UVAR Guidance: User Needs and Public Acceptance

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1. Introduction

1.1 About the ReVeAL project

Urban vehicle access regulations (UVARs) are one of the tools that can help make cities more liveable, healthier and more attractive for all. The goal of the EU Horizon 2020 project ReVeAL is to support cities producing good practice in UVAR and to add UVARs to the standard range of urban mobility approaches across Europe and beyond.

The ReVeAL project supports UVAR implementation in six pilot cities and is developing a tool to help other cities decide what UVAR measures may be appropriate for them and what to be aware of when implementing. The project is also producing several guidance documents on specific UVAR-related topics.

To find out more about ReVeAL, please see the ReVeAL website.

1.2 Purpose and context of this document[1]

There is no one-size-fits-all solution in implementing an UVAR, however ReVeAL has identified four aspects – called *Transition Areas* in ReVeAL – that are relevant to the change process associated with the implementation of any UVAR. These are governance and financing, user needs and public acceptance, mobility concepts and ensuring compliance (see Figure 1).

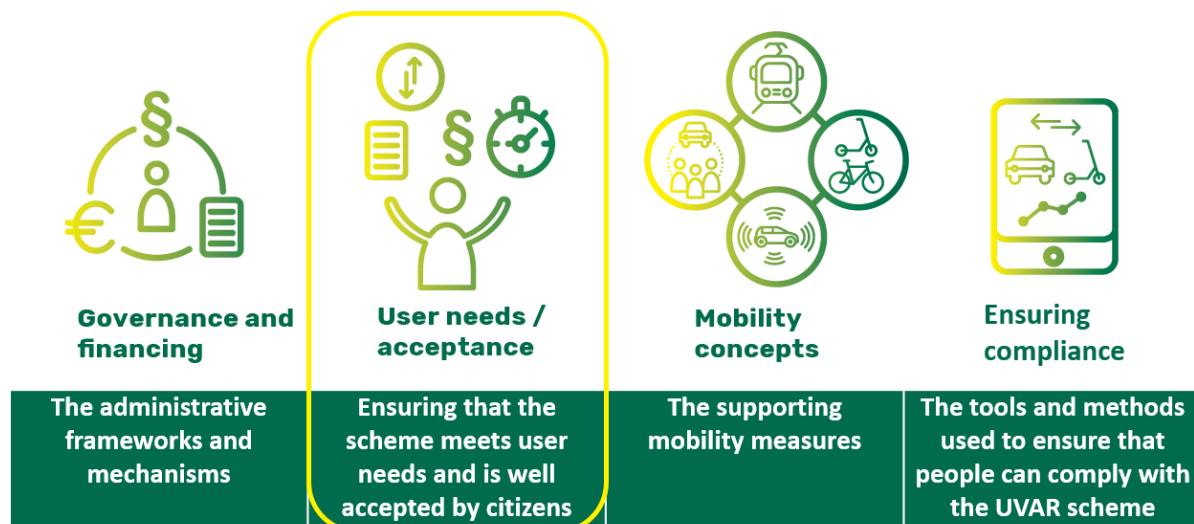| **Governance and financing**	**User needs / acceptance**	**Mobility concepts**	**Ensuring compliance**
The administrative frameworks and mechanisms	Ensuring that the scheme meets user needs and is well accepted by citizens	The supporting mobility measures	The tools and methods used to ensure that people can comply with the UVAR scheme

Figure 1: ReVeAL Transition Areas

As these key aspects are relevant to all schemes, we have developed a guidance document for each one. This document addresses **user needs and public acceptance**. The guidance

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[1] This document is for information and guidance. ReVeAL and its partners take no responsibility for any action taken base upon its content.

is not intended to tell cities which options to use, but rather to help identify the questions to be asked and the factors to be considered in making decisions. As there are many linkages among the four Transition Areas, it may be worth reading the guidance documents together.

1.3 Definition and scope of user needs and public acceptance

Central to implementing effective UVARs is public response – before, during implementation and when the scheme is in place. For an UVAR to live up to its full potential, it is crucial for the population to understand the scheme and its aims.

User needs and public acceptance involve citizens and mobility user communities in all their diversity (economic and socio-economic situations, cultural backgrounds, gender, mobility needs, attitudes and likely acceptance of UVARs). It includes both those who benefit from and those who need to adapt to the scheme (the two are not exclusive). The diversity of users is important to keep in mind when designing and/or building UVAR schemes.

Within ReVeAL, user *needs* are understood as the degree to which users' mobility needs (e.g., access to shops, work, deliveries, etc.) are met and the *necessary* transportation of people and goods is possible (although not necessarily all desired trips by the desired mode). Public *acceptance* is the demonstrable willingness within a group to use a system or measure for the task for which it was designed.

