



An Roinn Iompair
Department of Transport

Climate Action Plan 2023

'Ireland's Climate Action Plan | Net-zero decarbonisation pathway for Transport'

Institute of Asphalt Technology - Annual Seminar | Athlone
28th March 2023



CLIMATE ACTION PLAN 2023 CAP23

Changing Ireland for the Better

➔ (1) CAP23 - Introduction

- Climate Action Plan 2023 (CAP23) was published on 21st December 2022
- Implements carbon budgets and sectoral emissions ceilings - agreed July 2022
- Sets out a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050
- High-level Annex of Actions published 7th March 2023



(1) CAP23 - Introduction

➤ First CAP prepared pursuant to **Section 6** of the *Climate Action and Low Carbon Development (Amendment) Act 2021*

➤ Statutory Footing



Number 32 of 2021

CLIMATE ACTION AND LOW CARBON DEVELOPMENT (AMENDMENT) ACT 2021

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PRELIMINARY AND GENERAL

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2. Definitions

PART 2

AMENDMENT OF PRINCIPAL ACT

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The Six Vital High Impact Sectors



Powering renewables

75%

reduction in emissions by 2030

We will facilitate a large-scale deployment of renewables that will be critical to decarbonising the power sector as well as enabling the electrification of other technologies.

Accelerate the delivery of onshore wind, offshore wind, and solar.

Dial up to 9 GW onshore wind, 8 GW solar, and at least 7 GW of offshore wind by 2030 (with 2 GW earmarked for green hydrogen production).

Support at least 500 MW of local community-based renewable energy projects and increased levels of new micro-generation and small-scale generation.

Phase out and end the use of coal and peat in electricity generation.

New, dynamic Green Electricity Tariff will be developed by 2025 to incentivise people to use lower cost renewable electricity at times of high wind and solar generation.

Building better

commercial/public | residential
45% | 40%

reduction in emissions by 2030

We will increase the energy efficiency of existing buildings, put in place policies to deliver zero-emissions new builds and continue to ramp up our retrofit programme.

Ramp up retrofitting to 120,000 dwellings to BER B2 by 2025, jumping to 500,000 by 2030.

Put heat pumps into 45,000 existing and 170,000 new dwellings by 2025, up to 400,000 existing and 280,000 new dwellings by 2030.

Generation up to 0.8 TWh of district heating by 2025 and up to 2.5 TWh by 2030.

Turning transport around

50%

reduction in emissions by 2030

We will drive policies to reduce transport emissions by improving our town, cities and rural planning, and by adopting the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles.

Change the way we use our road space.

Reduce the total distance driven across all car journeys by 20%.

Walking, cycling and public transport to account for 50% of our journeys.

Nearly 1 in 3 private cars will be an Electric Vehicle.

Increase walking and cycling networks.

70% of people in rural Ireland will have buses that provide at least 3 trips to the nearby town daily by 2030.

Making family farms more sustainable

25%

reduction in emissions by 2030

We will support farmers to continue to produce world-class, safe and nutritious food while also seeking to diversify income through tillage, energy generation and forestry.

Significantly reduce our use of chemical nitrogen as a fertilizer.

Increase uptake of protected urea on grassland farms to 90-100%.

Increase organic farming to up to 450,000 hectares, the area of tillage to up to 400,000 ha.

Expand the indigenous biomethane sector through anaerobic digestion, reaching up to 5.7TWh of biomethane.

Contribute to delivery of the land use targets for afforestation and reduced management intensity of organic soils.

Greening business and enterprise

35%

reduction in emissions by 2030

We're changing how we produce, consume, and design our goods and services by breaking the link between fossil fuels and economic progress. Decarbonising industry and enterprise is key to Ireland's economy and future competitiveness.

Reduce clinker content in cement and substitute products with lower carbon content for construction materials, ensuring 35% reduction in emissions by 2030 (against 2018).

Reduce fossil fuel use from 64% of final consumption (2021) to 45% by 2025 and further by 2030.

Increase total share of heating to carbon neutral to 50-55% by 2025, up to 70-75% by 2030.

Significantly grow the circular economy and bioeconomy.

Changing our land use

Exact reduction target for this sector is yet to be determined.

The first phase of the land use review will tell us how we are using our land now. Then, we can map, with evidence, how it can be used most effectively to capture and store carbon and to produce better, greener food and energy.

Increase our annual afforestation rates to 8,000 hectares per annum from 2023 onwards.

Rethink our Forestry Programme and Vision. Promote forest management initiatives in both public and private forests to increase carbon sinks and stores.

Improve carbon sequestration of 450,000 ha of grasslands on mineral soils and reduce the management intensity of grasslands on 80,000 ha of drained organic soils.

Rehabilitate 77,600 hectares of peatlands.

