

Lessons learned from the Community Mobility Charging Hub

Local Authorities: enabling sustainable mobility, a catalyst for
changing public charging behavior

Cormac Healy, 9th November 2021

DCC



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Dublin City Council



6000 Staff



500+ Services



28k tCO2e

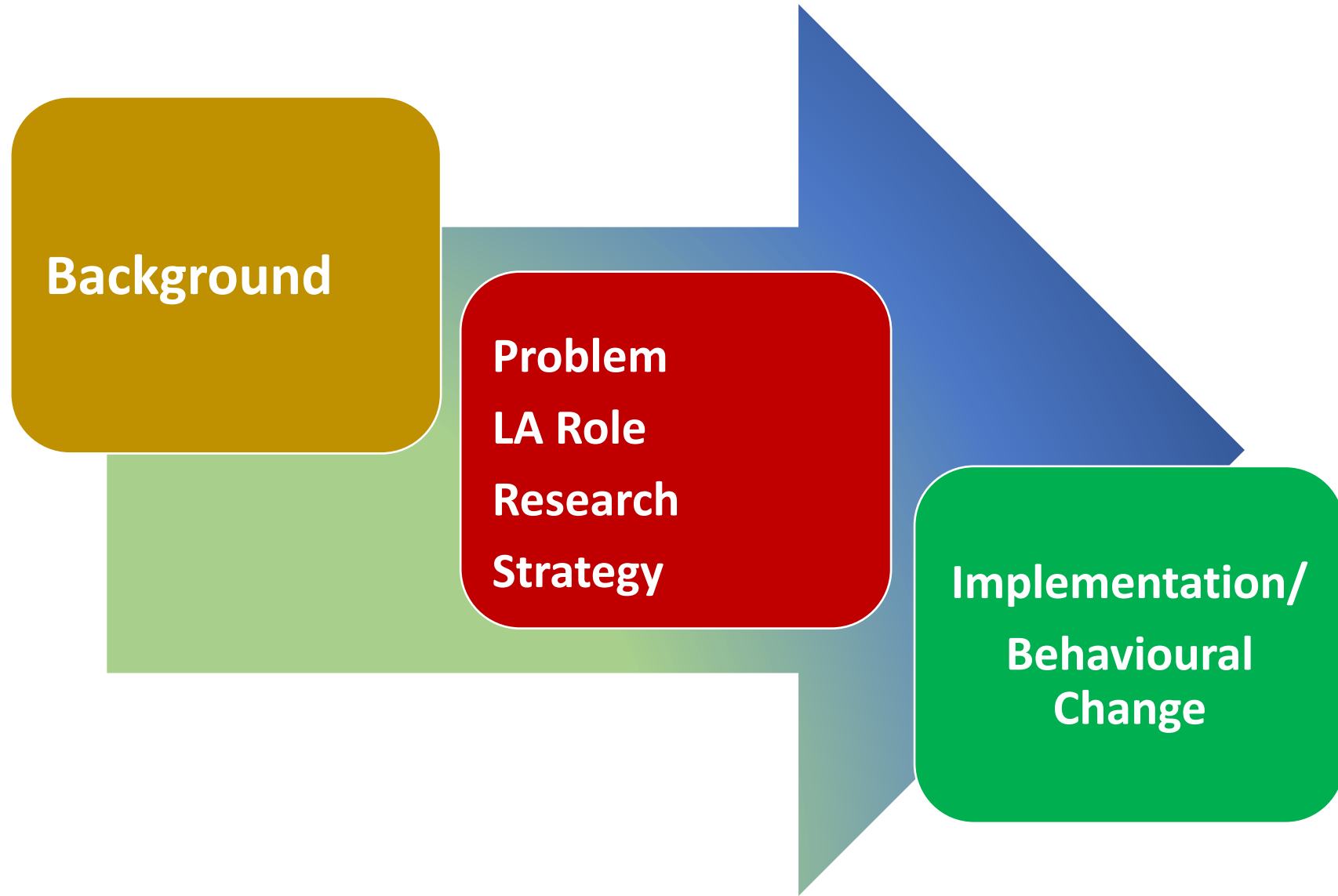


€1.1b - 2022

How did we get here?...



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To Recap...

Background

- CAP
- Gov. Prog
- LA Grant
- Assumed Responsibility
- Pressure: Councillors, Citizens, Operators

DMA to date

- How to Respond
- 4DLA Steering Group
- Strategic Study
- Holding Reply to Queries
- Internal Engagement

