



Permit charge

This ReVeAL building block fact sheet is one of a series of 33, each describing one Urban Vehicle Access Regulation (UVAR) building block and providing an example of its use in a city. The ReVeAL building blocks can be combined with one another to create a structured UVAR package for a city. Try out the ReVeAL online tool, www.AccessRegulationsForYourCity.eu, to receive suggestions of appropriate UVAR building blocks for your city as well as guidance in their implementation.

The EU-funded research and innovation project, CIVITAS ReVeAL, aims to add Urban Vehicle Access Regulations and associated policies and technologies to the standard range of urban mobility measures in cities across Europe. The project mission is to enable cities to optimise urban space and transport networks use to improve urban accessibility, sustainability, and liveability.

For more information, please visit: www.civitas-reveal.eu.

Spatial Interventions

Spatial interventions are where the road layout has been altered to favor more sustainable mobility and prevent vehicles entering. Examples of these are removing road and parking space taken for vehicles and using the space for sustainable mobility or amenities (bus lanes, logistics hubs, parklets, restaurants and more)

Speed reduction

Traffic filter:

- Recirculation of traffic
- Road block
- Capacity restraint

Reallocating parking space:

- Parklet
- Drop-off zone shared mobility
- Logistics bay (mini-hub)
- Kiss & Ride (K&R)

Reallocating road space for pedestrians:

- Widen pavement
- Pedestrian priority street or zone

Reallocating road space for cycling:

- Cycle lane
- Cycling street

Reallocating road space for public transport:

- Bus or tram priority lane

Pricing Aspects

Pricing aspects are when the entry to an area or to the entirety of the city is given a price tag to encourage more sustainable transport. Pricing aspects also include the (differential) levels of penalty fees to encourage (and enforce) compliance.

Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Charge applied to specific points
- Distance-based charge
- Time-based charge
- Permit charge
- Charge based on emission standards (pollution charge)

Parking charge:

- Dynamic price (real time)
- Fixed price
- Charge based on emission standards (pollution charge)
- Workplace levy
- From on-street to off-street parking

Regulatory Measures

Regulatory measures are those where there is a legal instrument that states who can and cannot enter an area. They could often also be called "bans" and include Zero Emission Zones, Low Emission Zones, and Limited Traffic Zones.

Regulation by emissions:

- Euro standard
- Zero-emission vehicles

Regulation by vehicle type and dimensions:

- Vehicle type
- Dimensions

Regulation by trip purpose:

- Delivery and logistics
- Through traffic ban

Regulation by permit:

- Permit to travel
- Parking permit
- Planning permit conditions



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Definition of the building block

In an UVAR scheme based on permits (e.g., a limited-traffic zone), drivers/owners may be required to pay a fee for a vehicle-specific permit. Fees may be differentiated according to user categories (e.g., residents pay less than delivery companies), the total number of vehicles (a second or third permitted vehicle is charge more than the first) or by time window (some time slots cost less than others).

Timing, phasing, scaling and replication

This building block has no-timing related issues requiring specific attention.

Time windows

- Allowing vehicle access at particular times of day
- Allowing vehicle access on given days of the week (e.g., weekends)
- Allowing seasonal vehicle access
- Having no time differentiated vehicle access
- Triggered access restrictions (e.g., by pollution levels)

Enforcement options

- Cameras with automated number plate recognition (ANPR)
- Radio frequency identification (RFID)
- Manual enforcement through visual inspection

Gender and equity

Consider offering a fixed number of accesses at a subsidised rate or free of cost to members of low income or identified special needs groups.

Future considerations

In a future with dynamic signs and connected vehicles, these technologies could combine to communicate the charge applicable to each individual vehicle when it enters a permit charging zone.

