

MOBILITY ENERGY ENVIRONMENT



Il futuro ci muove.

CIVITAS Forum

Session «Regulating Access to Cities»

**Do's and don't's for access regulations – results and recommendations from
the UVAR study**

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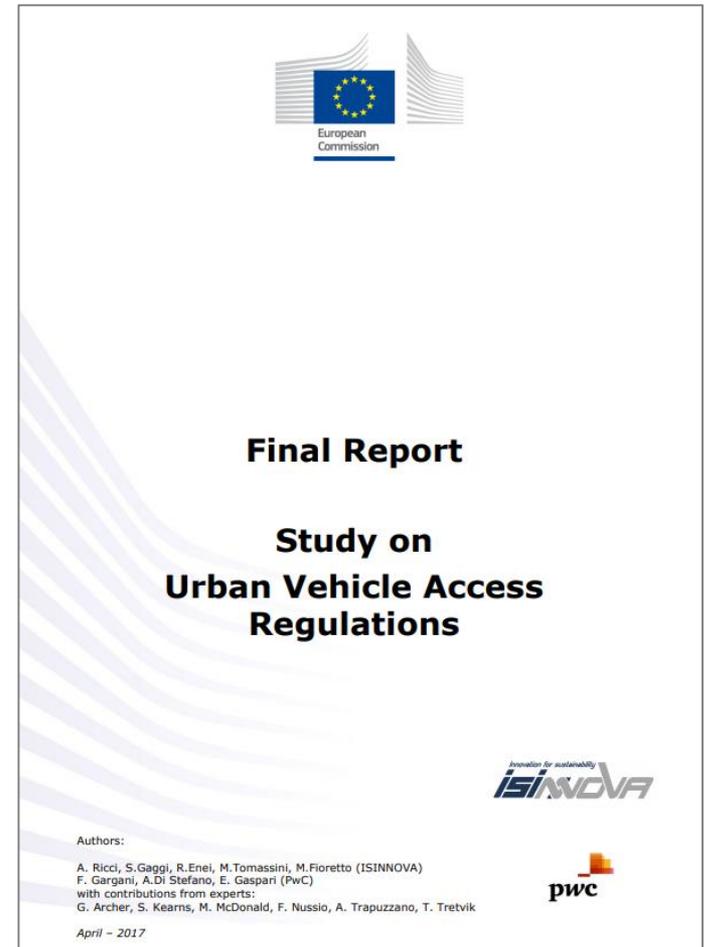
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Innovation for sustainability
ISI INNOVA

Study on Urban Vehicle Access Regulations

- The Directorate General for Mobility and Transport has launched in December 2014 a study to assist it with the preparation of non-binding guidance documents on **six specific aspects of urban access regulations**.
- After a tender process, a consortium led by Istituto di Studi per l'Integrazione dei Sistemi (IT) and involving PricewaterhouseCoopers (BE) has conducted the study.
- Released in April 2017

...to assist policymakers in the smooth and successful UVARs implementation.



The available options across the EU

Scheme Objectives

- Air Quality Improvement
- Congestion Reduction
- Raising revenues

Targeted Traffic

Different schemes throughout Europe (more than 200 options!)

Types of Access Regulations

Varieties of rules/enforcement methods/evolving vehicle technologies and characteristics

