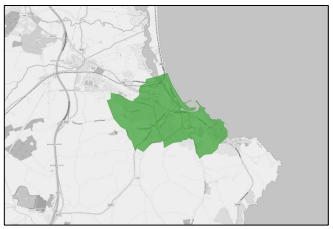


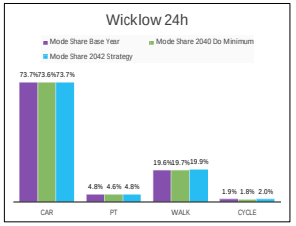


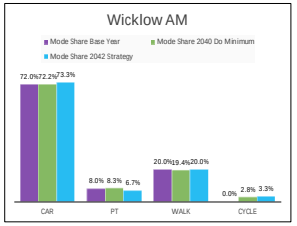






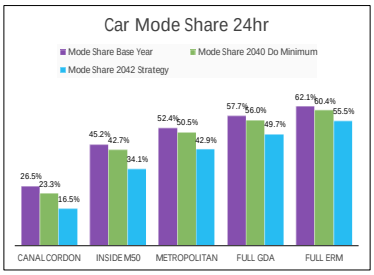


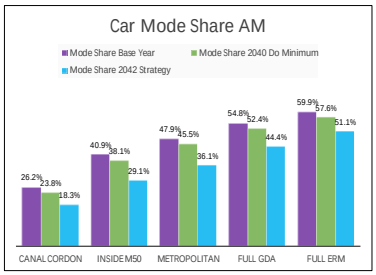


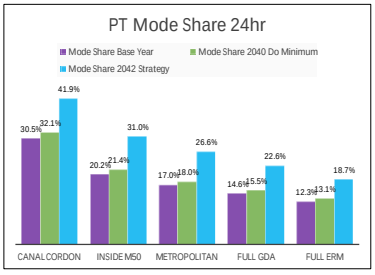


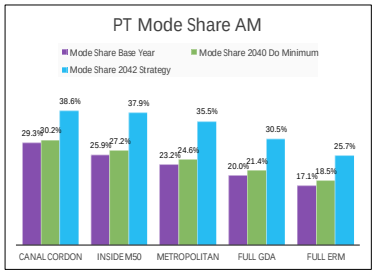
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABB (2042)

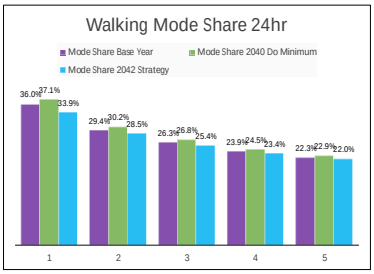
Mode Share By Area

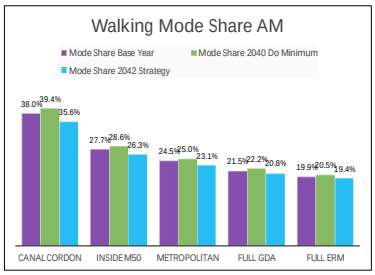


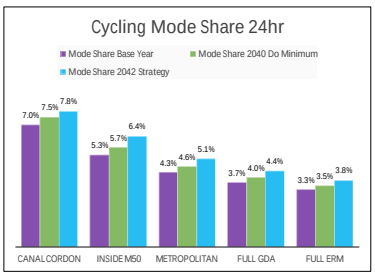


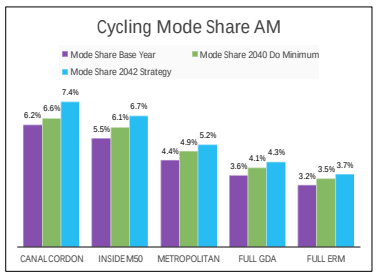












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABB (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2042 Strategy	123,700	314,700	254,500	58,600	751,500	16.5%	41.9%	33.9%	7.8%	11,100	23,400	21,600	4,500	60,700	18.3%	38.6%	35.6%	7.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-24.3%	39.7%	-2.4%	11.8%	7.1%					-17.2%	37.6%	-2.7%	21.6%	7.8%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2042 Strategy	952,400	867,100	795,700	177,600	2,792,700	34.1%	31.0%	28.5%	6.4%	94,200	122,700	84,900	21,600	323,400	29.1%	37.9%	26.3%	6.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-17.5%	49.7%	-2.7%	15.0%	3.2%					-20.0%	46.2%	-3.9%	14.3%	4.7%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2042 Strategy	1,948,200	1,210,200	1,155,600	230,800	4,544,700	42.9%	26.6%	25.4%	5.1%	206,300	203,000	132,000	29,900	571,200	36.1%	35.5%	23.1%	5.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-12.3%	52.8%	-2.1%	13.6%	3.4%					-16.5%	52.1%	-2.6%	12.8%	5.3%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2042 Strategy	2,851,200	1,294,400	1,343,600	249,700	5,738,800	49.7%	22.6%	23.4%	4.4%	328,300	225,300	154,100	32,100	739,700	44.4%	30.5%	20.8%	4.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-8.5%	49.6%	-1.4%	12.5%	3.1%					-11.6%	48.5%	-1.8%	11.8%	4.4%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2042 Strategy	4,008,000	1,348,500	1,592,400	276,500	7,225,300	55.5%	18.7%	22.0%	3.8%	476,200	239,400	180,700	34,700	931,000	51.1%	25.7%	19.4%	3.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-5.2%	46.6%	-0.5%	11.7%	3.2%					-7.3%	45.2%	-1.0%	11.6%	4.4%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2042 Strategy	828,600	552,400	541,100	119,100	2,041,200	40.6%	27.1%	26.5%	5.8%	83,100	99,300	63,200	17,100	262,700	31.6%	37.8%	24.1%	6.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-16.5%	56.1%	-2.8%	16.9%	1.8%					-20.4%	48.4%	-4.4%	12.5%	4.0%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2042 Strategy	995,900	343,100	359,900	53,100	1,752,000	56.8%	19.6%	20.5%	3.0%	112,000	80,300	47,100	8,400	247,800	45.2%	32.4%	19.0%	3.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-6.5%	61.2%	-0.8%	8.6%	3.7%					-13.4%	61.9%	-0.2%	10.5%	6.0%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2042 Strategy	903,000	84,300	188,000	18,900	1,194,100	75.6%	7.1%	15.7%	1.6%	122,000	22,300	22,100	2,200	168,500	72.4%	13.2%	13.1%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.0%	15.0%	2.8%	1.1%	2.2%					-1.7%	22.5%	3.3%	4.8%	1.6%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2042 Strategy	1,156,800	54,100	248,800	26,800	1,486,500	77.8%	3.6%	16.7%	1.8%	147,900	14,200	26,600	2,600	191,200	77.4%	7.4%	13.9%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.8%	-1.1%	4.5%	4.7%	3.7%					3.9%	7.6%	3.9%	4.0%	4.2%				

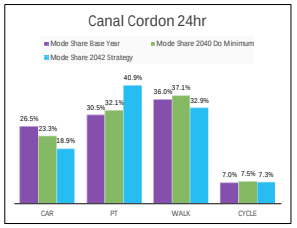
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2042 Strategy	22,700	1,300	8,000	700	32,700	69.4%	4.0%	24.5%	2.1%	2,500	300	800	100	3,700	67.6%	8.1%	21.6%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.6%	0.0%	-12.1%	-12.5%	-10.9%					-16.7%	0.0%	-20.0%	0.0%	-15.9%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	21,100	2,000	7,200	700	30,900	68.3%	6.5%	23.3%	2.3%	2,300	600	700	100	3,600	63.9%	16.7%	19.4%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.7%	66.7%	0.0%	0.0%	0.0%					-8.0%	100.0%	0.0%	0.0%	0.0%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2042 Strategy	33,300	6,700	14,500	1,000	55,400	60.1%	12.1%	26.2%	1.8%	4,000	1,700	1,700	100	7,500	53.3%	22.7%	22.7%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.1%	28.8%	-2.0%	-9.1%	3.9%					0.0%	41.7%	-5.6%	0.0%	5.6%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2042 Strategy	66,200	18,800	18,200	2,100	105,300	62.9%	17.9%	17.3%	2.0%	7,900	5,000	2,200	300	15,400	51.3%	32.5%	14.3%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	11.8%	97.9%	13.8%	23.5%	21.9%					5.3%	163.2%	10.0%	50.0%	32.8%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2042 Strategy	76,400	7,100	23,700	2,200	109,500	69.8%	6.5%	21.6%	2.0%	7,900	1,700	2,400	200	12,200	64.8%	13.9%	19.7%	1.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.1%	7.6%	6.8%	4.8%	4.3%					3.9%	21.4%	4.3%	0.0%	6.1%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2042 Strategy	23,700	3,100	4,500	400	31,700	74.8%	9.8%	14.2%	1.3%	3,400	900	600	100	5,000	68.0%	18.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.3%	3.3%	-6.3%	0.0%	-3.1%					-2.9%	-10.0%	0.0%	0.0%	-3.8%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Strategy	6,500	500	2,600	200	9,700	67.0%	5.2%	26.8%	2.1%	500	100	200	N/A	800	62.5%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	3.2%	0.0%	13.0%	0.0%	4.3%					25.0%	0.0%	0.0%	0.0%	33.3%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2042 Strategy	33,600	7,500	6,300	700	48,200	69.7%	15.6%	13.1%	1.5%	3,800	1,900	900	100	6,700	56.7%	28.4%	13.4%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-7.7%	53.1%	-14.9%	-12.5%	-2.6%					-25.5%	58.3%	-18.2%	0.0%	-10.7%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2042 Strategy	56,000	4,700	15,800	1,600	78,100	71.7%	6.0%	20.2%	2.0%	6,100	900	2,000	200	9,200	66.3%	9.8%	21.7%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	0.4%	0.0%	-0.6%	-5.9%	0.0%					-1.6%	12.5%	-4.8%	0.0%	-1.1%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2042 Strategy	65,700	4,600	16,000	1,600	87,900	74.7%	5.2%	18.2%	1.8%	7,800	1,000	1,800	200	10,800	72.2%	9.3%	16.7%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.2%	4.5%	6.7%	0.0%	2.2%					0.0%	25.0%	5.9%	0.0%	2.9%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2042 Strategy	47,100	5,500	9,900	1,100	63,600	74.1%	8.6%	15.6%	1.7%	5,000	1,200	1,100	100	7,300	68.5%	16.4%	15.1%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	9.0%	25.0%	17.9%	10.0%	11.8%					8.7%	33.3%	22.2%	0.0%	12.3%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2042 Strategy	9,400	800	2,500	200	13,000	72.3%	6.2%	19.2%	1.5%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	9.3%	14.3%	19.0%	0.0%	12.1%					0.0%	0.0%	0.0%	0.0%	0.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	18,500	1,200	5,000	500	25,100	73.7%	4.8%	19.9%	2.0%	2,200	200	600	100	3,000	73.3%	6.7%	20.0%	3.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.5%	-7.7%	-10.7%	0.0%	-11.6%					-15.4%	-33.3%	-14.3%	0.0%	-16.7%				

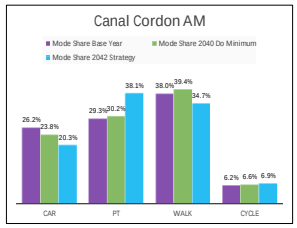
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABB (2042)

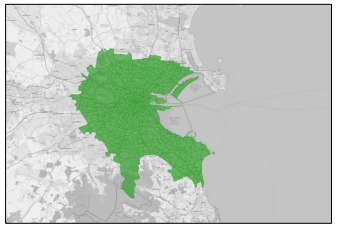
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2042 Strategy	16.5%	34.1%	42.9%	49.7%	55.5%	18.3%	29.1%	36.1%	44.4%	51.1%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2042 Strategy	41.9%	31.0%	26.6%	22.6%	18.7%	38.6%	37.9%	35.5%	30.5%	25.7%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2042 Strategy	33.9%	28.5%	25.4%	23.4%	22.0%	35.6%	26.3%	23.1%	20.8%	19.4%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2042 Strategy	7.8%	6.4%	5.1%	4.4%	3.8%	7.4%	6.7%	5.2%	4.3%	3.7%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2042 Strategy	123,700	952,400	1,948,200	2,851,200	4,008,000	11,100	94,200	206,300	328,300	476,200

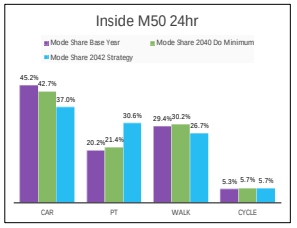
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

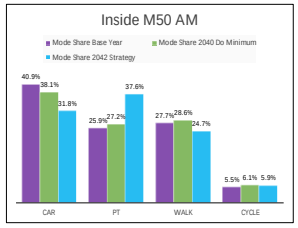
Cumulative Mode Share By Area

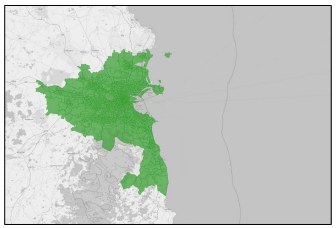


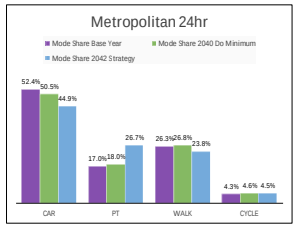


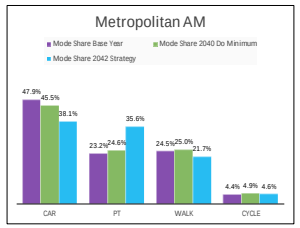


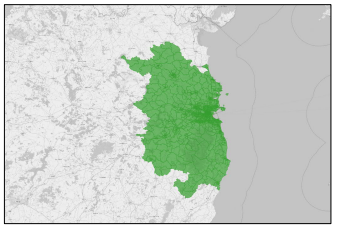


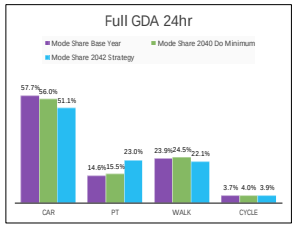


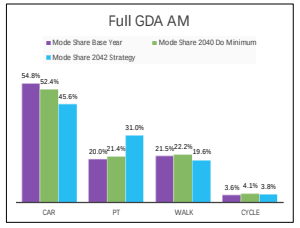


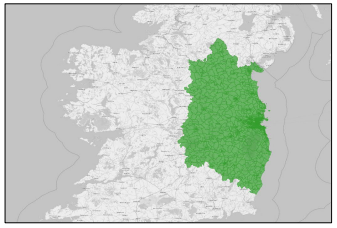


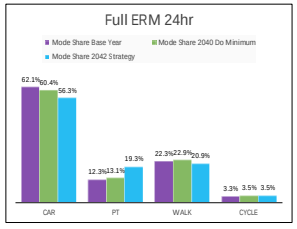


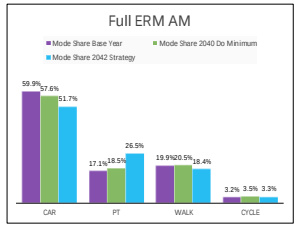




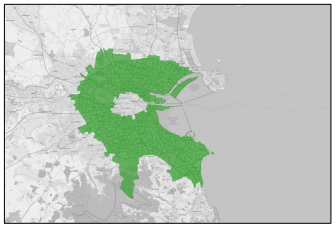


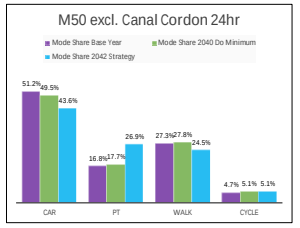


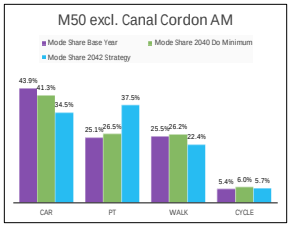


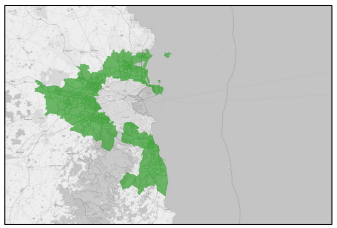


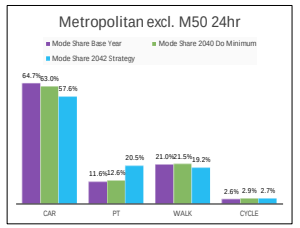
Mode Share By Individual Area

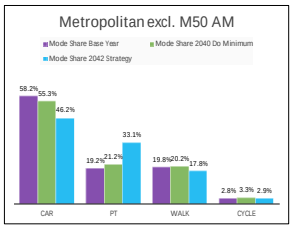


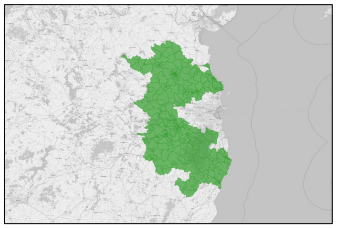


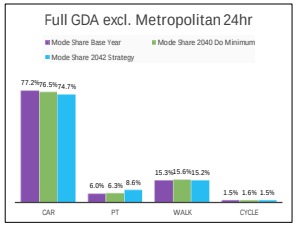


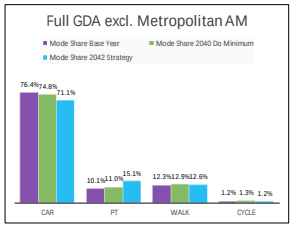


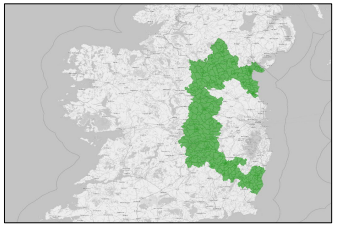


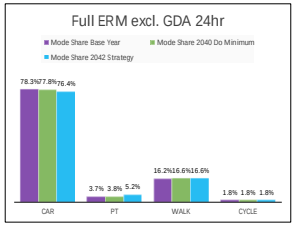


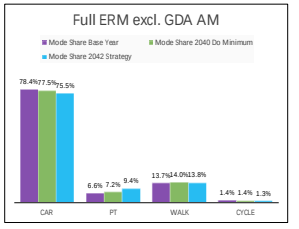






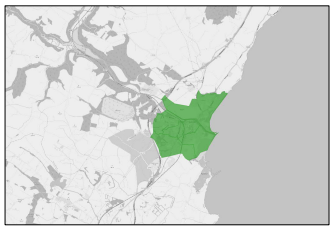


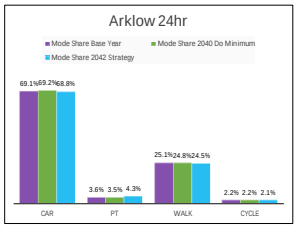


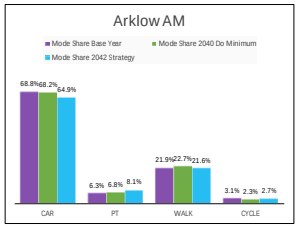


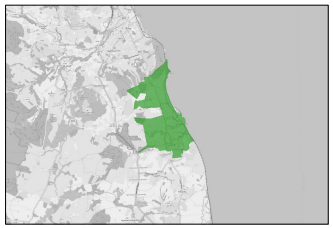
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

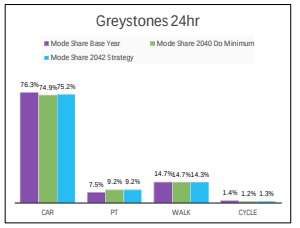
Cumulative Mode Share By Area (Towns)

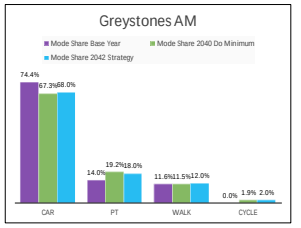


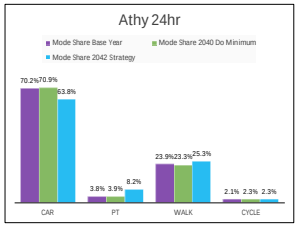


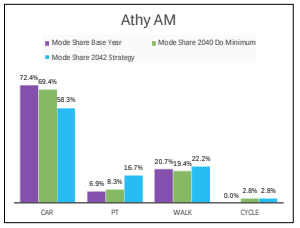


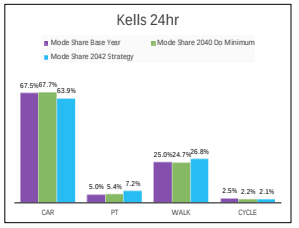


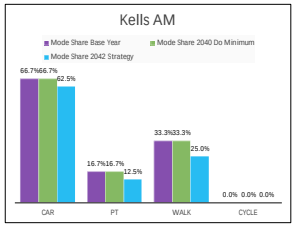


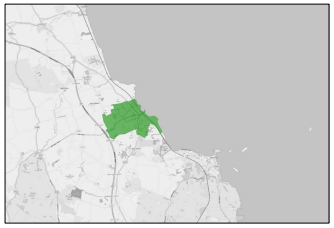


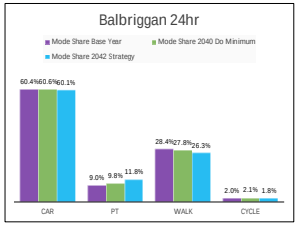


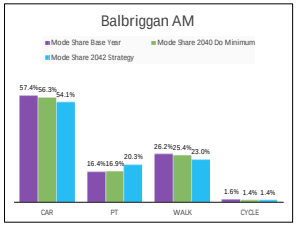


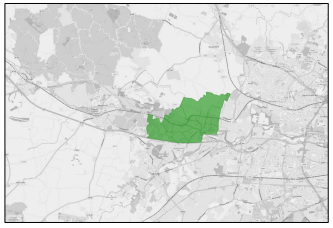


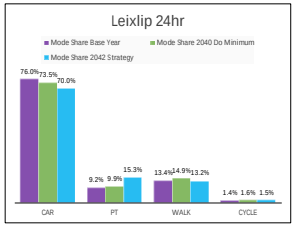


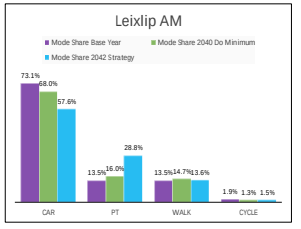


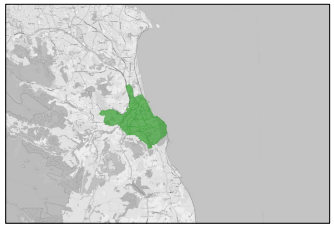


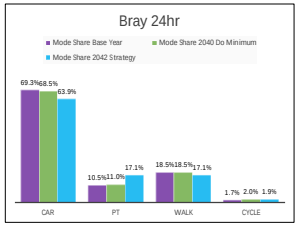


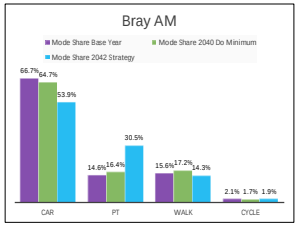


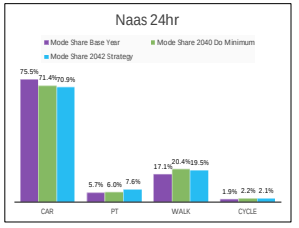


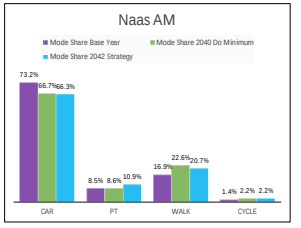


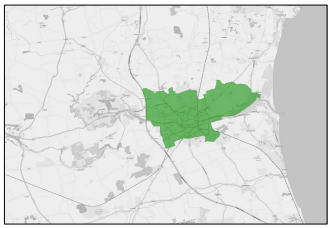


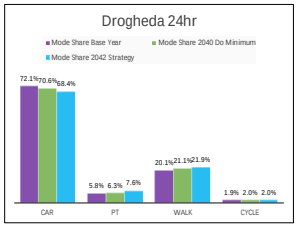


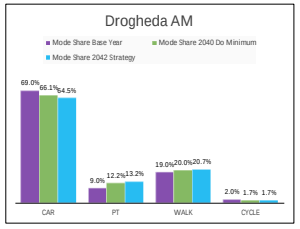


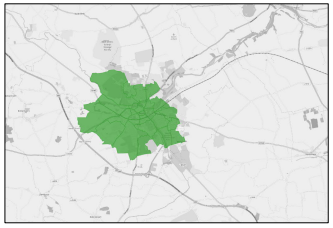


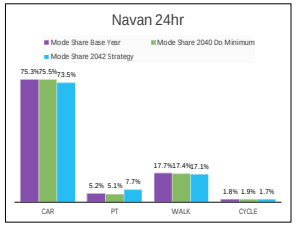


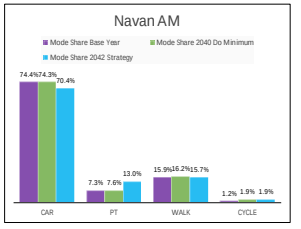






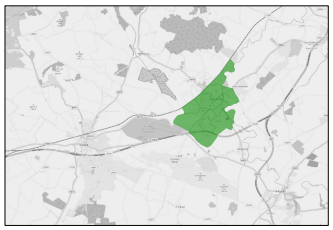


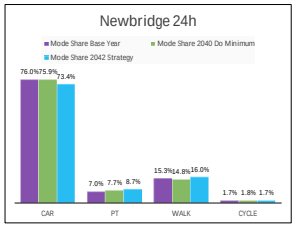


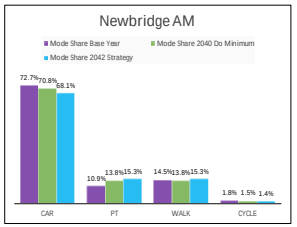


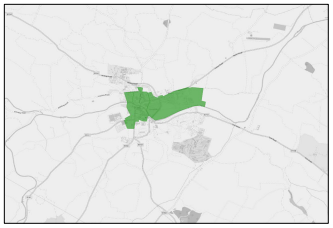
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