- 22x Chapters

- 6x Sectoral Emissions Ceiling Chapters

Table - Sectoral Emission Ceilings³

(Figures for MtCO₂eq for 2018 and 2030 have been rounded. This may lead to some discrepancies)

Sector	2018 Baseline (MtCO ₂ eq.) ⁴	Sectoral Emission Ceilings for each 5-year carbon budget period (MtCO ₂ eq.)		Indicative Emissions in Final Year of 2021- 2025 carbon budget period (MtCO ₂ eq)	Indicative Reduction in Emissions in Final Year of 2021-2025 budget period compared to 2018	Emissions in final year of 2026-2030 carbon budget period (MtCO ₂ eq)	Reduction in Emissions final year of 2026-2030 carbon budget period compared to 2018	Agreed CAP21 Ranges
	2018	2021-2025	2026-2030	2025	2025	2030	2030	2030
Electricity	10	40	20	6	~40%	3	~75%	60 – 80%
Transport	12	54	37	10	~20%	6	~50%	40 – 50%
Built Environment - Residential	7	29	23	5	~20%	4	~40%	45 – 55% ⁵
Built Environment - Commercial	2	7	5	1	~20%	1	~45%	
Industry	7	30	24	6	~20%	4	~35%	30 – 40%
Agriculture	23	106	96	20	~10%	17.25	~25%	20 – 30%
LULUCF ⁶	5	XXX	XXX	XXX	XXX	XXX	XXX	40 – 60%
Other (F-Gases, Waste & Petroleum refining)	2	9	8	2	~25%	1	~50%	N/A
<i>Unallocated Savings</i> ⁷			-26			-5.25		
TOTAL⁸	68	XXX	XXX	XXX	XXX	XXX	XXX	N/A
Legally binding Carbon Budgets and 2030 Emission Reduction Targets ⁹	-	295	200	-	-	34	51%	-

