



17. Strategy Outcomes

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17.1 Introduction

The Transport Strategy has been analysed and tested using the NTA's Strategic Transport Model for the Eastern Region – the ERM. A large number of model runs were undertaken in an iterative manner throughout the strategy development process and then in its appraisal. The suite of runs used in the appraisal towards the end of the strategy development process comprises an appropriate representation of the Transport Strategy in modelling terms, in that the measures tested reflect those set out in the strategy report. Full details of the modelling process, including the other tests that were undertaken, are set out in a separate Modelling report.

The Transport Strategy has also been subject to a Strategic Environmental Assessment and Appropriate Assessment.

These analyses and assessments were carried out in accordance with the strategy objectives set out in Chapter 5 and the strategic environmental objectives. The combination of these assessments is reported in this section according to each objective.

The impact of the strategy is measured against 2016 primarily. This is the last year for which comprehensive Census travel data is available. There are a number of indicators for which a comparison against a 2042 scenario without the strategy is more appropriate and these have been set out accordingly.

17.2 How the Strategy Contributes to an Enhanced Natural and Built Environment

17.2.1 Consolidated Development

The Transport Strategy sets out a number of policies and objectives that directly benefit the policy of development consolidation. Chapter 8 contains a number of planning principles which the NTA will endeavour to ensure are incorporated into Development Plans and other planning policy documents, and are applied to development proposals, via our role as a prescribed body for planning matters.

The proposed transport network is focussed on facilitating the development of brownfield land primarily, while serving a number of major strategic medium density greenfield developments, which are contiguous to the built-up area of Dublin.

The Transport Strategy therefore facilitates the growth and development of the GDA in a manner which reduces urban sprawl; land take; damage to habitats; protects biodiversity; and avoids potential adverse effects on protected sites.

17.2.2 Public Realm and Placemaking

In terms of contributing to a better built environment, the measures outlined in Chapters 8, 10 and 14 in particular place a great emphasis on the creation of people-centred urban areas – the transformation of streets as thoroughfares into places people wish to congregate and where movement on foot and by bicycle is safer and more convenient.

The development of the walking and cycling network, as well as the development of high-quality public transport across the GDA would foster the development of Dublin’s urban villages and other towns, as well as maintaining and enhancing the role of Dublin City Centre. This placemaking approach would contribute to an enhanced urban environment.

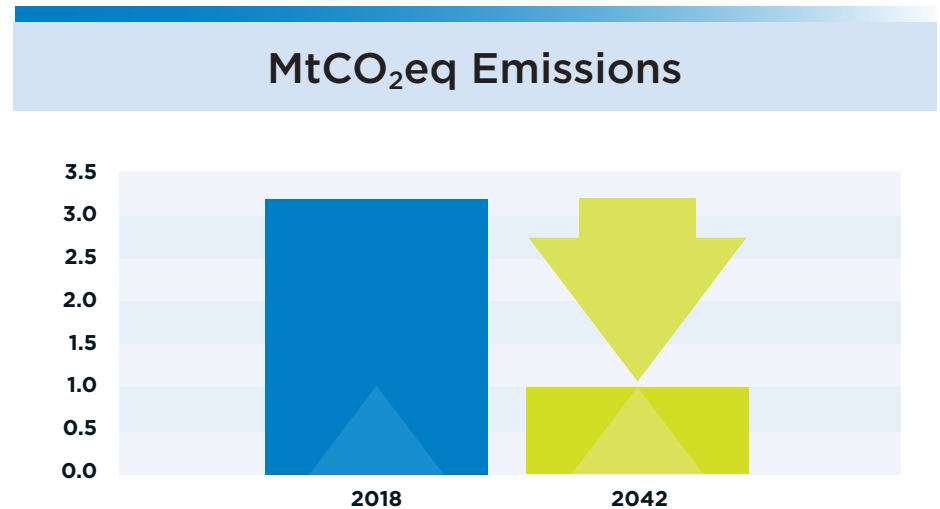
17.2.3 Reduced Impacts of Traffic

Linked to the previous point, the reorientation of transport and land use planning away from the facilitation of the private car may contribute to this environmental objective by reducing the dominance of this mode across the settlements of the GDA. This would lead to improved air quality; greater roadspace reallocation to sustainable modes, and the improvement of the visual environment by reducing the effects of cars parked – both on-street and in off-street car parks – which can dominate urban environments.