2. Key aspects

2.1 User needs

If user needs are not taken into account when designing an UVAR scheme, a city may end up with a system that does not work as anticipated. It is important here to distinguish between user *needs* and user *desires*. The need may be to access the area, the desire may be to access the area by private car; ensuring the perceived access *need* might appropriate and one that the UVAR should take into account, but this may not always be in the *desired mode*. There is a risk that essential transport needs cannot be fulfilled or that certain groups are unintentionally disproportionately affected.

2.2 Public acceptance

Public opinion and acceptance will in most cases vary across user groups. While you will not be able to please everyone, overall, it is important for any UVAR scheme to have general local support for it to work properly. A scheme that is well designed with stakeholder involvement tackling a known and agreed-upon problem is likely to be more readily accepted.

2.3 Transparency

The UVAR development process being (and being seen as) transparent, open and fair can help increase public acceptance and ensure that user needs are appropriately accommodated.

If an UVAR addresses – and is seen to address – a widely held concern, then support is easier to gain. When Ken Livingstone was elected Mayor of London saying he wanted to clean London's air (with a low emission zone), no-one disagreed that there was a pollution problem to solve. Where an issue *is* a problem, but is not generally *seen as a problem*, information campaigns may be needed at early stages of the UVAR project. For example, while Jerusalem's air is polluted, it nonetheless was perceived by locals to be "as clean as mountain wine", meaning the Jerusalem LEZ information campaign needed to explain the issue of pollution.

2.4 Diversity of users

No UVARs are universally welcomed, as they all imply a change or restriction for someone. Public opinion on local traffic needs to be taken into account when considering any new transport scheme, including an UVAR. Public opinion may vary across societal groups, as will the needs.

The socio-economic situation of residents and mobility users can range widely, as can their cultural background, gender and mobility needs (among others). This diversity is one of the key reasons why UVARs will never become a one-size-fits-all solution; what shows great results in one city might show limited or no success in a city with different demographic patterns.

When developing an UVAR, involving users appropriately is a key success factor. Identifying a broad range of users enables you to understand different viewpoints and to design the details and complementary measures appropriately. An UVAR cannot please everyone, but the views and problems of as many as possible should be understood and planned for. Some user concerns can be allayed, but, for example, the perceived automatic right to drive may not.

2.5 Different UVARs mean different roads to acceptance

While some UVARs only affect some users (e.g., low emission zone for commercial heavy goods vehicles), others (car-free neighbourhoods or limited-traffic city centres) affect a wider variety of users. The difference in UVARs therefore also must be taken into account when working with a broad range of user groups.

Furthermore, public acceptance and opposition often fluctuate over time, meaning acceptance should be seen as a continuous process and not a once-and-for-all "for or against" a specific UVAR.

2.6 Communicating the UVAR

How an UVAR is presented – or "marketed" – is important, as the example at the end of this document will show. There are many nuances to communication that are appropriate to each city. One aspect that is worth considering at the outset is the type of scheme that is communicated. If a congestion scheme is presented first and foremost as a revenue-raising tool, it is less likely to be accepted than if it is presented as a solution to a known congestion problem – even if the scheme does both.

Schemes that have multiple goals – such as the Dutch logistics zero emission zones – can be "sold", for example, as either an air quality or a climate measure, depending on the local context.

The London low emission zone (LEZ), for example, was implemented using congestion charging legislation, but it is communicated and marketed as a low emission zone.

The London Ultra LEZ is an example where the communication helped compliance. The main message delivered was that the ULEZ has tighter standards than the LEZ and that therefore significant higher impacts could be expected. But access to the area is not banned. It is still possible for a vehicle to enter a ULEZ – but it costs money, therefore incentivising compliance, especially for frequent users/polluters. However, Transport for London, the operator of the ULEZ, made it clear that their preference was compliance over payment.

More information on the legal aspects and communication can be found in UVAR Guidance: Governance and Financing, and on the methods and technologies for consultation in UVAR Guidance: Ensuring Compliance.

2.7 Fairness and equity

When working with UVARs, benefits will not be evenly distributed over the population; some people will experience large improvements, while some might be worse off than before. Not all people will have to change their travel habits, and those who do may see themselves as disadvantaged. The uneven distribution is due to factors such as income levels, geography, access to alternative modes of transport, etc.

Perceptions of fairness are individual and what is considered fair and equitable by some, will not be by others. These issues often become political. Thus, if the aim of an UVAR is to get people out of cars and into other modes, it needs to be seen as fair. Additionally, as few people as possible should be prevented from undertaking their desired travel (albeit using a different mode).

The issues of fairness and equity are also relevant to the larger question of urban space. If road space per person is considered, a person in a car takes up considerably more space than a person walking or cycling; this may be an argument for limiting car access in some cases.