Source: <https://www.gov.ie/en/publication/76864-sectoral-emissions-ceilings/>



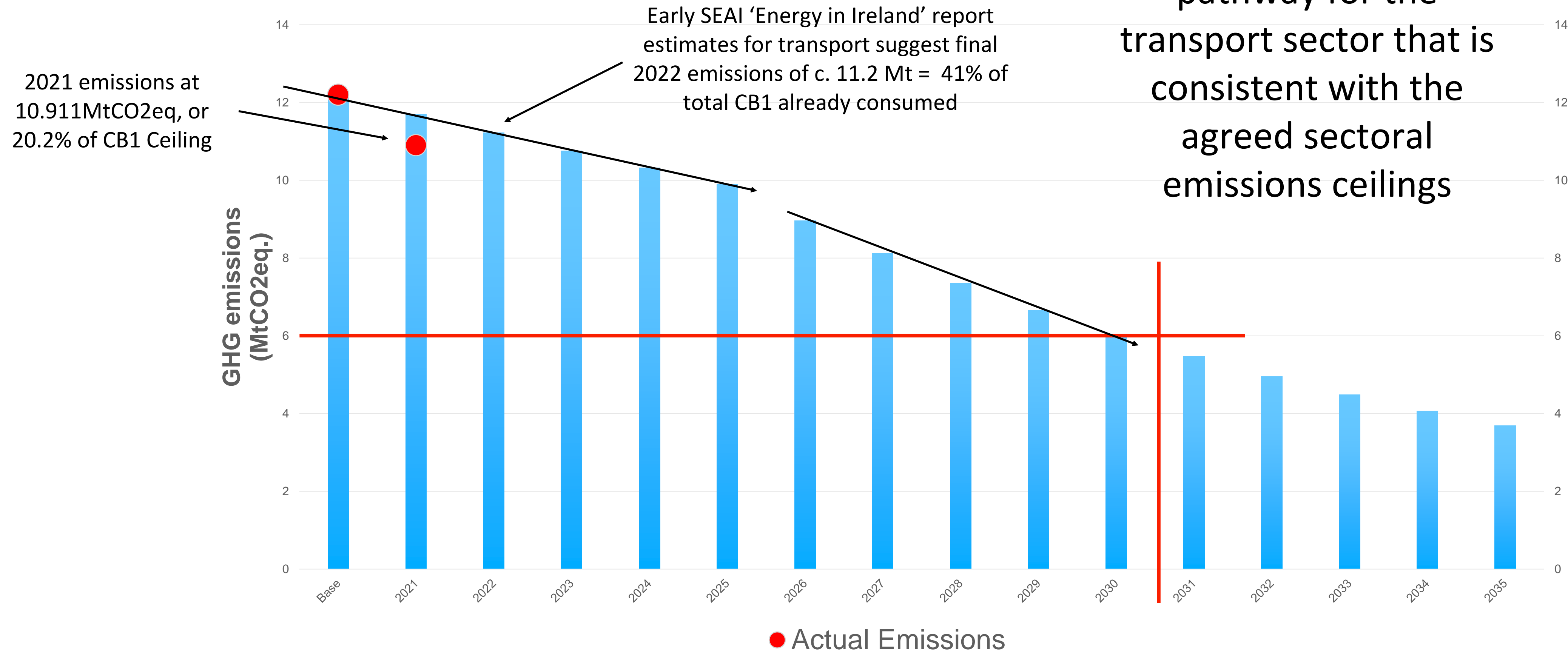
→ (2) CAP23 – Transport elements

- Sets out **measures required** for the first budget period (2021-2025) in the carbon budget programme (54MtCO₂eq)
- Sets out **overview of policies and measures** for the second budget period (2026-2030) in the carbon budget programme (37MtCO₂eq).



(2) CAP23 – Transport elements

Indicative decarbonisation pathway for the transport sector that is consistent with the agreed sectoral emissions ceilings



→ (3) CAP23 - Transport

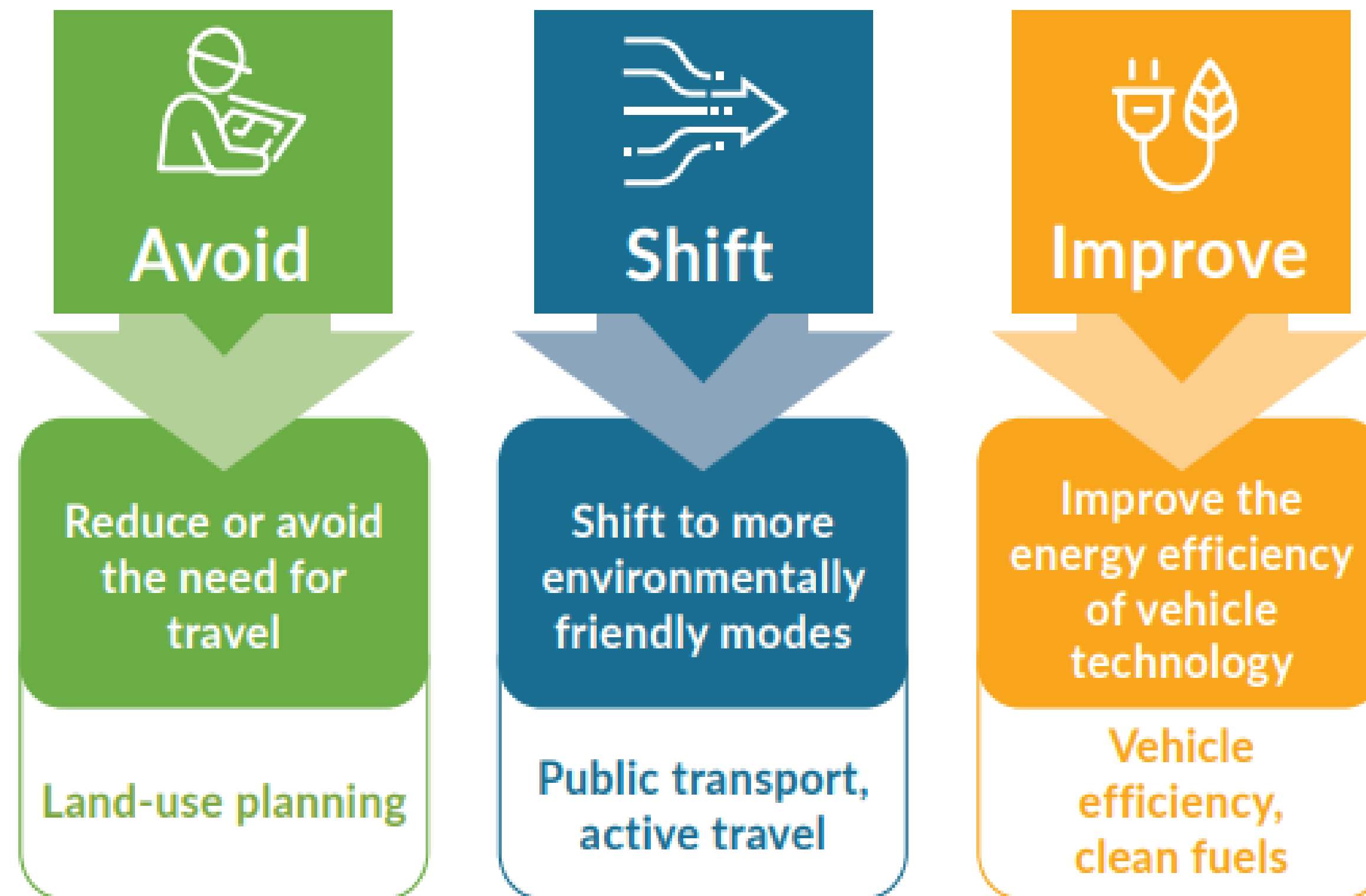
- Strong resonance with OECD Report *'Redesigning Ireland's Transport for Net Zero - Towards Systems that work for People and the Planet'*, recognising need for **Systemic Change and Measures with High Transformative Potential**