17.2.4 Carbon Emissions

The Transport Strategy, in combination with other Government policies and programmes is forecast to lead to a reduction in carbon emissions from transport in the GDA from 3.2 MtCO₂eq in 2018 to c.1.0 MtCO₂eq in 2042 (Figure 17.1)

Figure 17.1: GDA Transport Emissions 2018 and 2042



17.2.5 Air Quality

The Transport Strategy, in combination with other Government policies and programmes is forecast to lead to a significant reduction in air polluting emissions compared to 2016. (Table 17.1).

Table 17.1: Air-polluting Emissions 2016 and 2042 (Kg)

	NO _x	NO ₂	PM10	PM2.5
2016	7,182,430	2,234,190	537,350	357,300
2042 With Strategy	1,217,850	259,640	445,270	247,590
Reduction	-83%	-88%	-17%	-31%

17.2.6 Noise

The Transport Strategy leads to a significant reduction in the use of the private car for trips for all purposes (see following section). This is forecast to reduce the numbers of people exposed to unacceptable noise levels from traffic, in particular within urban areas.

The number of goods vehicles travelling in the GDA is expected to increase as a result of growth over the period of the strategy. While this may lead to some localised impacts in terms of increased noise, it is forecast – in line with policies and objectives related to the management of Heavy Goods Vehicles – that these adverse effects would arise primarily on the national and strategic road network, rather than on local roads and as such, would not lead to a significant increase in the population exposure to high noise levels.

The electrification of the public transport fleet, in addition to the private car fleet and light commercial goods vehicles, is likely to lead to reductions in noise as electric vehicles are generally quieter than those using ICEs.

Overall the Transport Strategy, in combination with other Government policies and developing technologies, is forecast to lead to a reduction in the numbers of people in the GDA being exposed to high noise levels from transport.

17.2.7 Mode Share

24 Hour Period

The Transport Strategy is forecast to lead to a significant reduction in car mode share for the GDA from 57.7% in 2016 to 48.6% in 2042 for all trip purposes throughout the day. The Cycling mode share for all trips over the 24 hour period is forecast to increase from 3.7% in 2016 to 11.5% in 2042. (Figure 17.2)

In Metropolitan Dublin, the mode share for car is forecast to fall from 52.4% to 41.9% for the 24hr period, with public transport forecast to increase to 19.7% and cycling to 14.1%. (Figure 17.3)

The numbers using public transport in the GDA over a 24 hour period increase by 39%, leading to a mode share increase from 14.6% to 17.5%. In the Metropolitan Area, these figures are 17.0% and 19.7% respectively.