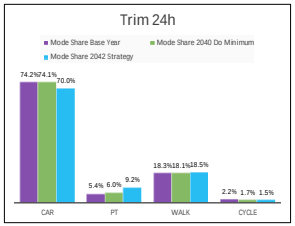
Cumulative Mode Share By Area (Towns)

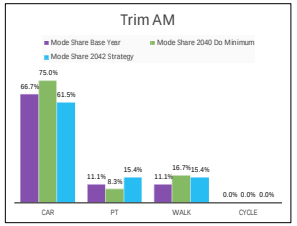


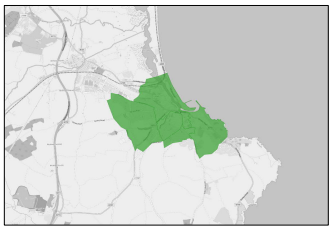


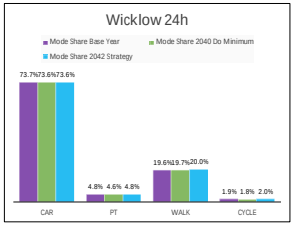


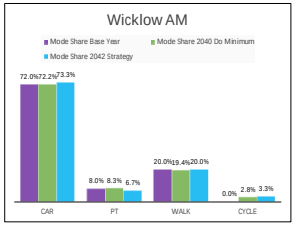






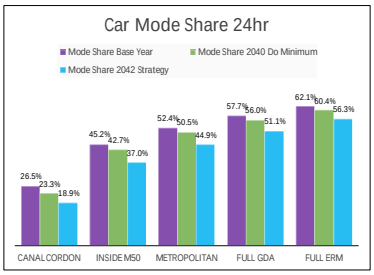


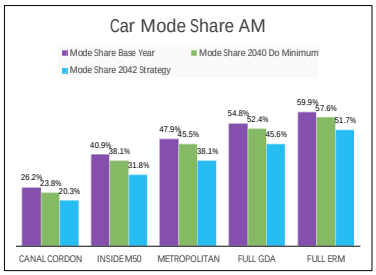


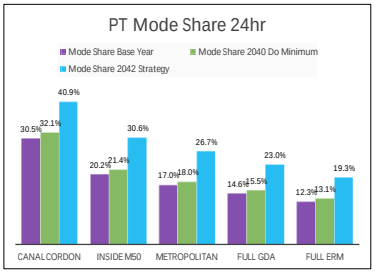


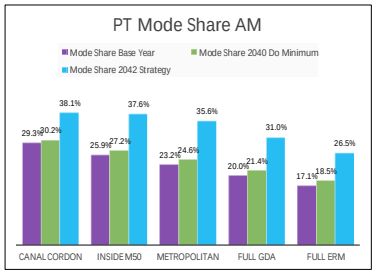
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

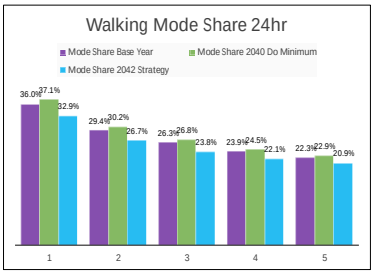
Mode Share By Area

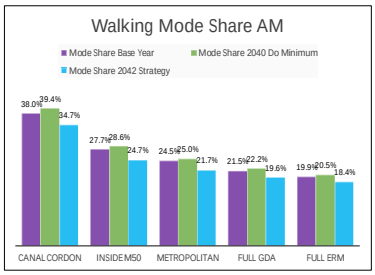


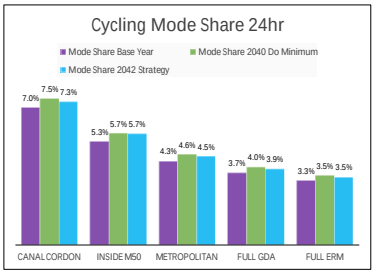


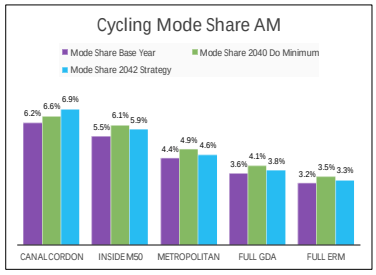












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2042 Strategy	141,000	304,800	245,800	54,400	746,000	18.9%	40.9%	32.9%	7.3%	12,300	23,100	21,000	4,200	60,600	20.3%	38.1%	34.7%	6.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-13.7%	35.3%	-5.7%	3.8%	6.3%					-8.2%	35.9%	-5.4%	13.5%	7.6%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2042 Strategy	1,029,900	853,500	745,000	158,600	2,787,100	37.0%	30.6%	26.7%	5.7%	102,500	121,100	79,500	19,000	322,100	31.8%	37.6%	24.7%	5.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.8%	47.4%	-8.9%	2.7%	3.0%					-13.0%	44.3%	-10.0%	0.5%	4.3%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2042 Strategy	2,036,600	1,211,700	1,081,200	205,100	4,534,600	44.9%	26.7%	23.8%	4.5%	217,000	203,100	123,700	26,200	570,000	38.1%	35.6%	21.7%	4.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-8.3%	53.0%	-8.4%	0.9%	3.1%					-12.2%	52.1%	-8.7%	-1.1%	5.0%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2042 Strategy	2,923,900	1,313,400	1,262,000	222,900	5,722,100	51.1%	23.0%	22.1%	3.9%	336,500	228,500	144,900	28,200	738,100	45.6%	31.0%	19.6%	3.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-6.1%	51.8%	-7.4%	0.5%	2.8%					-9.3%	50.6%	-7.7%	-1.7%	4.2%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2042 Strategy	4,053,200	1,389,500	1,507,600	249,400	7,199,800	56.3%	19.3%	20.9%	3.5%	480,600	246,500	171,300	30,700	929,000	51.7%	26.5%	18.4%	3.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.2%	51.0%	-5.8%	0.8%	2.9%					-6.4%	49.5%	-6.1%	-1.3%	4.1%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2042 Strategy	888,900	548,700	499,200	104,300	2,041,100	43.6%	26.9%	24.5%	5.1%	90,200	98,000	58,500	14,800	261,500	34.5%	37.5%	22.4%	5.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.4%	55.1%	-10.3%	2.4%	1.8%					-13.6%	46.5%	-11.5%	-2.6%	3.5%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2042 Strategy	1,006,700	358,200	336,300	46,400	1,747,600	57.6%	20.5%	19.2%	2.7%	114,500	82,100	44,200	7,200	247,900	46.2%	33.1%	17.8%	2.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-5.5%	68.2%	-7.3%	-5.1%	3.4%					-11.4%	65.5%	-6.4%	-5.3%	6.1%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2042 Strategy	887,300	101,600	180,700	17,800	1,187,500	74.7%	8.6%	15.2%	1.5%	119,500	25,400	21,200	2,000	168,100	71.1%	15.1%	12.6%	1.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-0.7%	38.6%	-1.1%	-4.8%	1.6%					-3.7%	39.6%	-0.9%	-4.8%	1.3%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2042 Strategy	1,129,300	76,200	245,600	26,500	1,477,600	76.4%	5.2%	16.6%	1.8%	144,100	18,000	26,300	2,500	190,900	75.5%	9.4%	13.8%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.3%	39.3%	3.2%	3.5%	3.1%					1.3%	36.4%	2.7%	0.0%	4.0%				

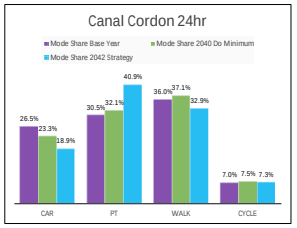
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2042 Strategy	22,500	1,400	8,000	700	32,700	68.8%	4.3%	24.5%	2.1%	2,400	300	800	100	3,700	64.9%	8.1%	21.6%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.4%	7.7%	-12.1%	-12.5%	-10.9%					-20.0%	0.0%	-20.0%	0.0%	-15.9%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	19,400	2,500	7,700	700	30,400	63.8%	8.2%	25.3%	2.3%	2,100	600	800	100	3,600	58.3%	16.7%	22.2%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.4%	108.3%	6.9%	0.0%	-1.6%					-16.0%	100.0%	14.3%	0.0%	0.0%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2042 Strategy	33,100	6,500	14,500	1,000	55,100	60.1%	11.8%	26.3%	1.8%	4,000	1,500	1,700	100	7,400	54.1%	20.3%	23.0%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	2.5%	25.0%	-2.0%	-9.1%	3.4%					0.0%	25.0%	-5.6%	0.0%	4.2%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2042 Strategy	66,900	17,900	17,900	2,000	104,700	63.9%	17.1%	17.1%	1.9%	8,300	4,700	2,200	300	15,400	53.9%	30.5%	14.3%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	13.0%	88.4%	11.9%	17.6%	21.2%					10.7%	147.4%	10.0%	50.0%	32.8%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2042 Strategy	74,400	8,300	23,800	2,200	108,700	68.4%	7.6%	21.9%	2.0%	7,800	1,600	2,500	200	12,100	64.5%	13.2%	20.7%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	0.4%	25.8%	7.2%	4.8%	3.5%					2.6%	14.3%	8.7%	0.0%	5.2%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2042 Strategy	23,600	2,900	4,500	400	31,400	75.2%	9.2%	14.3%	1.3%	3,400	900	600	100	5,000	68.0%	18.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.7%	-3.3%	-6.3%	0.0%	-4.0%					-2.9%	-10.0%	0.0%	0.0%	-3.8%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Strategy	6,200	700	2,600	200	9,700	63.9%	7.2%	26.8%	2.1%	500	100	200	N/A	800	62.5%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-1.6%	40.0%	13.0%	0.0%	4.3%					25.0%	0.0%	0.0%	0.0%	33.3%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2042 Strategy	33,300	7,300	6,300	700	47,600	70.0%	15.3%	13.2%	1.5%	3,800	1,900	900	100	6,600	57.6%	28.8%	13.6%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-8.5%	49.0%	-14.9%	-12.5%	-3.8%					-25.5%	58.3%	-18.2%	0.0%	-12.0%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2042 Strategy	55,200	5,900	15,200	1,600	77,900	70.9%	7.6%	19.5%	2.1%	6,100	1,000	1,900	200	9,200	66.3%	10.9%	20.7%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-1.1%	25.5%	-4.4%	-5.9%	-0.3%					-1.6%	25.0%	-9.5%	0.0%	-1.1%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2042 Strategy	64,500	6,800	15,000	1,500	87,800	73.5%	7.7%	17.1%	1.7%	7,600	1,400	1,700	200	10,800	70.4%	13.0%	15.7%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-0.6%	54.5%	0.0%	-6.3%	2.1%					-2.6%	75.0%	0.0%	0.0%	2.9%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2042 Strategy	46,300	5,500	10,100	1,100	63,100	73.4%	8.7%	16.0%	1.7%	4,900	1,100	1,100	100	7,200	68.1%	15.3%	15.3%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	7.2%	25.0%	20.2%	10.0%	10.9%					6.5%	22.2%	22.2%	0.0%	10.8%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2042 Strategy	9,100	1,200	2,400	200	13,000	70.0%	9.2%	18.5%	1.5%	800	200	200	N/A	1,300	61.5%	15.4%	15.4%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	5.8%	71.4%	14.3%	0.0%	12.1%					-11.1%	100.0%	0.0%	0.0%	8.3%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	18,400	1,200	5,000	500	25,000	73.6%	4.8%	20.0%	2.0%	2,200	200	600	100	3,000	73.3%	6.7%	20.0%	3.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-12.0%	-7.7%	-10.7%	0.0%	-12.0%					-15.4%	-33.3%	-14.3%	0.0%	-16.7%				

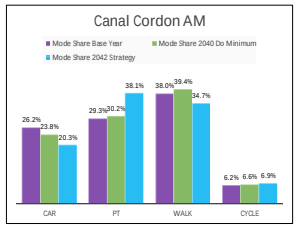
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABU (2042)

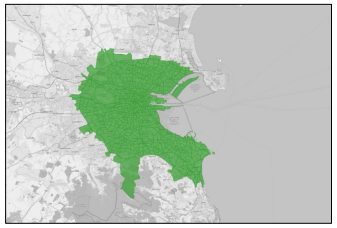
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2042 Strategy	18.9%	37.0%	44.9%	51.1%	56.3%	20.3%	31.8%	38.1%	45.6%	51.7%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2042 Strategy	40.9%	30.6%	26.7%	23.0%	19.3%	38.1%	37.6%	35.6%	31.0%	26.5%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2042 Strategy	32.9%	26.7%	23.8%	22.1%	20.9%	34.7%	24.7%	21.7%	19.6%	18.4%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2042 Strategy	7.3%	5.7%	4.5%	3.9%	3.5%	6.9%	5.9%	4.6%	3.8%	3.3%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2042 Strategy	141,000	1,029,900	2,036,600	2,923,900	4,053,200	12,300	102,500	217,000	336,500	480,600

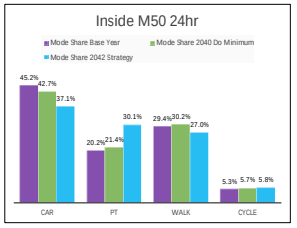
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

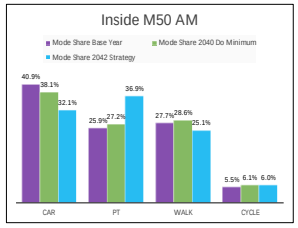
Cumulative Mode Share By Area

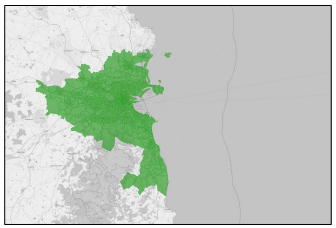


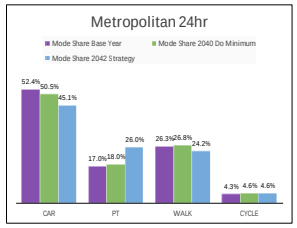


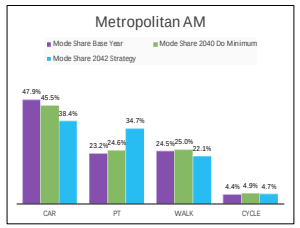


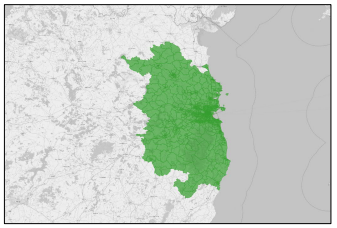


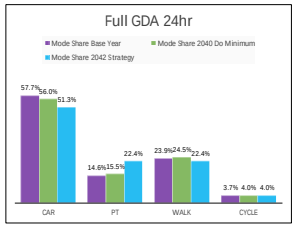


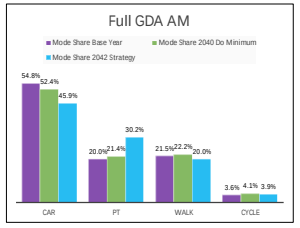


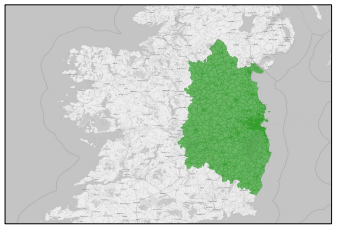


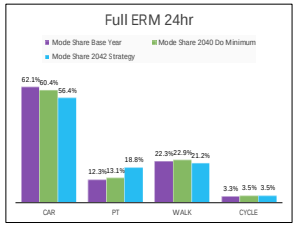


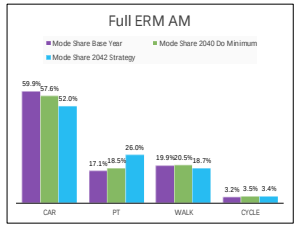




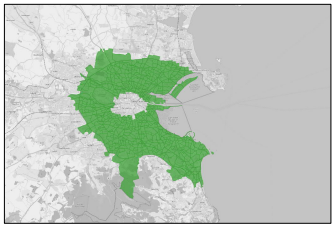


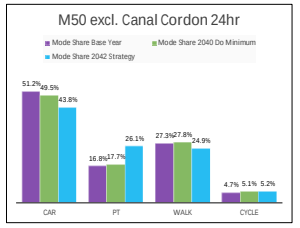


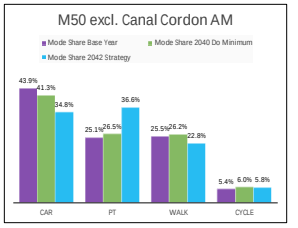


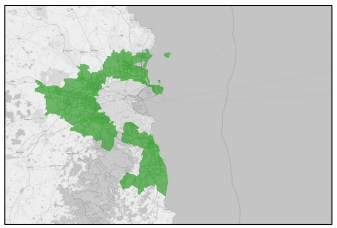


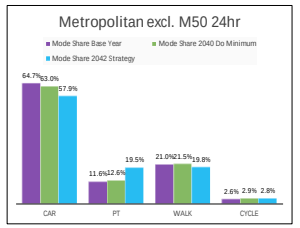
Mode Share By Individual Area

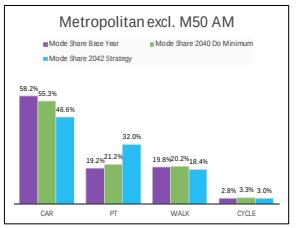


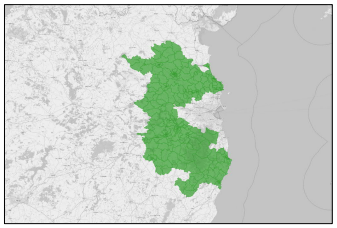


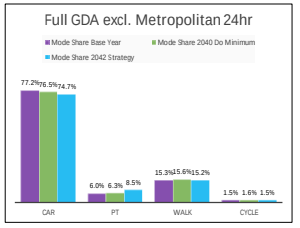


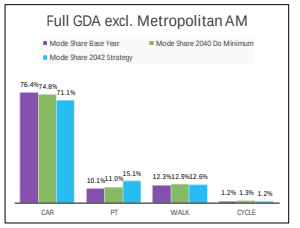


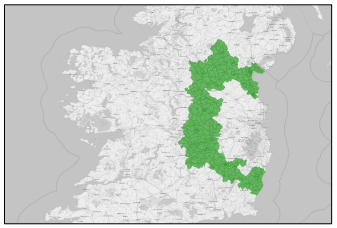


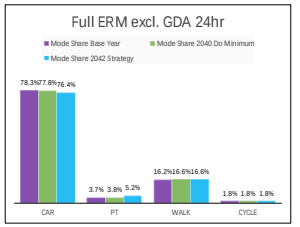


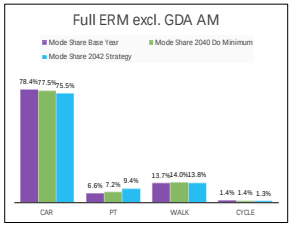






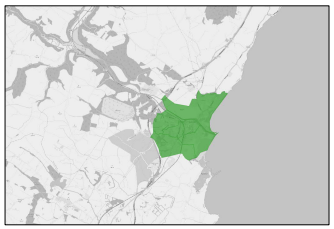


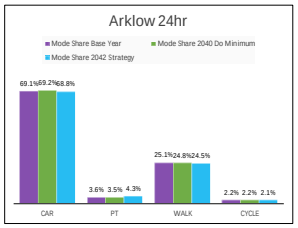


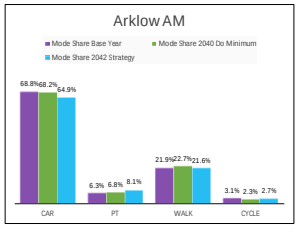


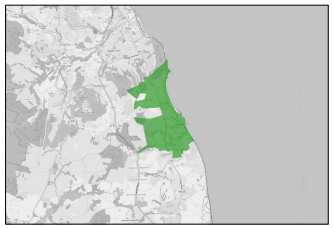
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

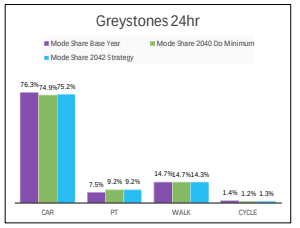
Cumulative Mode Share By Area (Towns)

