



HOW MUCH DO 'U' KNOW ABOUT UVARS? (URBAN VEHICLE ACCESS REGULATIONS):

PEDESTRIAN AREAS, CONGESTION CHARGING AND OTHER STRATEGIES THAT REDUCE TRAFFIC, IMPROVE SAFETY AND MAKE CITIES MORE LIVABLE

By Lucy Sadler and Adina Levin

You might have heard of terms like "Low Emission Zones" or "Congestion Pricing," but did you know that they are part of a larger toolkit that cities use to manage urban traffic and reduce pollution? Known collectively as Urban Vehicle Access Regulations (UVARs), these measures vary in approach and impact, offering different opportunities and challenges to create healthier, more efficient, and livable urban spaces.

To better understand UVARs, Lucy Sadler authored an online course Mastering Urban Vehicle Access Regulations for Sustainable Cities (UVARs) (1) together with EIT (the European Institute of Innovation and Technology) Urban Mobility where you can learn more about this topic for free. This article introduces UVARs and this online course and entices you to try it.

Photo credit: Dan Nguyen, Visitors stroll the first section of the High Line Park, over the 18th Street crossing. Frank Gehry's IAC building is in the background, New York, NY, 2012. https://commons.wikimedia.org/wiki/File:High_Line_Park_Section_1a.jpg

WHAT IS AN UVAR?

UVARs (pronounced “OOH-vars”) are a [priority area of the new EU urban mobility framework](#) (2). In a nutshell, “UVAR” is an umbrella term that covers a suite of interventions that tackle congestion, noise, and pollution in cities. There are lots of policies that try to nibble away at these problems, but you often have to use a bigger hammer to have enough impact. **Think of UVARs as a set of tools that can be used on their own or together to help cities hammer away at emissions and congestion and get to climate neutrality.** (For a good primer on UVARs, see Sadler et al “Urban Vehicle Access Regulations (UVARs): Helping the transition to sustainable transportation in Europe” World Transport Policy & Practice, 27.1, May 2022).

Common UVARs include:

1. **Low Emission Zones (LEZ):**
Areas that restrict high-emission vehicles.
2. **Limited Traffic Zones (LTZ):**
Areas with restricted vehicle access based on different types of permit, which vary according to factors like vehicle type, emissions, or time of day and/or week.
3. **Zero Emission Zones (ZET):**
Areas that allow zero-emission vehicles only.
4. **Congestion Charges & Urban Tolls:**
Fees for entering city areas.
5. **Pedestrian Zones: Vehicle-free areas.**
6. **Spatial Interventions:**
Road modifications like bus lanes and traffic filters.

If some of these interventions sound like they overlap with projects such as [superblocks](#) or [car-free zones](#), you’re not wrong. It’s all a matter of framing. UVARs boil down to two overarching frameworks: A city can either ban and/or charge vehicles so that there are fewer total vehicles (like in interventions 1-4 above), or it can take space away and the remaining vehicles will eventually change over to alternatives because the area will be too congested (like in interventions 5-6 above). Furthermore, some definitions of UVARs, include parking regulations, too, because people will stop driving into an area if they can’t park there.

While Lucy’s UVAR training course doesn’t go into much detail on parking, as it is a whole large field in itself, we can recommend the [SUMP Topic Guide pnm Parking](#) (3), or the EIT Urban Mobility online course on [curbside interventions](#) (4) for more information.

It’s precisely the range of options that make UVARs so essential for cities. UVARs don’t necessarily require a huge overhaul either; they can be done bit by bit and even stealthily. Doing a spatial intervention like a one-way street is not particularly controversial, but a congestion charge is usually very controversial. [Just ask New York City](#) (5), Ultimately, UVARs are about preventing (or limiting) vehicle access, but at the same time ensuring that the people and goods can still get there so that the city can still thrive. With a menu of potential solutions at their fingertips, planners can design a UVAR that best fits their cities’ unique needs. So... where to start?



Photo credit: City Transport Info, Flickr, London congestion charge and Ultra Low Emissions Zone (ULEZ) signs as seen from the Euston Road, London, UK, 2019. <https://www.flickr.com/photos/citytransportinfo/>

CHOOSING THE RIGHT UVAR FOR THE JOB

As is the case with many public works, [data-driven decisions](#) (6) are critical to showing cities the way forward. You don't do a low emission zone for lorries only to find out the problem was vans. Robust investigations and stakeholder dialogue on the potential impact of UVARs should also factor in. For example, vehicle restrictions (e.g., allowing only electric vehicles into a zone) and access charges can hurt those who can't afford to pay or purchase a new (e.g., electric) vehicle, which is why financial incentives, such as grants for the retrofit or **for public transport** tickets for those who scrap their vehicles, and additional public transportation **options must be added** to the equation.

