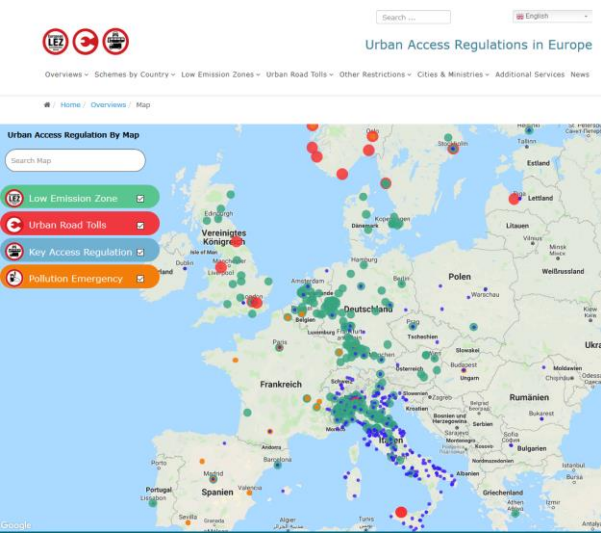




CLARS Platform, www.urbanaccessregulations.eu




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CLARS Platform & ReVeAL Project



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International Transport Forum 17-18 February 2020

**Frameworks facilitating the development of policies on vehicle circulation and/or road charges in Europe:
focus on the integration of electric vehicles**

Lots going on

- (Most of) Europe: Carbon Neutrality 2050
 - Many countries earlier
 - Some with clear action plan
- Many countries stating phase out of petrol & diesel
 - Dates start from 2030
 - Some countries have detailed plans to get there
- Cities
 - Many actions at city and regional levels
 - An overview:

Overview: Many different levers

- Initial Grants
 - Purchase
 - For EV charging points
 - Free or cheap loans
- Access Regulations / Logistical advantages
 - Zero Emission Zones
 - Logistics, all vehicles, construction, Zero emission developments
 - Preferential access, Guaranteed / more flexible / cheaper entry
 - Access to Bus lane
 - Preferential unloading / parking
- Public Procurement / leading by example
- Tax incentives
 - VAT, registration tax, import tax.....
 - Circulation tax, (with & without time limits)
 - Reductions in corporate income tax, personal income tax....
 - Changes in depreciation rates
- Reduction in running costs
 - Electricity costs (further for off-peak)...
 - 'Joining offers' from electricity or leasing companies
 - Reduction / exemption from motorway road tolls
 - Free EV charging at car parks, public charging stations....
 - Leasing with servicing contracts to allow vehicles to be sold at same price as conventional fuelled vehicles...
- EV implementation projects
- Planning regulations.....

At many different levels

- National
- Regional
- City
- Company
- Employer
- Energy company...

Incentives will change
& also reduce over
time

35 Mayors have now signed the Green and Healthy Streets Declaration.

- The signatory cities commit to:
 - Procure with our partners **only zero emission buses from 2025**
 - Ensure a **major area of our city is zero emission by 2030**
- The signatory cities demonstrate **city ambition** to tackle climate change and air pollution urgently and concretely in the transport sector, in line with the Paris Agreement
- In addition, it sends a clear **market signal** to private sector for zero-emission mobility options and services

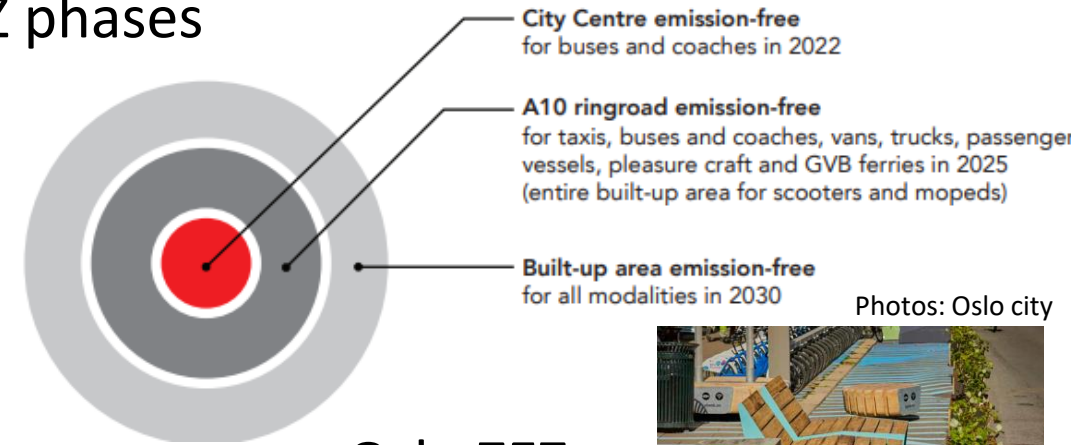


A few Zero Emission Zones already exist
 - many more coming in next 5-10 years

Some of the Pathways to ZEZ

- Tightening existing Low Emission Zones
- Phasing by vehicle types (Logistics, buses, times...)
- UVARs with ZEV advantages then requirements
 - eg Delivery regulations, time windows
- Reducing time windows for non-EV
- Requirements on Permits
- Agreements with stakeholders
- Through planning system & conditions
- Making non-ZEV financially unattractive
- Extending pedestrian areas with ZEV delivery & servicing
- ZEZ by Design - removing parking & road space