(3) CAP23 - Transport

➤ Framed around Avoid – Shift – Improve





(3) CAP23 - Transport

➤ Avoid – Shift – Improve

- Develop our services, communities, and infrastructure in such a manner as to **AVOID** the need to travel as much as we do today
- Improve the relative attractiveness of sustainable travel modes such as Public Transport, Cycling and Walking, to **SHIFT** away from car use; this will facilitate increased use of lower-carbon modes and reduce the percentage of total journeys that are made by private car (modal share) from over to 70% (today) to just over 50% in 2030; and
- Compliment these measures by increasing the proportion of EV's in our car fleet to 30% by 2030, which will **IMPROVE** the efficiency of the national car fleet; electrification of the freight and public transport sector will also be key.

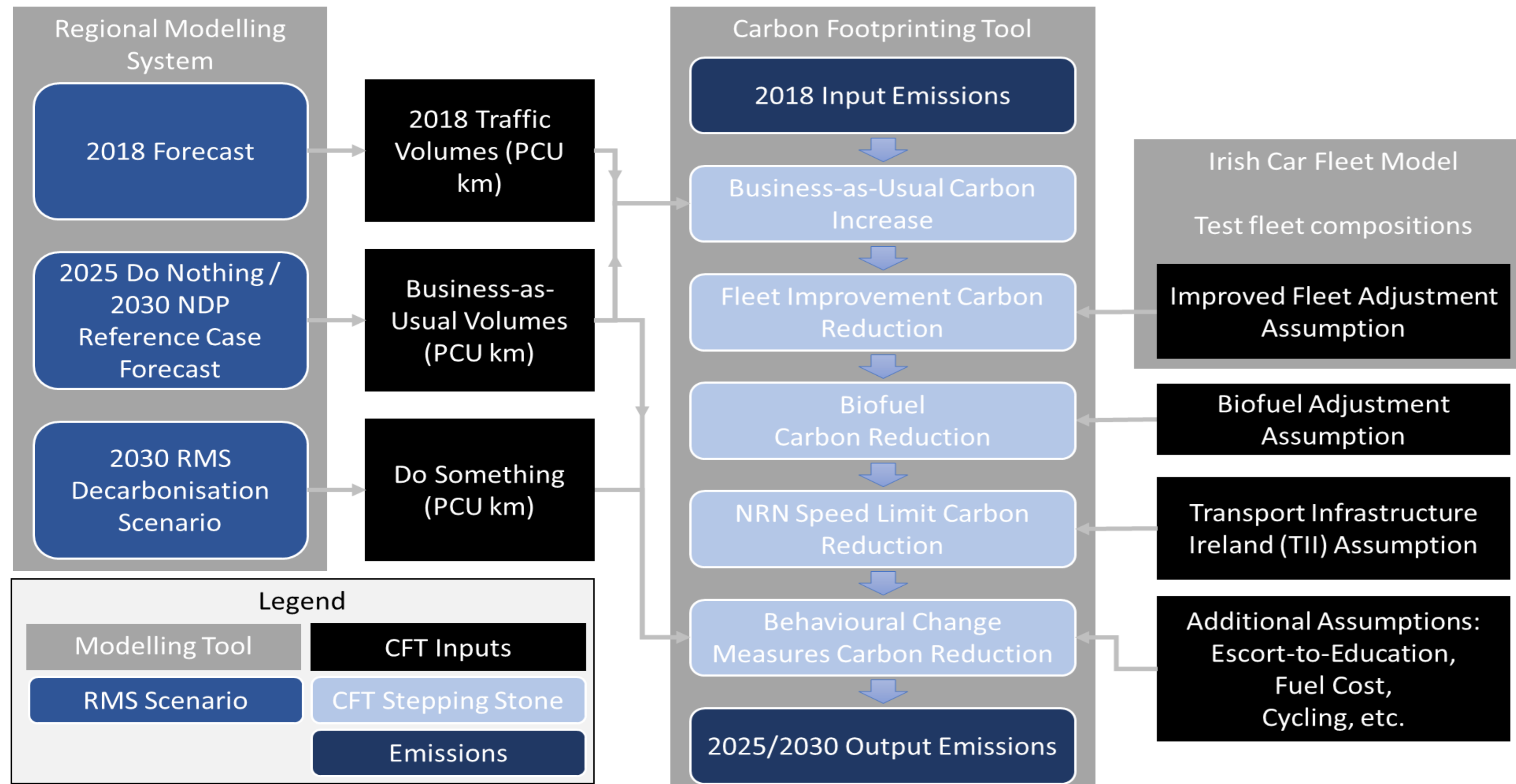