Figure 17.2: 24Hr Mode Share for the GDA 2016 and 2042

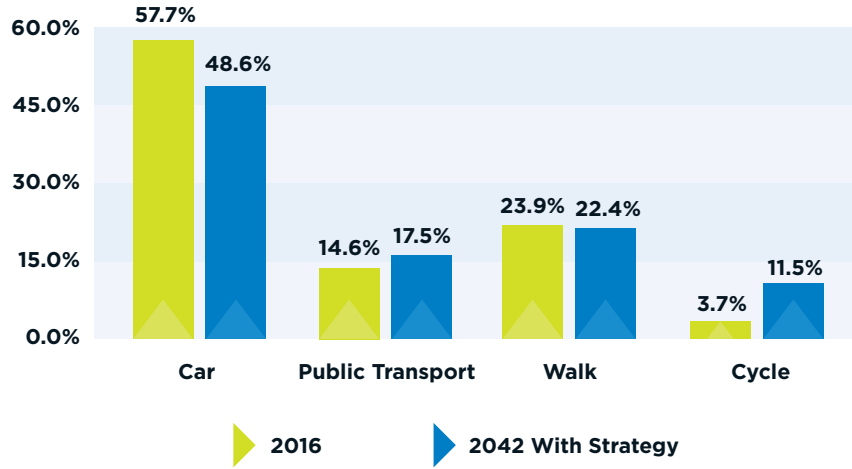
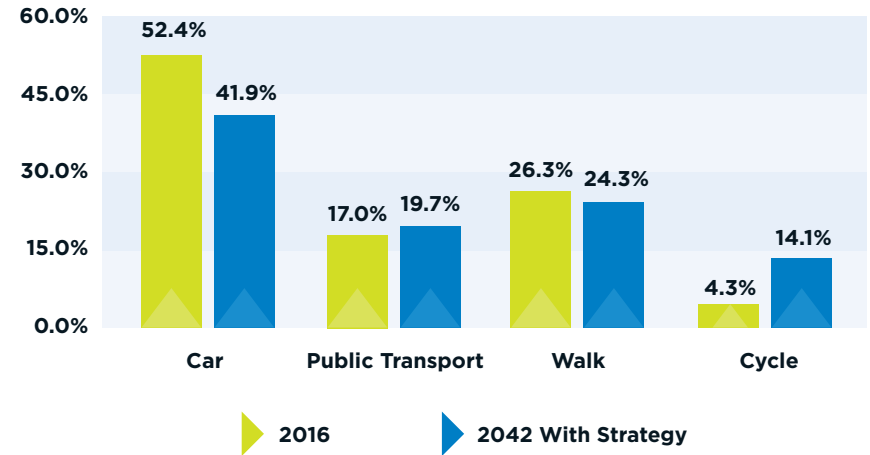


Figure 17.3: 24Hr Mode Share for Metropolitan Dublin 2016 and 2042





AM Peak Period

In the AM Peak Period (7-10am) the mode share for car is forecast to drop from 54.8% to 43.8% in the GDA, with increases in public transport and cycling. (Figure 17.4).

In Metropolitan Dublin in the AM Peak Period, the mode share for car is forecast to drop from 47.9% to 36%, while the Cycling mode share is forecast to increase from 4.4% in 2016 to 15.0% in 2042. (Figure 17.5)

Figure 17.4: AM Peak Period Mode Share for the GDA 2016 and 2042

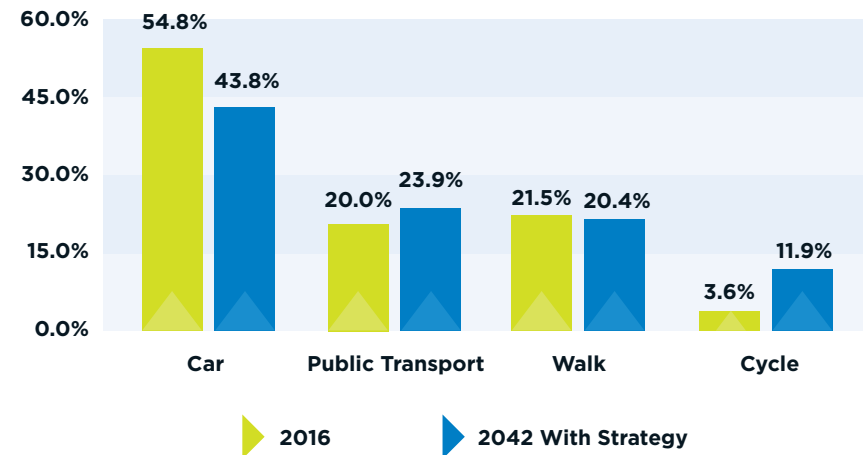
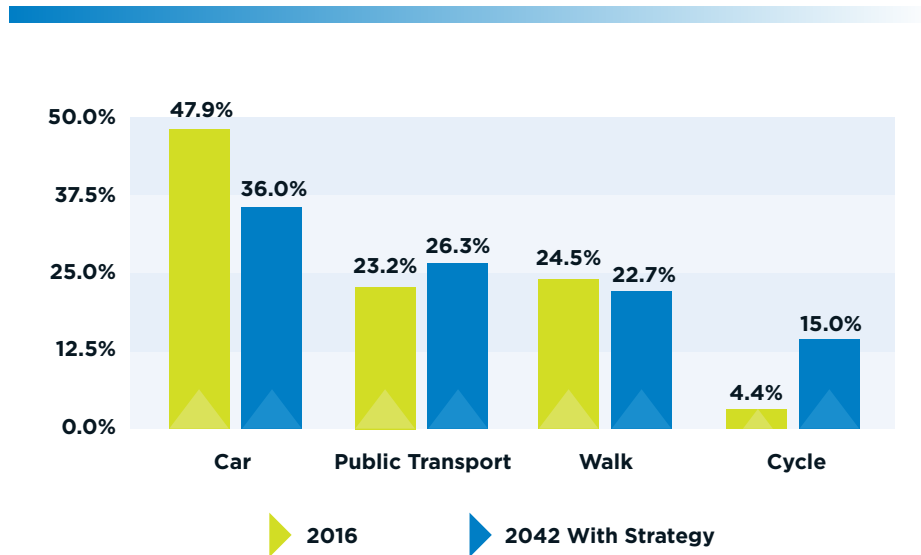