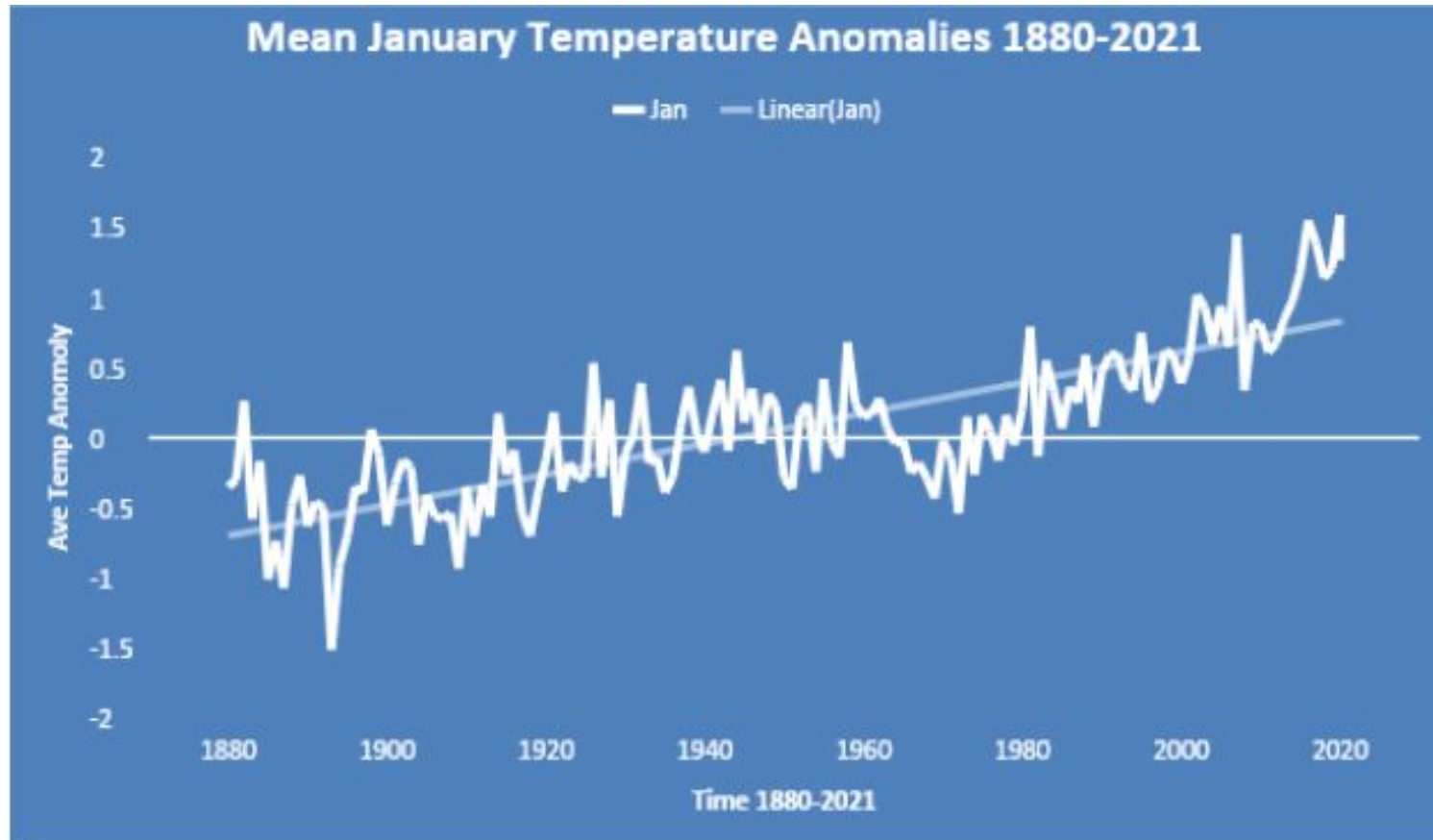
DMA Response

- Strategy Published
- Pillars of Cooperation
- Drafting Policy
- LA role
- Pilots
- Framework Procurement

Why Bother?



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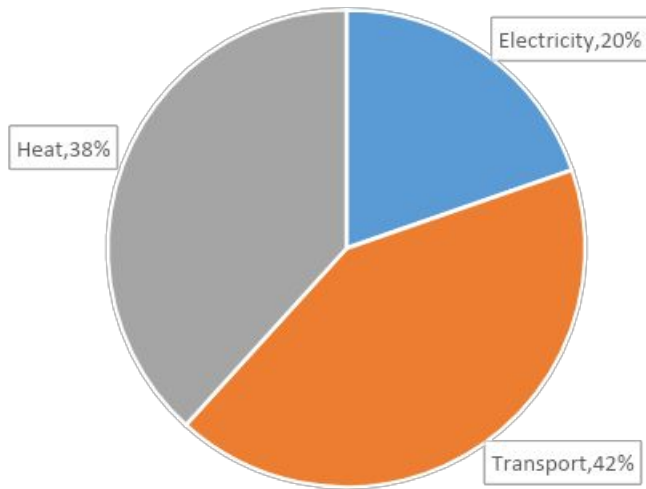


Global Jan temp anomalies
1880-2020;
linear regression
analysis trend line

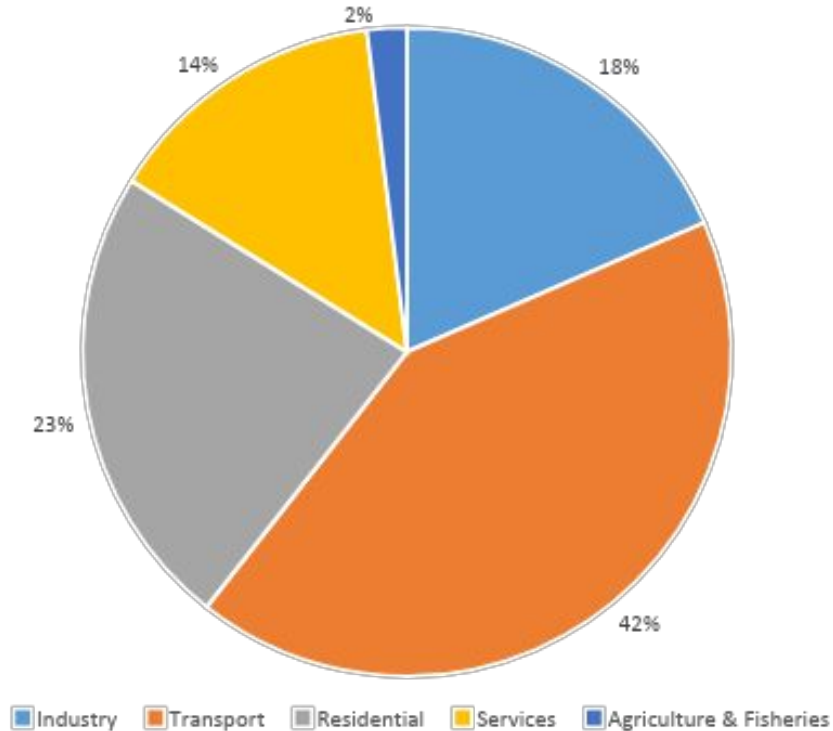
...its
heading in
the wrong
direction!