Once a city establishes a regulation, naturally everyone will ask for an exemption (typically granted via the issuance of a permit to “authorized” vehicles). Thus, city planners have to use good judgement to work out which exemptions are reasonable by asking: which vehicles need to be there? For example, for limited traffic zones, not commuters — but ambulances, buses, delivery vehicles, street cleaners, among others, should be granted permits. In some cities, a limited numbers of permits (e.g. up to 12 a year) can be purchased by individuals so that one-off approvals, such as for moving to a new house or “taking granny to the doctor,” don't slow down the system. However, **while permits can be short- or long-term, they should never be permanent**; our streets are constantly changing and flexibility for the future should be retained.



Photo credit: MZaplotnik, Emergency vehicle-related sign indicating emergency lane in pedestrian zone in Maribor centre, Slovenia, 2013.

https://commons.wikimedia.org/wiki/File:Road_sign_in_Maribor_01.JPG

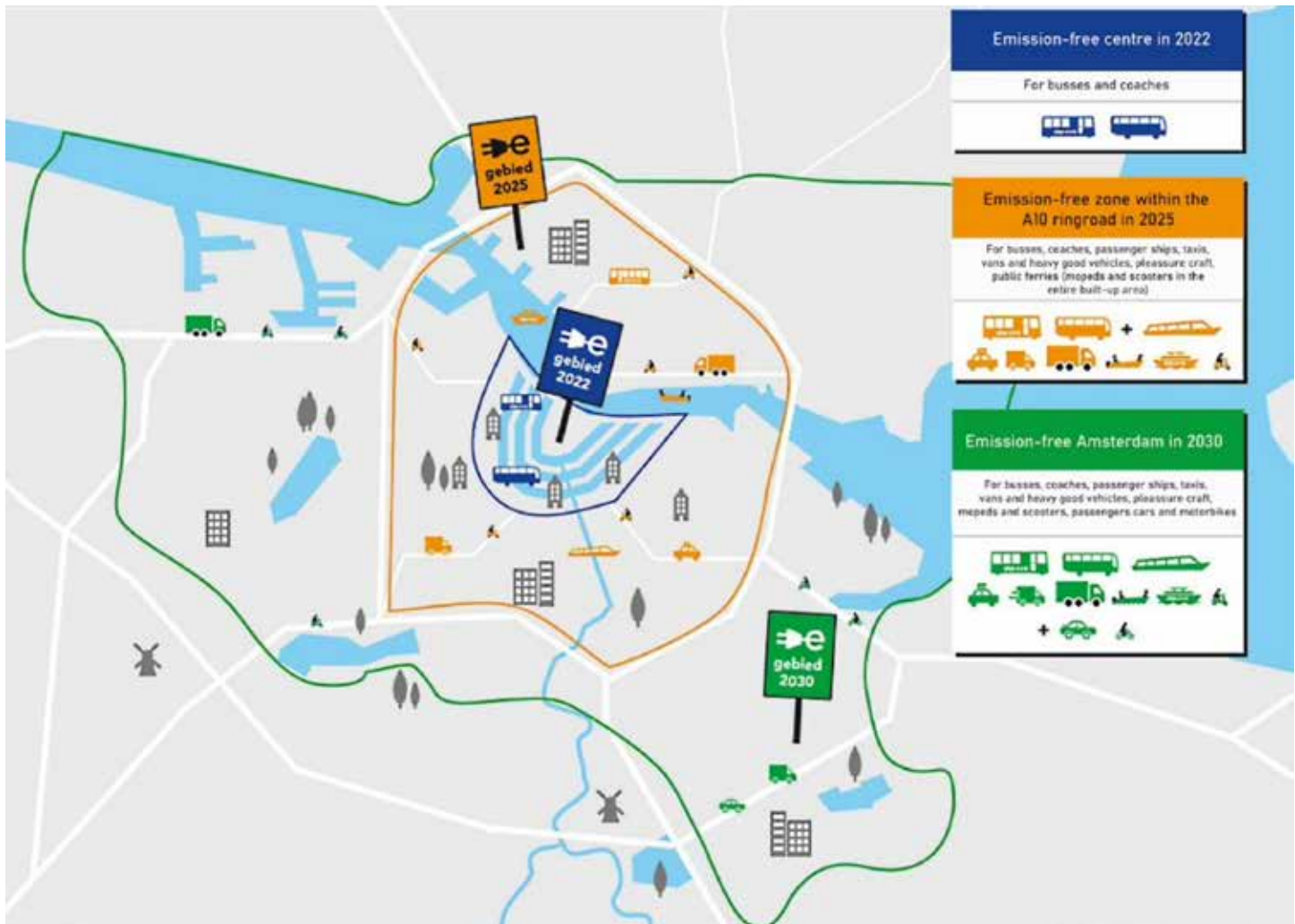
Exemptions also depend on the kind of UVAR. There are increasingly combined schemes, like **charging** non-compliant vehicles in **low emission zones** instead of **banning** them. A person with an old, high-emission car may decide that if they only come into the area once a month, it's worth paying the fee. But if they want to come in every day, they'd soon find it too expensive. That's the approach the [Central London Ultra LEZ](#) (7) took with their Low Emission Zone (LEZ). [Antwerp](#) carried out a variation on this, allowing vehicles that meet specific emission standards to purchase 12 entries a year. Moreover, most LEZs are phased, meaning that they gradually make their restrictions stricter. LEZ in particular need this approach; if a city does not gradually tighten a Low-Emission Zone (LEZ), the natural fleet renewal will catch up with the LEZ standard. **A city must always be a step ahead and publish standards well in advance so everyone knows what to expect and can plan for it.**