Figure 17.5: AM Peak Period Mode Share for Metropolitan Dublin 2016 and 2042



17.2.8 Vehicle Kilometres

The Transport Strategy is forecast to lead to an 18% reduction in the number of vehicle-kilometres travelled to work compared to 2016 and an 8% reduction for business trips. These are shown in Table 17.2. Vehicle kilometres travelled is forecast to reduce by 10% for all trips including commercial vehicles, Heavy Goods Vehicles and Taxis in 2042 with the strategy in place compared to without the strategy.

Table 17.2: 2042 Forecast Vehicle Kilometres Travelled by Select Trip Purposes – 24 Hour Period

Trip Type	2016	2042 With Strategy	% Change
Business	4,764,000	4,368,000	-8%
Commute	8,533,000	6,958,000	-18%

17.3 How the Strategy Leads to More Connected Communities and Better Quality of Life

17.3.1 Walking and Cycling

The Transport Strategy, in combination with the plans and programmes of national government and the local authorities will contribute to a step change in the approach to providing for pedestrians and cyclists and contribute to a much enhanced quality of life.

The reorientation of the transport network towards these modes, as set out in chapters 8, 10, 11 and 14 will ensure that people in the GDA will be provided with a walking and cycling environment which will greatly enhance their accessibility to services such as schools, health facilities, shops etc. at the neighbourhood and district level, promoting greater use of

these modes. Walking and cycling are, by their nature, more sociable modes of travel – people meet and interact more often – and by having a realistic choice to use these active modes over motorised modes contributes to a healthier lifestyle.

For school travel, better walking and cycling facilities will help address childhood obesity by providing exercise at the start and end of the school day.

Overall, the implementation of the transport strategy’s approach to these modes will help knit communities closer together; and will contribute to a better quality of life.

17.3.2 High Quality Public Transport Coverage

The level of public transport service on offer to an individual and the quality of that service is a major factor in that person’s quality of life. The Transport Strategy sets out a wide range of public transport measures which, in combination, would provide the people of the GDA with a significantly enhanced quality of life in this regard, in the following ways:

- Reduced waiting times for public transport due to greater coverage of high frequency services;
- Faster commutes by rail and by bus due to infrastructural improvements;
- Better reliability and associated reduced travel stress; and
- Reduced rural isolation as a result of increased coverage and frequency of services.