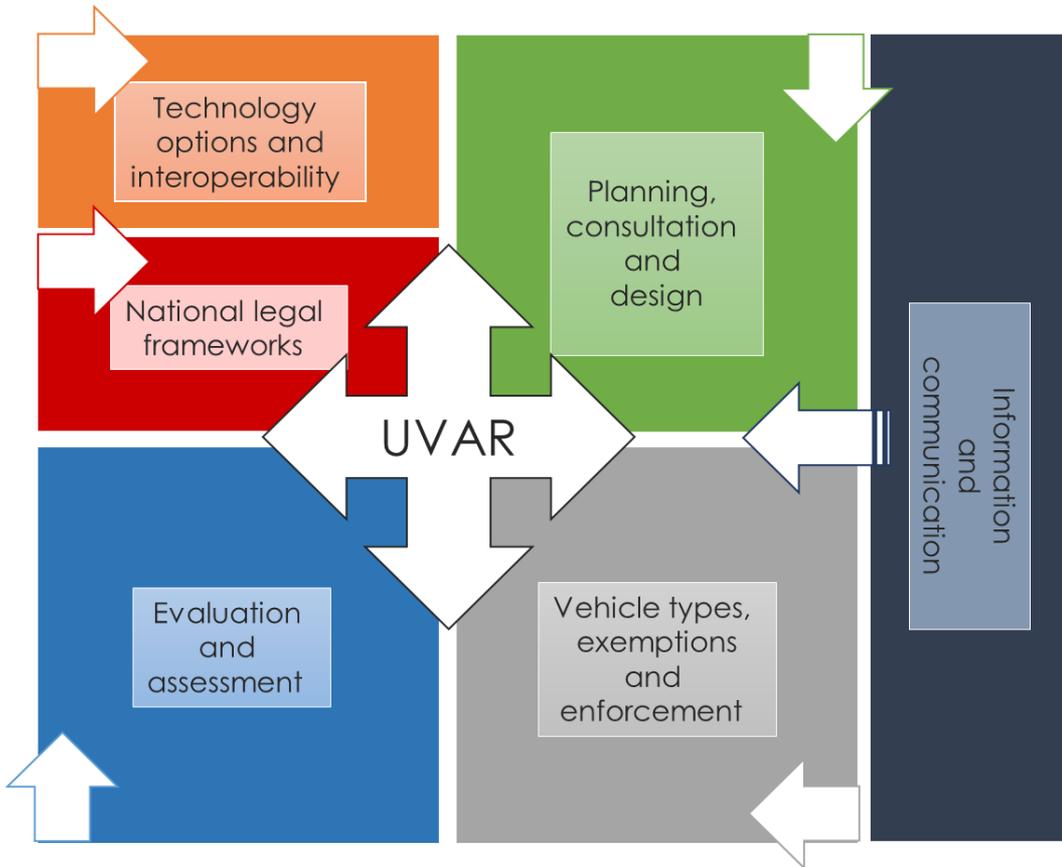
Scheme Design

- Toll rings
- Distance or time based
- Area license based
- Point based
- Cordon based

Technological Options for Implementation and Enforcement

- Manual inspection and windscreen stickers/Manual Toll Collection
- Automatic Number Plate Recognition (ANPR)
- Dedicated Short Range Communication (DSRC)
- Global Navigation Satellite Systems/Cellular Networks (GNSS/CN)

The UVAR study structure



- I. Introduction to the topic and role in the overall UVAR context
- II. The Challenge
- III. Application concepts
- IV. Potential Impacts (from a more harmonised approach)
- V. Barriers and enablers for a more harmonised approach
- VI. Recommendations (non-binding guidance)



Methodology_NBGD

■ Literature review

- ✓ *Information at the urban level:* i) CIVITAS ii) databases such as ELTIS, iii) academic literature on ex-post assessments of access regulations policies, iv) updates on the implementation of long-standing examples of access regulations policies in European cities, e.g. Milan, Rome, Bologna, London, Stockholm, Trondheim, Gothenburg etc.
- ✓ *Information at the urban and national level:*
<http://urbanaccessregulations.eu>
- ✓ *Information at the EU level.* Academic papers and proceedings from research institutes provide comparisons on UVARs schemes.



■ Support of Experts

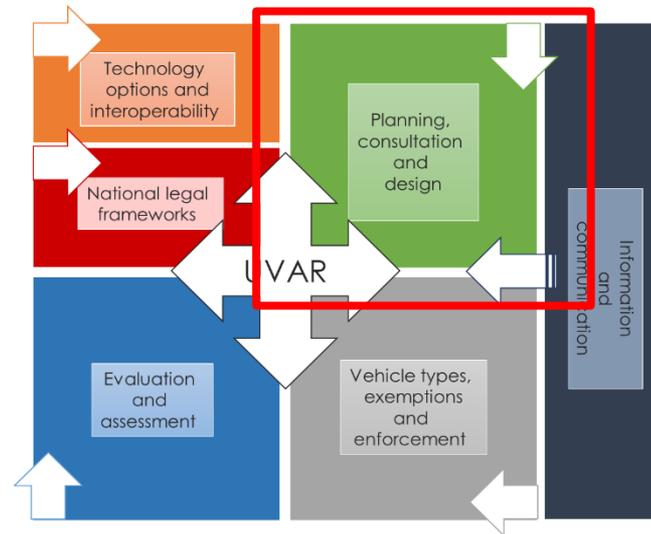
■ Stakeholder involvement and contributions (@100 names)