The Transport Problem

Total Final Energy Use by Mode 2019

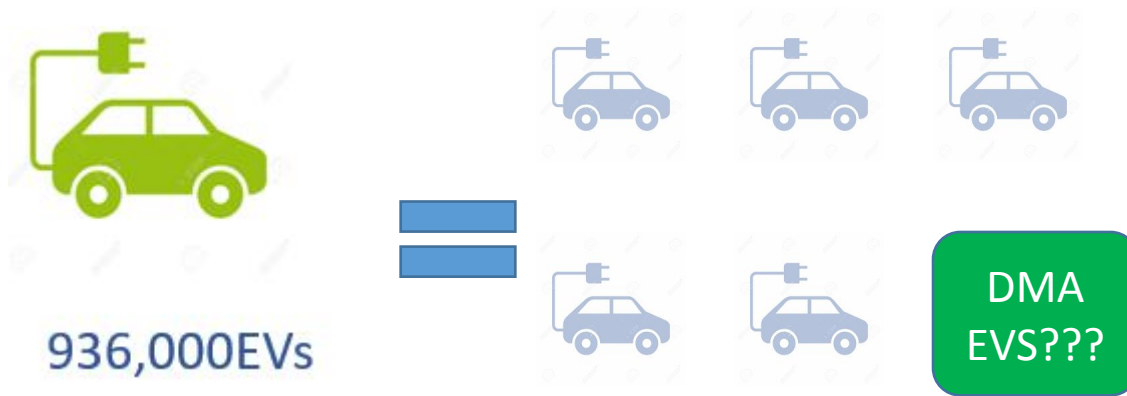


Total Final Energy Consumption by Sector 2019



Energy Use
Dominated
by Transport

Solving the Equation?



DMA
EVS???



*Type of charger ± Grid Capacity
± Location ± Business Model*

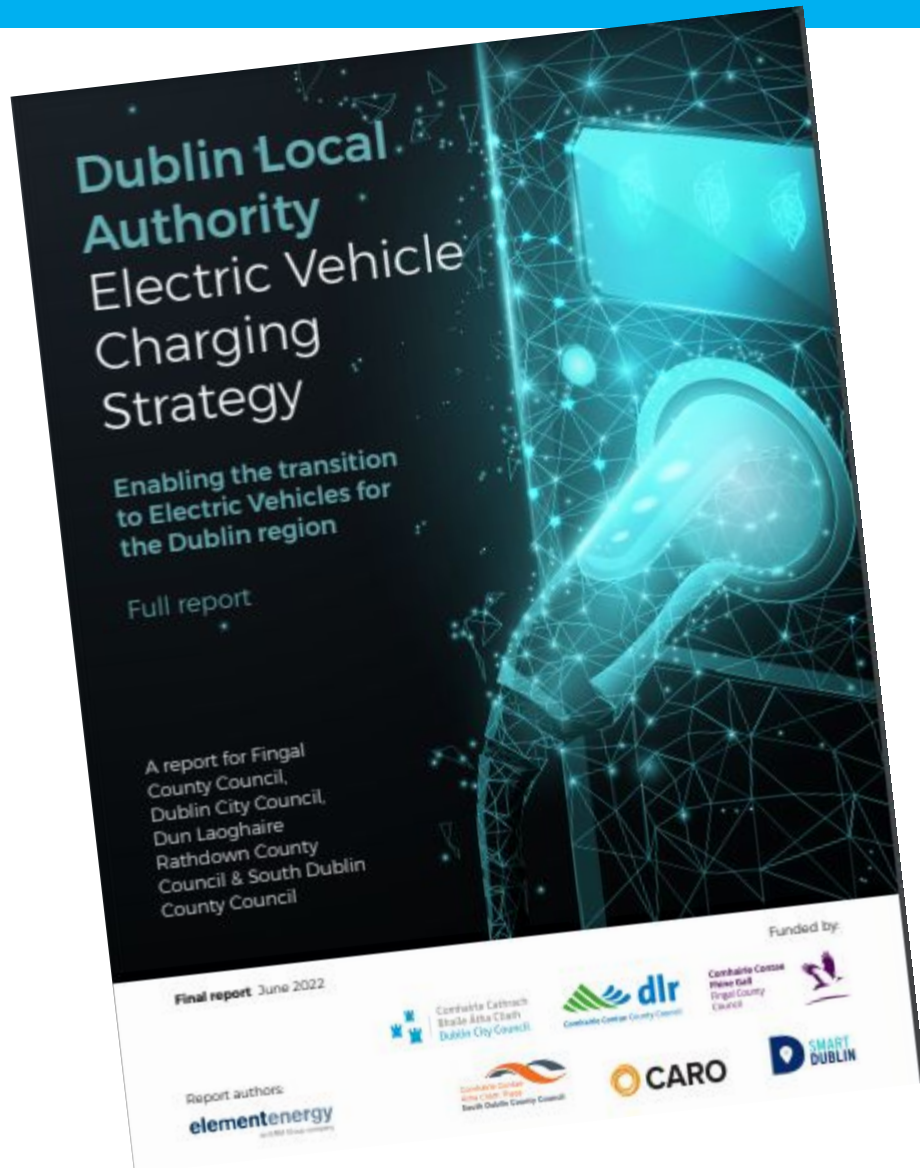
LA Resources/Role



DLA Strategy Published



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Strategy split into 5 key themes:

- Procurement & Council role,
- Site identification and deployment,
- Integration with national & local strategy,
- Communications, and
- Actions to aid private sector deployment

<https://www.dublincity.ie/residential/transportation/electric-vehicle-charging-information>

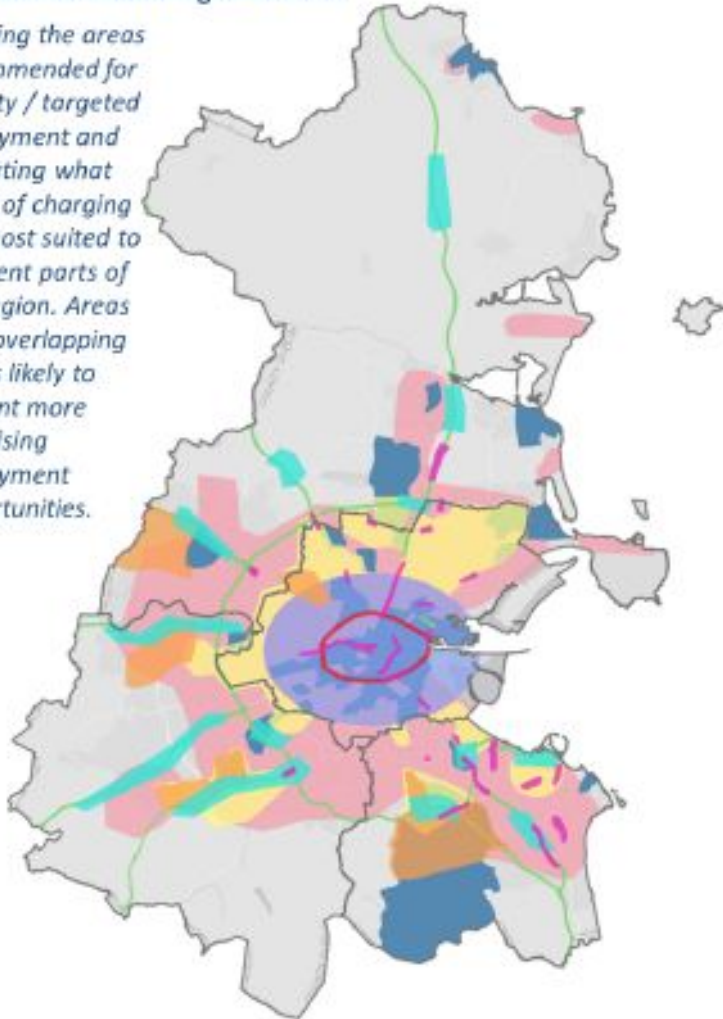
Key Strategy Recommendations



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Overarching recommended deployment approach for Dublin region to 2030

Showing the areas recommended for priority / targeted deployment and indicating what types of charging are most suited to different parts of the region. Areas with overlapping layers likely to present more promising deployment opportunities.

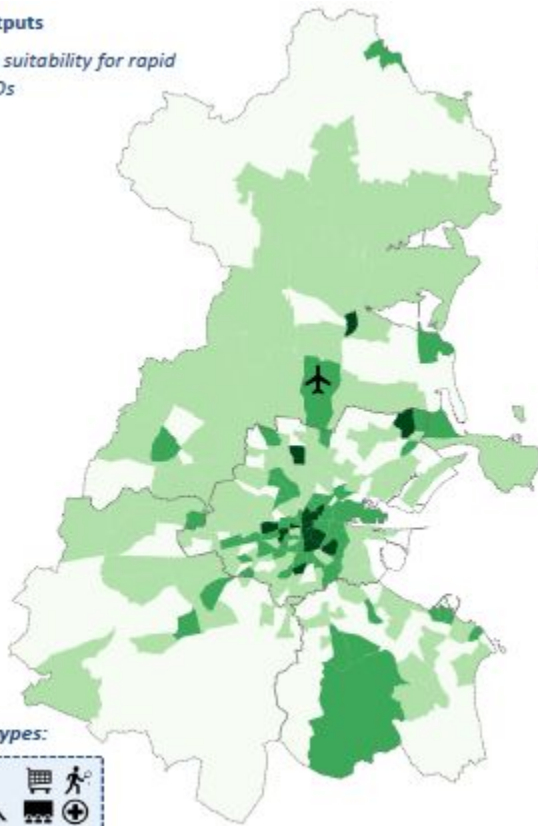


- LAs a key strategic and enabling role but not infrastructure delivery or operation
- Strategic approach aligns with best practice in more developed EV markets
- Intern'l evidence highlights the benefits of Councils planning and coordinating deployment
- Translate Legal Framework and National Policy through Planning and City Dev Plan
- Recommendation that the Dublin LAs collaborate; a central strategic role in enabling & developing a region-wide charging network