→ (4) Development of Chapter

- Three meetings of the Transport Working Group for CAP23
 - *23/09; 06/10 and 14/10*
- Multiple Bilateral engagements building on Gap to Target Workshops held during Summer 2022: CCAC, CCMA, DECC, SMP LG, NTA, TII...
- Extensive engagement with DECC / Dept of Taoiseach
- Direct engagement with Minister for Transport / Advisors

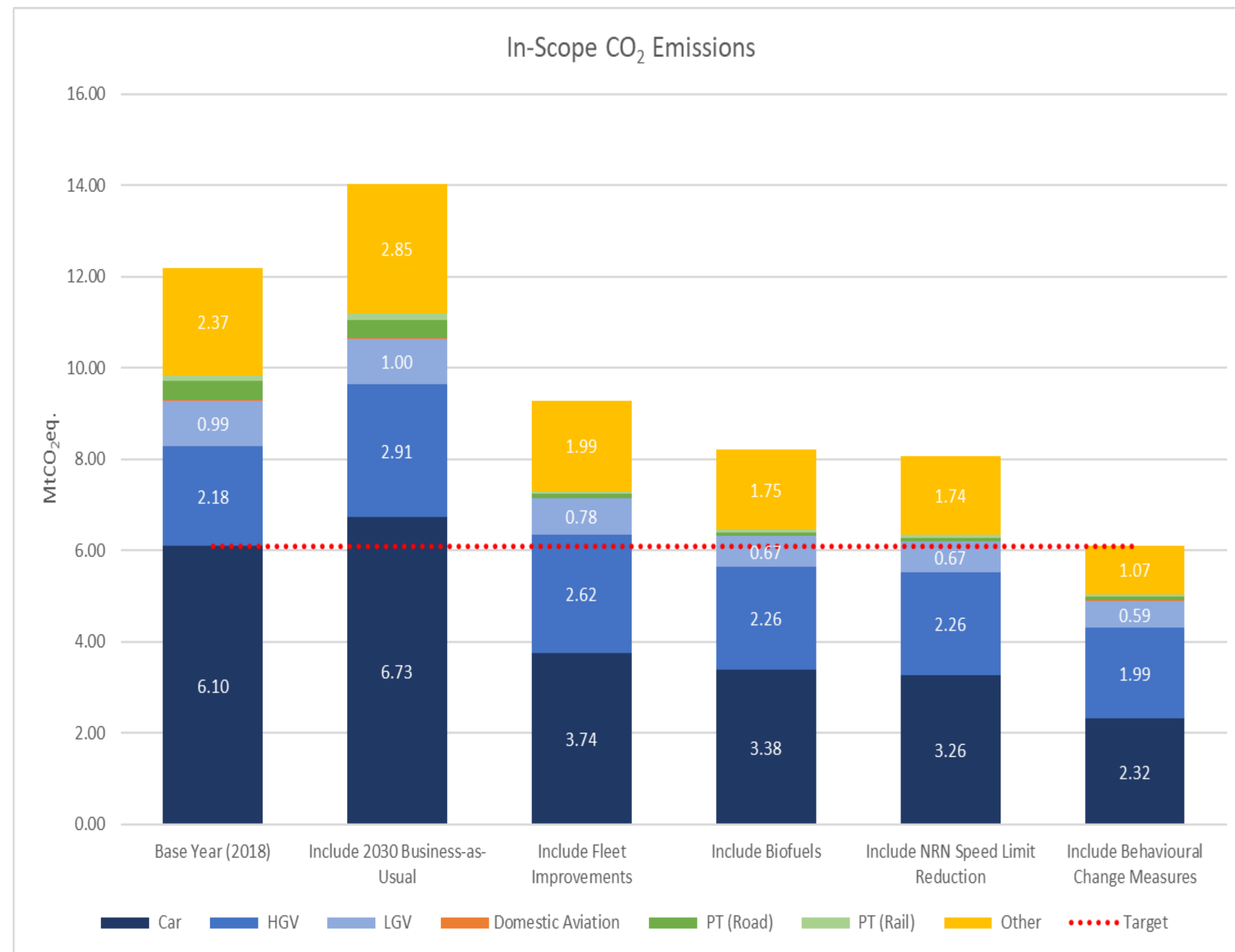


(4) Development of Chapter Overview of the Model Interaction Process





(4) Development of Chapter Overview of the Model Interaction Process



Description	Total Carbon (MtCO ₂ eq.)	Step Increment (MtCO ₂ eq.)	% of 2018 CO ₂
Base Year (2018)	12.2	-	-
2030 Business-as-Usual	14.0	1.8	15%
With Fleet Improvements	9.3	-4.7	-24%
With Biofuels	8.2	-1.1	-33%
With NRN Speed Limit Reduction	8.1	-0.1	-34%
With Behavioural Change Measures	6.1	-2.0	-50%