Further guidance

- How to communicate the scheme
- Transparency
- Complementary sustainable mobility measures
- Managing permits (and exemptions)
- Enforcement options
- Camera enforcement and privacy issues

The types of exemptions will be different depending on the scheme type, but some examples are:

- Key exemptions for police, fire department, waste collection, etc.
- User needs exemptions, e.g. for people with disabilities with forced car dependency, taxis, classic car owners, residents, deliveries
- Exemptions for adapted vehicles (e.g., retrofitted or converted electric or hybrid vehicles)
- Limited numbers of purchased exemptions for entry (e.g., per day/month/year) to a specific zone
- Specified maximum amount of kilometre “credits” allocated to individuals or businesses

The types of increased mobility options will be different depending on the scheme type, but some examples are:

- Creation of mobility hubs
- Increasing/improving walking or cycling facilities
- Increasing/improving public transport
- Facilitating vehicle hire and/or car sharing
- Providing parking spaces in alternative locations (e.g., Park & Ride)

These will differ depending on the planned UVAR measures, but some options include:

- Financial incentives for fleet renewal, e.g., for the purchase, renting or leasing of greener vehicles (including tax exemption)
- Membership or vouchers for sustainable mobility options (e.g., public transport and shared mobility services) such as discount cards, free rides or annual passes for public transport or consolidation centres
- Monetary incentives for cycling trips (e.g., for bike-to-work) or for (e-)cycle or (e-)cargobike purchases
- Grants towards retrofits (e.g., diesel particulate filters, new engine or fuel conversion)
- Compensation for scrapping an old vehicle (either financial or through a voucher), often differentiated by emission standards, vehicle type or owner income.

This can include logistical, administrative, promotional or other support provided by the city. This might include supporting alternative business models (e.g., for car parks that have no/fewer customers), facilitating changes and working on individual solutions to resolve issues.



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Consider combining with:

Spatial Interventions

Speed reduction

Traffic filter:

- Recirculation of traffic
- Road block

Reallocating road space for pedestrians:
Pedestrian priority street or zone

Reallocating road space for cycling:

- Cycle lane
- Cycling street

Reallocating road space for public
transport: Bus or tram priority lane

Pricing Aspects

Parking charge:

- Workplace levy
- From on-street to off-street parking

Regulatory Measures

Regulation by emissions:

- EURO standard
- Zero-emission vehicles

Regulation by vehicle type and
dimensions: Vehicle type

Permit charges are used (by definition)
with regulation by permit or regulation
by emissions.



The limited traffic zone in Turin. From *ZTL de Turin*, by Alain Rouiller, 2014, March 28, Flickr. CC BY-SA 2.0

Permit charge

Example: Limited traffic zone, Turin, Italy

Description

The city of Turin launched a limited traffic zone in the city centre in 1994, regulated by permits. Vehicles can access the restricted area if in possession of either a regular circulation permit or of a retroactive exemption. The retroactive exemption can be requested after having entered the restricted area and it allows occasional transit and stops.

The central limited traffic zone has generic time windows and comprises four areas with additional regulations (the Roman Area, public transport priority lanes, the pedestrian area and Valentino public park). Access to parking garages in the limited traffic zone is always allowed; however, motorists need to fill out a form provided by the garage to get an exemption from the established penalty.

There are ten different categories of permits, identified by coloured stickers, that vary by area of residence, activity and cost. To obtain a permit, vehicles must be either EURO 3 or higher or EURO 2 or higher, fueled by LPG and/or natural gas. People with a disability pay a fixed fee of €6 for a permit which is valid for five years.

Enforcement methods

Automatic number plate recognition (ANPR)

Time windows

In effect Monday to Friday, from 7:30 to 10:30

Roman area LTZ:

- Parking ban and driving ban daily, from 21:00 to 7:30
- Piazza Emanuele Filiberto: parking ban and driving ban from 19:30 to 7:30
- Loading and unloading allowed from 10:30 to 16:00

Public transport priority lane:

- Parking ban and driving ban for motor vehicles and bicycles, daily from 19:00 to 8:00
- Loading and unloading allowed from 10:30 to 12:00

Pedestrian area:

- 24/7 parking ban and driving ban
- Loading and unloading allowed from 10:30 to 12:00

Valentino LTZ (public park):

- 24/7 parking ban and driving ban
- Loading and unloading allowed Monday to Friday 10:30 to 12:00 and 15:00 to 16:00 and on Saturdays from 10:30 to 12:00