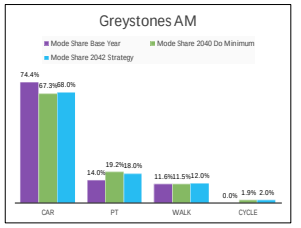


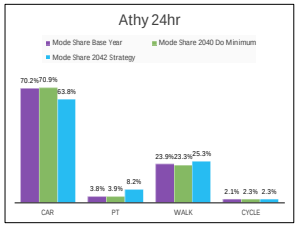


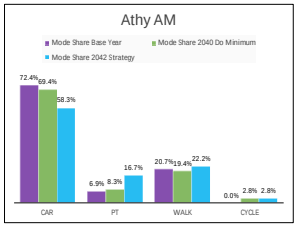


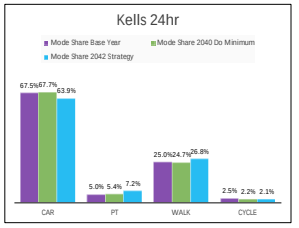


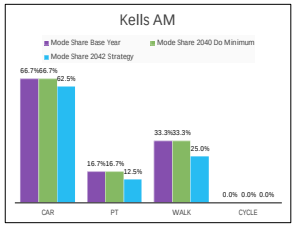


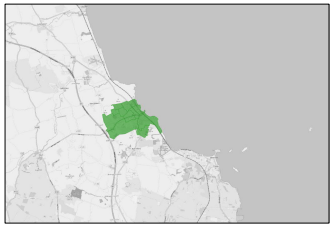


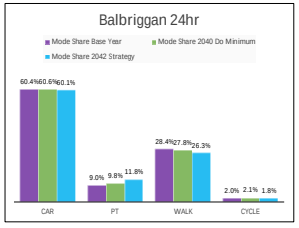


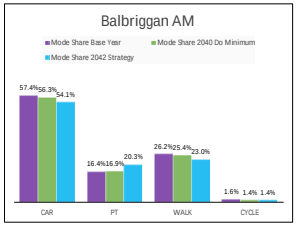


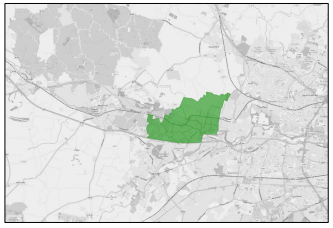


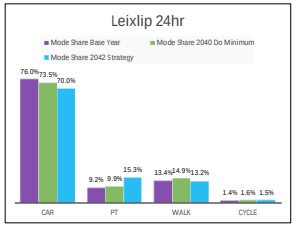


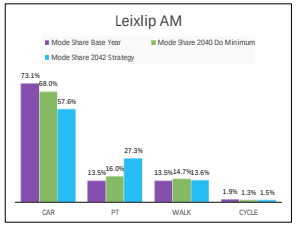


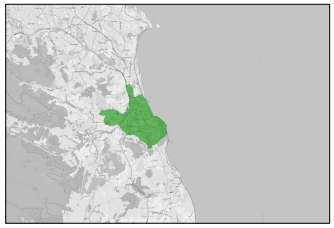


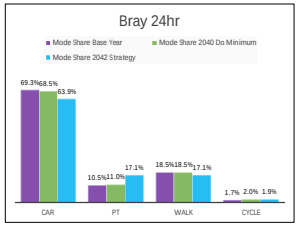


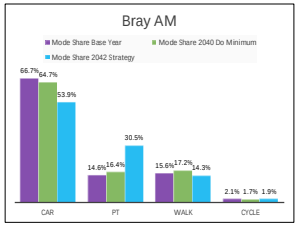


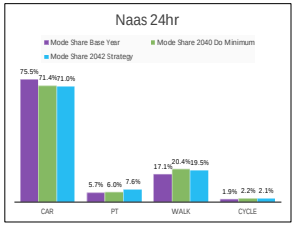


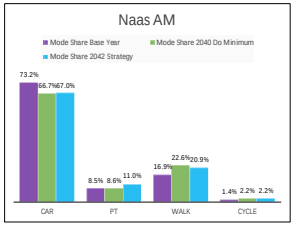


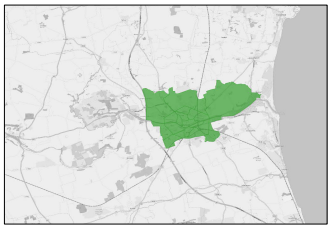


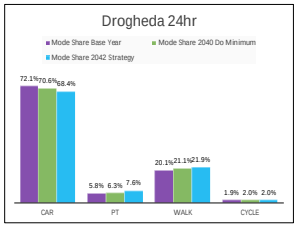


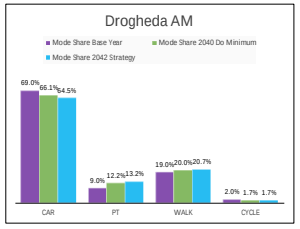


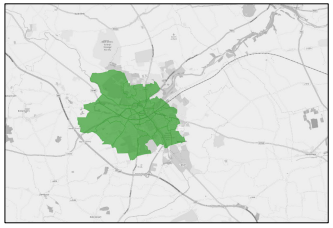


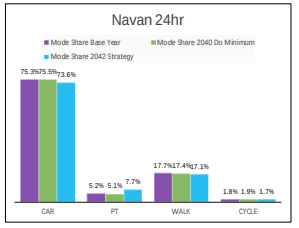


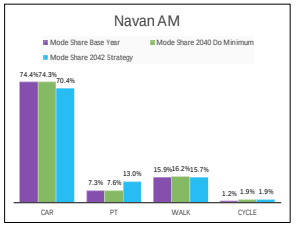






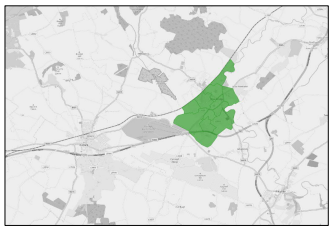


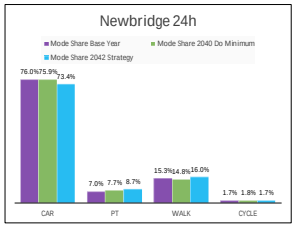


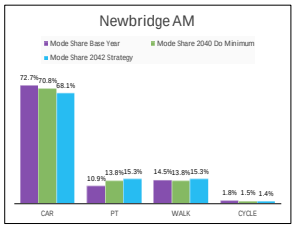


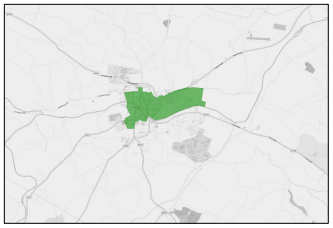
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

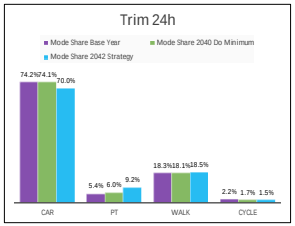
Cumulative Mode Share By Area (Towns)

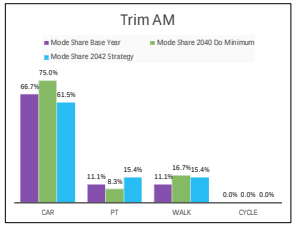


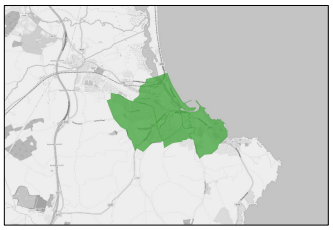


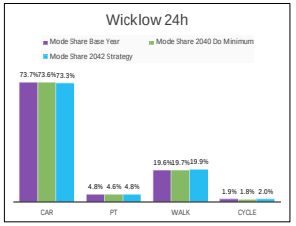


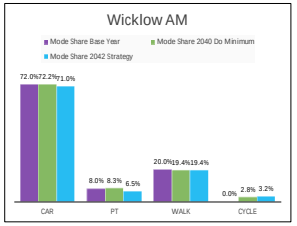






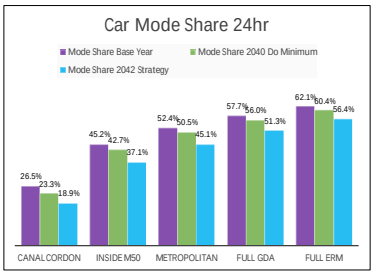


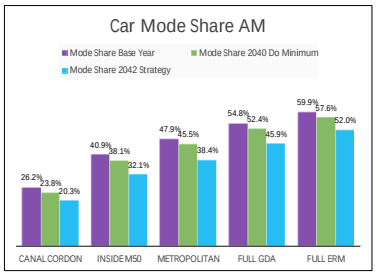


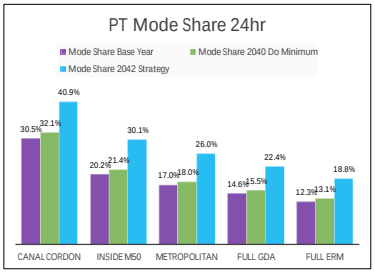


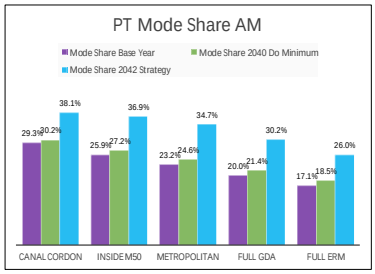
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

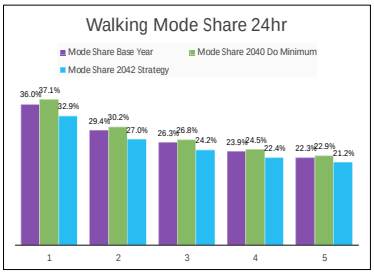
Mode Share By Area

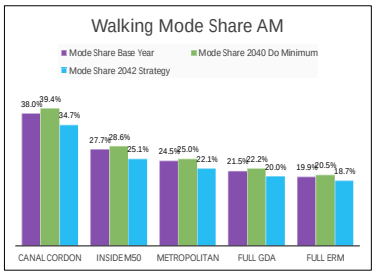


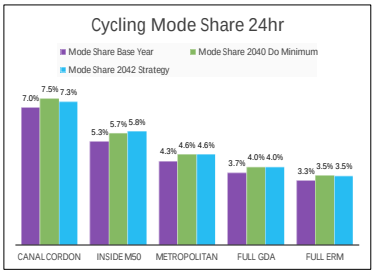


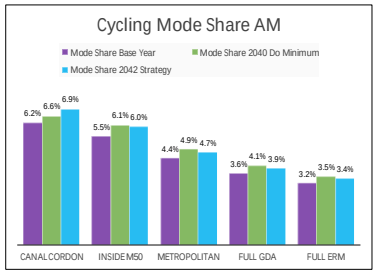












Phase 2, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	163,400	225,200	260,700	52,400	701,800	23.3%	32.1%	37.1%	7.5%	13,400	17,000	22,200	3,700	56,300	23.8%	30.2%	39.4%	6.6%
	Mode Share 2042 Strategy	140,900	305,700	245,800	54,600	747,000	18.9%	40.9%	32.9%	7.3%	12,300	23,100	21,000	4,200	60,600	20.3%	38.1%	34.7%	6.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.7%	32.7%	30.4%	34.4%	26.2%					13.6%	28.8%	29.8%	32.1%	25.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-13.8%	35.7%	-5.7%	4.2%	6.4%					-8.2%	35.9%	-5.4%	13.5%	7.6%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,155,100	579,100	817,500	154,400	2,706,000	42.7%	21.4%	30.2%	5.7%	117,800	83,900	88,300	18,900	308,900	38.1%	27.2%	28.6%	6.1%
	Mode Share 2042 Strategy	1,033,500	837,700	753,100	161,500	2,785,800	37.1%	30.1%	27.0%	5.8%	103,000	118,400	80,500	19,400	321,300	32.1%	36.9%	25.1%	6.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	12.9%	26.7%	22.7%	29.3%	19.4%					10.3%	23.9%	22.0%	30.3%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.5%	44.7%	-7.9%	4.6%	2.9%					-12.6%	41.1%	-8.8%	2.6%	4.0%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,220,700	792,000	1,180,300	203,200	4,396,200	50.5%	18.0%	26.8%	4.6%	247,100	133,500	135,500	26,500	542,600	45.5%	24.6%	25.0%	4.9%
	Mode Share 2042 Strategy	2,045,100	1,178,500	1,098,300	210,100	4,532,000	45.1%	26.0%	24.2%	4.6%	218,300	197,500	125,900	26,900	568,500	38.4%	34.7%	22.1%	4.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.5%	29.2%	24.6%	31.8%	22.0%					16.4%	30.1%	25.0%	35.2%	22.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-7.9%	48.8%	-6.9%	3.4%	3.1%					-11.7%	47.9%	-7.1%	1.5%	4.8%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,114,500	865,300	1,363,100	221,900	5,564,800	56.0%	15.5%	24.5%	4.0%	371,200	151,700	157,000	28,700	708,500	52.4%	21.4%	22.2%	4.1%
	Mode Share 2042 Strategy	2,932,900	1,279,700	1,279,200	227,900	5,719,800	51.3%	22.4%	22.4%	4.0%	337,900	222,800	147,100	28,900	736,600	45.9%	30.2%	20.0%	3.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	28.7%	24.1%	31.0%	21.3%					16.0%	29.9%	24.9%	34.7%	21.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-5.8%	47.9%	-6.2%	2.7%	2.8%					-9.0%	46.9%	-6.3%	6.7%	4.0%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,229,400	919,900	1,601,100	247,500	6,998,000	60.4%	13.1%	22.9%	3.5%	513,500	164,900	182,500	31,100	892,000	57.6%	18.5%	20.5%	3.5%
	Mode Share 2042 Strategy	4,062,200	1,355,800	1,524,900	254,400	7,197,400	56.4%	18.8%	21.2%	3.5%	481,900	240,700	173,400	31,400	927,500	52.0%	26.0%	18.7%	3.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.9%	28.2%	23.2%	29.4%	20.1%					15.6%	29.7%	23.8%	32.3%	20.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.0%	47.4%	-4.8%	2.8%	2.8%					-6.2%	46.0%	-5.0%	1.0%	4.0%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	991,800	353,800	556,800	101,900	2,004,300	49.5%	17.7%	27.8%	5.1%	104,400	66,900	66,100	15,200	252,700	41.3%	26.5%	26.2%	6.0%
	Mode Share 2042 Strategy	892,700	532,000	507,300	106,800	2,038,800	43.8%	26.1%	24.9%	5.2%	90,700	95,300	59,500	15,100	260,700	34.8%	36.6%	22.8%	5.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.3%	23.1%	19.5%	26.9%	17.3%					9.9%	23.0%	19.5%	29.9%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.0%	50.4%	-8.9%	4.8%	1.7%					-13.1%	42.5%	-10.0%	-0.7%	3.2%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,065,600	212,900	362,800	48,900	1,690,200	63.0%	12.6%	21.5%	2.9%	129,300	49,600	47,200	7,600	233,700	55.3%	21.2%	20.2%	3.3%
	Mode Share 2042 Strategy	1,011,600	340,800	345,200	48,600	1,746,200	57.9%	19.5%	19.8%	2.8%	115,200	79,100	45,400	7,500	247,300	46.6%	32.0%	18.4%	3.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	23.0%	36.6%	28.9%	40.5%	26.3%					22.6%	42.1%	31.1%	49.0%	28.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-5.1%	60.1%	-4.9%	-0.6%	3.3%					-10.9%	59.5%	-3.8%	-1.3%	5.8%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	893,800	73,300	182,800	18,700	1,168,600	76.5%	6.3%	15.6%	1.6%	124,100	18,200	21,400	2,100	165,900	74.8%	11.0%	12.9%	1.3%
	Mode Share 2042 Strategy	887,800	101,200	180,900	17,800	1,187,800	74.7%	8.5%	15.2%	1.5%	119,600	25,300	21,200	2,000	168,100	71.1%	15.1%	12.6%	1.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.6%	24.0%	21.5%	23.8%	18.7%					15.3%	28.2%	23.7%	23.5%	17.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-0.7%	38.1%	-1.0%	-4.8%	1.6%					-3.6%	39.0%	-0.9%	-4.8%	1.3%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,114,900	54,700	238,000	25,600	1,433,100	77.8%	3.8%	16.6%	1.8%	142,300	13,200	25,600	2,500	183,500	77.5%	7.2%	14.0%	1.4%
	Mode Share 2042 Strategy	1,129,300	76,100	245,700	26,500	1,477,600	76.4%	5.2%	16.6%	1.8%	144,100	17,900	26,300	2,500	190,900	75.5%	9.4%	13.8%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.9%	20.0%	18.3%	16.4%	15.7%					14.4%	26.9%	18.0%	13.6%	15.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	1.3%	39.1%	3.2%	3.5%	3.1%					1.3%	35.6%	2.7%	0.0%	4.0%				

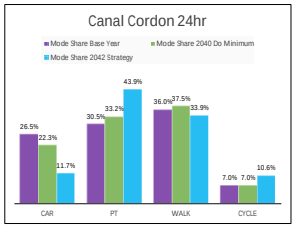
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	25,400	1,300	9,100	800	36,700	69.2%	3.5%	24.8%	2.2%	3,000	300	1,000	100	4,400	68.2%	6.8%	22.7%	2.3%
	Mode Share 2042 Strategy	22,500	1,400	8,000	700	32,700	68.8%	4.3%	24.5%	2.1%	2,400	300	800	100	3,700	64.9%	8.1%	21.6%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.7%	30.0%	31.9%	33.3%	33.5%					36.4%	50.0%	42.9%	0.0%	37.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.4%	7.7%	-12.1%	-12.5%	-10.9%					-20.0%	0.0%	-20.0%	0.0%	-15.9%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,900	1,200	7,200	700	30,900	70.9%	3.9%	23.3%	2.3%	2,500	300	700	100	3,600	69.4%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	19,400	2,500	7,700	700	30,400	63.8%	8.2%	25.3%	2.3%	2,100	600	800	100	3,600	58.3%	16.7%	22.2%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	31.1%	33.3%	26.3%	40.0%	29.8%					19.0%	50.0%	16.7%	0.0%	24.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.4%	108.3%	6.9%	0.0%	-1.6%					-16.0%	100.0%	14.3%	0.0%	0.0%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	32,300	5,200	14,800	1,100	53,300	60.6%	9.8%	27.8%	2.1%	4,000	1,200	1,800	100	7,100	56.3%	16.9%	25.4%	1.4%
	Mode Share 2042 Strategy	33,100	6,500	14,500	1,000	55,100	60.1%	11.8%	26.3%	1.8%	4,000	1,500	1,700	100	7,400	54.1%	20.3%	23.0%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.0%	26.8%	13.8%	22.2%	16.6%					14.3%	20.0%	12.5%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	2.5%	25.0%	-2.0%	-9.1%	3.4%					0.0%	25.0%	-5.6%	0.0%	4.2%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	59,200	9,500	16,000	1,700	86,400	68.5%	11.0%	18.5%	2.0%	7,500	1,900	2,000	200	11,600	64.7%	16.4%	17.2%	1.7%
	Mode Share 2042 Strategy	67,000	17,900	17,900	2,000	104,800	63.9%	17.1%	17.1%	1.9%	8,300	4,700	2,200	300	15,400	53.9%	30.5%	14.3%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.8%	30.1%	24.0%	41.7%	24.1%					17.2%	35.7%	33.3%	0.0%	20.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	13.2%	88.4%	11.9%	17.6%	21.3%					10.7%	147.4%	10.0%	50.0%	32.8%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	74,100	6,600	22,200	2,100	105,000	70.6%	6.3%	21.1%	2.0%	7,600	1,400	2,300	200	11,500	66.1%	12.2%	20.0%	1.7%
	Mode Share 2042 Strategy	74,400	8,300	23,800	2,200	108,700	68.4%	7.6%	21.9%	2.0%	7,800	1,600	2,500	200	12,100	64.5%	13.2%	20.7%	1.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	14.0%	26.9%	22.7%	23.5%	16.5%					10.1%	55.6%	21.1%	0.0%	15.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	0.4%	25.8%	7.2%	4.8%	3.5%					2.6%	14.3%	8.7%	0.0%	5.2%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	24,500	3,000	4,800	400	32,700	74.9%	9.2%	14.7%	1.2%	3,500	1,000	600	100	5,200	67.3%	19.2%	11.5%	1.9%
	Mode Share 2042 Strategy	23,600	2,900	4,500	400	31,400	75.2%	9.2%	14.3%	1.3%	3,400	900	600	100	5,000	68.0%	18.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	15.0%	42.9%	17.1%	0.0%	17.2%					9.4%	66.7%	20.0%	0.0%	20.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.7%	-3.3%	-6.3%	0.0%	-4.0%					-2.9%	-10.0%	0.0%	0.0%	-3.8%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,300	500	2,300	200	9,300	67.7%	5.4%	24.7%	2.2%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Strategy	6,200	700	2,600	200	9,700	63.9%	7.2%	26.8%	2.1%	500	100	200	N/A	800	62.5%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.7%	25.0%	15.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-1.6%	40.0%	13.0%	0.0%	4.3%					25.0%	0.0%	0.0%	0.0%	33.3%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	36,400	4,900	7,400	800	49,500	73.5%	9.9%	14.9%	1.6%	5,100	1,200	1,100	100	7,500	68.0%	16.0%	14.7%	1.3%
	Mode Share 2042 Strategy	33,400	7,300	6,300	700	47,700	70.0%	15.3%	13.2%	1.5%	3,800	1,800	900	100	6,600	57.6%	27.3%	13.6%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	33.8%	48.5%	54.2%	60.0%	38.3%					34.2%	71.4%	57.1%	0.0%	44.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-8.2%	49.0%	-14.9%	-12.5%	-3.6%					-25.5%	50.0%	-18.2%	0.0%	-12.0%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	55,800	4,700	15,900	1,700	78,100	71.4%	6.0%	20.4%	2.2%	6,200	800	2,100	200	9,300	66.7%	8.6%	22.6%	2.2%
	Mode Share 2042 Strategy	55,300	5,900	15,200	1,600	77,900	71.0%	7.6%	19.5%	2.1%	6,100	1,000	1,900	200	9,100	67.0%	11.0%	20.9%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.8%	38.2%	57.4%	54.5%	31.9%					19.2%	33.3%	75.0%	100.0%	31.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-0.9%	25.5%	-4.4%	-5.9%	-0.3%					-1.6%	25.0%	-9.5%	0.0%	-2.2%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	64,900	4,400	15,000	1,600	86,000	75.5%	5.1%	17.4%	1.9%	7,800	800	1,700	200	10,500	74.3%	7.6%	16.2%	1.9%
	Mode Share 2042 Strategy	64,600	6,800	15,000	1,500	87,800	73.6%	7.7%	17.1%	1.7%	7,600	1,400	1,700	200	10,800	70.4%	13.0%	15.7%	1.9%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.5%	25.7%	26.1%	33.3%	28.2%					27.9%	33.3%	30.8%	100.0%	28.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-0.5%	54.5%	0.0%	-6.3%	2.1%					-2.6%	75.0%	0.0%	0.0%	2.9%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	43,200	4,400	8,400	1,000	56,900	75.9%	7.7%	14.8%	1.8%	4,600	900	900	100	6,500	70.8%	13.8%	13.8%	1.5%
	Mode Share 2042 Strategy	46,300	5,500	10,100	1,100	63,100	73.4%	8.7%	16.0%	1.7%	4,900	1,100	1,100	100	7,200	68.1%	15.3%	15.3%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	29.4%	13.5%	25.0%	17.8%					15.0%	50.0%	12.5%	0.0%	18.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	7.2%	25.0%	20.2%	10.0%	10.9%					6.5%	22.2%	22.2%	0.0%	10.8%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	8,600	700	2,100	200	11,600	74.1%	6.0%	18.1%	1.7%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2042 Strategy	9,100	1,200	2,400	200	13,000	70.0%	9.2%	18.5%	1.5%	800	200	200	N/A	1,300	61.5%	15.4%	15.4%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	24.6%	40.0%	23.5%	0.0%	24.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	5.8%	71.4%	14.3%	0.0%	12.1%					-11.1%	100.0%	0.0%	0.0%	8.3%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	20,900	1,300	5,600	500	28,400	73.6%	4.6%	19.7%	1.8%	2,600	300	700	100	3,600	72.2%	8.3%	19.4%	2.8%
	Mode Share 2042 Strategy	18,400	1,200	5,000	500	25,100	73.3%	4.8%	19.9%	2.0%	2,200	200	600	100	3,100	71.0%	6.5%	19.4%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	35.7%	30.0%	36.6%	25.0%	35.9%					44.4%	50.0%	40.0%	0.0%	44.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-12.0%	-7.7%	-10.7%	0.0%	-11.6%					-15.4%	-33.3%	-14.3%	0.0%	-13.9%				

