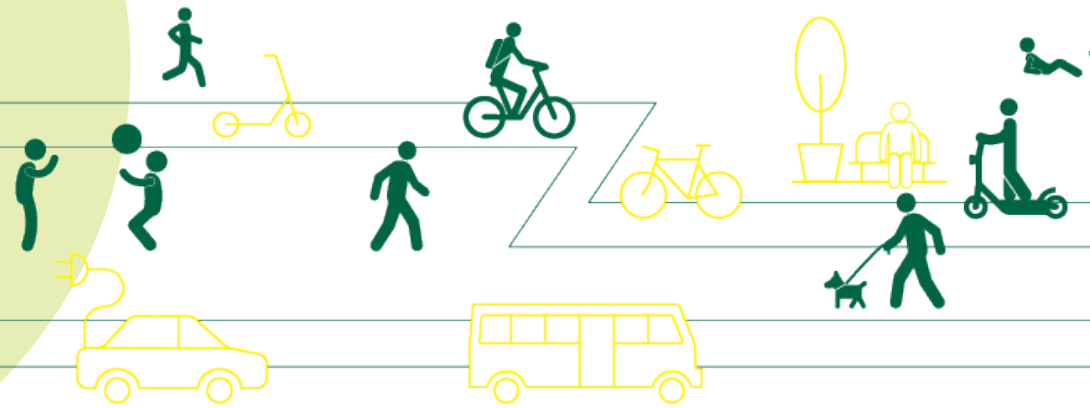


Strategies to Lower Emissions and Improve Liveability in Urban Areas



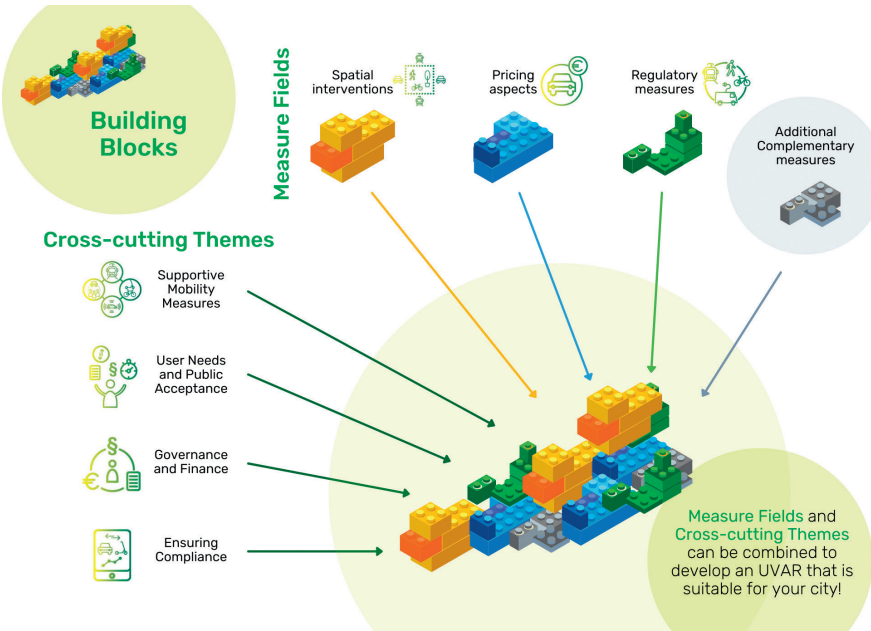
★ We talked to **Bonnie Fenton** from the EU ReVeAL project (Regulating Vehicle Access for Improved Liveability) about using UVARs (Urban Vehicle Access Regulations) to improve accessibility, lower emissions, improve air quality and public safety, and increase the overall quality of life within cities.

Urban areas, such as city centres, can be saturated with motorized traffic and the noise, hazards and pollution that come with it. To improve air quality, liveability, safety, and attractivity in cities, as well as to achieve wider sustainability goals, the ReVeAL project set out a range of UVAR options to pick and choose from to support the reduction of vehicular access to urban areas. UVARs are rules, regulations, restrictions and bans in relation that regulate under what conditions certain vehicles are allow to enter certain parts of a city (e.g. Low Emissions Zone, Congestion Charges, etc.). This is not an easy task and requires robust strategies to be successful.

As Fenton, Sustainable Mobility Consultant at Rupprecht Consult, puts it, "It requires both 'carrot' and 'stick' methods for a city to achieve its goals. UVARs are seen as 'sticks', as they reduce vehicle access to certain parts of the city. This can be as extreme as a complete car-free area – a pedestrian zone – but there are many other options to reduce vehicle access.

"Some people may be upset at the idea of no longer being able to drive into the city centre. They have the feeling like something is being taken away. But you can achieve higher levels of acceptance if you're addressing a known problem, such as safety or air quality. If people don't see a problem, they won't see the need for change. Part of a city's communication work is to make sure people are aware of the problem that needs addressing".

There is a problem. In terms of air quality alone, according to The European



The ReVeAL's Building Blocks are a fundamental concept of the project; ©ReVeAL.

Environment Agency (EEA): 'Air pollution is the single largest environmental health risk in Europe, causing cardiovascular and respiratory diseases that lead to the loss of healthy years of life and, in the most serious cases, to premature deaths'.

"It comes back to what kind of cities we want to live in," said Fenton. "A city might decide to implement UVAR measures to reduce emissions, pollution, speed, improve safety or the quality of life. Depending on what your goals are, you will make different decisions about what kind of UVAR measures you want to put in place.