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Limited traffic zone, Turin, Italy

Phasing and upscaling

- 1994: First municipal resolution on a limited traffic zone. The area covers 1 km² of the city centre
- 2003: Installation of seven electronic gantries
- 2004: set up of the low emission zone (called Environmental Limited Traffic Zone)
- 2006: Installation of seven electronic gantries (14)
- 2007: Installation of 10 electronic gantries (total 24)
- 2008: Installation of 10 electronic gantries (total 34)
- 2010: end of the LEZ
- 2010: installation of three electronic gantries (total 37)
- 2020: installation of two electronic gantries (total 39)
- September 2020-March 2022: pause of the LTZ during the COVID-19 pandemic
- April 2022: returned to pre-pandemic conditions

Other building blocks put in place

Spatial Interventions

Reallocating road space for pedestrians:
Pedestrian priority street or zone

Reallocating road space for public transport: Bus or tram priority lane

Pricing Aspects

Parking charge:
From on-street to off-street parking

Regulatory Measures

Regulation by emission: EURO standard

Regulation by vehicle type and dimensions:

- Vehicle type
- Dimensions

Regulation by trip purpose:
Delivery and logistics

Regulation by permit:

- Permit to travel
- Parking permit



On the left, one of the access points to Turin's limited traffic zone. Signage warns of the presence of ANPR cameras. (Mole 24, 2017, July 17)

Complementary measures

Exemptions

Permits by vehicle:

- Mopeds, light quadricycles, and motorcycles
- Governmental bodies and public services
- Public transport and shuttles operated by private companies
- Transport of people with disabilities
- Emergency, health services, law enforcement
- Taxi and car rental with driver
- Major events, demonstrations, filming and commercials

Retroactive permits:

- Transport of goods
- Construction vehicles
- Health services users
- People with temporary disabilities
- Veterinaries on home visits
- School permit
- Artisans and small-and-medium enterprises
- Catering and events, wedding and funeral services
- Sewer cleaners
- Hotel guests
- Official visits
- Detective agencies
- Vehicle owners whose vehicle has been stolen or is under repair can request an access permit

Increased mobility options

- Park & Ride
- Car park
- Electric bus from Park & Ride, free for vehicle owners, usual fare for accompanying people
- Car sharing (three operators)
- Free floating electric microcar sharing
- Scooter sharing
- Carpooling
- Bike sharing

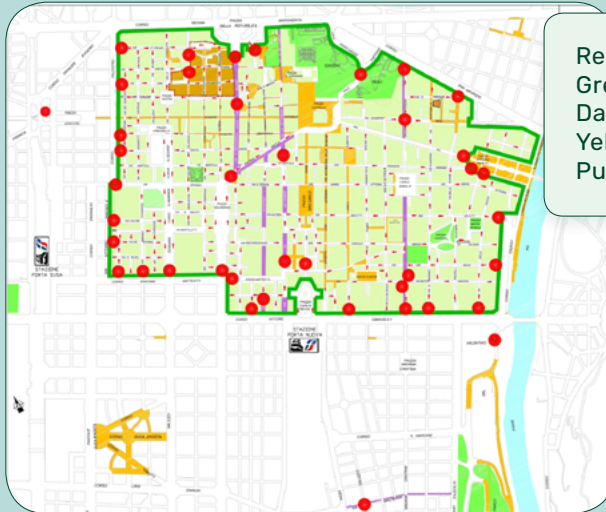
Financial incentives

- Electric vehicles only pay an administration fee
- Hybrid vehicles (petrol/electric), registered after 2015 have a discount on permit



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Limited traffic zone, Turin, Italy



Red: access points
Green: Central LTZ
Dashed: Roman area LTZ
Yellow: pedestrian area
Purple: public transport priority lanes

The map on the left shows the limited traffic zone in Turin (Comune di Torino, 2022)

Additional information

From 2004 to 2010 there was also a low-emission zone in Turin; it was ultimately stopped due to lack of enforcement capacity.

References

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