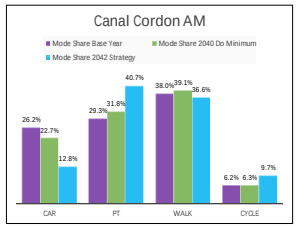
Phase 2, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: AAM (2040)
Strategy Model: ABW (2042)

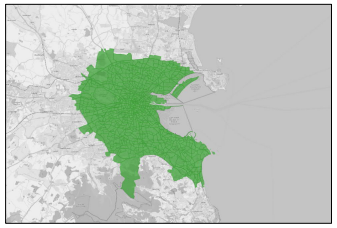
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	23.3%	42.7%	50.5%	56.0%	60.4%	23.8%	38.1%	45.5%	52.4%	57.6%
Mode Share 2042 Strategy	18.9%	37.1%	45.1%	51.3%	56.4%	20.3%	32.1%	38.4%	45.9%	52.0%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	32.1%	21.4%	18.0%	15.5%	13.1%	30.2%	27.2%	24.6%	21.4%	18.5%
Mode Share 2042 Strategy	40.9%	30.1%	26.0%	22.4%	18.8%	38.1%	36.9%	34.7%	30.2%	26.0%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.1%	30.2%	26.8%	24.5%	22.9%	39.4%	28.6%	25.0%	22.2%	20.5%
Mode Share 2042 Strategy	32.9%	27.0%	24.2%	22.4%	21.2%	34.7%	25.1%	22.1%	20.0%	18.7%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.5%	5.7%	4.6%	4.0%	3.5%	6.6%	6.1%	4.9%	4.1%	3.5%
Mode Share 2042 Strategy	7.3%	5.8%	4.6%	4.0%	3.5%	6.9%	6.0%	4.7%	3.9%	3.4%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	163,400	1,155,100	2,220,700	3,114,500	4,229,400	13,400	117,800	247,100	371,200	513,500
Mode Share 2042 Strategy	140,900	1,033,500	2,045,100	2,932,900	4,062,200	12,300	103,000	218,300	337,900	481,900

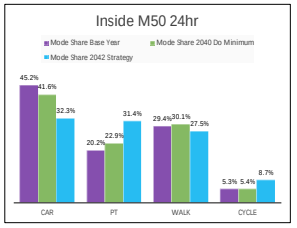
Phase 2, Iteration 5
Base Model: E8R06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

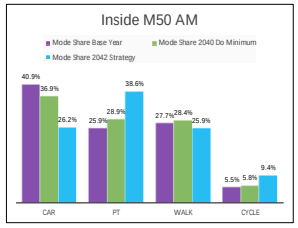
Cumulative Mode Share By Area

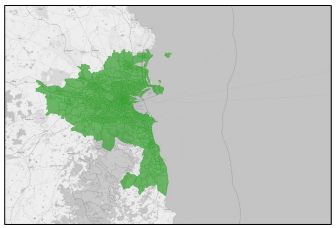


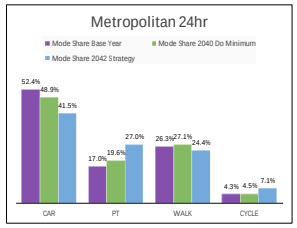


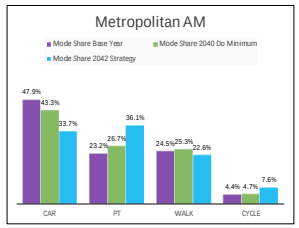


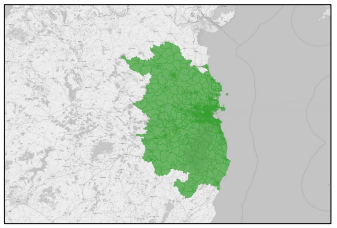


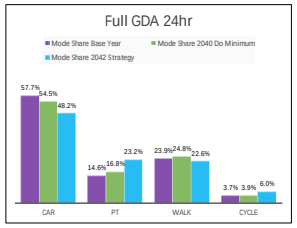


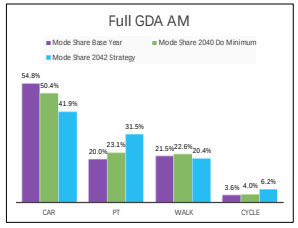


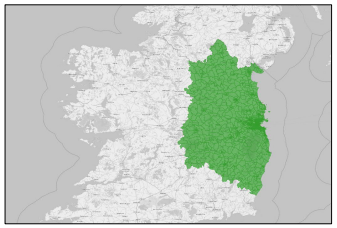


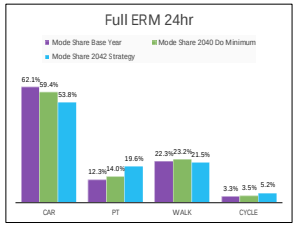


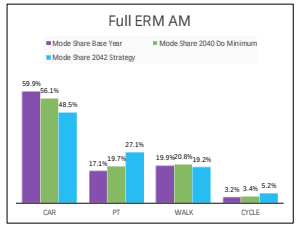




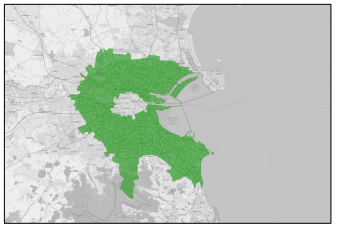


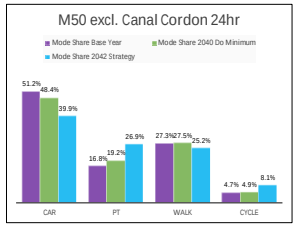


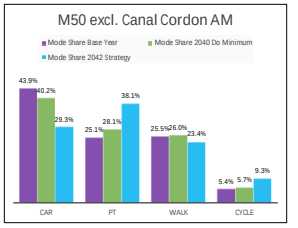


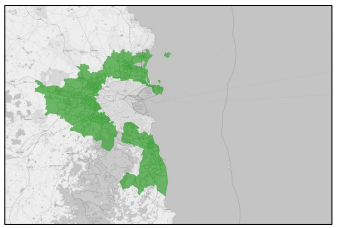


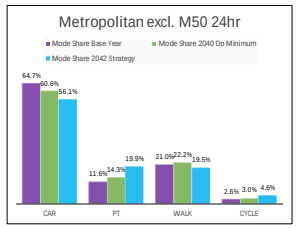
Mode Share By Individual Area

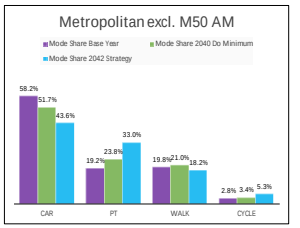


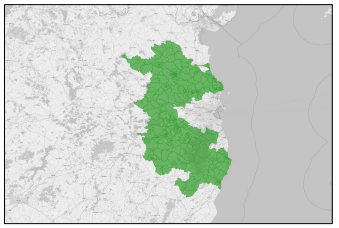


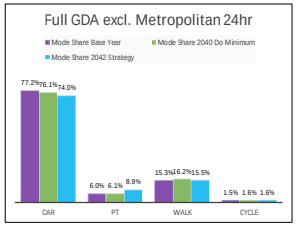


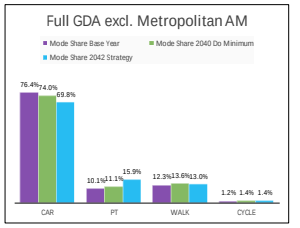


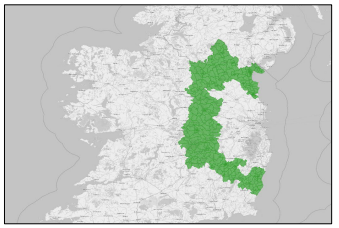


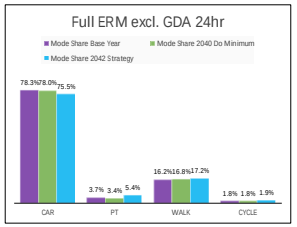


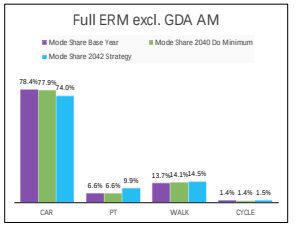






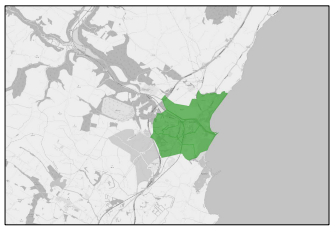


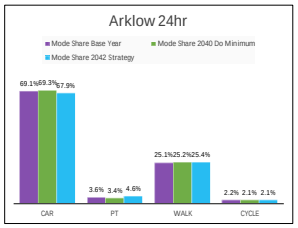


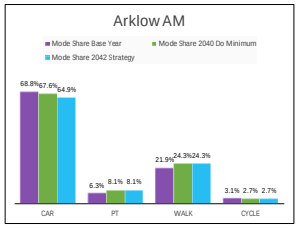


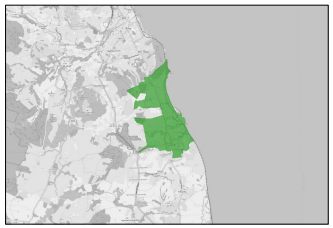
Phase 2, Iteration 5
Base Model: E8R06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

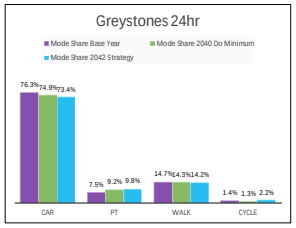
Cumulative Mode Share By Area (Towns)

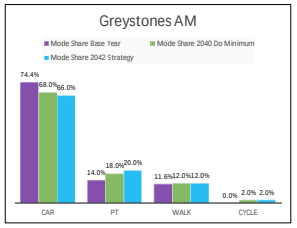


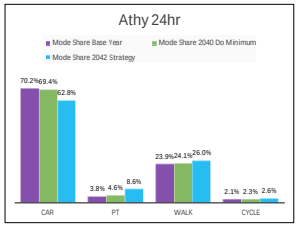


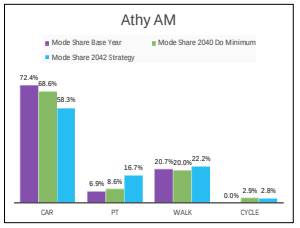


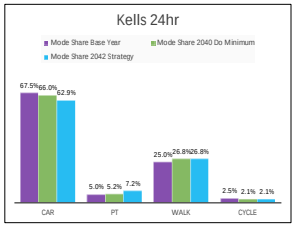


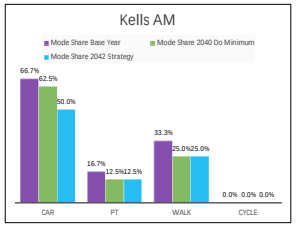


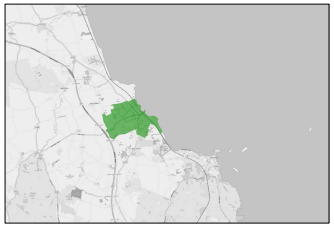


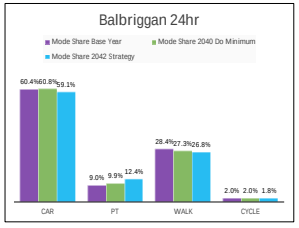


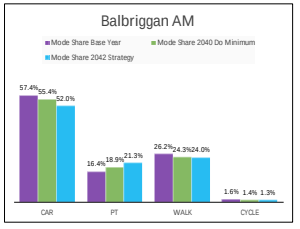


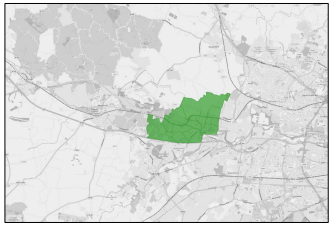


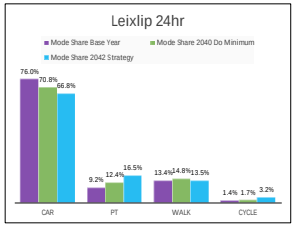


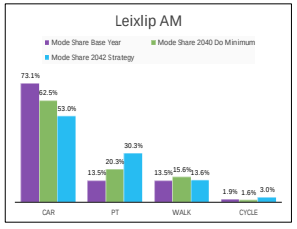


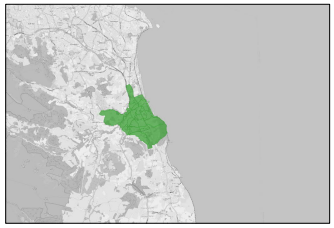


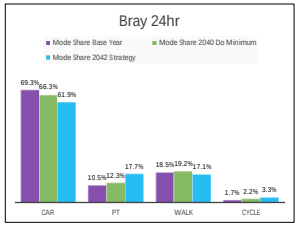


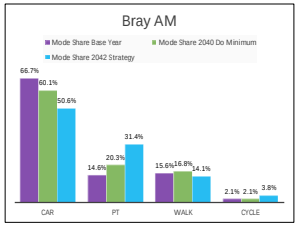


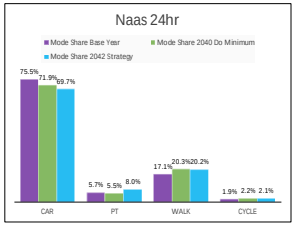


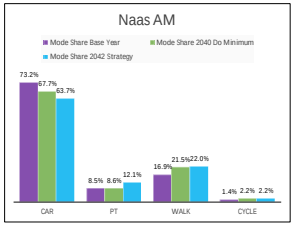


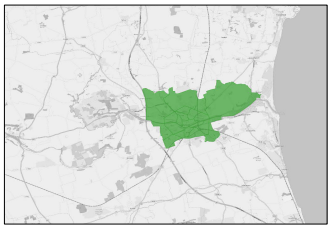


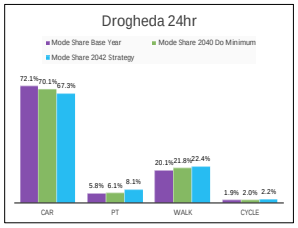


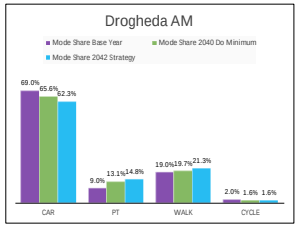


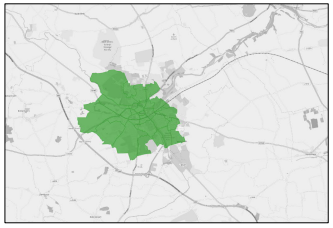


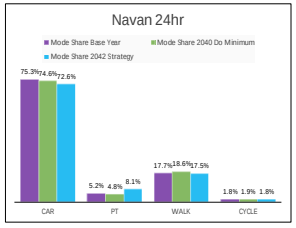


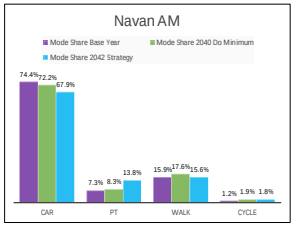






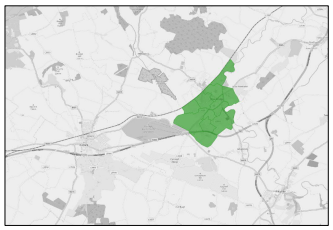


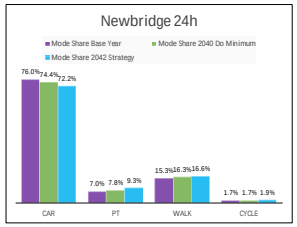


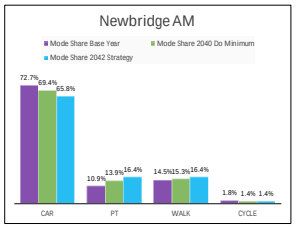


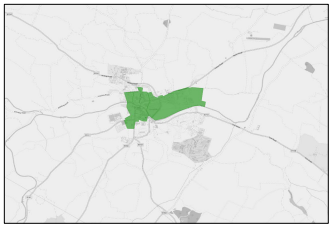
Phase 2, Iteration 5
Base Model: E8R06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

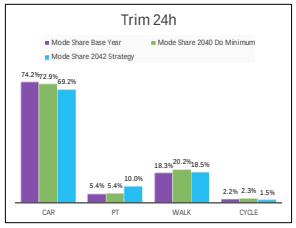
Cumulative Mode Share By Area (Towns)

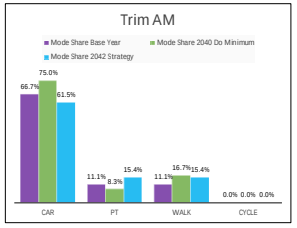


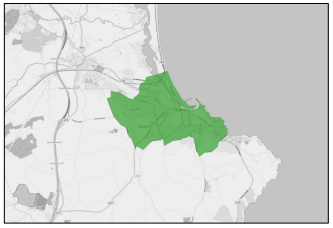


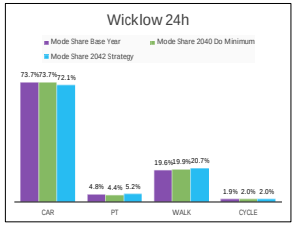


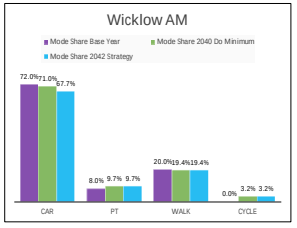






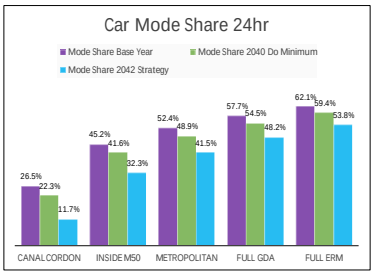


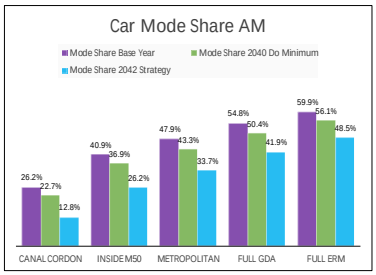


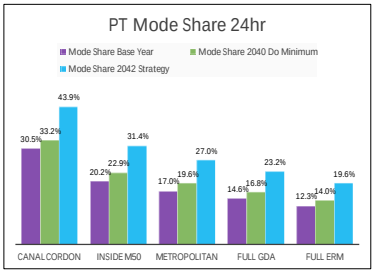


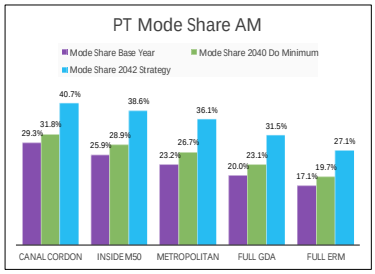
Phase 2, Iteration 5
Base Model: E8R06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