Other notable cities with UVARs include [Amsterdam](#), [Ghent](#), and [Barcelona](#) — plus, a city can (and should) customize its own UVAR, and to do so they can use the [ReVeAL tool](#) (8) mentioned in the free [EIT Urban Mobility course](#) (9).



Photo credit: Francesc Fort, Superilla al Botànic, Barcelona, Spain, 2023.

https://commons.wikimedia.org/wiki/File:Superilla_al_Bot%C3%A0nic.jpg



Example of a phased ZEZ in Amsterdam, featured in the course ([Picture Source Amsterdam city](#))

HOW STORYTELLING SELLS UVARS

Let's face it: Cities won't cut down on emissions on their own. It's citizens like us who need to be nudged. In your own life, there are three reasons you do things. One, because it's cheaper. Two, because it's more convenient. And three, because you have to. In other words, even when we know we really *should* go by public transit or bike, many of us will still take a car as long as it's still an option. While UVARs can serve as a "boot in the butt" toward climate neutrality, they can't be implemented on their own: They must also provide alternative modes of transport to access the area. It is essential not to lock out people or goods.

That said, even with alternatives and specific, strategic exemptions in place, UVARs are likely to encounter resistance from the public. The **public acceptance curve**, detailed in our [free course](#), helps to understand what happens: When people first hear about a new intervention, it sounds like a good idea... until they get more information and realise it's going to affect them. Acceptance will only go up afterward if the intervention has been done well, but politicians can get scared because the dip in acceptance tends to coincide with opening day. After all, public opinion and city planning depend on each other, which means cities should get creative with their storytelling for UVARs and "take the people with them," to get the happy ending our cities deserve.