Public Charging Needs to 2030

Rapid Hub Index outputs

Showing the relative suitability for rapid charging between EDs

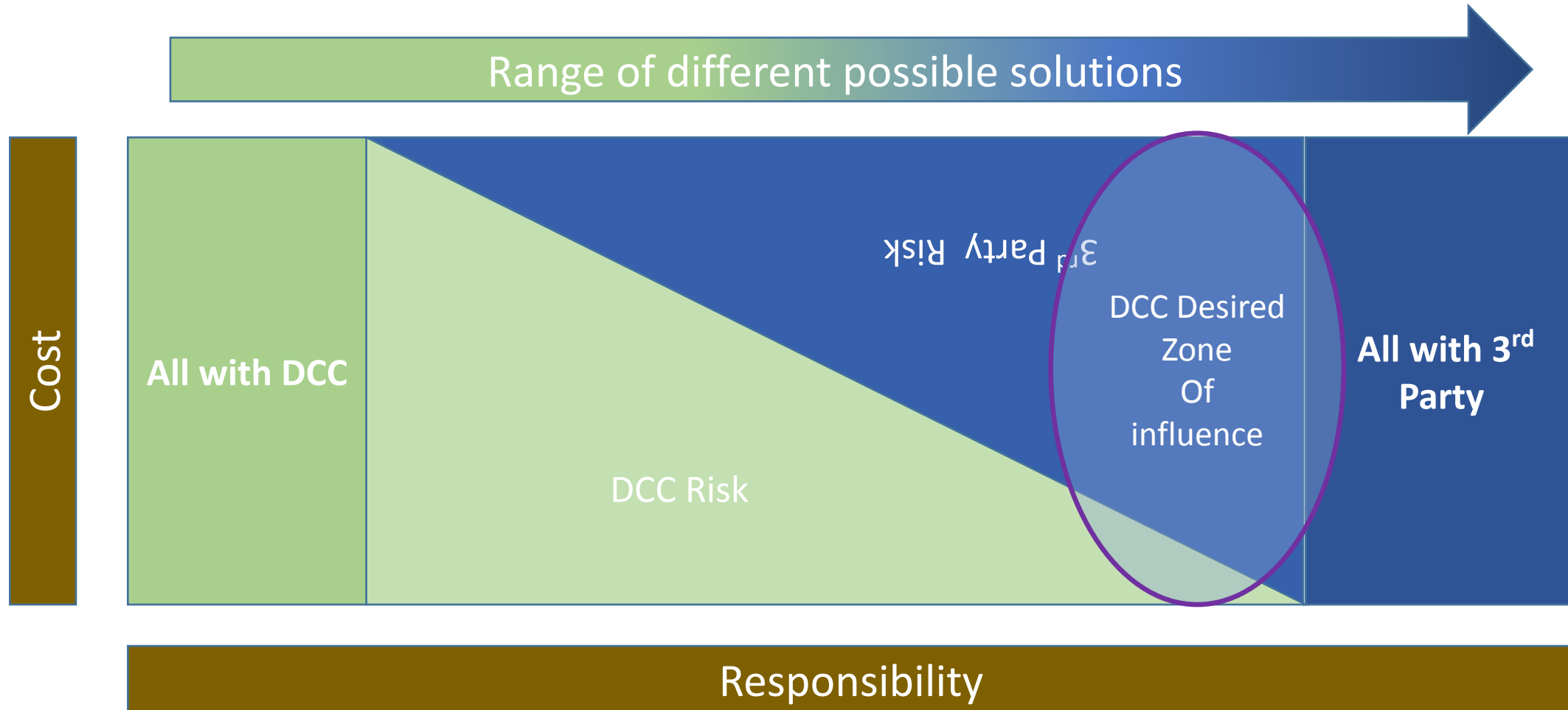


Relevant charging types:



- 140k EVs by 2030, 35k reliant on public charging
- Rapid hub charging is recommended
- 500 to 4,000 (public) EVCPs, **depending** how many rapid hubs
- 50 well located 10-charger hubs meets all residential demand
- €42m by 2030, (€24m public funding-less if just Rapid hubs)
- For EV uptake, 2,500/166 destination/en-route EVCPs-private
- Detailed geospatial analysis, targets key user groups
- Strategy supports wider mobility ambitions

The Adaptive Question



Changing Mobility Behaviour



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1912 “hand-cranked battery charger” by the Pope Manufacturing Company of Hartford, Connecticut was clearly altogether more hands-on.

Columbia Mark 68 Victoria



MY 2011/12
117 km EPA
175 km [NEDC](#)



[WLTP](#) range:

- 45 kWh: up to 330 km
- 58 kWh: up to 420 km
- 77 kWh: up to 550 km

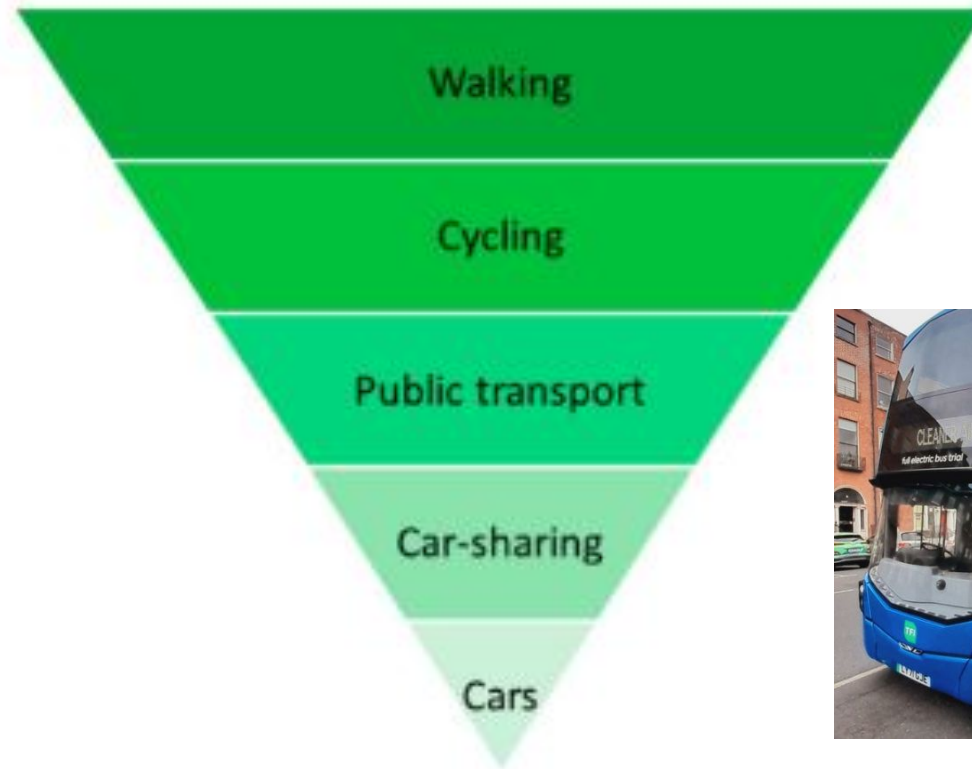
The Mobility Pyramid



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DMC-12 used a Flux capacitor requiring 1.21 gigawatts of power and needs to travel 88 miles per hour (142 km/h) to initiate time travel!



EVs as part of the sustainable mobility solution





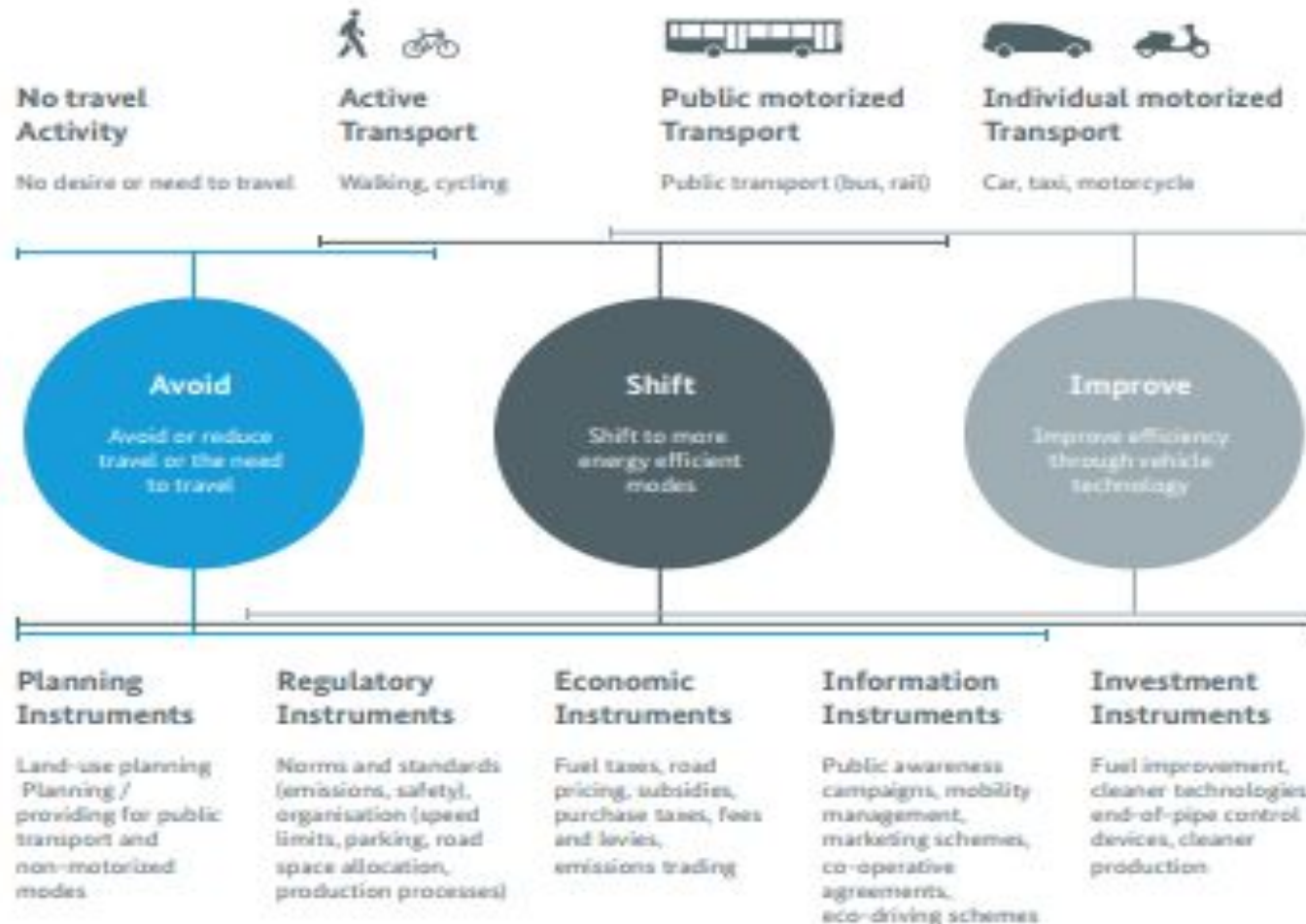
Therefore, ... policies aimed at boosting a sustainable mobility lifestyle should first focus on other issues such as extending cycle paths, improving public transport and simplifying inter-modality...