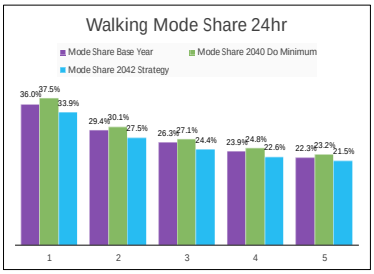
Mode Share By Area

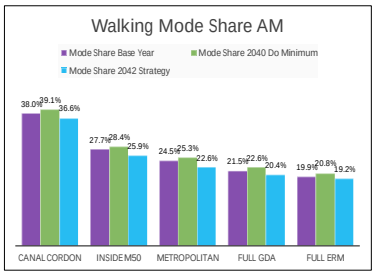


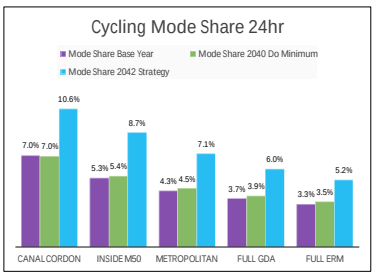


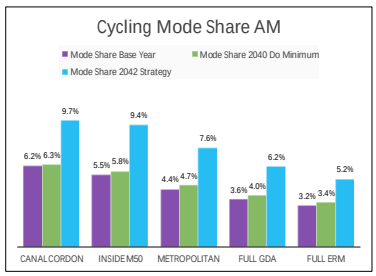












Phase 2, Iteration 5
Base Model: EBR06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	162,800	242,300	273,500	50,800	729,400	22.3%	33.2%	37.5%	7.0%	13,700	19,200	23,600	3,800	60,300	22.7%	31.8%	39.1%	6.3%
	Mode Share 2042 Strategy	87,100	327,600	252,800	79,000	746,500	11.7%	43.9%	33.9%	10.6%	7,800	24,800	22,300	5,900	60,900	12.8%	40.7%	36.6%	9.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.3%	42.8%	36.8%	30.3%	31.1%					16.1%	45.5%	38.0%	35.7%	34.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-46.5%	35.2%	-7.6%	55.5%	2.3%					-43.1%	29.2%	-5.5%	55.3%	1.0%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2040 Do Minimum	1,156,400	636,900	837,600	151,400	2,782,100	41.6%	22.9%	30.1%	5.4%	117,200	91,600	90,300	18,400	317,500	36.9%	28.9%	28.4%	5.8%
	Mode Share 2042 Strategy	901,700	875,700	766,300	243,900	2,787,600	32.3%	31.4%	27.5%	8.7%	84,500	124,500	83,700	30,200	322,900	26.2%	38.6%	25.9%	9.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.1%	39.3%	25.7%	26.8%	22.8%					9.7%	35.3%	24.7%	26.9%	21.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-22.0%	37.5%	-8.5%	61.1%	0.2%					-27.9%	35.9%	-7.3%	64.1%	1.7%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2040 Do Minimum	2,206,100	884,300	1,221,800	202,800	4,515,000	48.9%	19.6%	27.1%	4.5%	240,500	148,400	140,400	26,400	555,800	43.3%	26.7%	25.3%	4.7%
	Mode Share 2042 Strategy	1,882,200	1,223,500	1,106,900	323,400	4,536,000	41.5%	27.0%	24.4%	7.1%	192,100	206,000	128,600	43,200	569,900	33.7%	36.1%	22.6%	7.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	16.8%	44.2%	29.0%	31.5%	25.3%					13.3%	44.6%	29.5%	34.7%	25.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-14.7%	38.4%	-9.4%	59.5%	0.5%					-20.1%	38.8%	-8.4%	63.6%	2.5%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2040 Do Minimum	3,110,600	956,800	1,414,300	222,400	5,704,100	54.5%	16.8%	24.8%	3.9%	364,500	167,000	163,100	28,700	723,200	50.4%	23.1%	22.6%	4.0%
	Mode Share 2042 Strategy	2,762,300	1,329,400	1,291,400	342,300	5,725,500	48.2%	23.2%	22.6%	6.0%	309,600	232,700	150,500	45,500	738,200	41.9%	31.5%	20.4%	6.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.4%	42.3%	28.8%	31.3%	24.3%					13.9%	43.0%	29.8%	34.7%	23.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-11.2%	38.9%	-8.7%	53.9%	0.4%					-15.1%	39.3%	-7.7%	58.5%	2.1%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2040 Do Minimum	4,266,500	1,006,700	1,664,200	249,400	7,186,700	59.4%	14.0%	23.2%	3.5%	512,200	179,500	189,900	31,300	912,900	56.1%	19.7%	20.8%	3.4%
	Mode Share 2042 Strategy	3,870,800	1,409,100	1,543,800	370,500	7,194,100	53.8%	19.6%	21.5%	5.2%	449,500	251,500	178,000	48,300	927,400	48.5%	27.1%	19.2%	5.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.9%	40.3%	28.1%	30.4%	23.3%					15.3%	41.2%	28.8%	33.2%	23.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-9.3%	40.0%	-7.2%	48.6%	0.1%					-12.2%	40.1%	-6.3%	54.3%	1.6%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2040 Do Minimum	993,600	394,400	564,100	100,600	2,052,700	48.4%	19.2%	27.5%	4.9%	103,400	72,400	66,800	14,700	257,200	40.2%	28.1%	26.0%	5.7%
	Mode Share 2042 Strategy	814,500	548,100	513,500	164,900	2,041,100	39.9%	26.9%	25.2%	8.1%	76,700	99,700	61,300	24,300	262,000	29.3%	38.1%	23.4%	9.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	13.5%	37.2%	21.0%	25.3%	20.1%					8.8%	33.1%	20.8%	25.6%	18.8%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-18.0%	39.0%	-9.0%	63.9%	-0.6%					-25.8%	37.7%	-8.2%	65.3%	1.9%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2040 Do Minimum	1,049,700	247,600	384,200	51,400	1,732,900	60.6%	14.3%	22.2%	3.0%	123,300	56,800	50,100	8,000	238,300	51.7%	23.8%	21.0%	3.4%
	Mode Share 2042 Strategy	980,500	347,700	340,500	79,600	1,748,400	56.1%	19.9%	19.5%	4.6%	107,600	81,400	44,900	13,000	247,000	43.6%	33.0%	18.2%	5.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	21.2%	58.8%	36.5%	47.7%	29.5%					16.9%	62.8%	39.2%	56.9%	31.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-6.6%	40.4%	-11.4%	54.9%	0.9%					-12.7%	43.3%	-10.4%	62.5%	3.7%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2040 Do Minimum	904,500	72,400	192,500	19,600	1,189,100	76.1%	6.1%	16.2%	1.6%	123,900	18,600	22,700	2,300	167,400	74.0%	11.1%	13.6%	1.4%
	Mode Share 2042 Strategy	880,100	105,900	184,500	18,900	1,189,500	74.0%	8.9%	15.5%	1.6%	117,400	26,700	21,900	2,300	168,200	69.8%	15.9%	13.0%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	19.0%	22.5%	27.9%	29.8%	20.8%					15.1%	31.0%	31.2%	35.3%	18.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-2.7%	46.3%	-4.2%	-3.6%	0.0%					-5.2%	43.5%	-3.5%	0.0%	0.5%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2040 Do Minimum	1,155,800	49,900	249,800	27,000	1,482,600	78.0%	3.4%	16.8%	1.8%	147,700	12,500	26,800	2,600	189,700	77.9%	6.6%	14.1%	1.4%
	Mode Share 2042 Strategy	1,108,500	79,600	252,400	28,100	1,468,700	75.5%	5.4%	17.2%	1.9%	140,000	18,800	27,500	2,800	189,200	74.0%	9.9%	14.5%	1.5%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	19.1%	9.4%	24.2%	22.7%	19.7%					18.7%	20.2%	23.5%	18.2%	19.6%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.1%	59.5%	1.0%	4.1%	-0.9%					-5.2%	50.4%	2.6%	7.7%	-0.3%				

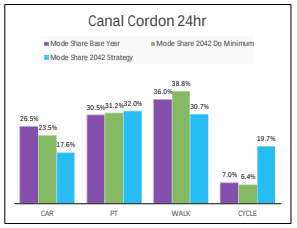
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2040 Do Minimum	22,600	1,100	8,200	700	32,600	69.3%	3.4%	25.2%	2.1%	2,500	300	900	100	3,700	67.6%	8.1%	24.3%	2.7%
	Mode Share 2042 Strategy	22,200	1,500	8,300	700	32,700	67.9%	4.6%	25.4%	2.1%	2,400	300	900	100	3,700	64.9%	8.1%	24.3%	2.7%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	18.9%	10.0%	18.8%	16.7%	18.5%					13.6%	50.0%	28.6%	0.0%	15.6%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-1.8%	36.4%	1.2%	0.0%	0.3%					-4.0%	0.0%	0.0%	0.0%	0.0%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2040 Do Minimum	21,300	1,400	7,400	700	30,700	69.4%	4.6%	24.1%	2.3%	2,400	300	700	100	3,500	68.6%	8.6%	20.0%	2.9%
	Mode Share 2042 Strategy	19,100	2,600	7,900	800	30,400	62.8%	8.6%	26.0%	2.6%	2,100	600	800	100	3,600	58.3%	16.7%	22.2%	2.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	27.5%	55.6%	29.8%	40.0%	29.0%					14.3%	50.0%	16.7%	0.0%	20.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-10.3%	85.7%	6.8%	14.3%	-1.0%					-12.5%	100.0%	14.3%	0.0%	2.9%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2040 Do Minimum	33,800	5,500	15,200	1,100	55,600	60.8%	9.9%	27.3%	2.0%	4,100	1,400	1,800	100	7,400	55.4%	18.9%	24.3%	1.4%
	Mode Share 2042 Strategy	32,900	6,900	14,900	1,000	55,700	59.1%	12.4%	26.8%	1.8%	3,900	1,600	1,800	100	7,500	52.0%	21.3%	24.0%	1.3%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	22.5%	34.1%	16.9%	22.2%	21.7%					17.1%	40.0%	12.5%	0.0%	21.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-2.7%	25.5%	-2.0%	-9.1%	0.2%					-4.9%	14.3%	0.0%	0.0%	1.4%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2040 Do Minimum	67,000	12,400	19,400	2,200	101,000	66.3%	12.3%	19.2%	2.2%	8,600	2,900	2,400	300	14,300	60.1%	20.3%	16.8%	2.1%
	Mode Share 2042 Strategy	65,400	18,700	18,100	3,500	105,600	61.9%	17.7%	17.1%	3.3%	7,900	4,900	2,200	600	15,600	50.6%	31.4%	14.1%	3.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	39.0%	69.9%	50.4%	83.3%	45.1%					34.4%	107.1%	60.0%	50.0%	49.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-2.4%	50.8%	-6.7%	59.1%	4.6%					-8.1%	69.0%	-8.3%	100.0%	9.1%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2040 Do Minimum	76,500	6,700	23,800	2,200	109,200	70.1%	6.1%	21.8%	2.0%	8,000	1,600	2,400	200	12,200	65.6%	13.1%	19.7%	1.6%
	Mode Share 2042 Strategy	73,400	8,800	24,400	2,400	109,000	67.3%	8.1%	22.4%	2.2%	7,600	1,800	2,600	200	12,200	62.3%	14.8%	21.3%	1.6%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	17.7%	28.8%	31.5%	29.4%	21.2%					15.9%	77.8%	26.3%	0.0%	22.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.1%	31.3%	2.5%	9.1%	-0.2%					-5.0%	12.5%	8.3%	0.0%	0.0%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2040 Do Minimum	23,600	2,900	4,500	400	31,500	74.9%	9.2%	14.3%	1.3%	3,400	900	600	100	5,000	68.0%	18.0%	12.0%	2.0%
	Mode Share 2042 Strategy	23,200	3,100	4,500	700	31,600	73.4%	9.8%	14.2%	2.2%	3,300	1,000	600	100	5,000	66.0%	20.0%	12.0%	2.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	10.8%	38.1%	9.8%	0.0%	12.9%					6.3%	50.0%	20.0%	0.0%	16.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-1.7%	6.9%	0.0%	75.0%	0.3%					-2.9%	11.1%	0.0%	0.0%	0.0%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2040 Do Minimum	6,400	500	2,600	200	9,700	66.0%	5.2%	26.8%	2.1%	500	100	200	N/A	800	62.5%	12.5%	25.0%	0.0%
	Mode Share 2042 Strategy	6,100	700	2,600	200	9,700	62.9%	7.2%	26.8%	2.1%	400	100	200	N/A	800	50.0%	12.5%	25.0%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	18.5%	25.0%	30.0%	0.0%	21.3%					25.0%	0.0%	0.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.7%	40.0%	0.0%	0.0%	0.0%					-20.0%	0.0%	0.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,900	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2040 Do Minimum	33,000	5,800	6,900	800	46,600	70.8%	12.4%	14.8%	1.7%	4,000	1,300	1,000	100	6,400	62.5%	20.3%	15.6%	1.6%
	Mode Share 2042 Strategy	31,600	7,800	6,400	1,500	47,300	66.8%	16.5%	13.5%	3.2%	3,500	2,000	900	200	6,600	53.0%	30.3%	13.6%	3.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	21.3%	75.8%	43.8%	60.0%	30.2%					5.3%	85.7%	42.9%	0.0%	23.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.2%	34.5%	-7.2%	87.5%	1.5%					-12.5%	53.8%	-10.0%	100.0%	3.1%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2040 Do Minimum	56,100	4,300	15,800	1,700	78,000	71.9%	5.5%	20.3%	2.2%	6,300	800	2,000	200	9,300	67.7%	8.6%	21.5%	2.2%
	Mode Share 2042 Strategy	54,300	6,200	15,700	1,600	77,900	69.7%	8.0%	20.2%	2.1%	5,800	1,100	2,000	200	9,100	63.7%	12.1%	22.0%	2.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	25.5%	26.5%	56.4%	54.5%	31.8%					21.2%	33.3%	66.7%	100.0%	31.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.2%	44.2%	-0.6%	-5.9%	-0.1%					-7.9%	37.5%	0.0%	0.0%	-2.2%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2040 Do Minimum	65,500	4,200	16,300	1,700	87,800	74.6%	4.8%	18.6%	1.9%	7,800	900	1,900	200	10,800	72.2%	8.3%	17.6%	1.9%
	Mode Share 2042 Strategy	63,900	7,100	15,400	1,600	88,000	72.6%	8.1%	17.5%	1.8%	7,400	1,500	1,700	200	10,900	67.9%	13.8%	15.6%	1.8%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	29.7%	20.0%	37.0%	41.7%	30.8%					27.9%	50.0%	46.2%	100.0%	31.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-2.4%	69.0%	-5.5%	-5.9%	0.2%					-5.1%	66.7%	-10.5%	0.0%	0.9%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2040 Do Minimum	47,000	4,900	10,300	1,100	63,200	74.4%	7.8%	16.3%	1.7%	5,000	1,000	1,100	100	7,200	69.4%	13.9%	15.3%	1.4%
	Mode Share 2042 Strategy	45,600	5,900	10,500	1,200	63,200	72.2%	9.3%	16.6%	1.9%	4,800	1,200	1,200	100	7,300	65.8%	16.4%	16.4%	1.4%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	28.1%	44.1%	39.2%	37.5%	30.8%					25.0%	66.7%	37.5%	0.0%	30.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-3.0%	20.4%	1.9%	9.1%	0.0%					-4.0%	20.0%	9.1%	0.0%	1.4%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2040 Do Minimum	9,400	700	2,600	300	12,900	72.9%	5.4%	20.2%	2.3%	900	100	200	N/A	1,200	75.0%	8.3%	16.7%	0.0%
	Mode Share 2042 Strategy	9,000	1,300	2,400	200	13,000	69.2%	10.0%	18.5%	1.5%	800	200	200	N/A	1,300	61.5%	15.4%	15.4%	0.0%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	36.2%	40.0%	52.9%	50.0%	38.7%					50.0%	0.0%	100.0%	0.0%	33.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-4.3%	85.7%	-7.7%	-33.3%	0.8%					-11.1%	100.0%	0.0%	0.0%	8.3%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2040 Do Minimum	18,500	1,100	5,000	500	25,100	73.7%	4.4%	19.9%	2.0%	2,200	300	600	100	3,100	71.0%	9.7%	19.4%	3.2%
	Mode Share 2042 Strategy	18,100	1,300	5,200	500	25,100	72.1%	5.2%	20.7%	2.0%	2,100	300	600	100	3,100	67.7%	9.7%	19.4%	3.2%
	Dif Mode Share 2040 Do Minimum - Mode Share Base Year	20.1%	10.0%	22.0%	25.0%	20.1%					22.2%	50.0%	20.0%	0.0%	24.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2040 Do Minimum	-2.2%	18.2%	4.0%	0.0%	0.0%					-4.5%	0.0%	0.0%	0.0%	0.0%				

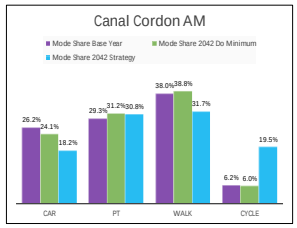
Phase 2, Iteration 5
Base Model: E8R06 (2016)
Do Minimum Model: ACB (2042)
Strategy Model: ACG (2042)

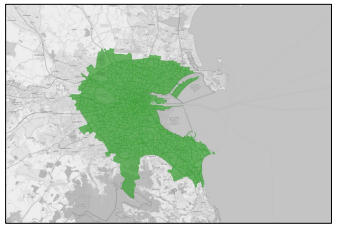
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2040 Do Minimum	22.3%	41.6%	48.9%	54.5%	59.4%	22.7%	36.9%	43.3%	50.4%	56.1%
Mode Share 2042 Strategy	11.7%	32.3%	41.5%	48.2%	53.8%	12.8%	26.2%	33.7%	41.9%	48.5%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2040 Do Minimum	33.2%	22.9%	19.6%	16.8%	14.0%	31.8%	28.9%	26.7%	23.1%	19.7%
Mode Share 2042 Strategy	43.9%	31.4%	27.0%	23.2%	19.6%	40.7%	38.6%	36.1%	31.5%	27.1%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2040 Do Minimum	37.5%	30.1%	27.1%	24.8%	23.2%	39.1%	28.4%	25.3%	22.6%	20.8%
Mode Share 2042 Strategy	33.9%	27.5%	24.4%	22.6%	21.5%	36.6%	25.9%	22.6%	20.4%	19.2%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2040 Do Minimum	7.0%	5.4%	4.5%	3.9%	3.5%	6.3%	5.8%	4.7%	4.0%	3.4%
Mode Share 2042 Strategy	10.6%	8.7%	7.1%	6.0%	5.2%	9.7%	9.4%	7.6%	6.2%	5.2%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2040 Do Minimum	162,800	1,156,400	2,206,100	3,110,600	4,266,500	13,700	117,200	240,500	364,500	512,200
Mode Share 2042 Strategy	87,100	901,700	1,882,200	2,762,300	3,870,800	7,800	84,500	192,100	309,600	449,500

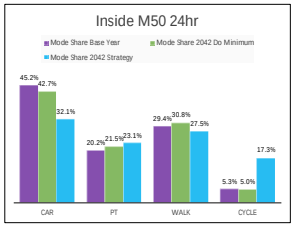
Phase 3, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

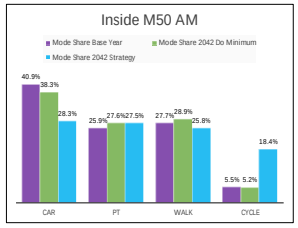
Cumulative Mode Share By Area

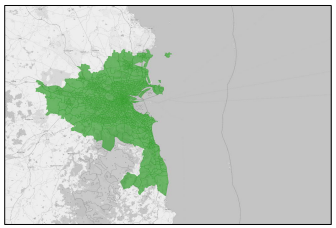


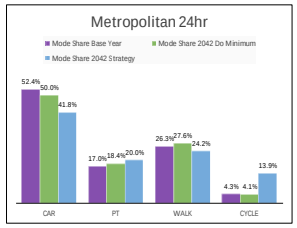


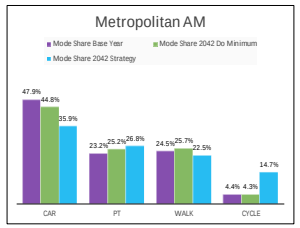


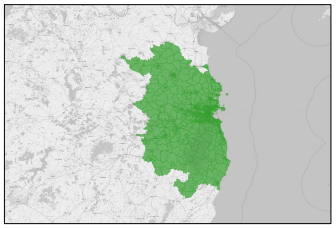


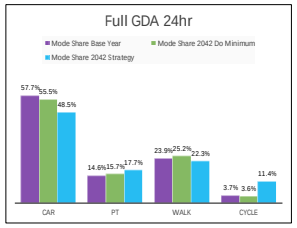


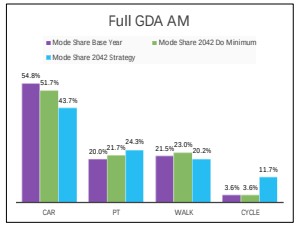


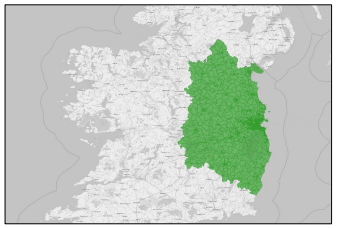


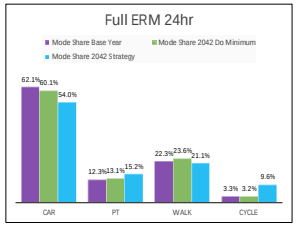


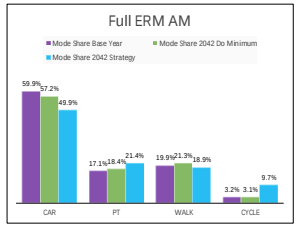




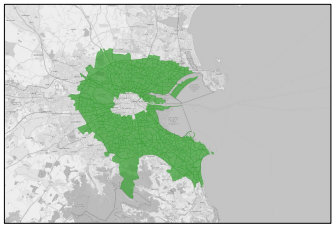


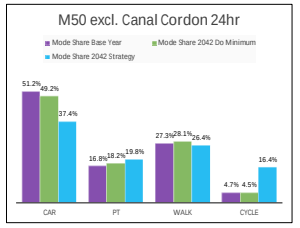


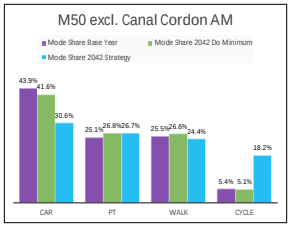


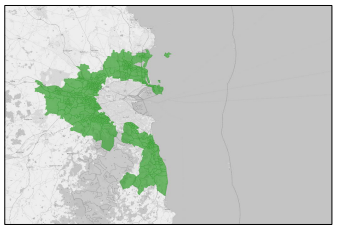


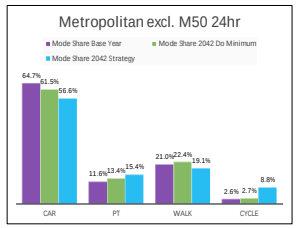
Mode Share By Individual Area

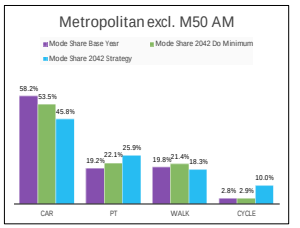


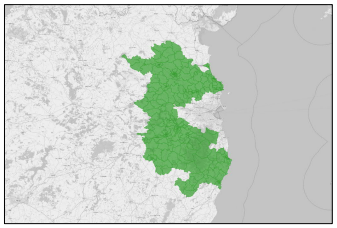


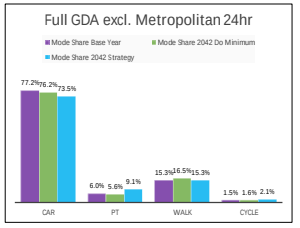


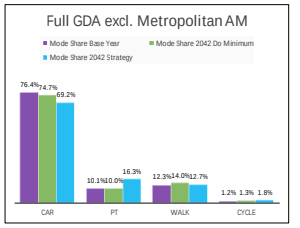


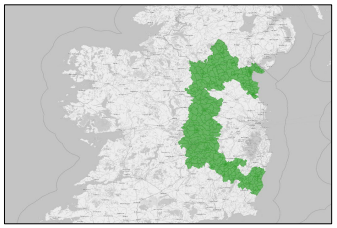


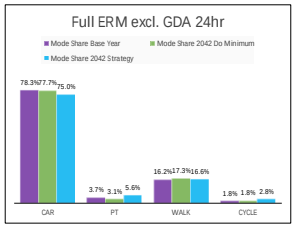


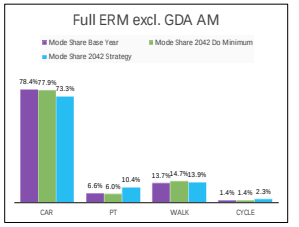






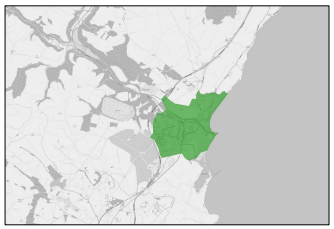


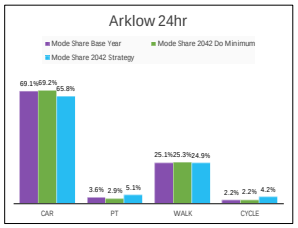


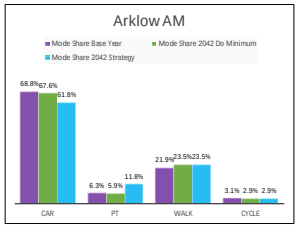


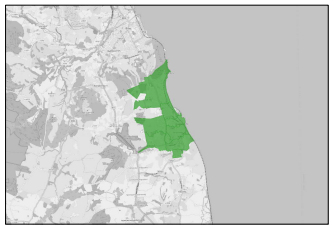
Phase 3, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

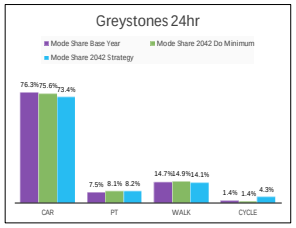
Cumulative Mode Share By Area (Towns)