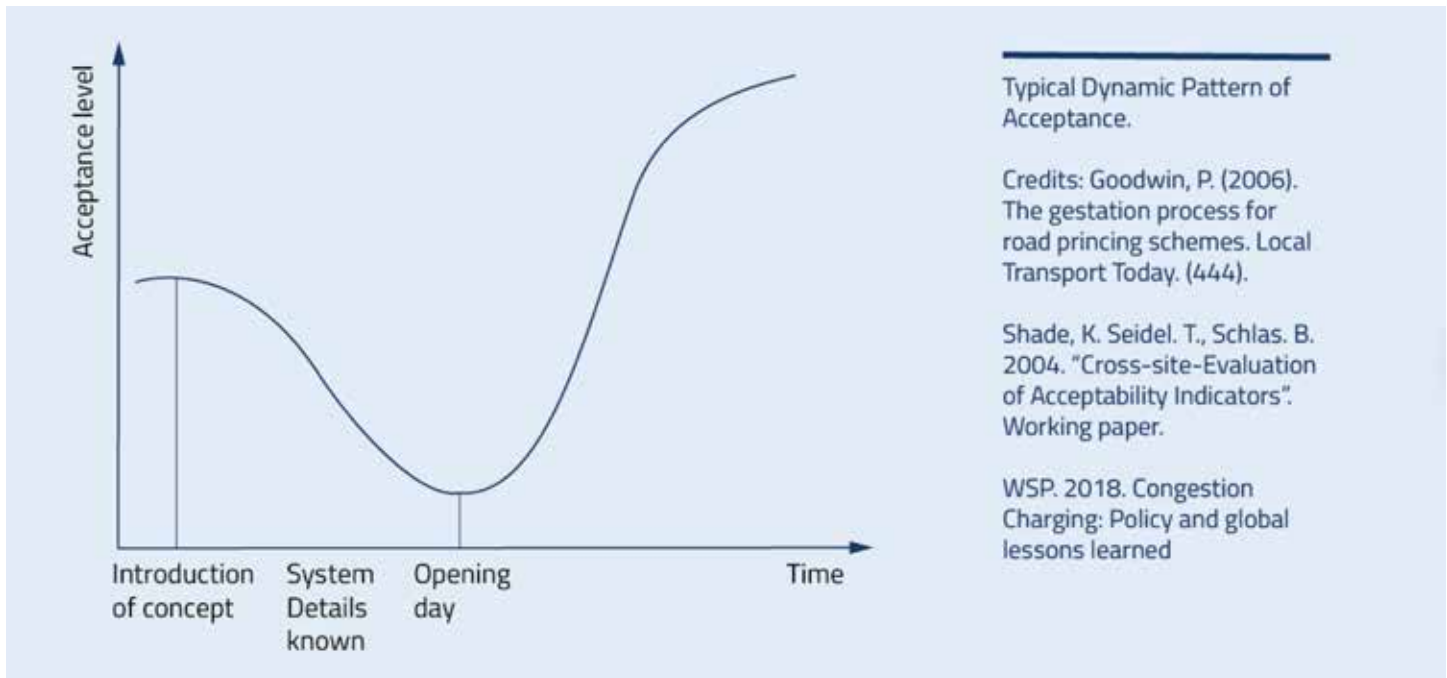


Diagram of the public acceptance curve (Picture credits Goodwin P, Shade K, Seidel T, Schlas B)

Thankfully, there are several cities that planners can look to for inspiration. For example, to implement a [low emissions zone in Jerusalem](#) (10), politicians first had to make pollution strike a chord. The city's air, once famously celebrated in the local anthem "[Jerusalem of Gold](#)", with the lyrics, "The mountain air is clear as wine," has become heavily polluted in recent years. This prompted the administration to launch an awareness campaign about pollution that shifted public perception to look favourably upon the city's planned LEZ.

Another example, is the "A tale of two cities: Stockholm and Gothenburg." Both introduced a congestion charge, yet whereas the former explained to its citizens that the scheme was to reduce congestion and that the money earned would go toward transportation, the latter focussed on the charge to fund the construction of a new tunnel. Can you guess which one was successful in terms of public opinion and which one wasn't? Stockholm's congestion charge "[has become more successful and popular with every year that has passed](#)" (11); Gothenburg's "[still attracts criticism 10 years on](#)." (12, 13) Yikes!

These cases also point to the responsibility of politicians, policymakers, and planners. After all, difficult stories call for a master storyteller. UVARs "need a champion — someone who says, 'I want to make this happen so I'm going to make this work' and carry it forward." Someone is needed who isn't afraid to take charge of initiatives like low emission zones and congestion charges, as unpopular as they might be at some point in the public acceptance curve, and to set a new narrative that sets the city up for success. Now that you know more about UVARs, perhaps that person can be you!

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REFERENCES

1. Mastering Urban Vehicle Access Regulations for Sustainable Cities (UVARs). <https://urbanmobilitycourses.eu/courses/urban-vehicle-access-regulations/>
2. https://transport.ec.europa.eu/transport-themes/urban-transport/urban-vehicle-access-regulations_en
3. Rye et al. Parking and SUMP. Using parking management to achieve your SUMP objectives effectively and sustainably. European Union Horizon 2020. August 2022. https://urban-mobility-observatory.transport.ec.europa.eu/document/download/4ae9e061-dfc9-4f92-afe2-30d70de76580_en?filename=parking_and_sump.pdf
4. Curbside interventions. <https://urbanmobilitycourses.eu/blog/life-on-the-edge-of-the-curb/>
5. "Supporters of Congestion Pricing are furious at Hochel's Betrayal" New York Times. June 4, 2024. <https://www.nytimes.com/2024/06/05/nyregion/congestion-pricing-supporters.html>
6. <https://urbanmobilitycourses.eu/blog/when-numbers-fail-navigating-the-complexities-of-urban-mobility-data/>
7. London Congestion charges. <https://urbanaccessregulations.eu/countries-mainmenu-147/united-kingdom-mainmenu-205/london>
8. Regulating Vehicle Access for Improved Liveability. Reveal Toolkit. <https://civitas-reveal.eu/>
9. EIT Urban Mobility Course. <https://urbanmobilitycourses.eu/courses/urban-vehicle-access-regulations/>
10. <https://urbanaccessregulations.eu/countries-mainmenu-147/israel/jerusalem>
11. Congestion charge successful and popular. September 24, 2012 Six years after it was introduced, the Stockholm city congestion charge has become more successful and popular with every year that has passed.
12. Schofield, Ben "What can Cambridge learn from Gothenburg's congestion charge?" BBC. 2 February 2023. <https://www.bbc.com/news/uk-england-cambridge-64496836>
13. Börjesson, Maria and Ida Kristoffersson. "The Swedish congestion charges: Ten years on". Transportation Research Part A: Policy and Practice. 2018



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