- Workshops
- Online consultation

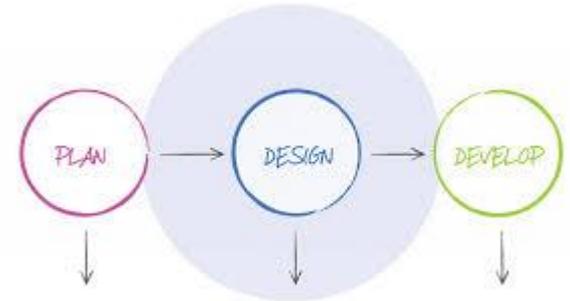
Very participatory



Planning, consultation and design



To provide information to stakeholders about the UVARs planning, consultation and design cycle. Dialogue with stakeholders, design and inclusions of ancillary transport policies, e.g. parking management and pedestrianisation, are considered.



Recommendation for Planning, Consultation and Design

- Set up UVARs as part of an integrated planning (e.g. SUMP)
- Ensure an effective **stakeholder consultation** via a structured interaction with a wide range of stakeholders
- Design a **comprehensive UVARs scheme**, including enforcement techniques. Schemes that are **clear, simple and understandable** are able to achieve high compliance rates
- **Consider the use of trials.** Trials can be helpful to be able to introduce a scheme on an experimental basis (e.g. Stockholm congestion charge)
- **Invest UVARs-related revenues in sustainable mobility options**, and communicate it (e.g. Oslo Toll Ring)

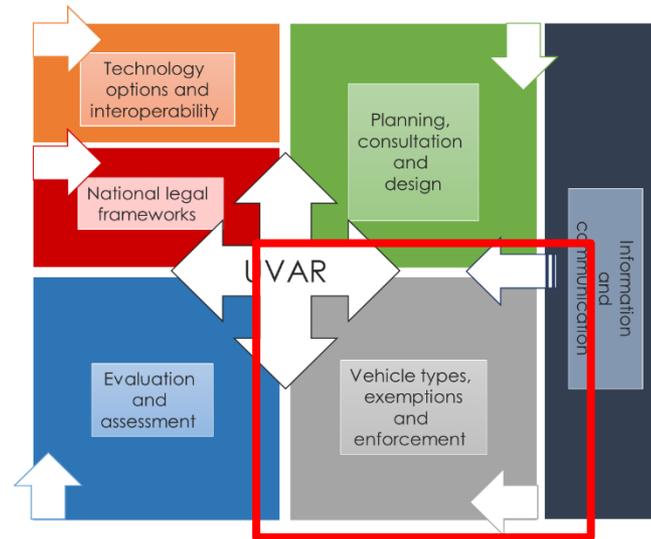


Recommendation for Information & Communication

- Define a clear and comprehensive communication and information **strategy** at the outset
- Promote UVAR as part of a **wider strategic policy**
- Set up and communicate appropriate complementary and **alternative transport modes** and options
- Address **all users and stakeholders** in and out the zone, frequent users, occasional and one-time, also foreigners.
- Provide **clear, focused, multilingual information**
- Ensure independent evaluations of the schemes are publicly announced.
- Care must be taken to provide **clear UVAR signalling**, especially when they are part of a larger set of signs.
- Wide range of communication and information channels, using **new media**



Vehicle types, exemptions & (cross-border) enforcement:



To inform stakeholders, using best practices and examples, of the benefits of efficient **vehicle identification methods**, (including common standards for retrofitted vehicles) **exemptions and enforcement rules**, also in relation to national legislation. The situation at **cross-border points** and **treatment of foreign vehicles** is considered as well.