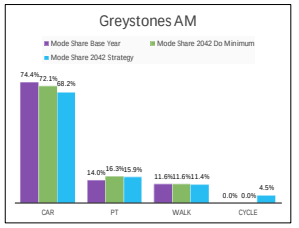


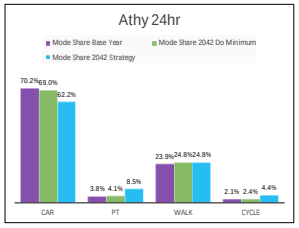


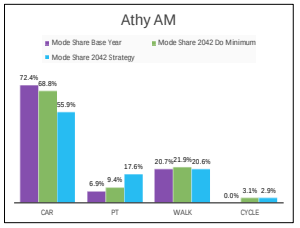


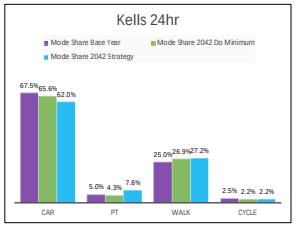


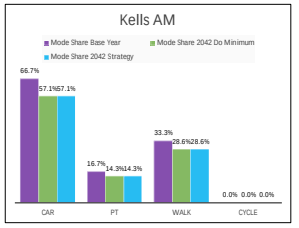


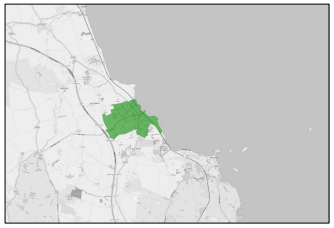


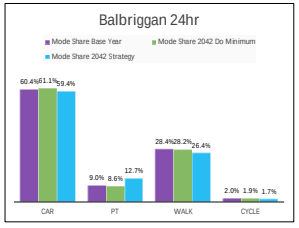


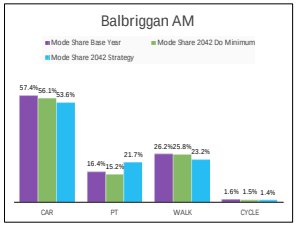


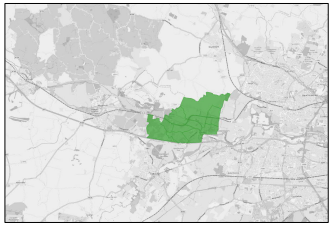


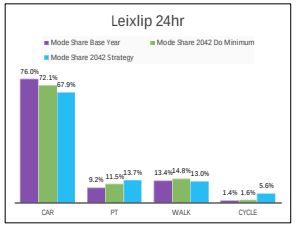


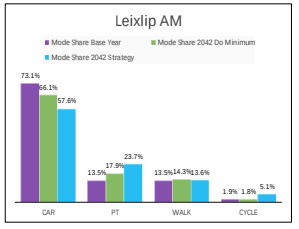


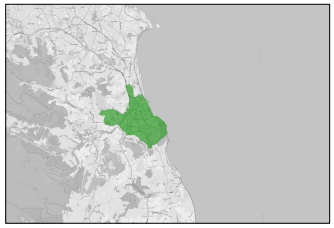


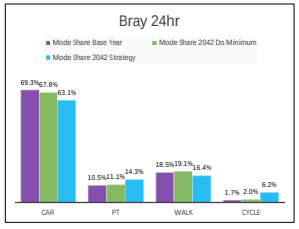


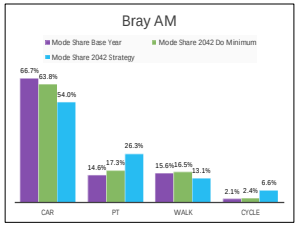


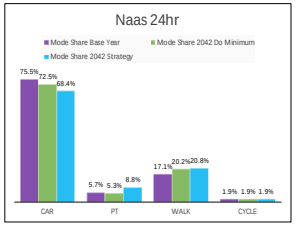


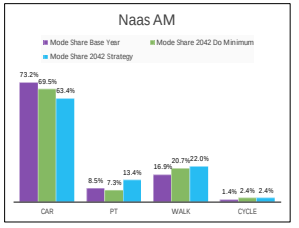


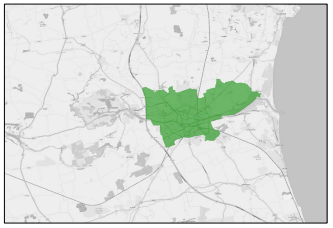


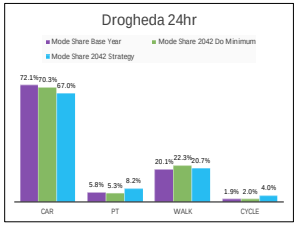


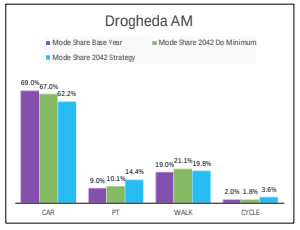


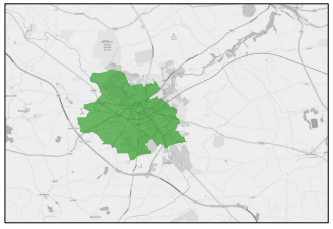


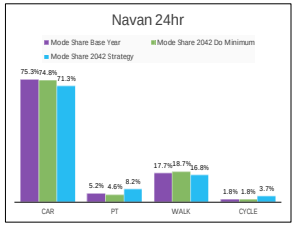


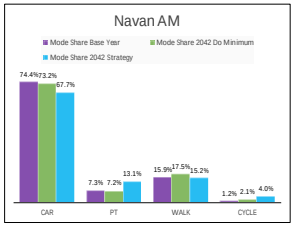






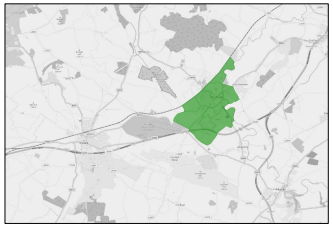


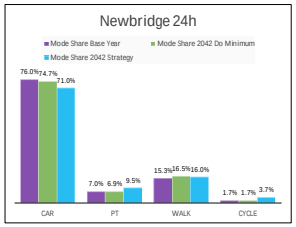


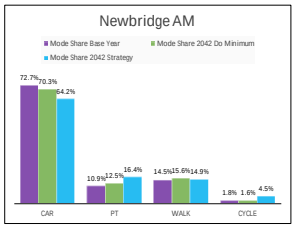


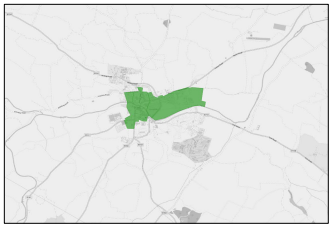
Phase 3, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

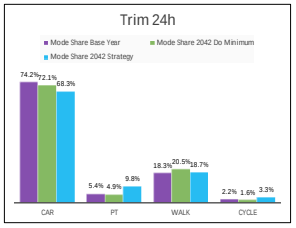
Cumulative Mode Share By Area (Towns)

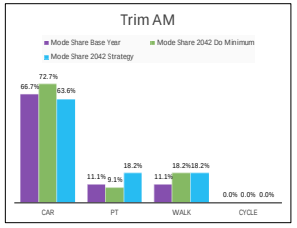


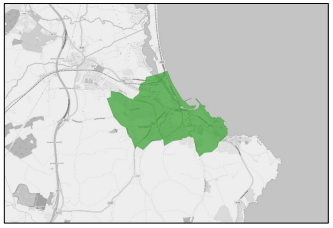


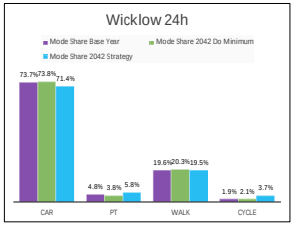


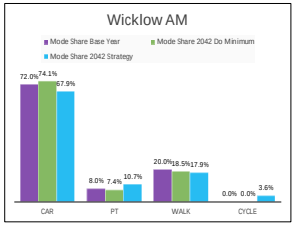






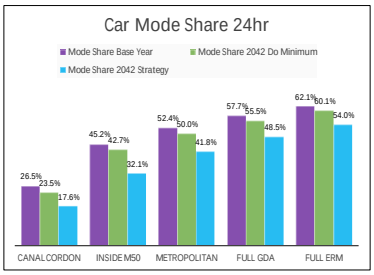


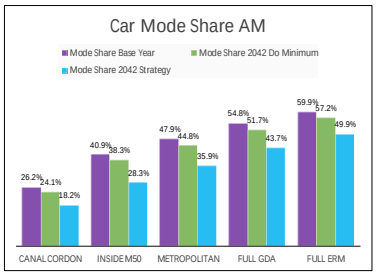


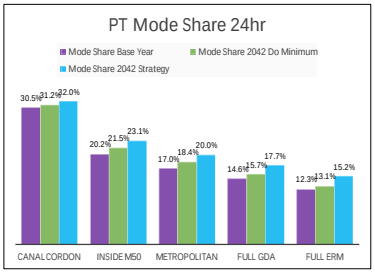


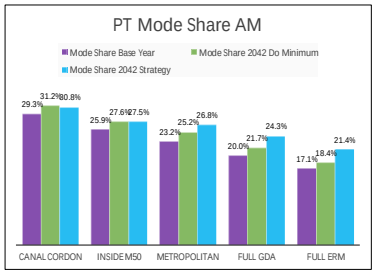
Phase 3, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

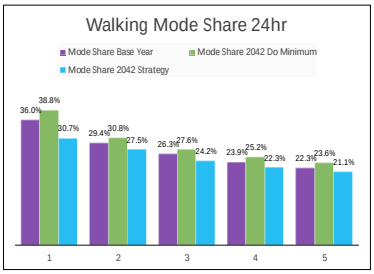
Mode Share By Area

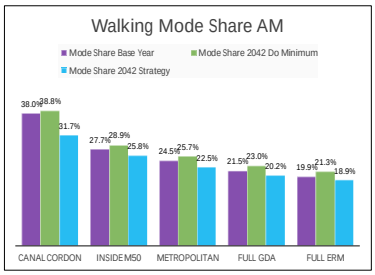


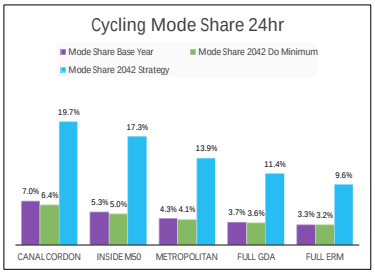


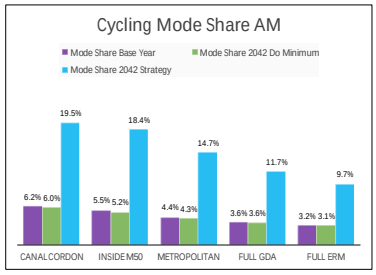












Phase 3, Iteration 1
Base Model: EBR06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2042 Do Minimum	153,900	203,900	253,800	42,100	653,800	23.5%	31.2%	38.8%	6.4%	12,900	16,700	20,800	3,200	53,600	24.1%	31.2%	38.8%	6.0%
	Mode Share 2042 Strategy	119,900	217,700	209,100	133,700	680,400	17.6%	32.0%	30.7%	19.7%	9,700	16,400	16,900	10,400	53,300	18.2%	30.8%	31.7%	19.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	4.3%	20.2%	26.9%	7.9%	17.5%					9.3%	26.5%	21.6%	14.3%	19.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-22.1%	6.8%	-17.6%	217.6%	4.1%					-24.8%	-1.8%	-18.8%	225.0%	-0.6%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2042 Do Minimum	1,095,500	552,100	790,400	128,000	2,566,100	42.7%	21.5%	30.8%	5.0%	108,300	78,000	81,700	14,800	282,900	38.3%	27.6%	28.9%	5.2%
	Mode Share 2042 Strategy	818,300	588,000	702,200	440,500	2,548,900	32.1%	23.1%	27.5%	17.3%	79,400	77,300	72,500	51,800	281,000	28.3%	27.5%	25.8%	18.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	7.1%	20.8%	18.7%	7.2%	13.3%					1.4%	15.2%	12.8%	2.1%	8.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-25.3%	6.5%	-11.2%	244.1%	-0.7%					-26.7%	-0.9%	-11.3%	250.0%	-0.7%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2042 Do Minimum	2,092,200	769,500	1,154,400	171,900	4,188,000	50.0%	18.4%	27.6%	4.1%	222,300	125,000	127,400	21,100	495,800	44.8%	25.2%	25.7%	4.3%
	Mode Share 2042 Strategy	1,766,000	846,500	1,022,600	587,000	4,222,100	41.8%	20.0%	24.2%	13.9%	179,900	134,100	112,600	73,800	500,500	35.9%	26.8%	22.5%	14.7%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	10.7%	25.5%	21.8%	11.5%	16.2%					4.7%	21.8%	17.5%	7.7%	11.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-15.6%	10.0%	-11.4%	241.5%	0.8%					-19.1%	7.3%	-11.6%	249.8%	0.9%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2042 Do Minimum	2,941,900	832,000	1,338,700	189,900	5,302,500	55.5%	15.7%	25.2%	3.6%	333,100	139,900	148,100	23,000	644,200	51.7%	21.7%	23.0%	3.6%
	Mode Share 2042 Strategy	2,599,100	950,100	1,195,800	610,500	5,355,500	48.5%	17.7%	22.3%	11.4%	285,800	159,100	132,200	76,400	653,500	43.7%	24.3%	20.2%	11.7%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.1%	23.8%	21.9%	12.1%	15.6%					4.1%	19.8%	17.8%	8.0%	10.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-11.7%	14.2%	-10.7%	221.5%	1.0%					-14.2%	13.7%	-10.7%	232.2%	1.4%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2042 Do Minimum	4,030,600	875,300	1,581,300	215,600	6,702,800	60.1%	13.1%	23.6%	3.2%	466,700	150,100	173,300	25,400	815,500	57.2%	18.4%	21.3%	3.1%
	Mode Share 2042 Strategy	3,643,400	1,028,400	1,427,000	649,800	6,748,500	54.0%	15.2%	21.1%	9.6%	412,100	177,000	156,200	80,400	825,700	49.9%	21.4%	18.9%	9.7%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.4%	22.0%	21.7%	12.7%	15.0%					5.0%	18.1%	17.6%	8.1%	9.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-9.6%	17.5%	-9.8%	201.4%	0.7%					-11.7%	17.9%	-9.9%	216.5%	1.3%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2042 Do Minimum	941,600	348,200	536,600	85,900	1,912,200	49.2%	18.2%	28.1%	4.5%	95,400	61,400	60,900	11,700	229,300	41.6%	26.8%	26.6%	5.1%
	Mode Share 2042 Strategy	698,400	370,300	493,100	306,800	1,868,600	37.4%	19.8%	26.4%	16.4%	69,700	60,900	55,600	41,500	227,700	30.6%	26.7%	24.4%	18.2%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	7.6%	21.1%	15.1%	7.0%	11.9%					0.4%	12.9%	10.1%	0.0%	5.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-25.8%	6.3%	-8.1%	257.2%	-2.3%					-26.9%	-0.8%	-8.7%	254.7%	-0.7%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2042 Do Minimum	996,700	217,400	364,000	43,900	1,621,900	61.5%	13.4%	22.4%	2.7%	114,000	47,000	45,600	6,200	212,900	53.5%	22.1%	21.4%	2.9%
	Mode Share 2042 Strategy	947,700	258,500	320,400	146,500	1,673,200	56.6%	15.4%	19.1%	8.8%	100,500	56,800	40,200	21,900	219,400	45.8%	25.9%	18.3%	10.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	15.1%	39.4%	29.4%	26.1%	21.2%					8.1%	34.7%	26.7%	21.6%	17.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.9%	18.9%	-12.0%	233.7%	3.2%					-11.8%	20.9%	-11.8%	253.2%	3.1%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2042 Do Minimum	849,700	62,500	184,200	18,100	1,114,500	76.2%	5.6%	16.5%	1.6%	110,800	14,800	20,800	2,000	148,400	74.7%	10.0%	14.0%	1.3%
	Mode Share 2042 Strategy	833,100	103,600	173,200	23,500	1,133,300	73.5%	9.1%	15.3%	2.1%	105,900	25,000	19,500	2,700	153,100	69.2%	16.3%	12.7%	1.8%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.8%	5.8%	22.4%	19.9%	13.2%					3.0%	4.2%	20.2%	17.6%	5.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-2.0%	65.8%	-6.0%	29.8%	1.7%					-4.4%	68.9%	-6.3%	35.0%	3.2%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2042 Do Minimum	1,088,700	43,300	242,700	25,700	1,400,300	77.7%	3.1%	17.3%	1.8%	133,500	10,200	25,200	2,400	171,300	77.9%	6.0%	14.7%	1.4%
	Mode Share 2042 Strategy	1,044,300	78,300	231,200	39,300	1,393,100	75.0%	5.6%	16.6%	2.8%	126,200	17,900	24,000	4,000	172,200	73.3%	10.4%	13.9%	2.3%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	12.2%	-5.0%	20.7%	16.8%	13.0%					7.3%	-1.9%	16.1%	9.1%	8.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.1%	80.8%	-4.7%	52.9%	-0.5%					-5.5%	75.5%	-4.8%	66.7%	0.5%				

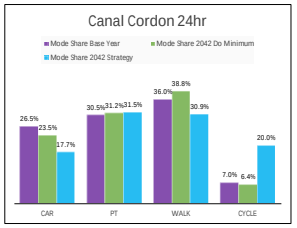
		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2042 Do Minimum	21,600	900	7,900	700	31,200	69.2%	2.9%	25.3%	2.2%	2,300	200	800	100	3,400	67.6%	5.9%	23.5%	2.9%
	Mode Share 2042 Strategy	20,600	1,600	7,800	1,300	31,300	65.8%	5.1%	24.9%	4.2%	2,100	400	800	100	3,400	61.8%	11.8%	23.5%	2.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.7%	-10.0%	14.5%	16.7%	13.5%					4.5%	0.0%	14.3%	0.0%	6.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.6%	77.8%	-1.3%	85.7%	0.3%					-8.7%	100.0%	0.0%	0.0%	0.0%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2042 Do Minimum	20,300	1,200	7,300	700	29,400	69.0%	4.1%	24.8%	2.4%	2,200	300	700	100	3,200	68.8%	9.4%	21.9%	3.1%
	Mode Share 2042 Strategy	18,300	2,500	7,300	1,300	29,400	62.2%	8.5%	24.8%	4.4%	1,900	600	700	100	3,400	55.9%	17.6%	20.6%	2.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	21.6%	33.3%	28.1%	40.0%	23.5%					4.8%	50.0%	16.7%	0.0%	10.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-9.9%	108.3%	0.0%	85.7%	0.0%					-13.6%	100.0%	0.0%	0.0%	6.3%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2042 Do Minimum	32,000	4,500	14,800	1,000	52,400	61.1%	8.6%	28.2%	1.9%	3,700	1,000	1,700	100	6,600	56.1%	15.2%	25.8%	1.5%
	Mode Share 2042 Strategy	31,800	6,800	14,100	900	53,500	59.4%	12.7%	26.4%	1.7%	3,700	1,500	1,600	100	6,900	53.6%	21.7%	23.2%	1.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	15.9%	9.8%	13.8%	11.1%	14.7%					5.7%	0.0%	6.3%	0.0%	8.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-0.6%	51.1%	-4.7%	-10.0%	2.1%					0.0%	50.0%	-5.9%	0.0%	4.5%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2042 Do Minimum	64,200	10,500	18,100	1,900	94,700	67.8%	11.1%	19.1%	2.0%	8,100	2,200	2,100	300	12,700	63.8%	17.3%	16.5%	2.4%
	Mode Share 2042 Strategy	64,400	14,600	16,700	6,300	102,000	63.1%	14.3%	16.4%	6.2%	7,400	3,600	1,800	900	13,700	54.0%	26.3%	13.1%	6.6%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	33.2%	43.8%	40.3%	58.3%	36.1%					26.6%	57.1%	40.0%	50.0%	32.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	0.3%	39.0%	-7.7%	231.6%	7.7%					-8.6%	63.6%	-14.3%	200.0%	7.9%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2042 Do Minimum	72,600	5,500	23,000	2,100	103,200	70.3%	5.3%	22.3%	2.0%	7,300	1,100	2,300	200	10,900	67.0%	10.1%	21.1%	1.8%
	Mode Share 2042 Strategy	69,900	8,600	21,600	4,200	104,300	67.0%	8.2%	20.7%	4.0%	6,900	1,600	2,200	400	11,100	62.2%	14.4%	19.8%	3.6%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.7%	5.8%	27.1%	23.5%	14.5%					5.8%	22.2%	21.1%	0.0%	9.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-3.7%	56.4%	-6.1%	100.0%	1.1%					-5.5%	45.5%	-4.3%	100.0%	1.8%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2042 Do Minimum	22,300	2,400	4,400	400	29,500	75.6%	8.1%	14.9%	1.4%	3,100	700	500	N/A	4,300	72.1%	16.3%	11.6%	0.0%
	Mode Share 2042 Strategy	22,400	2,500	4,300	1,300	30,500	73.4%	8.2%	14.1%	4.3%	3,000	700	500	200	4,400	68.2%	15.9%	11.4%	4.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	4.7%	14.3%	7.3%	0.0%	5.7%					-3.1%	16.7%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	0.4%	4.2%	-2.3%	225.0%	3.4%					-3.2%	0.0%	0.0%	0.0%	2.3%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Do Minimum	6,100	400	2,500	200	9,300	65.6%	4.3%	26.9%	2.2%	400	100	200	N/A	700	57.1%	14.3%	28.6%	0.0%
	Mode Share 2042 Strategy	5,700	700	2,500	200	9,200	62.0%	7.6%	27.2%	2.2%	400	100	200	N/A	700	57.1%	14.3%	28.6%	0.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.0%	0.0%	25.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-6.6%	75.0%	0.0%	0.0%	-1.1%					0.0%	0.0%	0.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2042 Do Minimum	30,700	4,900	6,300	700	42,600	72.1%	11.5%	14.8%	1.6%	3,700	1,000	800	100	5,600	66.1%	17.9%	14.3%	1.8%
	Mode Share 2042 Strategy	30,200	6,100	5,800	2,500	44,500	67.9%	13.7%	13.0%	5.6%	3,400	1,400	800	300	5,900	57.6%	23.7%	13.6%	5.1%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	12.9%	48.5%	31.3%	40.0%	19.0%					-2.6%	42.9%	14.3%	0.0%	7.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-1.6%	24.5%	-7.9%	257.1%	4.5%					-8.1%	40.0%	0.0%	200.0%	5.4%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2042 Do Minimum	52,300	3,800	14,600	1,400	72,100	72.5%	5.3%	20.2%	1.9%	5,700	600	1,700	200	8,200	69.5%	7.3%	20.7%	2.4%
	Mode Share 2042 Strategy	49,700	6,400	15,100	1,400	72,700	68.4%	8.8%	20.8%	1.9%	5,200	1,100	1,800	200	8,200	63.4%	13.4%	22.0%	2.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	17.0%	11.8%	44.6%	27.3%	21.8%					9.6%	0.0%	41.7%	100.0%	15.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-5.0%	68.4%	3.4%	0.0%	0.8%					-8.8%	83.3%	5.9%	0.0%	0.0%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2042 Do Minimum	61,900	3,800	15,500	1,500	82,700	74.8%	4.6%	18.7%	1.8%	7,100	700	1,700	200	9,700	73.2%	7.2%	17.5%	2.1%
	Mode Share 2042 Strategy	59,400	6,800	14,000	3,100	83,300	71.3%	8.2%	16.8%	3.7%	6,700	1,300	1,500	400	9,900	67.7%	13.1%	15.2%	4.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	22.6%	8.6%	30.3%	25.0%	23.2%					16.4%	16.7%	30.8%	100.0%	18.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.0%	78.9%	-9.7%	106.7%	0.7%					-5.6%	85.7%	-11.8%	100.0%	2.1%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2042 Do Minimum	44,300	4,100	9,800	1,000	59,300	74.7%	6.9%	16.5%	1.7%	4,500	800	1,000	100	6,400	70.3%	12.5%	15.6%	1.6%
	Mode Share 2042 Strategy	42,500	5,700	9,600	2,200	59,900	71.0%	9.5%	16.0%	3.7%	4,300	1,100	1,000	300	6,700	64.2%	16.4%	14.9%	4.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	20.7%	20.6%	32.4%	25.0%	22.8%					12.5%	33.3%	25.0%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.1%	39.0%	-2.0%	120.0%	1.0%					-4.4%	37.5%	0.0%	200.0%	4.7%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2042 Do Minimum	8,800	600	2,500	200	12,200	72.1%	4.9%	20.5%	1.6%	800	100	200	N/A	1,100	72.7%	9.1%	18.2%	0.0%
	Mode Share 2042 Strategy	8,400	1,200	2,300	400	12,300	68.3%	9.8%	18.7%	3.3%	700	200	200	N/A	1,100	63.6%	18.2%	18.2%	0.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	27.5%	20.0%	47.1%	0.0%	31.2%					33.3%	0.0%	100.0%	0.0%	22.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.5%	100.0%	-8.0%	100.0%	0.8%					-12.5%	100.0%	0.0%	0.0%	0.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2042 Do Minimum	17,500	900	4,800	500	23,700	73.8%	3.8%	20.3%	2.1%	2,000	200	500	N/A	2,700	74.1%	7.4%	18.5%	0.0%
	Mode Share 2042 Strategy	17,200	1,400	4,700	900	24,100	71.4%	5.8%	19.5%	3.7%	1,900	300	500	100	2,800	67.9%	10.7%	17.9%	3.6%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.6%	-10.0%	17.1%	25.0%	13.4%					11.1%	0.0%	0.0%	0.0%	8.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-1.7%	55.6%	-2.1%	80.0%	1.7%					-5.0%	50.0%	0.0%	0.0%	3.7%				