Tools for behavioural Change



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Avoid Shift Improve - Instruments

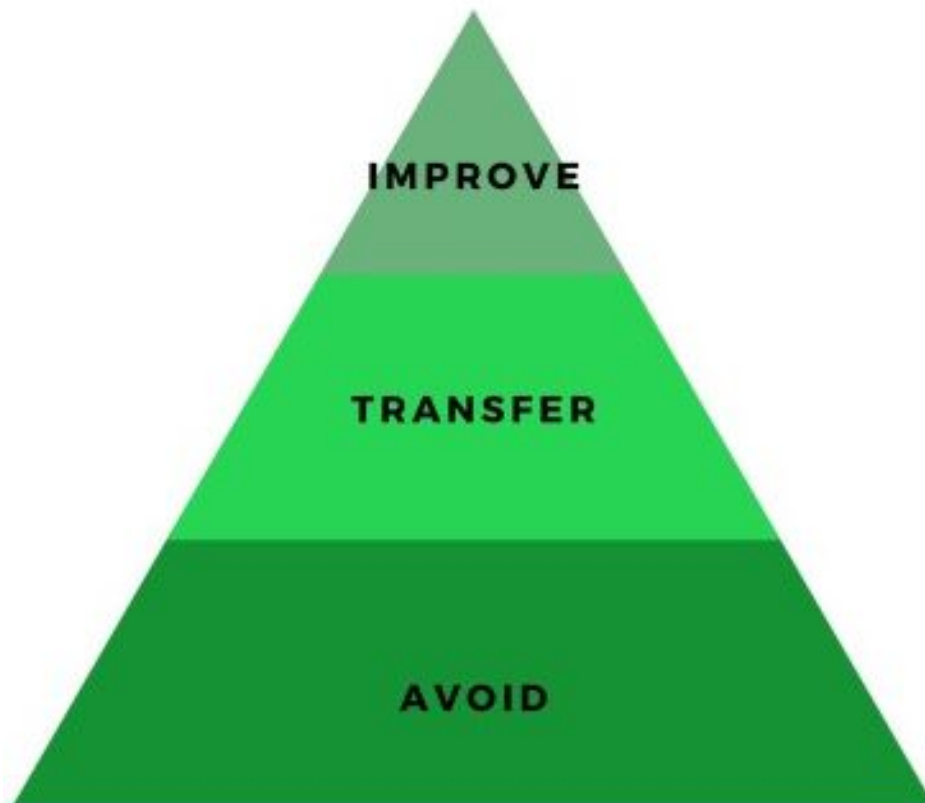


Traditional Tools

- Planning/Land Use/Public Realm
- Regulation (emissions, speed, parking)
- Fuel taxes, road tax, subsidies
- Educational campaigns
- Technological improvements



Some New Tools



Nudge Theory; creates a context of choice and favours the adoption of desired behaviour without constraints.

Suggests consumer behaviour can be influenced by small suggestions and positive reinforcements.

Offers governments a way of responding to public problems without increasing regulation, without reducing equality and without increasing public spending.

Tools for behavioural Change



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Mobility Hubs

The development of mobility hubs which link the car share / club and bike share services to the local public transport network, bike parking facilities and other relevant transport services.

Allows public to **make the responsible and sustainable choice** for their mobility needs for each trip.

Community Mobility Charging Hub



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**Making Responsible
Sustainable Mobility Choices**

- **Modular Concept**
- 4 charge points
- 2 AC (22KW)
- 2 DC (75KW)
- Co-located Car Share EV
- Co-Located 8 eBikes (ESB)
- Licence Arrangements

Lessons from Finglas Hub



Lessons

- Partnership win/win in Practice
- Licence
- All Stakeholders

**Making Responsible
Sustainable Mobility Choices**

Consulting with the Public



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Electric Vehicle Charging Information

[Suggest a location for an Electric Vehicle Charging Station by clicking here](#)

Share

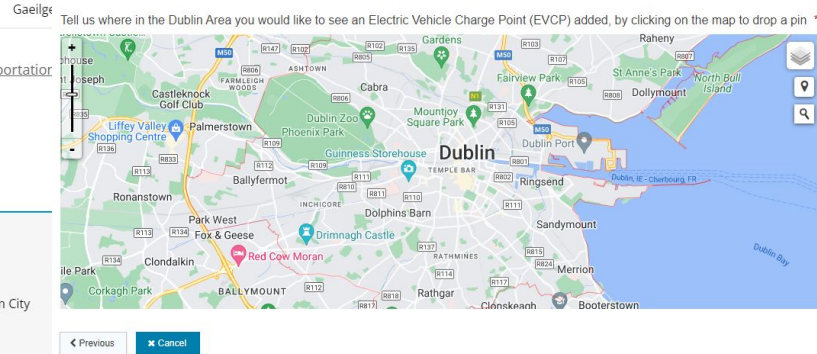
Dublin City Council is aware of the transition to electric vehicles as set out in the Climate Action Plan as we prepare to respond to the needs of the citizens of the City by providing a sustainable urban mobility strategy. The Council is also aware that technology is changing rapidly and that a range of different solutions will be required to successfully address current and future mobility demand, not only in the City, but also across the wider Dublin Metropolitan Area.

In order to inform the four local authorities of the type and number of chargers required, the four Dublin Local Authorities, together with SMART Dublin and CARO, commissioned a strategic study. This will allow us examine how the four Councils can best facilitate the provision of electric vehicle-charging infrastructure across the Dublin region and the scale of investment required.

The Dublin Local Authority Electric Vehicle Charging Strategy is now complete.

EV Charging Points

EV Information Charging point request



In this Section

Traffic News

Speed Limits in Dublin City

Active Travel

Electric Vehicle Charging Information

How to Apply for General Transport Measures

Road Maintenance Services

Street Lights

Faulty Traffic Signals/Lights

Apply for a licence or permit

Roads and Traffic Projects

EV Charging Points

EV Information Charging point request



Dublin City Council is asking the public who currently own or lease an Electric Vehicle, to tell us where they would like a charge point in Dublin. Filling out this form does not guarantee a charge point will be installed in that location but will help the Dublin Local Authorities to identify areas where there is a charging need.

The Dublin Metropolitan Area (DMA) is currently identifying priority areas that require the installation of charging solutions supported by the four Dublin Local Authorities, which will take into account location factors while ensuring distribution and provision is fair and equitable.