"ReVeAL systematises the process to show what is available and can be done and

what changes might happen. The context or the goals may be different from place to place, you need to decide what it is you want to achieve, and we have been developing what we are calling a 'decision support tool' which will help cities decide what might be appropriate, via UVAR building blocks."

The Measure Fields

ReVeAL has organised the possible measures into what it calls Measure Fields. These include Spatial Interventions, Pricing Aspects and Regulatory Measures.

Spatial measures focus on changes to physical spaces like road layouts which might block access to vehicles or be altered



to favour more sustainable transport (like bicycles) or it may involve the reallocation of parking spaces to other uses. Pricing Aspects centre around putting a cost to going into a city space with a vehicle or a vehicle that pollutes more, such as penalties and fees in the form of congestion, pollution, or parking charges. If there are charges involved, those funds can be used for sustainable mobility improvements. London did this with its congestion charge, as the money collected was ploughed back into improving public transport.

Further to these central ideas are Complementary Measures, a list of ideas such as incentives for fleet renewal, user exemptions, grants for adaptations and so forth.

A complementary measure is defined within the project as an additional measure that complements a given UVAR building block to enable access of people, goods and services into the UVAR area while maintaining the goals of the UVAR, easing compliance and facilitating the best adaptation to the new reality. It may also

act to minimise any equity issues that may result from the measure it complements.

There is a lot to consider for any city wanting to reduce traffic and the right mix of measures will be focused on a specific outcome.

Technology and data play a key part in UVARs. For instance, number plate reading technology and air quality measuring devices. There is also Radiofrequency Identification, known as RFID, which uses radiofrequency waves to transfer data. This could be used to identify vehicles permitted to access without having to pre-register them. A badge on the car could communicate automatically that a car is exempt from a rule without the need for time-consuming checks.

What's important in this project is the idea of transformation toward a

better environment. The emphasis is on communicating why measures taken are necessary, and how they promote benefits such as improved standards for air quality, traffic congestion and safety.

For each of the building blocks in a plan, ReVeAL detailed what was incorporated and why. For instance, a school street might require the removal of vehicle traffic from in front of the school for a given period of the day, when the children are going to school.

ReVeAL outlines a description of how that can be implemented and what to consider for building blocks that might fit well to achieve the desired environment around this area. For example, it may be worth considering cycle-only streets in the neighbourhood around a school, so children have access to bicycles, without needing to contend with other vehicles when riding to their school.

Depending on what your goals are you'll make different decisions about what kind of Urban Vehicle Access Regulations (UVAR) measures you want to put in place.



ReVeAL

Regulating Vehicle Access for Improved Liveability

Project Objectives

The EU-funded CIVITAS ReVeAL project aims to add Urban Vehicle Access Regulations (UVARs) and associated policies and technologies to the standard range of urban mobility transition approaches in cities across Europe. The overarching mission of the project is to enable cities to optimise urban space and transport network usage, not only to decrease emissions and noise pollution but also to improve accessibility, sustainability, and liveability for every member of society.

Project Partners

<https://civitas-reveal.eu/about/partnership/>

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Bonnie Fenton



Bonnie Fenton has worked in sustainable mobility at both the local and the international levels with experience both in Canada and across Europe. She has a particular interest in walking, cycling and shared mobility as well as in making connections between theory and practice. Bonnie coordinates the EU ReVeAL project.



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There are all sorts of possibilities depending on the area being considered for changes.

ReVeAL developed and tested UVAR packages and approaches in six participating pilot cities, namely Helmond in the Netherlands, Jerusalem in Israel, the City of London in the UK, Padua in Italy, Vitoria-Gasteiz in Spain, and Bielefeld in Germany.

"We are learning through their experiences what works and what is challenging. From that, we are creating guidance for other cities to take forward. When a city is considering regulating vehicle access, we can show the kinds of factors that need to be thought through," said Fenton. "For example, a low-emission zone needs to be planned in phases, not all at once, and people need to be informed about what is coming up in subsequent phases. We also need people to feel that their city centre is accessible for all. The trick is to make sure everyone has access – but not necessarily by the mode they are used to taking, like private cars."

Changing the Identity of Spaces

The pilot cities involved in the EU-funded project were all invested in the idea of change. Whilst traffic reduction was an outcome, more startling transformations redefined the way locations were perceived and used. To give an example, Bielefeld saw something of a minor regeneration unfold.

"Bielefeld is a medium-sized city in Germany, and they have been focussing on the old town in the city centre. They looked at individual streets to see what they could do and have done quite a bit just using automated bollards (which can be raised and lowered, allowing delivery vehicles to come in at different times). They took away parking spaces and used that extra space for other things such as restaurant seating.



The Jerusalem Light Rail (Harakevet Hakala) stretches from Pisgat Ze'ev in the North (Heil Ha'avir Station) to Mount Herzl in the West; © lex Ugolkov/Pexels.

Activities were planned during the pilot phase in the wintertime to make it more attractive to be there outdoors. It showed that these UVAR measures can make cities more attractive."

In Bielefeld the authorities monitored how people reacted to the changes, which was important because the aim is not to simply to draft regulations but to attain acceptance for a vision of the city's future. Testing is fundamental. What can happen is the redefining of a city centre's identity, making it a place to relax, enjoy venues and congregate with other people without traffic, noise and pollution.

Urban living has long been synonymous with polluted air, the cut-and-thrust of cars and trucks and an environment that can be unhealthy and hazardous. The catalogue of measures created by ReVeAL will help support decision-makers in cities and built-up areas with heavy traffic to reimagine and reinvent their spaces, so people can enjoy life in them to a far greater degree.



City of Bielefeld's Jahnplatz has been redesigned to favour a more sustainable urban mobility; ©DSK GmbH.