Amsterdam ZEZ phases



Photos: Oslo city



Oslo ZEZ

Time table for delivery vehicles

Un-auth. ICE	
Auth. EV	
Auth. ICE	
No motor & EV<3m ³	

Toulouse Delivery regulation

Some Examples

30-40 largest Dutch cities to be ZEZ Urban Logistics by 2025

- Many living lab projects to ensure achieve ZEZs in 2025
<https://www.greendealzes.nl/en/publications/>



										
Green and full is always welcome Ample general delivery windows, strict enforcement and privileges for electric vehicles	Regulations? Then preferably the same Aligning delivery windows and vehicle restrictions reduces the kilometres	Beep the enforcer Cameras register those who park illegally and beep enforcers	Kerb parking for electric vehicles Electric delivery vans and trucks may load and unload on the kerb	Charging for fresh deliveries Charging post and parking place for vehicles with electric cooling and refrigeration	Noiseless early mornings Deliveries to supermarket chains in the early morning with quiet, green vehicles	Discerning shopping basket delivery Zero-emission home deliveries	Hotel & cater by e-car Supplies to the hotel catering trade by electric vehicles	Zero emission removals Every removal operation is electric thanks to cooperation and purchasing criteria	Collective waste contract All entrepreneurs in the street are with the same waste collection company	Real sustainable purchasing Encourage green, smart transport for the purchase of products and services

Stockholm, night-time deliveries with geofenced PHEVs

- Encouraging ZEVs, reducing daytime traffic and driver stress
- Low noise driver & unloading equipment
- PHEV lorries geofence switch to EV in city



Picture: Stockholm city

ReVeAL Examples

- London ZEZ
 - 2 small current ZEZs in London
 - ZEZ in City of London 2021, timed closures then ZEZ
 - ZEZ Central London from 2025, larger ZEZ Central London by 2040; London-wide latest 2050
 - 'ZE capable' taxis, all taxis ZEV 2033, All Bus ZE 2037
- Helmond Zero Emissions Brainport Smart District development
 - Emission-free from the start (with some exemptions)
 - Within BSD all journeys on foot, by bicycle or with shared transport
 - Free emission-free shuttle bus, mobility hubs, no private parking
 - Smart deliveries: pick-up points, cargo bikes, delivery hubs...
 - ZEV Construction



[Photo: city of London](#)



[From BSD presentation](#)

Our goal			
4.500 Residents	120.000 m ² Business Park	1500 Houses	73.000 PV Panels
300 Autonomous transport	27.000 m ² Bio-intensive agriculture	1.5 km Smart Mobility Loop	125.000 m ² Parc



Zero-emission zones



Spatial interventions

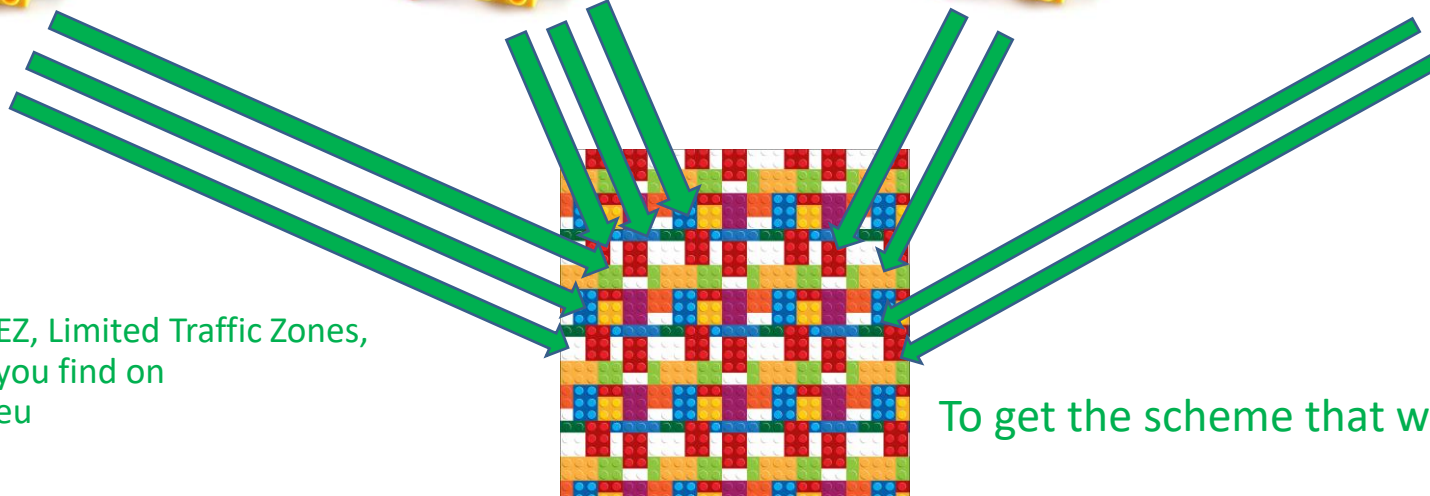


Pricing measures



Future options

Building Blocks



* Pathways to ZEZ. Includes LEZ, Limited Traffic Zones, most of the types of scheme you find on www.urbanaccessregulation.eu