A congestion charge will have different effects on different income groups. A congestion charge represents a higher proportion of income for low-income households than for high-income ones. At the same time, those with lower incomes are also less likely to own a car, and more likely to use public transport, walk or cycle. These modes are likely to be improved and subsidised by a congestion charge. This applies to most UVARs, as their aim is generally to intentionally disadvantage private car users and favour sustainable mobility.

Fairness and equity are important when redistributing the revenues from a congestion charging scheme. When redistributing revenues from the Stockholm congestion charge, reduced transit fares had the highest effect on equity, and tax rebates the lowest.

2.8 Designing a good scheme

A well-designed scheme will be more readily accepted and more effective than a poorly designed one. Many aspects that contribute to a well-designed scheme can be found in the full set of ReVeAL guidance documents.

3. Timing: The acceptance curve

Public acceptance often changes over the lifetime of a proposed scheme. As an example, the same distinct pattern of acceptance has been observed in the implementation of congestion charges in several cities (see Figure 2). Understanding this helps to explain the reactions to a scheme, and to plan the stakeholder involvement, consultation and communication strategy aspects appropriately.
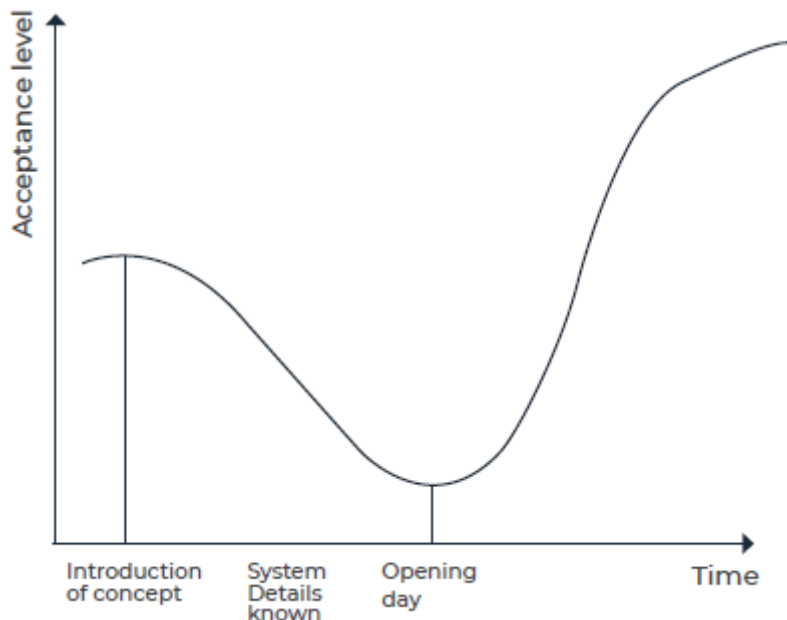

Figure 2: Typical dynamic pattern of acceptance

Early in the process, when the discussion is general and the effects of charging are discussed as an abstract concept, there is typically limited opposition from the public. As the concept progresses towards implementation, more concrete definitions around the scheme design are developed and presented to the public. The scheme becomes more "real" (and potentially personally relevant) to those who may be affected. The increased clarity around congestion charging typically makes people worry about negative personal consequences and evokes public debate. The level of public acceptance decreases during this phase.

On opening day, the level of acceptance will be at its lowest.

After implementation, acceptance typically increases again. This increase can be attributed to several factors, primarily as the benefits are observed. But even those who must change

their travel habits due to the scheme often find that travel times are not as negatively affected as expected and that negative aspects are not as problematic as anticipated. In addition, people adapt and accept a new status quo, therefore no longer seeing it as a change, but rather as a new normal.

4. Illustration: A tale of two UVARs

As an example of different outcomes of similar schemes, the stories of congestion charges in Stockholm and Gothenburg can give good insight to how different approaches can lead to different levels of public acceptance.

In 2007, Stockholm introduced the first congestion charge in Sweden. In 2013, the Gothenburg congestion charge was introduced.

While the two cities sit on different sides of the Swedish peninsula, they are comparable in many ways and sit within the same social, cultural and legal context. Although there were many similarities between the two schemes, the acceptance levels turned out to be very different. The similarities between the two cities but different outcomes of the schemes highlight the importance of the design of a scheme and of the local context to an UVAR like a congestion charge.

The Stockholm congestion charge was launched as a half-year trial followed by a public referendum. Prior to the trial, the approval rate was as low as 21%. The referendum resulted in a 53% approval rate from the citizens. Later, the approval rates climbed as high as 70%.

The Gothenburg congestion charge had a public acceptance level of 28% before the implementation (2013). At the time of the 2014 referendum, the public acceptance level had grown to 43%. Although a majority of citizens voted against the scheme, the city's government argued that there was a lack of policy alternatives to put in place to replace the congestion scheme, and therefore kept it in place without the support of the majority of the public. The highest approval rate of the Gothenburg scheme was reached later in 2014 with an acceptance rate of 51%, but has decreased since, never reaching the sustainable approval rate of Stockholm's scheme.