→ (5) Key Metrics



Table 15.6 – Key Metrics to Deliver Abatement in the Transport Sector

Theme	2025 Abatement/KPI	2030 Abatement/KPI
Avoid (encompassing a range of behavioural change and sustainable transport measures)		
	Total abatement -0.72 MtCO ₂ eq.	Total abatement -2.09 MtCO ₂ eq.
Vehicle Kilometres	n/a	20% reduction in total vehicle kms 20% reduction in total car kms 20% reduction in 'commuting' car kms
Fuel Usage		50% reduction in fuel usage
Shift (encompassing a range of behavioural change and sustainable transport measures)		
	Total abatement -0.72 MtCO ₂ eq.	Total abatement -2.09 MtCO ₂ eq.
Sustainable Transport Trips	<ul style="list-style-type: none"> Additional 125,000 sustainable journeys Roll-out of sustainable demand management measures informed by National Demand Strategy 	<ul style="list-style-type: none"> 50% increase in daily active travel journeys 130% increase in daily public transport journeys. 25% reduction in daily car journeys.
Daily Journeys Modal Share	<ul style="list-style-type: none"> Delivery of Pathfinder Programmes 	<ul style="list-style-type: none"> Shift in Daily Mode Share 2018: 72% (car), 8% (PT), 20% (AT) 2030: 53% (car), 19% (PT), 28% (AT)
Escort to Education Journeys		<ul style="list-style-type: none"> 30% shift of all E-to-E car journeys to sustainable modes
Improve		
	Total abatement -1.96 MtCO ₂ eq.	Total abatement -4.74 MtCO ₂ eq.
Fleet Electrification	<ul style="list-style-type: none"> 175,000 passenger EVs 20,000 commercial vans 700 low-emission HGV 300 EV buses in PSO bus fleet Expansion of electrified rail services 	<p>Private Car Fleet EV share of total passenger car fleet (30%) EV share of new registrations (100%) 845,000 Private EVs⁴⁶</p> <p>Commercial Fleet 20% EV share of total LGV fleet. 95,000 commercial EVs 30% ZE share of new heavy duty vehicle registrations 3,500 HGVs</p> <p>PT Services 1,500 EV buses in PSO bus fleet; Expansion of electrified rail services.</p>
	Total abatement -0.53 MtCO ₂ eq	Total abatement -1.08 MtCO ₂ eq
Biofuels Blend Rate	E10:B12	E10:B20



(5) Key Metrics

- **20%** reduction in vehicle km (versus BAU)
- Modal share of car journeys to drop from **72% to 53%** (one in two journeys via Sustainable Modes)

- **30%** of Escort to Education car journeys to be avoided/shift to sustainable modes
- **30%** of car fleet made up of EV's
- Biofuels: **E10 / B20**



→ (6) Overview of Measures

- Key pivot from CAP21 – Perceived take-away ‘*Almost 1million EV’s on the road by 2030*’
- CAP23 built around AVOID – SHIFT – IMPROVE
- Strong recognition of recommendations in OECD Report



(6) Overview of Measures

- Horizontal / Cross-cutting
 - **COMMUNICATIONS:** Engaging the Citizen on Climate Action and Sustainable Mobility
 - **Accelerating** Implementation (e.g. Sustainable Mobility Policy Leadership Group)
 - **Enhanced Governance** (Better oversight of Interdepartmental and LA engagement)

