

# Italy: successful Urban Access Solutions.



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Kapsch TrafficCom is the maker of the larger solutions: 28% of Italian cities with more than 100.000 inhabitants are equipped with a Kapsch TrafficCom urban access system (46% of all Italians who live in cities with more than 100.000 inhabitants have the possibility of using a KTC system on a daily basis).



#### Cities with a Kapsch TrafficCom implementation:

Civitavecchia, Sarzana, Lecce, Salerno, Roma, Bologna, Lerici, Ravenna, Como, Cremona, Torino, Bergamo, Mediglia, Lazise, Castellammare di Stabia, Catania, Piacenza, Bardonecchia, Galliate, Seregno, Monterosso al Mare, Napoli, Melegnano, Vergiate, San Giovanni Valdarno, Monza, Giovinazzo, Colle di Vald'Elsa, Bolzano, Mestre, Sassuolo, Prato, Arezzo, Siracusa, Livorno, San Casciano Val di Pesa, Gallipoli, Novara, Genova, Mantova.

## How it all began.

Italian cities were not built for cars – narrow streets from medieval times or even older. As a consequence, limited traffic zones used to be in force for a long time, being manually enforced by policemen. With the upcoming capabilities of ANPR, license plate reading cameras were used to substitute the manual enforcement by electronic

enforcement, granting a 7x24 service with reduced human intervention and higher reliability and fairness. Italy was among the first countries worldwide to accomplish electronic enforcement of **Limited Access Zones** ("Zona traffico limitato"), the success of the first zones encouraged cities to go for much more. Currently, out of the more than 200

Limited Access Zones, some 70% are electronically enforced.

Kapsch TrafficCom was among the first companies to shape Italian Limited Access Zones and gradually gained its market share.





## How does it work?

There are no obstacles or any other barriers when driving into the zone, however access is granted to holders of an access authorization only. An access permit can be granted very restrictively or more widely, according to the local transport policy. The access permit is linked to the vehicle's license plate number, so drivers have to apply for a permit and register their car. The access limitation can be valid only during certain hours of the day (e.g. from 9 am until 7 pm on working days) or it can be valid all the time except for a small time window in the morning for deliverers where general access is granted. Permits can be given for short time usage (1 day, a couple of days), for longer usage (weeks or months), or for permanent usage. The permit can be granted by the responsible authorities or even by delegate users such as hotels for their guests. Whether such a permission is free of charge or not might be decided locally from the respective city.

This scheme however has been enhanced quite soon with additional features. Soon cities began to grant authorizations according to environmental concerns, so the access criterion was the vehicle's emission class. Now, roughly a quarter of all electronically enforced zones are **Low Emission Zones**, achieving partly considerable pollution reductions, such as the zone of Bologna, in which not only the absolute traffic number was reduced by -23%...-31% (depending on the time of the day), but also PM10 emissions were reduced by -47% (Bologna was recognized by the European Commission's Directorate General for Mobility and Transport to become a European best practice in 2012). In total, compared to the number of implementations and to their effects, Italy became a leading country in Low Emission Zones.

Not only the environment but also the city budget **benefits from the urban access solutions**. Soon, municipalities started to grant short term permits against a usage fee (day pass tickets or tickets for several days). The schemes vary, but again, Bologna serves as an example; a limited number of short term access tickets which are valid for one day (alternatively four consecutive days) can be bought at supermarkets or municipal vending points. Each ticket is carrying a PIN code hidden under a scratch foil and has to be validated via telephoning a call centre, sending a short message (sms) or via internet. The ticket is bound to the vehicle's license plate number and adequately the license plate number is communicated during the validation. Drivers that are not respecting the scheme and do enter in the zone without a valid permission will be enforced from the system for the payment of a penalty (these funds will remain with the respective city and usually pay off the investment and the operational costs of such a system within a few months).



## Why is it a success?

### There are many factors which made this scheme a success.

- The access regulation is made for the citizens. Local demand (like that of hotel owners or delivery services) can be considered. Even if unpopular measures have to be taken like banning polluter cars, this can be made understandable individual behaviour change can be assigned to improvements of urban quality of life.
- The scheme is simple to understand. Both, motorists and citizens, know the principal intention and how to obtain a permit. For the municipality, the effort to build and operate the system is without much ado; it is an option for big cities (like the capital Rome with its 2.7 million inhabitants) as well as for small towns.
- The measure is solely in the hands of the municipality. The city is more or less free in defining the zone boundaries, the authorization scheme and the pricing. Furthermore the city can take responsibility of running the enforcement and keeping the penalties.
- The legal basis which allows municipalities to introduce such schemes is covered by the Italian road traffic regulation “codice della strada” and therefore applicable in the whole of Italy. Therefore (despite other examples in Europe) the cities do not have to take care about legal topics.
- Access regulation turns out to be a vital part of urban funding. Apart of penalties which are outside of the budgeting process, the municipalities can raise revenues from selling access permits which helps financing public services like bus transportation.
- Last but not least, the scheme proved to be highly effective in order to achieve transport policy goals like pollution reduction, traffic reduction, protection of historical buildings from excessive traffic.



## More than just electronic enforcement.

The simplicity and efficiency of the approach stems from its origins as highly effective enforcement systems for access restrictions. License plate cameras are in use to autonomously identify vehicles passing the zone boundaries and to correlate the reads with the entries of the permit list. Only violator files are kept and transmitted to the central application, and being digitally signed they can be used as evidence in front of a court trial.

The simplest systems therefore consist of the peripheral license plate cameras and a central application for collecting and treating violator files. The more sophisticated systems contain also the permit handling, like customer relation management, self-registration, accounting, invoicing and payment for selling tickets.

As such they differ little from other European zone management schemes like in the UK or in the Netherlands. The Central London Congestion Charge for instance grants charged day pass tickets for motorists who wish to enter the central zone; the London Low Emission Zone encompasses charged day pass tickets for polluter trucks if they have to be operated within the considerably larger low emission zone.

### Kapsch Group.

Kapsch is one of Austria's most successful technology corporations, specialized in the future-oriented market segments of Intelligent Transportation Systems (ITS), Railway and Public Operator Telecommunications as well as Information and Communications Technology (ICT). Kapsch. Always one step ahead.