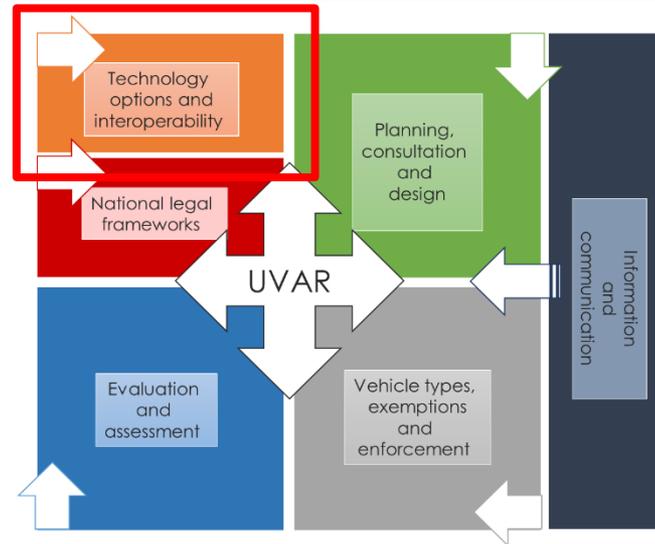


Recommendation for Vehicles Types, Exemptions & Enforcement

- Work towards **compliance with the latest Euro standards** as a basis for access-to-access regulated areas
- Consider **exempting cars running on zero emission** devices such as battery-electric and fuel cell- electric vehicles
- Clearly **define exemptions** to ensure a high level of effectiveness
- **Historic vehicles** could be exempted from low emission zones
- Encourage the **use of IT solutions** and/or web platforms for the carrying out of UVARs schemes
- Establish of **national bilateral agreements**, to pursue cross-border enforcement (e.g European debt recovery and vehicle licensing agencies).
- Properly **inform the public on penalties** in case of violations



Technology options and interoperability



To inform stakeholders of the benefits and shortcomings of the available technology options, and of the potential benefits deriving from interoperability and, in general, from the adoption of common approaches.

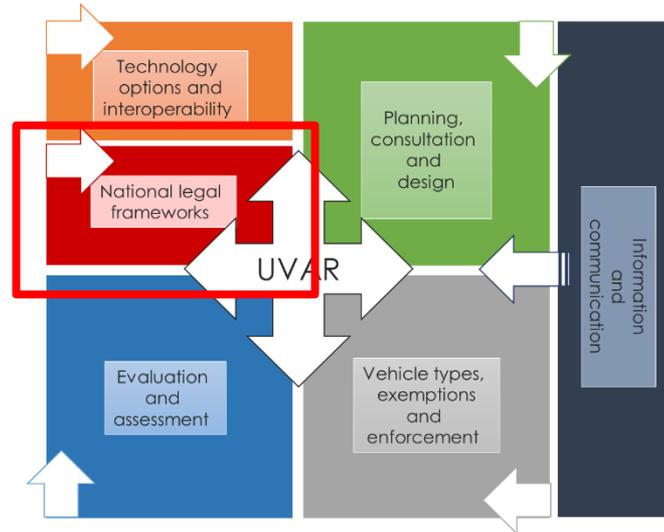


Recommendation for Technology Options & Interoperability

- Consider **interoperability and user friendliness** when planning a UVARs scheme and its associated technology.
 - ANPR are particularly suitable in areas where there are many occasional users, since they do not require the installation of in-vehicle equipment.
 - DSRC should be considered as an alternative or complementary technology where a large proportion of vehicles in the area covered by the UVAR are already equipped with on-board equipment (for example provided by surrounding motorway operators).
 - GNSS solutions in urban areas face several implementation barriers, driving up investment costs.
- In general, the **appropriate combination of technologies** must cope with the everyday challenges, e.g. public acceptability, **privacy issues**, legal problems, technical reliability, and EU technological interoperability. Every combination should **be evaluated ex-ante**.
- Keep in mind that **the lack of cross-border agreements on enforcement of UVARs** is currently an issue.



National legal frameworks



To inform stakeholders about the requirements for an efficient and supportive national framework in relation to national and sub-national legislation for UVARs implementation.