Plenty of factors play a role in the difference of approval ratings between the two cities. Due to the similarities between the two cities, the differences are to be found in the different levels of congestion, political process and public engagement. In Stockholm the congestion charge was framed as a green policy (with money raised supporting mobility), while in Gothenburg, it was framed as a measure to raise funds for transport infrastructure.

5. Recommendations

5.1 Tackle a known problem

Tackling an issue widely perceived as a problem will be more readily accepted than measures taken for a problem that citizens do not really perceive. Some issues may need to be raised as problems before the solutions can be discussed.

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5.2 Know your users

Different users often call for different measures – and sometimes even a different UVAR – to solve a problem. A scheme that takes into account all user needs is much more likely to be accepted – and achieve its aims.

5.3 Involve your stakeholders

Involving users in different stages of scheme development can help develop a good scheme, ensure user needs are appropriately accounted for in the scheme development and allow citizens to feel involved in the scheme.

Determining the appropriate amount of information to the appropriate groups at an appropriate time, as well as discerning genuine concerns that need action, are part of the "art" of UVAR implementation.

Discussions with interest groups (e.g., chamber of commerce, businesses, campaign groups) may be appropriate at early stages when the scheme can be shaped. At later stages, general public consultation should be accompanied by sufficient information for participants to make an informed decision. This should include details of what the scheme will look like and its expected impacts. There are, of course, many stages of dialogue between the early-stage discussions and public consultation, depending on the individual scheme, city context, type of involvement, etc. The Sustainable Urban Mobility Planning process and accompanying guidelines can be a useful guide. See also ReVeAL guidance documents, especially on ensuring compliance and stakeholder engagement and communication.

5.4 Understand the impacts

It is important to understand the probable impact of your UVAR on different user groups so you can understand what they will need (as opposed to what some may *want*) from the UVAR implementation. It also helps you identify supporting measures, be they part of the mobility plan, or separate complementary measures.

5.5 Monitor and assess

Monitoring and assessing the existing situation helps to identify issues that need to be tackled, and possible solutions. Questions like "which vehicles are the problem?" are important. In the Netherlands, a framework for lorry LEZs – but not for van LEZs – was established in 2007. However, thanks to monitoring and assessment, the City of Nijmegen realised that its emission problem was caused predominantly by vans, not lorries, meaning the lorry LEZ was not an appropriate measure at that stage, but they would consider an UVAR affecting lighter duty vehicles.

Monitoring is also important in the months and years after implementation; identification of impacts and any unintended consequences can help determine whether an UVAR has met the objectives and if it has not, to determine which adaptations need to be made to the scheme. This may trigger a re-start of some UVAR processes, depending on the significance of the adaptation. Measuring scheme acceptance as well as impact over time will be useful to follow the level of acceptance. Monitoring and assessing the schemes also helps produce objective data.

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6. Further information/links

ReVeAL website: https://civitas-reveal.eu

ReVeAL UVAR guidance (all available at: https://civitas-reveal.eu/resources-overview/publications/guidances/)

- General – What to think about when planning an UVAR?*
- UVAR Development Process*
- Mobility concepts
- Ensuring Compliance
- User needs and public acceptance of UVARs
- Equity*
- Data and monitoring*
- Stakeholder involvement*
- Communication, awareness raising (incl. digitising UVARs)*
- Geofencing
- Permits and exemptions
- Privacy and camera enforcement*
- Foreign vehicle enforcement*

*available autumn 2021

SUMP Process: https://www.eltis.org/mobility-plans/sump-process

SUMP Guidelines: https://www.eltis.org/mobility-plans/sump-online-guidelines

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Schade, J., Seidel. T., Schlag, B. 2004. "Cross-Site-Evaluation of Acceptability Indicators". Working Paper. EU-Project CUPID Funded by the European Commission under the 5th Framework Programme. Dresden: https://www.researchgate.net/profile/Jens_Schade/publication/242462382_Cross-Site-Evaluation_of_Acceptability_indicators/links/0f31752eb83babc8d4000000/Cross-Site-Evaluation-of-Acceptability-indicators.pdf

WSP, 2018. Congestion Charging: Policy and global lessons learned: https://www.wsp.com/-/media/Insights/Canada/Documents/doc-Congestion-Charging-Report.pdf?la=en-GL&hash=ADE02366CDA806EB17ACB7A018E8A6AED624A5A2

Nijmegen light-duty vehicle UVAR (in Dutch): https://www.nijmegen.nl/over-de-gemeente/dossiers/30-maatregelen-voor-schonere-lucht/