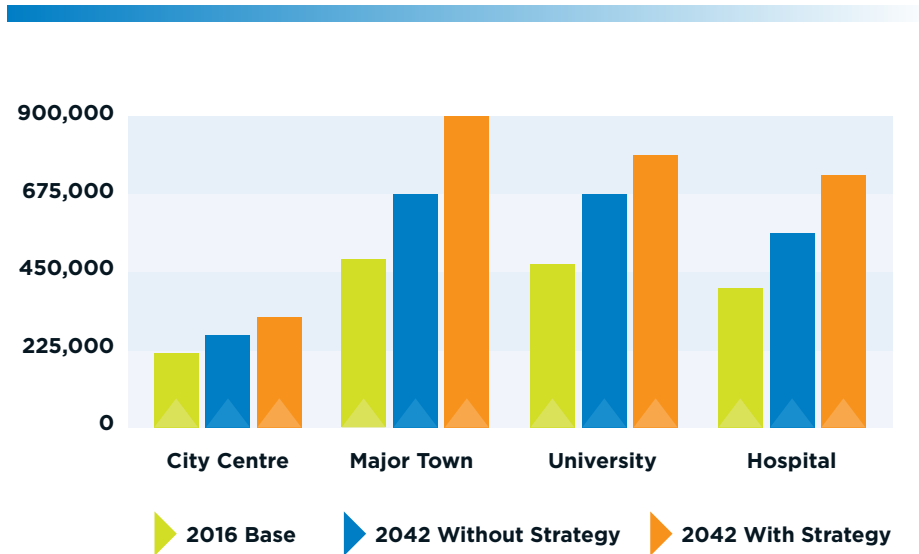
17.3.3 Travel Time to Major Destinations

With the Transport Strategy in place in 2042, the number of people living within 30 minutes journey time to major destinations in the AM Peak increases significantly. 31% more residents of the GDA will be able to reach the City Centre in that time by public transport compared to a 2042 scenario without the transport strategy in place, and 45% more will be within 30 minutes of a major hospital. (Table 17.3 and Figure 17.6)

Table 17.3: Number of People within 30 Minutes Travel Time of Major Destinations by Public Transport

Destination	2016	2042 Without Strategy	2042 With Strategy	% Change vs 2016	% Change vs without 2016
City Centre	214,891	274,899	316,035	47%	15%
Major Town	504,422	676,742	895,880	77%	32%
University	468,349	677,554	792,486	69%	17%
Hospital	408,610	572,253	737,066	80%	29%

Figure 17.6: Number of People within 30 Minutes Travel Time of Major Destinations by Public Transport – 2016, 2042 Without Strategy and 2042 With Strategy



17.3.4 Safety

The implementation of the Transport Strategy is forecast to save 86 lives over its appraisal period and 333 serious casualties when compared to a scenario without the Transport Strategy, using available transport modelling and appraisal

methods. For this indicator, the appraisal period is 30 years beyond the strategy end-year of 2042.

This reduction in casualties is due primarily to a reduction in car use, but does not fully take into account the enhanced safety impacts of better cycling and walking infrastructure at the local level across urban areas. In this regard, it is anticipated that the implementation of the Transport Strategy will have a significant impact, not only on the numbers of collisions and injuries, but on the perception of safety among vulnerable road users.

In terms of cycling and walking modes specifically, the roll-out of segregated cycle routes on all the main corridors and elsewhere across the GDA, as well as the greenway network, will make this mode significantly safer and more accessible to people of all ages and cycling abilities. Additionally, improvements to the pedestrian environment, including better crossing facilities and footpaths, are likely to reduce accidents.

The Transport Strategy sets out a number of measures which will seek to ensure that the transport system is safe from a personal security point of view. This relates to security on-board public transport as well as ensuring that walking routes are safe at night with lighting, CCTV etc., as well as ensuring that people can get home safely throughout the night by expanding the amount of late night services including those operating 24hr a day.

17.4 How the Strategy Contributes to a Strong and Sustainable Economy

17.4.1 Fostering Economic Activity

The transport system is a critical factor in the economic health of city regions. It is essential that all trip purposes at all times are facilitated in an efficient manner as almost every journey has an economic value. While the focus can often be on the peak hour commute to work, the Transport Strategy ensures that all-day business travel; goods movement; off-peak and weekend trips to retail; trips for recreation and leisure etc. are all catered for.

By proposing a comprehensive and integrated transport network that serves all trip purposes by all modes at all times of the day, the Transport Strategy ensures that the value of the maximum range of activities will be harnessed and that the economic costs of congestion and suppressed demand due to inconvenience are reduced.