(6) Overview of Measures – 15 High-level Work-programmes



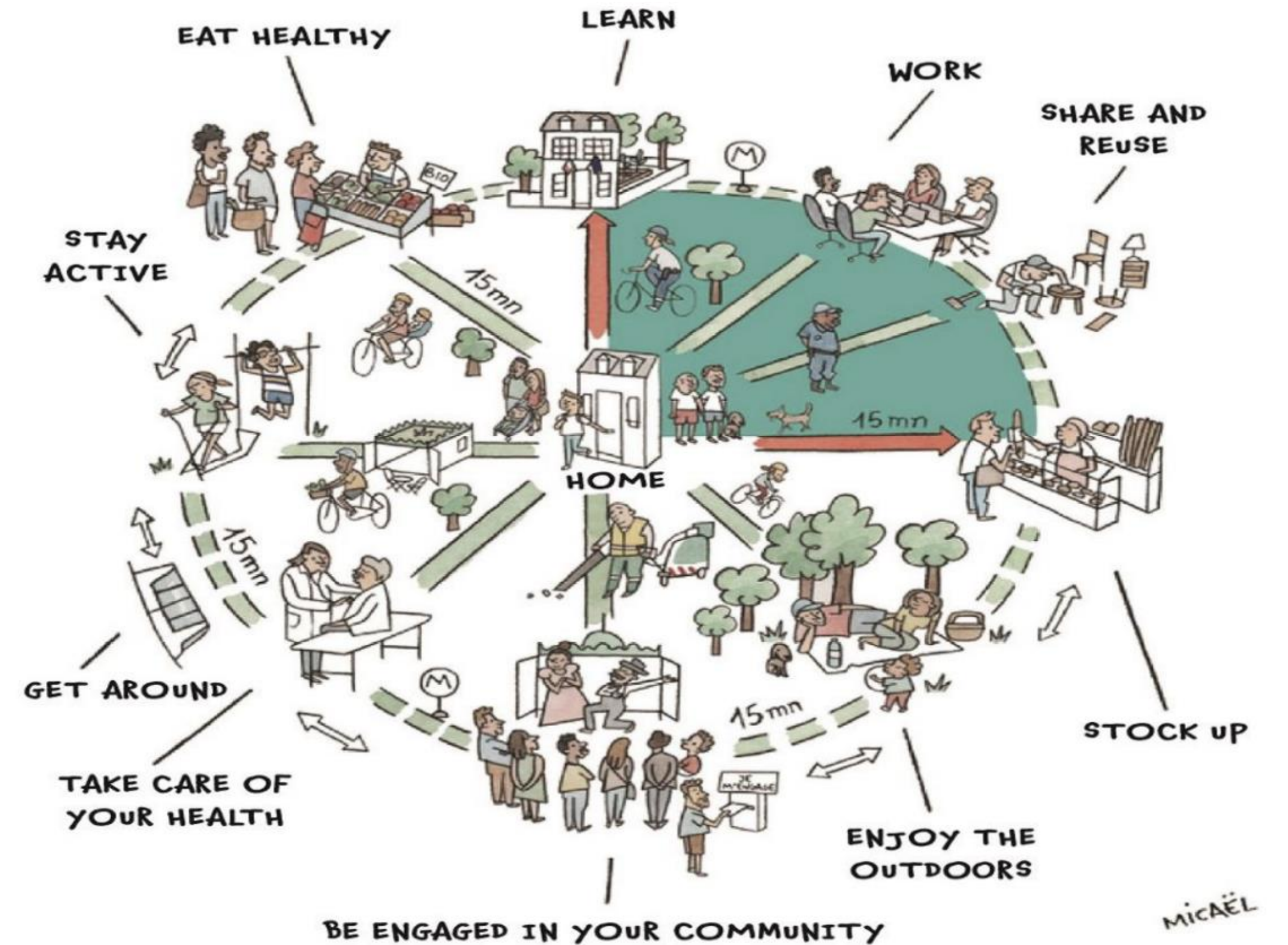
Avoid Actions	Avoid and Shift Actions	Shift Actions	Improve Actions
Enhanced Spatial and Land Use Planning – Enabling Systems Change	Demand Management Strategy – Reducing Travel Demand with Improved Sustainable Mobility Alternatives	Active Travel Infrastructure Programme	Zero Emission Vehicles Ireland Work Programme and Electrification Strategy
Strategic Transport Planning - Systems Change in Practice		Major Public Transport Infrastructure Programme	
Digital Access to Services, Remote Working and Wider Systemic Behavioural Change		Public Transport Services Investment	
	Road Space Reallocation	NTA Connecting Ireland – Rural Mobility Programme	Renewable Transport Fuels
		Escort to Education Journeys	
Smart, Shared & Integrated Mobility and the Promotion of Alternatives to the Private Car			

(6) Overview of Measures



AVOID

Develop our services, communities, and infrastructure in such a manner as to **AVOID** the need to travel as much as we do today





(6) Overview of Measures - AVOID

- **Enhanced Spatial and Land-use Planning**
 - **Design Manual for Urban Roads and Streets (DMURS)**
 - **Transport-orientated Development**
 - **Sustainable and Compact Settlement Guidelines (S.28)**
 - **Updated Transport Appraisal Guidelines**



(6) Overview of Measures - AVOID

- Strategic Transport Planning
 - Expansion of NTA strategic transport planning remit to regional cities
 - Metropolitan Area Transport Strategies – Updates
 - Strategic Network Planning