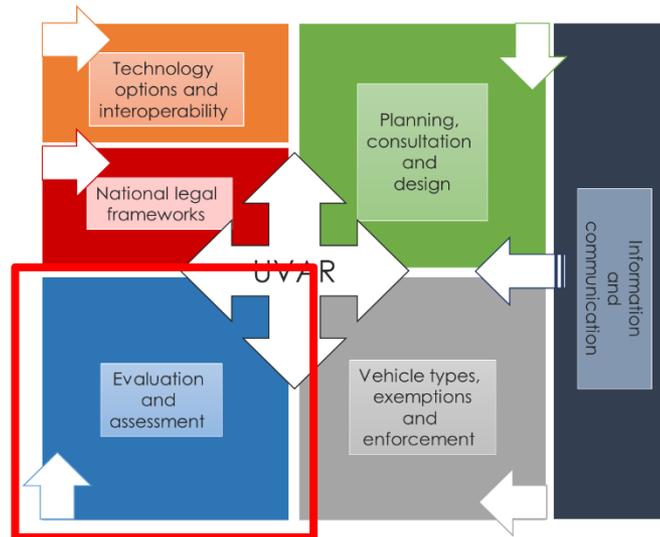


Recommendation for National Legal Frameworks

- Account for **enough flexibility** allowing cities to tackle their differing problems and for innovation to produce new good practice schemes.
- Formulate the combining **city/region input, European legislation and non-binding guidance, drawing on examples of good practices in Europe.**
- Design national frameworks in a **transparent way**, addressing all citizens and reflecting all stakeholder's views.
- **Clearly link to EU and national policy goals** in the fields of for instance air pollution or CO2 emissions.
- **Include common issues which might apply to all UVARs schemes** (e.g types of vehicles exempt, classifications of road, emission levels of vehicles etc; Non-discriminatory treatments)
- Include provisions and **recommendations** relating to the necessity of a utility test trial, consultation process, assessments and evaluation.



Evaluation and assessment



To provide information to stakeholders on state-of-the-art techniques and practices for the evaluation and assessment of UVARs schemes. Information on the range of impacts, techniques, barriers and processes is collected, organised and shared.



Recommendation for Evaluation and Assessment

- Selection of evaluation indicators, and on how to concretely measure them.
- Minimum data requirements for meaningful evaluation process and outcomes.
- Relation between scale of expected impacts and resources allocated to the evaluation.
- Establishment of a baseline (or “do nothing” scenario).
- Cost-benefit analysis including economic and social impacts of the proposed measures on the local economy and businesses.
- Distinction between evaluating concrete UVARs and long-term strategy defined e.g. at city master plan level.
- Assessment of synergic effects between UVARs and other urban mobility policies and measures.
- Engagement of stakeholders from the outset to jointly select and prioritize evaluation criteria allowing to negotiate conflicting interests at an early stage.
- Transparency ensured by regular communication and dissemination of the evaluation results.
- Assesments should be neutral (by independent bodies)



Barriers & benefits of a more common approach

Technology & Interoperability

Barriers:

- ANPR mistakes and license plate standardization
- Privacy issues

Benefits:

- Road users easily obtain access to cities across EU and facilitate daily operations.
- Increase security in EU generating useful information for law enforcement authorities.
- Economies of scales
- Access to single EU market for industry and technology providers

Evaluation & Assessment

Barriers:

- Lack of practice
- Lack of (homogeneous) indicators & data
- Cumulated effects with other policies/measures

Benefits:

- Comparisons of effectiveness among schemes
- Wider and more reliable evidence base

Identification & Enforcement

Barriers:

- Lack of common criteria for vehicle identification (absence of EU legislation for retrofit emissions)
- National vehicle registries
- Lack of harmonized guidance on personal data protection and standards across Europe for specific aspects of ITS
- No cross-border data exchange systems for violations

Benefits:

- Non discrimination...
- Unique EU wide database

Communication & Information

Barriers:

- Information provided in national languages
- Different signalling

Benefits:

- Facilitate life to European traveler
- Decrease of transaction costs (time, money)

Potential Impacts from common UVAR schemes in European Cities

Benefits to the EU

- pre-conditions for consolidating the EU internal market
- common framework for national legislation on cross-border and multilateral topics

Benefits to National Governments/Regulators

- favouring the compliance with EU legislation
- harmonised implementation of UVAR schemes at national level

Benefits to the Cities

- increased acceptability by the users
- change in mobility behaviour
- more respect for rules and regulations.

Benefits to the Local Population

- cleaner and more pleasant cities to live in, and to visit
- less congestion and better air quality

Benefits to the Users

- better knowledge of UVARs
- limited unintended violations
- freedom of movement across countries

Benefits to the Industry

- economies of scale
- critical mass from standardised applications and common rules

Final message

While in drafting the NBGDs there is obviously **no one-size-fits-all approach**, commonly applicable solutions to shared challenges and concerns can be found for all of the relevant topics, which can lead to a **European rapprochement of practices** for the benefit of cities, citizens and stakeholders across Europe, including business and industry.



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Il futuro ci muove.

Thank you for your attention!

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