Furthermore, by providing for a step change in the capacity of the transport system, the Transport Strategy facilitates the more efficient concentration of growth into the City Centre and major centres of economic activity in the GDA. This agglomeration benefit comprises a virtuous circle whereby greater access by sustainable modes increases the potential for investment in our centres. This investment creates greater demand for movement and improvements to the transport system, which when delivered increases investment in turn.

17.4.2 Business Trips

The Transport Strategy is forecast to facilitate a greater level of business travel, and a much greater amount of this travel is forecast to be undertaken by sustainable transport, with these modes accounting for 38% of business trips in 2042 with the strategy in place, compared to 26% in 2016. However there will be a slight increase in journey time effecting businesses still dependent on the car.

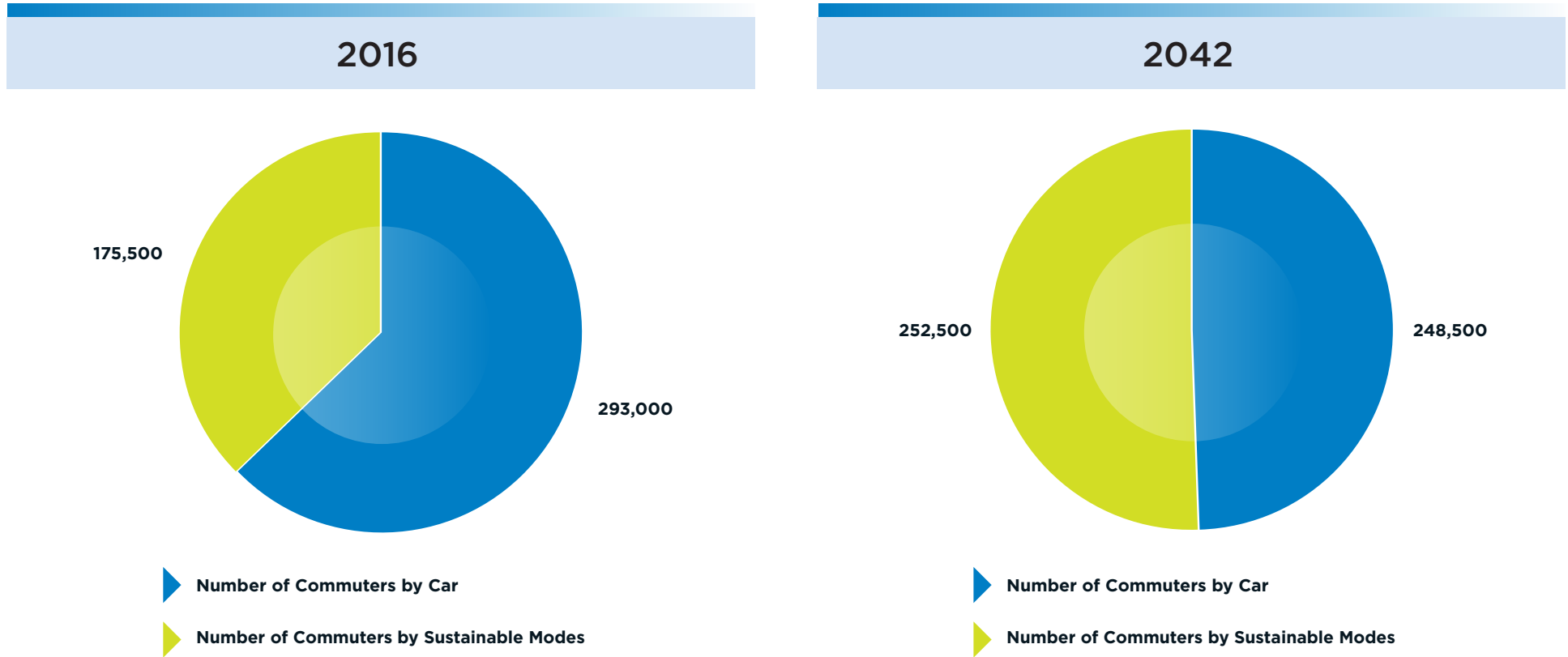
17.4.3 Trips to Work

The transport system proposed in the Transport Strategy facilitates a far more sustainable pattern of commuting and is likely to remove a significant number of people out of congested networks onto free-flowing public transport and cycling networks, in particular in Metropolitan Dublin and the larger urban centres of the GDA.