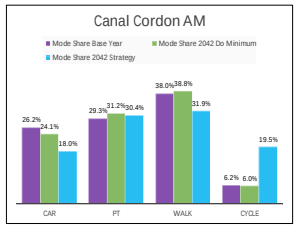
Phase 3, Iteration 1
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADB (2042)

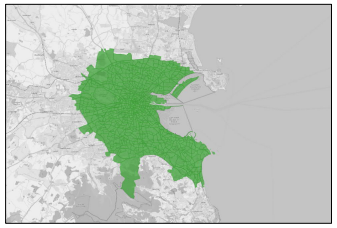
	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2042 Do Minimum	23.5%	42.7%	50.0%	55.5%	60.1%	24.1%	38.3%	44.8%	51.7%	57.2%
Mode Share 2042 Strategy	17.6%	32.1%	41.8%	48.5%	54.0%	18.2%	28.3%	35.9%	43.7%	49.9%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2042 Do Minimum	31.2%	21.5%	18.4%	15.7%	13.1%	31.2%	27.6%	25.2%	21.7%	18.4%
Mode Share 2042 Strategy	32.0%	23.1%	20.0%	17.7%	15.2%	30.8%	27.5%	26.8%	24.3%	21.4%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2042 Do Minimum	38.8%	30.8%	27.6%	25.2%	23.6%	38.8%	28.9%	25.7%	23.0%	21.3%
Mode Share 2042 Strategy	30.7%	27.5%	24.2%	22.3%	21.1%	31.7%	25.8%	22.5%	20.2%	18.9%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2042 Do Minimum	6.4%	5.0%	4.1%	3.6%	3.2%	6.0%	5.2%	4.3%	3.6%	3.1%
Mode Share 2042 Strategy	19.7%	17.3%	13.9%	11.4%	9.6%	19.5%	18.4%	14.7%	11.7%	9.7%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2042 Do Minimum	153,900	1,095,500	2,092,200	2,941,900	4,030,600	12,900	108,300	222,300	333,100	466,700
Mode Share 2042 Strategy	119,900	818,300	1,766,000	2,599,100	3,643,400	9,700	79,400	179,900	285,800	412,100

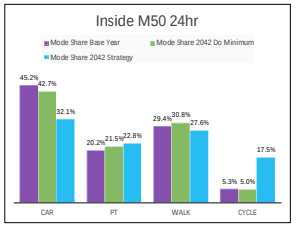
Phase 3, Preferred Strategy
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

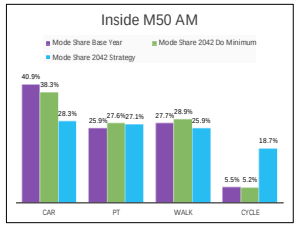
Cumulative Mode Share By Area

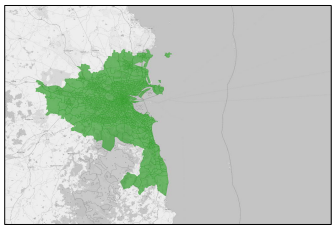


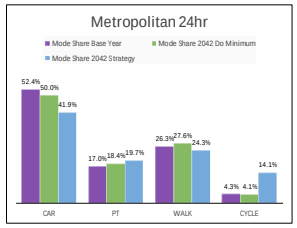


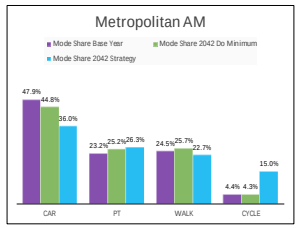


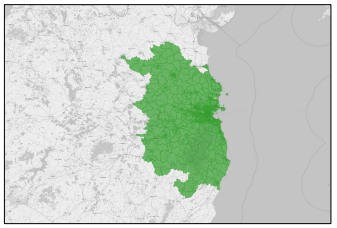


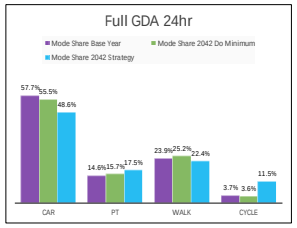


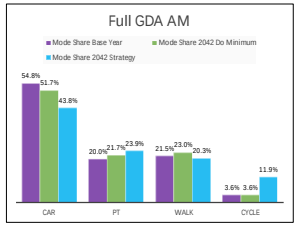


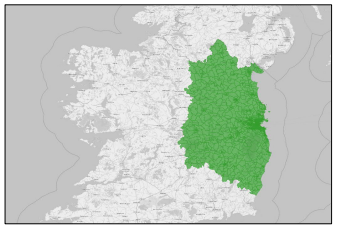


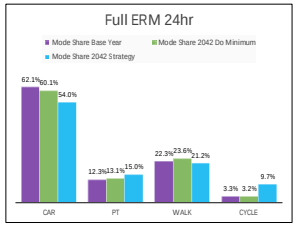


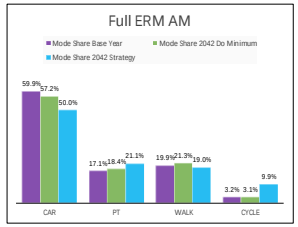




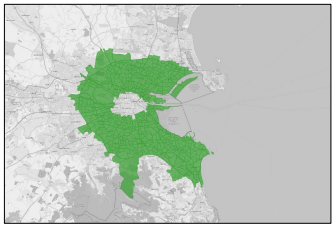


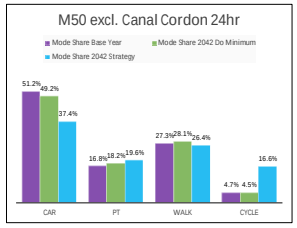


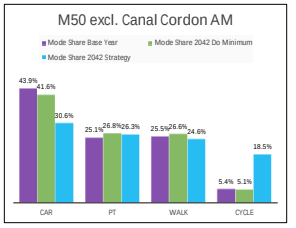


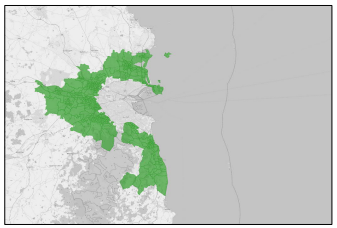


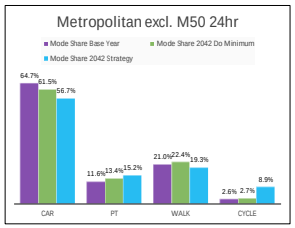
Mode Share By Individual Area

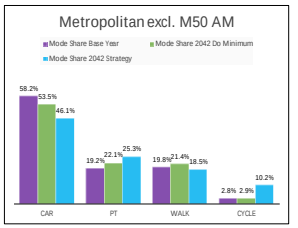


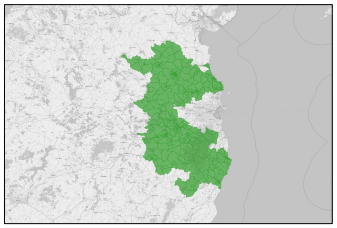


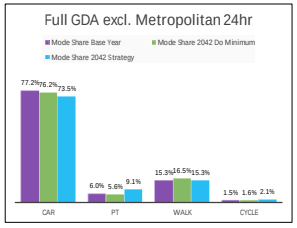


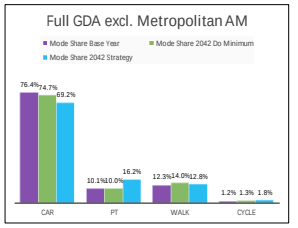


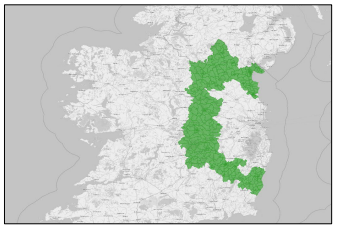


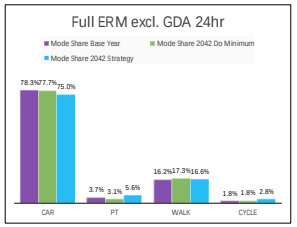


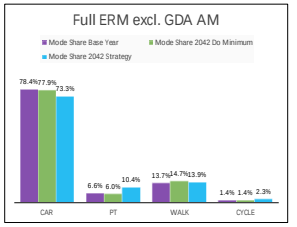






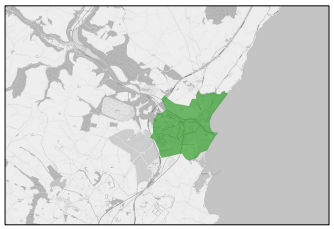


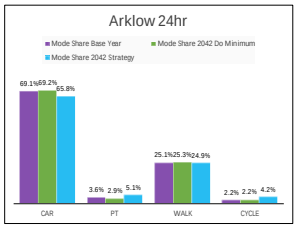


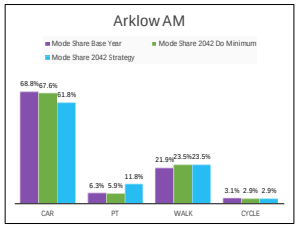


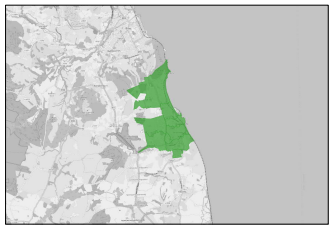
Phase 3, Preferred Strategy
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

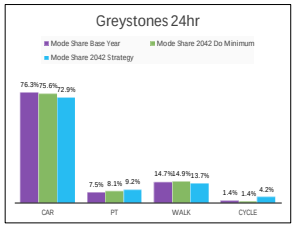
Cumulative Mode Share By Area (Towns)

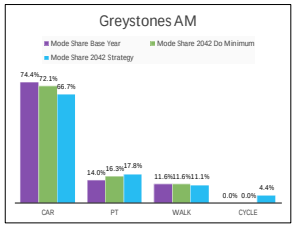


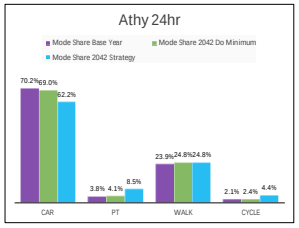


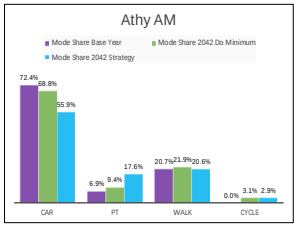


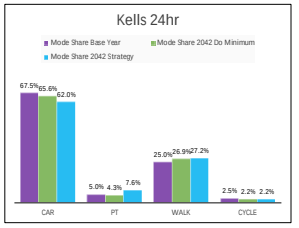


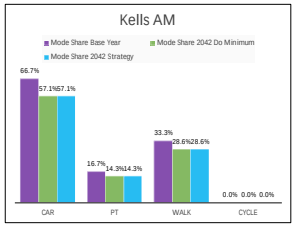


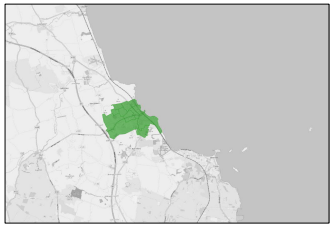


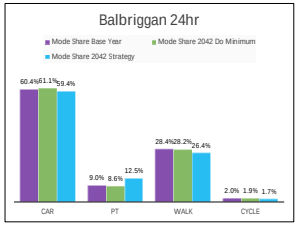


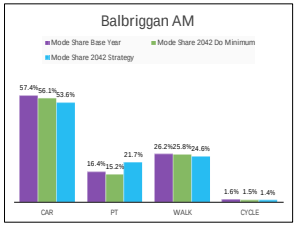


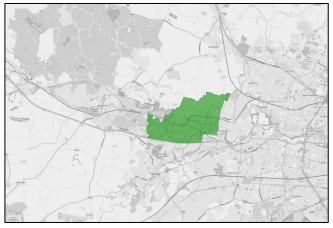


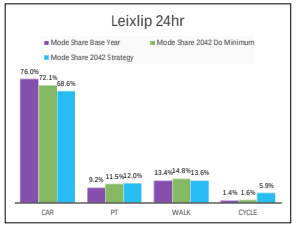


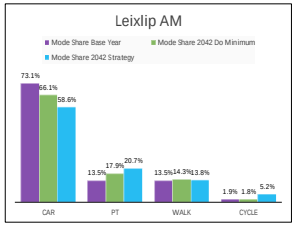


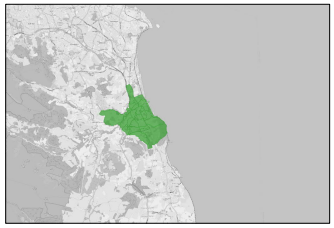


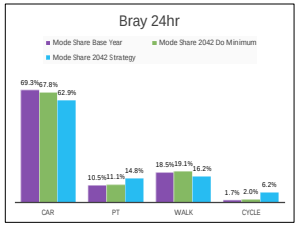


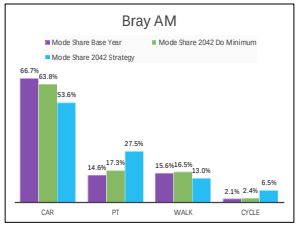


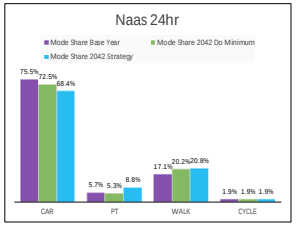


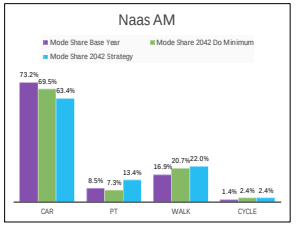


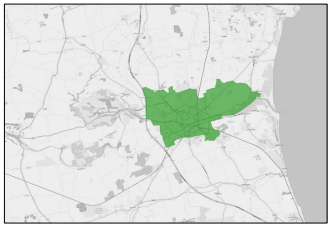


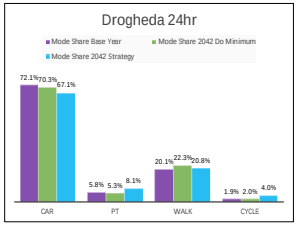


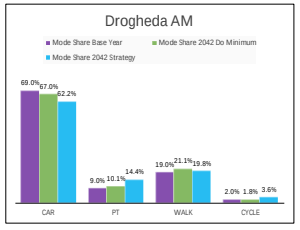


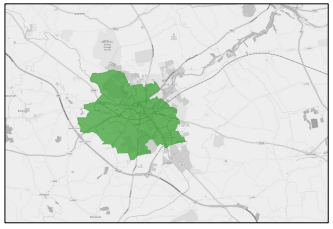


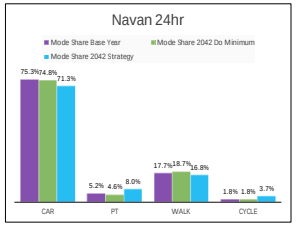


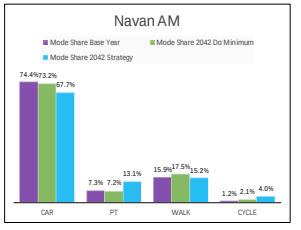






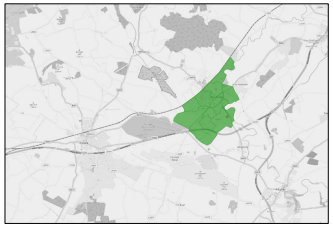


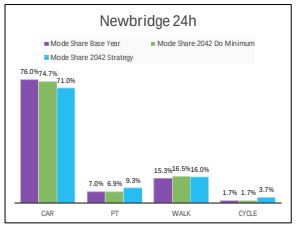


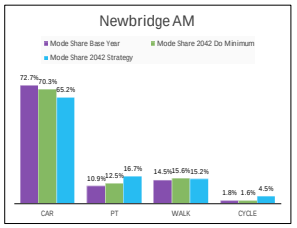


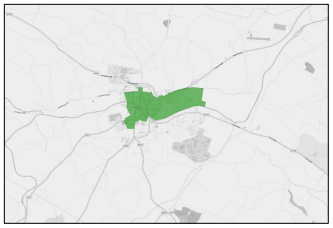
Phase 3, Preferred Strategy
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

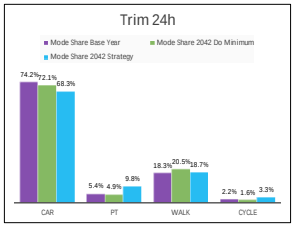
Cumulative Mode Share By Area (Towns)

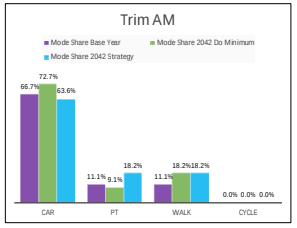


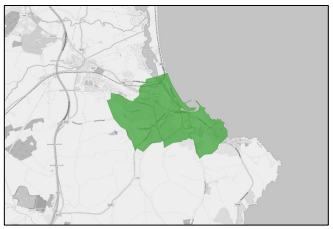


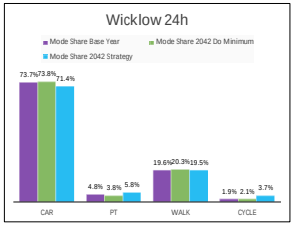


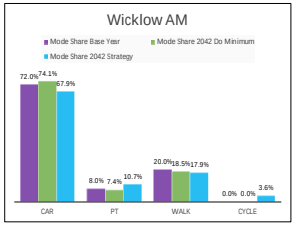






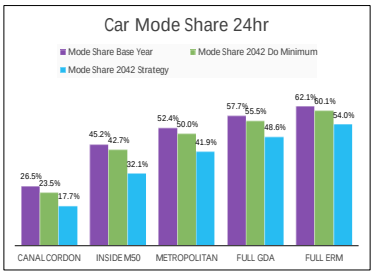


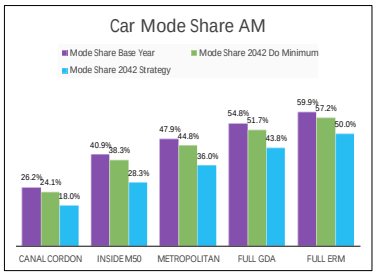


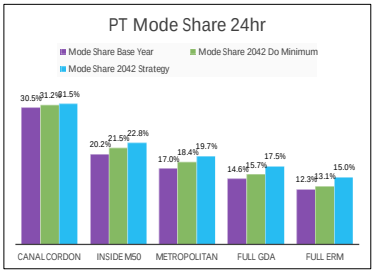


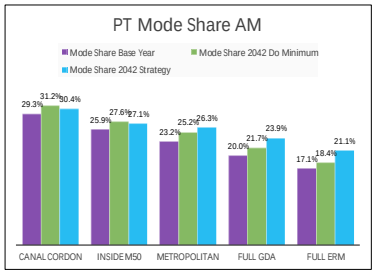
Phase 3, Preferred Strategy
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