To get the scheme that works for your city



Regulating Vehicle Access for improved Liveability

- **ReVeAL Toolkit**
- Urban Vehicle Access Regulation (UVAR) “Option Generator” with supporting measures
- Process guidance to support implementation



Governance and financing



System design / technology



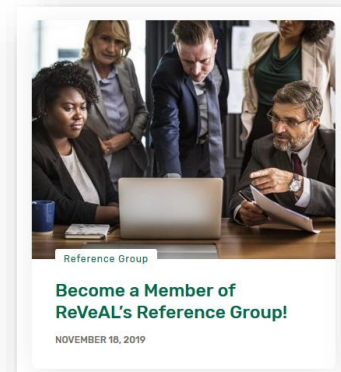
Mobility concept



User needs / acceptance

- **ReVeAL Reference Group**
- Diverse group of 30 key stakeholders
- (call for members closed)
- First meeting 24 June 2020
- **13 Webinars during 3 year project**
- Register to find out webinar details & other news & events

<https://civitas-reveal.eu>



ZEV Enablers

- National facilitating frameworks
 - Dutch ZEZ city logistics & Green Deals
 - LEZ stickers with ZEV stickers
 - ZEZ law (Poland, but need enough vehicles....)
- Statements and Goals, followed up by concrete actions
 - Climate neutrality goals may be more popular than the action needed to implement them
- Set date & details for ZEZ zones and ZEV-only vehicle sales
 - Larger zones give return on the required investment

Barriers / Solutions

- Lack of ZEZ legal possibilities / frameworks for cities
 - Change the law, provide framework, remove barriers.....
- Cities need national support, information sharing & funds
- Sharing experience → learning & consistency
- National bans on selling diesel/petrol vehicles wrt need to be clarified as legally possible EU legislation
 - Indications are that it will be clarified at EU political level with European Green Deal
 - Please clarify as a yes, it is legal

Enabling examples National Frameworks

- London congestion charge 100% discount
 - Currently PHEV Euro 6, <75g/km of CO₂ & minimum 20 mile ZE-capable
 - From 25 October 2021 only BEV
 - From 25 December 2025 no more cleaner vehicle discount
- French LEZ Sticker
 - Gas and Euro 6 petrol PHEV lorry (PHEV Euro 4 motorcycles Euro 5 & 5 Petrol car)
 - Electric vehicles and hydrogen fuel cell vehicles
- Tightest Spanish LEZ sticker
 - EV, fuel cell, but also plug-in-hybrid (minimum range 40 km) ☹️
- EV Number Plates
 - German: electric “E” number plates include PHEV ☹️
 - Norway: EL, EK, EV and EB: Electrically powered vehicles; HY Hybrid
-
- Allow an absolute ZEV, differentiated from PHEV



Identification of vehicles

- Information on vehicle databases
 - Split out all technologies, BEV, PHEV (& type), Fuel Cell, Hydrogen ICE...
 - PHEV type: What range EV, which fuel, y/n switchable to BEV (certified) geofencing...
 - Also EV special number plates where relevant
- Allow (absolutely) Zero Emission Options
- Ideally consistent definitions of 'good' PHEVs
 - Possibly too late, or as an option
- Share information across borders
 - Both to identify & enforce (Please EU)
 - Currently cities need to require registration of foreign vehicles to identify emissions (or ZE) standard of foreign vehicles. Only EU can change this (eg UVARs in EETS Directive)
 - Similarly for foreign vehicle enforcement

Geofencing Barriers and Solutions

Geofencing possible for many aspects; here focus switching PHEV to pure EV

Procurement: Geofencing required / 'implied' | Voluntary: by agreement

ZEZs: non-tamper-proof geofencing equipment → White List (otherwise PHEV banned)

- Need legal definition of geofencing
 - UNECE, EU type approval
 - Geofencing standard for vehicles (equipment) & enforcement (incl non-tamper, data...),
 - Vienna Convention may want an override
 - any overriding logged & passed to enforcing authority an infringement
- Legal basis to enable use as enforcement: Regulation, data sharing
 - The legal ability to allow geofencing for entry into ZEZ (or as an 'exemption' for white list)
 - Good quality digital maps & Digital rules
 - To support Please be involved with forthcoming EU DG MOVE project digitizing UVAR data
- CLOSER Project <https://closer.lindholmen.se/en/projects-2/geofencing>



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Thank you for your attention



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