For those outside the main centres, the reach of high-quality public transport into the GDA and Leinster will be much expanded under the Transport Strategy, including via Park and Ride, facilitating greater numbers of commuters to reduce their use of the private car if they are travelling into Dublin or other major centres.

Within the built-up area of Dublin, not only will the main radial corridors be enhanced, but the development of a proper, coherent and integrated network of high quality services will offer people an attractive alternative to the private car for a wide range of commuter trips to all areas and make that trip more attractive. The forecast shift from car to sustainable modes from 2016 to 2042 is shown in Figure 17.7.

Figure 17.7: Trips to Work 2016 and 2042 With Strategy AM Peak



17.4.4 Goods Vehicles

While the modelling is focussed on movement of people, there are a number of outputs related to goods vehicles and freight movement generally.

The Transport Strategy is forecast to facilitate more than double the amount of goods vehicles trips in 2042 compared to 2016. There is an increase of approximately 7 minutes in the average journey time for goods vehicles over that period. This indicator should be read in conjunction with the significant improvements in indicators for other trip purposes, and in particular in the context of the traffic management measures required to meet Climate Change targets.

The Transport Strategy sets out an ambitious programme of engagement between all of the major freight stakeholders and provides for the development of a freight strategy which will aim to deliver significant improvements to this sector, taking full account of emerging challenges such as Brexit and the recovery from Covid-19.

17.4.5 Travel to Dublin Port

The Transport Strategy facilitates more than double the amount of vehicles accessing Dublin Port in the AM Peak compared to 2016. While the travel time increases, this clearly demonstrates that the strategy protects the strategic function of Dublin Port by ensuring that the radical interventions required across the GDA to meet climate change targets, do not adversely affect the movement of essential goods traffic to and from Dublin Port.

17.4.6 Travel to Dublin Airport

The overall number of people that access Dublin Airport increases by 66% in 2042 with the strategy in place compared to 2016. The numbers travelling by public transport is forecast to almost triple to over 16,000 in the same period. It should also be noted that the number of car trips reduces significantly with the strategy in place in 2042 compared to a scenario without the strategy, with an associated increase in public transport. This clearly demonstrates the manner in which the measures proposed in the strategy, such as MetroLink and the Core Bus Corridors, protect and foster the growth of this strategic national asset. Similar outcomes arise for the AM Peak period. See Figure 17.8.

Travel time to Dublin Airport by car decreases by 13% in the AM Peak as a result of the Transport Strategy and by 21% by Public Transport compared to a scenario without the strategy in place in 2042. This primarily reflects the impact of Metrolink and the Core Bus Corridors. As more people use bus and light rail, the reduced numbers travelling by car also benefit from reduced congestion. While the time travelled by car increases relative to 2016, this must be viewed in the context of the significant shift to sustainable modes that the strategy enables.