You can find out about where public EV charge points are across Dublin City, Dúnlaoghaire Rathdown, Fingal, South Dublin and beyond, by either allowing permissions to use your current location or searching your location in the search bar using Zap Map.

Cancel

Next

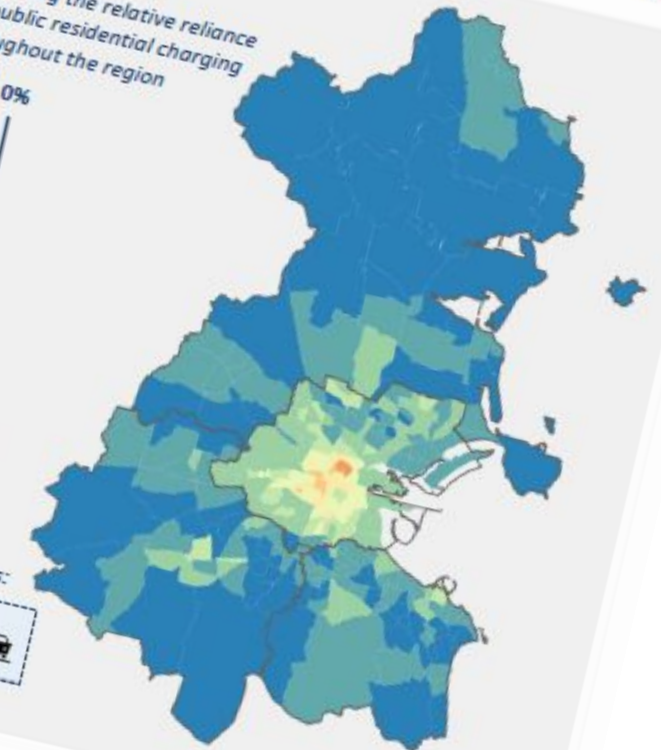
Example of the geospatial analysis outputs generated as part of the strategy

Share of cars without off-street parking

Indicating the relative reliance on public residential charging throughout the region



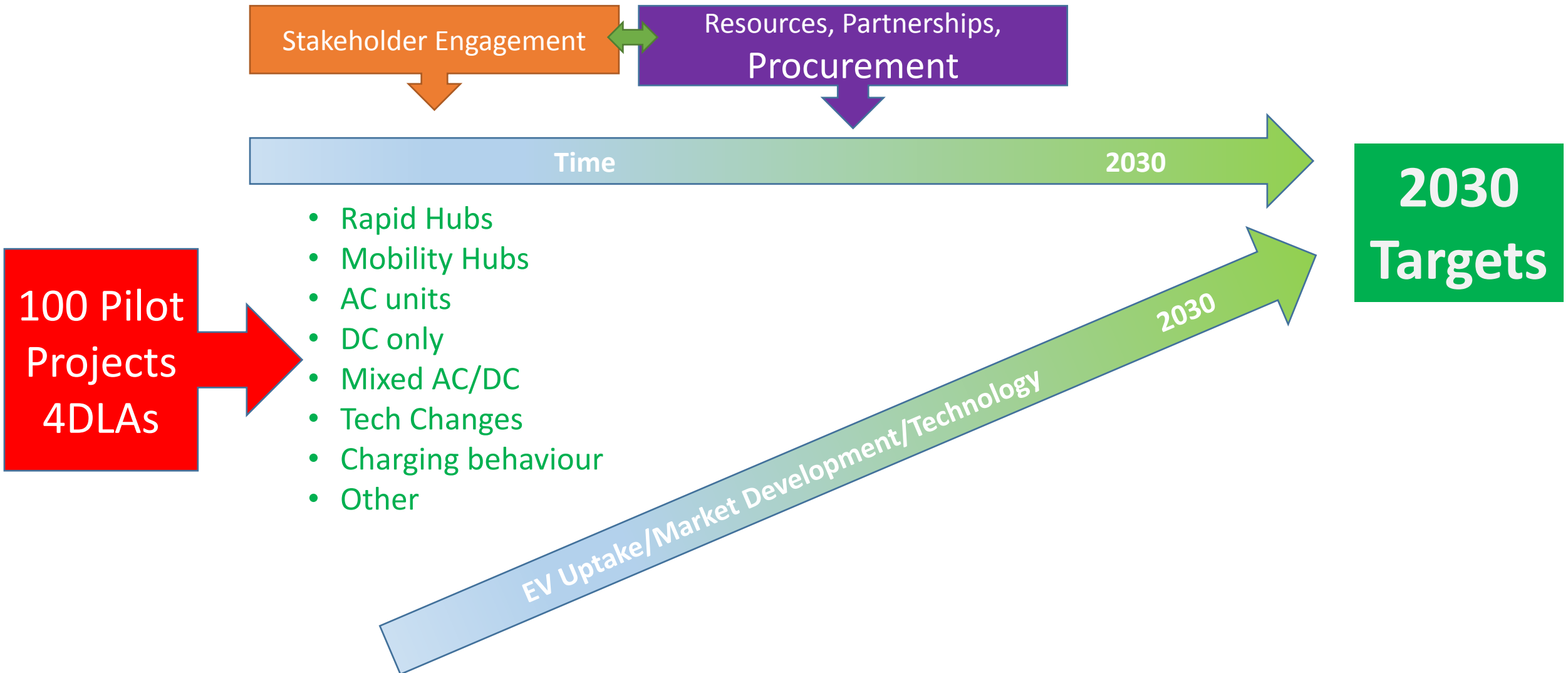
Relevant charging types:



Implementation



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Questions?



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...Thank
You!



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