(6) Overview of Measures



AVOID

+

SHIFT





(6) Overview of Measures – AVOID+SHIFT

- Demand Management Strategy
 - Publish National Demand Management Strategy
 - Speed Management and Enforcement work (TII)
 - Project BRUCE
 - Promote uptake of Remote/Blended Working Policies to reduce car commuting journeys



(6) Overview of Measures – AVOID+SHIFT

➤ Roadspace Reallocation

- **Deliver on SMP Pathfinder Programme**
- **Develop Section 38 Guidelines**
- **Network identification by LAs to identify suitable roads and streets**
- **Leverage road infrastructure ‘Protection and Renewal Programme’ to enhance safety of sustainable modes**

(6) Overview of Measures



SHIFT

Improve the relative attractiveness of sustainable travel modes such as Public Transport, Cycling and Walking, to SHIFT away from car use; this will facilitate increased use of lower-carbon modes and reduce the percentage of total journeys that are made by private car (modal share) from over to 70% (today) to just over 50% in 2030





(6) Overview of Measures – SHIFT

- **Active Travel & Accessibility Work Programme**
 - **Roll-out 1,000 km walking/cycling infrastructure / National Cycle and Greenway Networks**
 - **Publish National Cycling Manual (Design Standards)**
 - **Deliver on SMP Pathfinder Programme**



(6) Overview of Measures – SHIFT

- Major Public Transport Infrastructure Programme, PSO Services Investment & NTA Connecting Ireland Rural Mobility Programme
 - **Metrolink, BusConnects, DART+, Cork Commuter Area Programme, Interurban rail fleet capacity / rail services expansion**
 - **Delivery of NTA Connecting Ireland / New Town Services**
 - **Develop high-level, multi-annual costed programme of Public Transport Services to meet pathway assumptions**



(6) Overview of Measures – SHIFT

- Smart, Shared and Integrated Mobility
 - **Progress Smart, Shared & Integrated Mobility Work Programme (through Establishment of Shared Mobility unit)**
 - **Regulate use of Personal Powered Transporters**
 - **Expansion of bike share schemes**
 - **Development / rollout of 'eMobility Hub' shared mobility solutions**
 - **Incentives to promote access / purchase of eCargo + eBikes**

(6) Overview of Measures



IMPROVE

Increasing the proportion of EV's in our car fleet to 30% by 2030, which will **IMPROVE** the efficiency of the national car fleet; electrification of the freight and public transport sector will also be key.





(6) Overview of Measures – IMPROVE

- EV Charging Infrastructure Strategy & ZEV1 work programme
 - Ongoing provision of capital / policy supports for uptake of EVs, eSPSVs and AFHDVs (per EV Policy Pathway)
 - EV Charging Infrastructure Strategy & Infrastructure - Develop Regional EV Network plans
 - Destination Charger Schemes
 - High-powered charging implementation plan on finalisation of mandatory AFIR targets



(6) Overview of Measures – IMPROVE

- Renewable Fuels for Transport
 - **Draft National Policy Framework on Alternative Fuels**
 - **RTF Policy Statement: Move from E5 to E10 (2023) & publish Policy Statement for 2023-2025**
 - **Support Renewable Gas Development / Use of Bio-methane in Transport**
 - **Promote Renewable Energy use in Aviation & Maritime Transport**

(6) Overview of Measures – IMPROVE



- Decarbonising Public Transport & School Transport Services
 - PSO electric bus fleet procurement/depot charging upgrades
 - Decarbonisation strategy for long-distance bus services, informed by Bus Éireann Hydrogen bus pilot
 - Decarbonisation pathway of interurban rail services
 - Improve sustainability of School Transport Scheme



(6) Overview of Measures

➤ Adaptation

- *Transport adaptation actions / enhancement of adaptive capacity to climate risk, prioritisation and adaptive capacity, and enhanced governance and coordination*
- *Define metrics to accurately quantify cost of extreme weather events to State, research development and enhancement of procedures*

(6) Overview of Measures



➤ Special Focus

➤ *Haulage & Heavy Goods Road Freight Sector*



→ (7) What does this mean for the Roads Sector?

- Sustained investment in major capital infrastructure projects (Metrolink, DART+, BusConnects, etc.)
- Review demands on the road network and infrastructure (Shared spaces, Design standards for cycling, more Bus transit, heavier EV's)



(7) What does this mean for the Roads Sector?

- Re-imagine how we develop and revive our existing urban spaces and public realm – more people-focussed spaces that are ‘accessible’ and ‘permeable’



→ (8) Conclusions

- Very ambitious targets (...*'Eye-watering' / 'Beyond Compare'...*)
- Difficult to track and monitor
- Need State Investment, Government Policy, Private Sector initiatives...
- ...All coupled with Individual Behavioural Change:
- Communication will be critical



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