Figure 17.8: Total Trips to Dublin Airport 2016 and 2042 by Mode 24hr

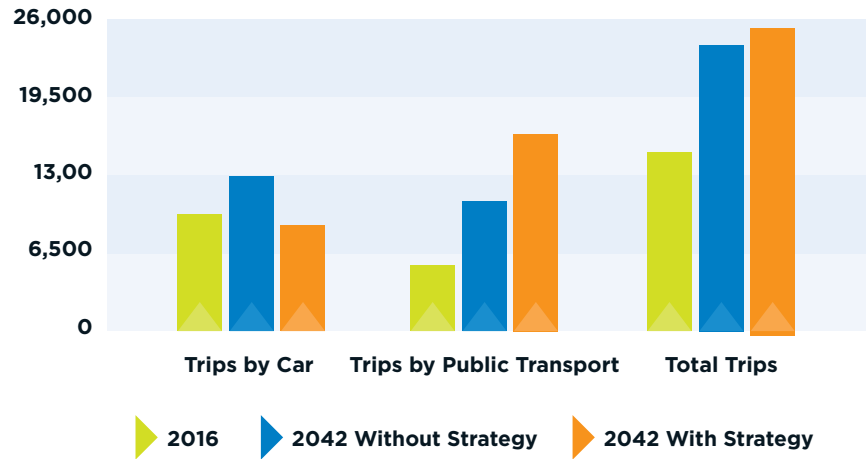
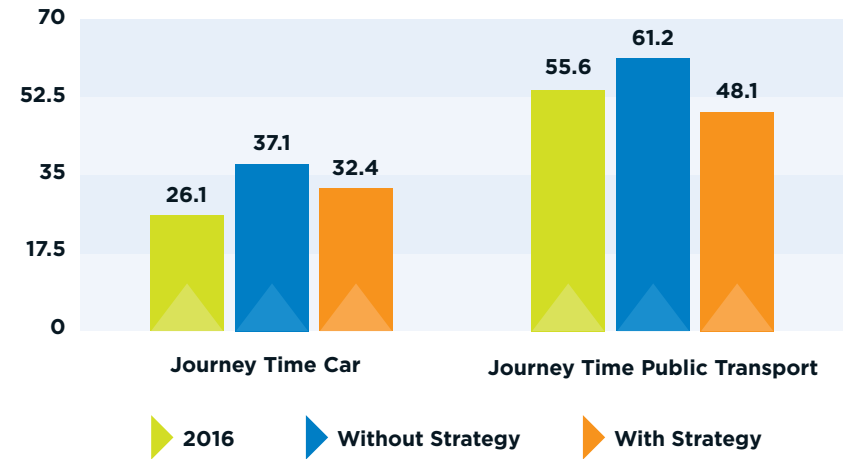


Figure 17.9: Average Journey Time to Dublin Airport 2042 AM Peak



17.5 How the Strategy Fosters an Inclusive Transport System

17.5.1 Equality

The Transport Strategy places great emphasis on inclusion and equality and it will be subject to a full Equality Impact Assessment prior to finalisation.

Chapter 9 sets out a statutory framework committing the NTA and all other agencies in the GDA to the implementation of measures to ensure the transport system meets the needs of all members of society, and to advertising and education campaigns which seek to inform people of specific needs of others.

In terms of the transport system itself, the Transport Strategy commits the NTA and transport operators to the delivery of stations, stops, vehicles and passenger information and signage that meet the highest standards required in this regard.

As such, the Transport Strategy, within its statutory remit, commits all actors in this area to develop an inclusive transport system, building on the work done to date.

17.5.2 Access to Jobs

The Transport Strategy is forecast to increase the numbers of jobs accessible to people living in the GDA by 30 minutes public transport journey time by 5%.

This, coupled with the improvements to the walking and cycling environment, demonstrates the manner in which the Transport Strategy will make it easier for people to access the workplace by sustainable modes without the need to own a car. Disadvantaged Areas.

17.5.3 Access to Jobs for those Living in Disadvantaged Areas

The Transport Strategy is forecast to increase the numbers of jobs accessible to people living in Disadvantaged Areas in the GDA by 30 minutes public transport journey time by 57%.

Car ownership rates are significantly lower in disadvantaged areas and as such, this is an important metric which demonstrates the impact of the strategy in facilitating access to the labour market for those with limited travel options.

17.5.4 Accessibility to High Frequency Public Transport

The number of people forecast to be living within a 800m catchment of a rail, light rail or high frequency bus service will grow by 182% between 2016 and 2042 with the strategy in place.

17.5.5 Promoting Culture and the Night-Time Economy

The implementation of the Transport Strategy will contribute significantly to the promotion of the cultural, hospitality and night-time economy of the GDA.

By providing high-quality public transport services on a 24hr basis in Metropolitan Dublin; by improving the level of service offered by the SPSV sector; and by improving connectivity to the urban centres and rural areas by public transport, these parts of the economy – which operate primarily outside of the traditional transport peak hours – would benefit significantly.