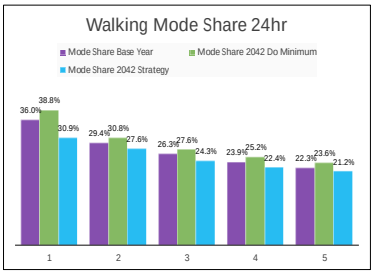
Mode Share By Area

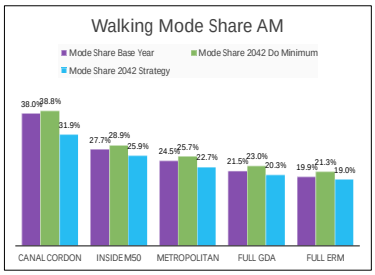


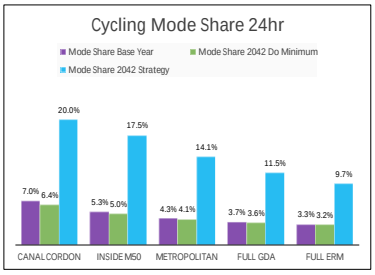


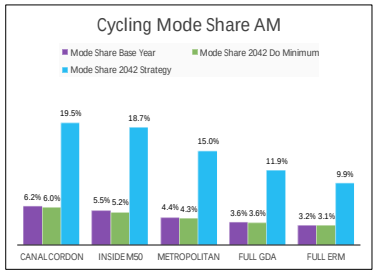












Phase 3, Preferred Strategy
Base Model: EBR06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Canal Cordon	Mode Share Base Year	147,600	169,700	200,000	39,000	556,300	26.5%	30.5%	36.0%	7.0%	11,800	13,200	17,100	2,800	45,000	26.2%	29.3%	38.0%	6.2%
	Mode Share 2042 Do Minimum	153,900	203,900	253,800	42,100	653,800	23.5%	31.2%	38.8%	6.4%	12,900	16,700	20,800	3,200	53,600	24.1%	31.2%	38.8%	6.0%
	Mode Share 2042 Strategy	120,000	213,700	209,800	135,600	679,000	17.7%	31.5%	30.9%	20.0%	9,600	16,200	17,000	10,400	53,300	18.0%	30.4%	31.9%	19.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	4.3%	20.2%	26.9%	7.9%	17.5%					9.3%	26.5%	21.6%	14.3%	19.1%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-22.0%	4.8%	-17.3%	222.1%	3.9%					-25.6%	-3.0%	-18.3%	225.0%	-0.6%				
Inside M50	Mode Share Base Year	1,022,900	457,200	666,100	119,400	2,265,500	26.5%	30.5%	36.0%	7.0%	106,800	67,700	72,400	14,500	261,400	26.2%	29.3%	38.0%	6.2%
	Mode Share 2042 Do Minimum	1,095,500	552,100	790,400	128,000	2,566,100	42.7%	21.5%	30.8%	5.0%	108,300	78,000	81,700	14,800	282,900	38.3%	27.6%	28.9%	5.2%
	Mode Share 2042 Strategy	818,900	579,700	704,000	445,200	2,547,800	32.1%	22.8%	27.6%	17.5%	79,400	76,100	72,800	52,600	280,900	28.3%	27.1%	25.9%	18.7%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	7.1%	20.8%	18.7%	7.2%	13.3%					1.4%	15.2%	12.8%	2.1%	8.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-25.2%	5.0%	-10.9%	247.8%	-0.7%					-26.7%	-2.4%	-10.9%	255.4%	-0.7%				
Metropolitan	Mode Share Base Year	1,889,200	613,100	947,400	154,200	3,603,900	52.4%	17.0%	26.3%	4.3%	212,300	102,600	108,400	19,600	442,900	47.9%	23.2%	24.5%	4.4%
	Mode Share 2042 Do Minimum	2,092,200	769,500	1,154,400	171,900	4,188,000	50.0%	18.4%	27.6%	4.1%	222,300	125,000	127,400	21,100	495,800	44.8%	25.2%	25.7%	4.3%
	Mode Share 2042 Strategy	1,767,400	833,300	1,025,900	593,400	4,220,000	41.9%	19.7%	24.3%	14.1%	180,100	131,500	113,200	74,900	499,700	36.0%	26.3%	22.7%	15.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	10.7%	25.5%	21.8%	11.5%	16.2%					4.7%	21.8%	17.5%	7.7%	11.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-15.5%	8.3%	-11.1%	245.2%	0.8%					-19.0%	5.2%	-11.1%	255.0%	0.8%				
Full GDA	Mode Share Base Year	2,649,100	672,200	1,098,000	169,400	4,588,600	57.7%	14.6%	23.9%	3.7%	319,900	116,800	125,700	21,300	583,700	54.8%	20.0%	21.5%	3.6%
	Mode Share 2042 Do Minimum	2,941,900	832,000	1,338,700	189,900	5,302,500	55.5%	15.7%	25.2%	3.6%	333,100	139,900	148,100	23,000	644,200	51.7%	21.7%	23.0%	3.6%
	Mode Share 2042 Strategy	2,600,400	936,300	1,199,300	616,900	5,353,000	48.6%	17.5%	22.4%	11.5%	286,000	156,200	132,800	77,600	652,600	43.8%	23.9%	20.3%	11.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.1%	23.8%	21.9%	12.1%	15.6%					4.1%	19.8%	17.8%	8.0%	10.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-11.6%	12.5%	-10.4%	224.9%	1.0%					-14.1%	11.7%	-10.3%	237.4%	1.3%				
Full ERM	Mode Share Base Year	3,619,500	717,700	1,299,100	191,300	5,827,600	62.1%	12.3%	22.3%	3.3%	444,300	127,100	147,400	23,500	742,300	59.9%	17.1%	19.9%	3.2%
	Mode Share 2042 Do Minimum	4,030,600	875,300	1,581,300	215,600	6,702,800	60.1%	13.1%	23.6%	3.2%	466,700	150,100	173,300	25,400	815,500	57.2%	18.4%	21.3%	3.1%
	Mode Share 2042 Strategy	3,644,800	1,014,400	1,430,600	656,200	6,745,900	54.0%	15.0%	21.2%	9.7%	412,200	174,100	156,800	81,600	824,700	50.0%	21.1%	19.0%	9.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.4%	22.0%	21.7%	12.7%	15.0%					5.0%	18.1%	17.6%	8.1%	9.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-9.6%	15.9%	-9.5%	204.4%	0.6%					-11.7%	16.0%	-9.5%	221.3%	1.1%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
M50 excl. Canal Cordon	Mode Share Base Year	875,300	287,500	466,100	80,300	1,709,200	51.2%	16.8%	27.3%	4.7%	95,000	54,400	55,300	11,700	216,500	43.9%	25.1%	25.5%	5.4%
	Mode Share 2042 Do Minimum	941,600	348,200	536,600	85,900	1,912,200	49.2%	18.2%	28.1%	4.5%	95,400	61,400	60,900	11,700	229,300	41.6%	26.8%	26.6%	5.1%
	Mode Share 2042 Strategy	698,900	366,000	494,200	309,600	1,868,800	37.4%	19.6%	26.4%	16.6%	69,700	59,900	55,900	42,100	227,600	30.6%	26.3%	24.6%	18.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	7.6%	21.1%	15.1%	7.0%	11.9%					0.4%	12.9%	10.1%	0.0%	5.9%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-25.8%	5.1%	-7.9%	260.4%	-2.3%					-26.9%	-2.4%	-8.2%	259.8%	-0.7%				
Metropolitan excl. M50	Mode Share Base Year	866,300	155,900	281,400	34,800	1,338,400	64.7%	11.6%	21.0%	2.6%	105,500	34,900	36,000	5,100	181,400	58.2%	19.2%	19.8%	2.8%
	Mode Share 2042 Do Minimum	996,700	217,400	364,000	43,900	1,621,900	61.5%	13.4%	22.4%	2.7%	114,000	47,000	45,600	6,200	212,900	53.5%	22.1%	21.4%	2.9%
	Mode Share 2042 Strategy	948,400	253,700	321,900	148,200	1,672,200	56.7%	15.2%	19.3%	8.9%	100,800	55,300	40,400	22,300	218,800	46.1%	25.3%	18.5%	10.2%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	15.1%	39.4%	29.4%	26.1%	21.2%					8.1%	34.7%	26.7%	21.6%	17.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.8%	16.7%	-11.6%	237.6%	3.1%					-11.6%	17.7%	-11.4%	259.7%	2.8%				
Full GDA excl. Metropolitan	Mode Share Base Year	759,900	59,100	150,500	15,100	984,700	77.2%	6.0%	15.3%	1.5%	107,600	14,200	17,300	1,700	140,800	76.4%	10.1%	12.3%	1.2%
	Mode Share 2042 Do Minimum	849,700	62,500	184,200	18,100	1,114,500	76.2%	5.6%	16.5%	1.6%	110,800	14,800	20,800	2,000	148,400	74.7%	10.0%	14.0%	1.3%
	Mode Share 2042 Strategy	833,100	103,000	173,400	23,500	1,132,900	73.5%	9.1%	15.3%	2.1%	105,800	24,800	19,600	2,700	152,900	69.2%	16.2%	12.8%	1.8%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.8%	5.8%	22.4%	19.9%	13.2%					3.0%	4.2%	20.2%	17.6%	5.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-2.0%	64.8%	-5.9%	29.8%	1.7%					-4.5%	67.6%	-5.8%	35.0%	3.0%				
Full ERM excl. GDA	Mode Share Base Year	970,400	45,600	201,100	22,000	1,239,000	78.3%	3.7%	16.2%	1.8%	124,400	10,400	21,700	2,200	158,600	78.4%	6.6%	13.7%	1.4%
	Mode Share 2042 Do Minimum	1,088,700	43,300	242,700	25,700	1,400,300	77.7%	3.1%	17.3%	1.8%	133,500	10,200	25,200	2,400	171,300	77.9%	6.0%	14.7%	1.4%
	Mode Share 2042 Strategy	1,044,400	78,100	231,200	39,300	1,393,000	75.0%	5.6%	16.6%	2.8%	126,200	17,900	24,000	4,000	172,200	73.3%	10.4%	13.9%	2.3%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	12.2%	-5.0%	20.7%	16.8%	13.0%					7.3%	-1.9%	16.1%	9.1%	8.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.1%	80.4%	-4.7%	52.9%	-0.5%					-5.5%	75.5%	-4.8%	66.7%	0.5%				

		24 Hours Total Trips (Persons)					Mode Share				AM Peak Period Trips (Persons)					Mode Share			
		Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle	Car	PT	Walk	Cycle	Total	Car	PT	Walk	Cycle
Arklow	Mode Share Base Year	19,000	1,000	6,900	600	27,500	69.1%	3.6%	25.1%	2.2%	2,200	200	700	100	3,200	68.8%	6.3%	21.9%	3.1%
	Mode Share 2042 Do Minimum	21,600	900	7,900	700	31,200	69.2%	2.9%	25.3%	2.2%	2,300	200	800	100	3,400	67.6%	5.9%	23.5%	2.9%
	Mode Share 2042 Strategy	20,600	1,600	7,800	1,300	31,300	65.8%	5.1%	24.9%	4.2%	2,100	400	800	100	3,400	61.8%	11.8%	23.5%	2.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.7%	-10.0%	14.5%	16.7%	13.5%					4.5%	0.0%	14.3%	0.0%	6.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.6%	77.8%	-1.3%	85.7%	0.3%					-8.7%	100.0%	0.0%	0.0%	0.0%				
Athy	Mode Share Base Year	16,700	900	5,700	500	23,800	70.2%	3.8%	23.9%	2.1%	2,100	200	600	N/A	2,900	72.4%	6.9%	20.7%	0.0%
	Mode Share 2042 Do Minimum	20,300	1,200	7,300	700	29,400	69.0%	4.1%	24.8%	2.4%	2,200	300	700	100	3,200	68.8%	9.4%	21.9%	3.1%
	Mode Share 2042 Strategy	18,300	2,500	7,300	1,300	29,400	62.2%	8.5%	24.8%	4.4%	1,900	600	700	100	3,400	55.9%	17.6%	20.6%	2.9%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	21.6%	33.3%	28.1%	40.0%	23.5%					4.8%	50.0%	16.7%	0.0%	10.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-9.9%	108.3%	0.0%	85.7%	0.0%					-13.6%	100.0%	0.0%	0.0%	6.3%				
Balbriggan	Mode Share Base Year	27,600	4,100	13,000	900	45,700	60.4%	9.0%	28.4%	2.0%	3,500	1,000	1,600	100	6,100	57.4%	16.4%	26.2%	1.6%
	Mode Share 2042 Do Minimum	32,000	4,500	14,800	1,000	52,400	61.1%	8.6%	28.2%	1.9%	3,700	1,000	1,700	100	6,600	56.1%	15.2%	25.8%	1.5%
	Mode Share 2042 Strategy	31,800	6,700	14,100	900	53,500	59.4%	12.5%	26.4%	1.7%	3,700	1,500	1,700	100	6,900	53.6%	21.7%	24.6%	1.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	15.9%	9.8%	13.8%	11.1%	14.7%					5.7%	0.0%	6.3%	0.0%	8.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-0.6%	48.9%	-4.7%	-10.0%	2.1%					0.0%	50.0%	0.0%	0.0%	4.5%				
Bray	Mode Share Base Year	48,200	7,300	12,900	1,200	69,600	69.3%	10.5%	18.5%	1.7%	6,400	1,400	1,500	200	9,600	66.7%	14.6%	15.6%	2.1%
	Mode Share 2042 Do Minimum	64,200	10,500	18,100	1,900	94,700	67.8%	11.1%	19.1%	2.0%	8,100	2,200	2,100	300	12,700	63.8%	17.3%	16.5%	2.4%
	Mode Share 2042 Strategy	64,300	15,100	16,600	6,300	102,200	62.9%	14.8%	16.2%	6.2%	7,400	3,800	1,800	900	13,800	53.6%	27.5%	13.0%	6.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	33.2%	43.8%	40.3%	58.3%	36.1%					26.6%	57.1%	40.0%	50.0%	32.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	0.2%	43.8%	-8.3%	231.6%	7.9%					-8.6%	72.7%	-14.3%	200.0%	8.7%				
Drogheda	Mode Share Base Year	65,000	5,200	18,100	1,700	90,100	72.1%	5.8%	20.1%	1.9%	6,900	900	1,900	200	10,000	69.0%	9.0%	19.0%	2.0%
	Mode Share 2042 Do Minimum	72,600	5,500	23,000	2,100	103,200	70.3%	5.3%	22.3%	2.0%	7,300	1,100	2,300	200	10,900	67.0%	10.1%	21.1%	1.8%
	Mode Share 2042 Strategy	69,900	8,400	21,700	4,200	104,200	67.1%	8.1%	20.8%	4.0%	6,900	1,600	2,200	400	11,100	62.2%	14.4%	19.8%	3.6%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	11.7%	5.8%	27.1%	23.5%	14.5%					5.8%	22.2%	21.1%	0.0%	9.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-3.7%	52.7%	-5.7%	100.0%	1.0%					-5.5%	45.5%	-4.3%	100.0%	1.8%				
Greystones	Mode Share Base Year	21,300	2,100	4,100	400	27,900	76.3%	7.5%	14.7%	1.4%	3,200	600	500	N/A	4,300	74.4%	14.0%	11.6%	0.0%
	Mode Share 2042 Do Minimum	22,300	2,400	4,400	400	29,500	75.6%	8.1%	14.9%	1.4%	3,100	700	500	N/A	4,300	72.1%	16.3%	11.6%	0.0%
	Mode Share 2042 Strategy	22,300	2,800	4,200	1,300	30,600	72.9%	9.2%	13.7%	4.2%	3,000	800	500	200	4,500	66.7%	17.8%	11.1%	4.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	4.7%	14.3%	7.3%	0.0%	5.7%					-3.1%	16.7%	0.0%	0.0%	0.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	0.0%	16.7%	-4.5%	225.0%	3.7%					-3.2%	14.3%	0.0%	0.0%	4.7%				
Kells	Mode Share Base Year	5,400	400	2,000	200	8,000	67.5%	5.0%	25.0%	2.5%	400	100	200	N/A	600	66.7%	16.7%	33.3%	0.0%
	Mode Share 2042 Do Minimum	6,100	400	2,500	200	9,300	65.6%	4.3%	26.9%	2.2%	400	100	200	N/A	700	57.1%	14.3%	28.6%	0.0%
	Mode Share 2042 Strategy	5,700	700	2,500	200	9,200	62.0%	7.6%	27.2%	2.2%	400	100	200	N/A	700	57.1%	14.3%	28.6%	0.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.0%	0.0%	25.0%	0.0%	16.3%					0.0%	0.0%	0.0%	0.0%	16.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-6.6%	75.0%	0.0%	0.0%	-1.1%					0.0%	0.0%	0.0%	0.0%	0.0%				
Leixlip	Mode Share Base Year	27,200	3,300	4,800	500	35,800	76.0%	9.2%	13.4%	1.4%	3,800	700	700	100	5,200	73.1%	13.5%	13.5%	1.9%
	Mode Share 2042 Do Minimum	30,700	4,900	6,300	700	42,600	72.1%	11.5%	14.8%	1.6%	3,700	1,000	800	100	5,600	66.1%	17.9%	14.3%	1.8%
	Mode Share 2042 Strategy	30,300	5,300	6,000	2,600	44,200	68.6%	12.0%	13.6%	5.9%	3,400	1,200	800	300	5,800	58.6%	20.7%	13.8%	5.2%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	12.9%	48.5%	31.3%	40.0%	19.0%					-2.6%	42.9%	14.3%	0.0%	7.7%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-1.3%	8.2%	-4.8%	271.4%	3.8%					-8.1%	20.0%	0.0%	200.0%	3.6%				
Naas	Mode Share Base Year	44,700	3,400	10,100	1,100	59,200	75.5%	5.7%	17.1%	1.9%	5,200	600	1,200	100	7,100	73.2%	8.5%	16.9%	1.4%
	Mode Share 2042 Do Minimum	52,300	3,800	14,600	1,400	72,100	72.5%	5.3%	20.2%	1.9%	5,700	600	1,700	200	8,200	69.5%	7.3%	20.7%	2.4%
	Mode Share 2042 Strategy	49,700	6,400	15,100	1,400	72,700	68.4%	8.8%	20.8%	1.9%	5,200	1,100	1,800	200	8,200	63.4%	13.4%	22.0%	2.4%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	17.0%	11.8%	44.6%	27.3%	21.8%					9.6%	0.0%	41.7%	100.0%	15.5%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-5.0%	68.4%	3.4%	0.0%	0.8%					-8.8%	83.3%	5.9%	0.0%	0.0%				
Navan	Mode Share Base Year	50,500	3,500	11,900	1,200	67,100	75.3%	5.2%	17.7%	1.8%	6,100	600	1,300	100	8,200	74.4%	7.3%	15.9%	1.2%
	Mode Share 2042 Do Minimum	61,900	3,800	15,500	1,500	82,700	74.8%	4.6%	18.7%	1.8%	7,100	700	1,700	200	9,700	73.2%	7.2%	17.5%	2.1%
	Mode Share 2042 Strategy	59,400	6,700	14,000	3,100	83,300	71.3%	8.0%	16.8%	3.7%	6,700	1,300	1,500	400	9,900	67.7%	13.1%	15.2%	4.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	22.6%	8.6%	30.3%	25.0%	23.2%					16.4%	16.7%	30.8%	100.0%	18.3%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.0%	76.3%	-9.7%	106.7%	0.7%					-5.6%	85.7%	-11.8%	100.0%	2.1%				
Newbridge	Mode Share Base Year	36,700	3,400	7,400	800	48,300	76.0%	7.0%	15.3%	1.7%	4,000	600	800	100	5,500	72.7%	10.9%	14.5%	1.8%
	Mode Share 2042 Do Minimum	44,300	4,100	9,800	1,000	59,300	74.7%	6.9%	16.5%	1.7%	4,500	800	1,000	100	6,400	70.3%	12.5%	15.6%	1.6%
	Mode Share 2042 Strategy	42,500	5,600	9,600	2,200	59,900	71.0%	9.3%	16.0%	3.7%	4,300	1,100	1,000	300	6,600	65.2%	16.7%	15.2%	4.5%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	20.7%	20.6%	32.4%	25.0%	22.8%					12.5%	33.3%	25.0%	0.0%	16.4%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.1%	36.6%	-2.0%	120.0%	1.0%					-4.4%	37.5%	0.0%	200.0%	3.1%				
Trim	Mode Share Base Year	6,900	500	1,700	200	9,300	74.2%	5.4%	18.3%	2.2%	600	100	100	N/A	900	66.7%	11.1%	11.1%	0.0%
	Mode Share 2042 Do Minimum	8,800	600	2,500	200	12,200	72.1%	4.9%	20.5%	1.6%	800	100	200	N/A	1,100	72.7%	9.1%	18.2%	0.0%
	Mode Share 2042 Strategy	8,400	1,200	2,300	400	12,300	68.3%	9.8%	18.7%	3.3%	700	200	200	N/A	1,100	63.6%	18.2%	18.2%	0.0%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	27.5%	20.0%	47.1%	0.0%	31.2%					33.3%	0.0%	100.0%	0.0%	22.2%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-4.5%	100.0%	-8.0%	100.0%	0.8%					-12.5%	100.0%	0.0%	0.0%	0.0%				
Wicklow	Mode Share Base Year	15,400	1,000	4,100	400	20,900	73.7%	4.8%	19.6%	1.9%	1,800	200	500	N/A	2,500	72.0%	8.0%	20.0%	0.0%
	Mode Share 2042 Do Minimum	17,500	900	4,800	500	23,700	73.8%	3.8%	20.3%	2.1%	2,000	200	500	N/A	2,700	74.1%	7.4%	18.5%	0.0%
	Mode Share 2042 Strategy	17,200	1,400	4,700	900	24,100	71.4%	5.8%	19.5%	3.7%	1,900	300	500	100	2,800	67.9%	10.7%	17.9%	3.6%
	Dif Mode Share 2042 Do Minimum - Mode Share Base Year	13.6%	-10.0%	17.1%	25.0%	13.4%					11.1%	0.0%	0.0%	0.0%	8.0%				
	Dif Mode Share 2042 Strategy - Mode Share 2042 Do Minimum	-1.7%	55.6%	-2.1%	80.0%	1.7%					-5.0%	50.0%	0.0%	0.0%	3.7%				

Phase 3, Preferred Strategy
Base Model: E8R06 (2016)
Do Minimum Model: ACX (2042)
Strategy Model: ADF (2042)

	24 Hours Cars Mode Share					AM Peak Period Cars Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	26.5%	45.2%	52.4%	57.7%	62.1%	26.2%	40.9%	47.9%	54.8%	59.9%
Mode Share 2042 Do Minimum	23.5%	42.7%	50.0%	55.5%	60.1%	24.1%	38.3%	44.8%	51.7%	57.2%
Mode Share 2042 Strategy	17.7%	32.1%	41.9%	48.6%	54.0%	18.0%	28.3%	36.0%	43.8%	50.0%
	24 Hours PT Mode Share					AM Peak Period PT Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	30.5%	20.2%	17.0%	14.6%	12.3%	29.3%	25.9%	23.2%	20.0%	17.1%
Mode Share 2042 Do Minimum	31.2%	21.5%	18.4%	15.7%	13.1%	31.2%	27.6%	25.2%	21.7%	18.4%
Mode Share 2042 Strategy	31.5%	22.8%	19.7%	17.5%	15.0%	30.4%	27.1%	26.3%	23.9%	21.1%
	24 Hours Walk Mode Share					AM Peak Period Walk Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	36.0%	29.4%	26.3%	23.9%	22.3%	38.0%	27.7%	24.5%	21.5%	19.9%
Mode Share 2042 Do Minimum	38.8%	30.8%	27.6%	25.2%	23.6%	38.8%	28.9%	25.7%	23.0%	21.3%
Mode Share 2042 Strategy	30.9%	27.6%	24.3%	22.4%	21.2%	31.9%	25.9%	22.7%	20.3%	19.0%
	24 Hours Cycle Mode Share					AM Peak Period Cycle Mode Share				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	7.0%	5.3%	4.3%	3.7%	3.3%	6.2%	5.5%	4.4%	3.6%	3.2%
Mode Share 2042 Do Minimum	6.4%	5.0%	4.1%	3.6%	3.2%	6.0%	5.2%	4.3%	3.6%	3.1%
Mode Share 2042 Strategy	20.0%	17.5%	14.1%	11.5%	9.7%	19.5%	18.7%	15.0%	11.9%	9.9%
	24 Hours Car Trips Total					AM Peak Period Car Trips Total				
	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM	Canal Cordon	Inside M50	Metropolitan	Full GDA	Full ERM
Mode Share Base Year	147,600	1,022,900	1,889,200	2,649,100	3,619,500	11,800	106,800	212,300	319,900	444,300
Mode Share 2042 Do Minimum	153,900	1,095,500	2,092,200	2,941,900	4,030,600	12,900	108,300	222,300	333,100	466,700
Mode Share 2042 Strategy	120,000	818,900	1,767,400	2,600,400	3,644,800	9,600	79,400	180,100	286,000	412,200