Traffic calming & widespread cycling

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Freelance
Do they take road safety seriously?
The flaws in policy have a detrimental influence on car drivers’ behavior, among others a lack in respect for pedestrians and cyclists.

In urban areas, **80-90% pedestrians and cyclists** involved in accidents are injured, compared to **5-10% motorists**

In absolute figures, in 2013 in ITALY there were **186,726 accidents** with **3,653 fatal accidents** and **264,716 injured people**

This is a high factor, which affects the livability of our cities, causing a social cost to the community (resulting from hospitalization and medical care consequential). **In Italy, it is equal to 2% of GDP (30 billion euro)**
The first and most important issue that actions for the defense and spread of urban cycling have to deal with is therefore the development of a general "bicycle-friendly" environment, where cyclists can move comfortably and safely.
In order to **defend** and **promote** cycling as a primary means of transport, able to satisfy even the **home-to-school** and **home-to-work commuting trips** and access to services and not just for recreation or sport or short length trips, it’s important to:

- Identify and implement a Strategic Cycle Network, which must be continuous, attractive, short and easily recognizable – **BICYCLE MASTER PLAN**

- A general redesign of roads - through **traffic calming and 30 km/h Zones** – whose main goal is to reduce speed, the crucial element of danger
The Bicycle Master Plan

Identification of strategic routes

- Except on primary roads, separated and protected cycling routes are not necessary

- In the heart of the city – especially European cities - cycling lanes and tracks are in fact a clear demonstration of the failure of the speed moderation approach
A City.

Where cars & pedestrians can go.

Where “they” think cyclists want to go.

Where cyclists actually want to go.

copenhagenize.com
After studying and sharing European best practices, in 2008 I designed the **BMP of Reggio Emilia**

with 12 radial routes along the axes to reach the Centre and three rings around the Centre to allow the connection between itineraries and traffic attractors outside the historical city Centre.
However, what kind of cycling infrastructures should be developed in planning the main roads of the urban areas?

**Cycling lanes or cycling tracks?**

In Italy the idea that to increase cycling cycle tracks are the best solution (in urban areas where there are numerous intersections and driveways, shops and pedestrian movements) is still strong.

In Countries having an advanced cycling planning, **cycling lanes are now much preferred** a solution that - although seemingly more vulnerable due to their easy accessibility and use - **is actually used by many users, as it can provide them with a significant level of protection.**
Why this choice?

First of all, it is a matter of safety at intersections: the Countries which have experienced and advanced cycling culture show that urban trips on cycling tracks running alongside the carriageways are often not safer than the ones directly made on carriageways; in the case of cycling tracks, the accident risk even increases at the intersections.

[accident study of Berne - Oskar Balsiger]
This scheme shows the accident probability, on a cycling lane or on a cycling track, when cars must turn right:

• If the probability on a cycling lane is 1 (because the cyclist can be seen by the car drivers, as the cyclist is in front of him or he has just overcome),
• this ratio increases by 3.4 times in the case of cycling track (because the cyclist is not perceived),
• and even by 11.9 times in the case of a cycling track coming from the opposite direction (since the car driver tends to look only to the right when he turns)
The second question concerns

**The spaces available for the realization of cycling paths**

Generally speaking, in Italy, like in many other European Countries, the roads have limited spaces and it is very hard - sometimes impossible - to insert a high capacity cycling track, ensuring high travelling speed to cyclists who are going to work, school, etc.

Nowadays, our urban roads do not have space enough for cycling tracks like in Denmark or The Netherlands, Countries that have planned their cities around cycling for more than 40 years.

Moreover, the realization of cycling tracks on secondary and local urban roads commonly has shown that they are not successfully used by all the cyclists.

Let’s recall what said in the beginning: you do not need more bike paths, but more cycling.
Obviously all slides shown so far do not mean to abandon the construction of cycling tracks. On the contrary, we suggest to use them only on essential situations.

According to ECF the conclusion is quite obvious:

**a single measure is not enough to get more people involved in cycling.**

**A set of actions, a clear vision of mobility policies, should be requested:**

motorized traffic calming (separation only on main roads), designing the cycling lanes on the carriageway, discouraging private cars and reducing the car parks, implementing the bike sharing service, improving the intermodality and the public transport, promoting public awareness through campaigns on the benefits of cycling and on road safety, supplying cyclists with facilities and so on, are the main areas where interventions are requested.
This is an example of a safety and redesign of a primary road, as well as an example of the implementation of a primary cycling route.

To confirm that designing of infrastructures affects our behaviors as a driver, in the last six years before the project was implemented, along the involved section more than 319 car accidents happened, with a total of 420 injuries and 3 fatal accidents.

In order to reduce accidents and speeds, as well as ensure a higher safety on pedestrians, cyclists and motorists, a central multifunctional strip was introduced in the carriageway.
Safety measures on main roads: the case of via Emilia (RE)

- Central “Safety islands” to protect pedestrians and cyclists road crossings at pelicans
- Drains for cyclists and lowered curbs to facilitate cyclists along the cycling lanes
In other words:

- Traffic calming with central multifunctional band
- Protection of crossings
- Bike lane for "hare" cyclists
- Cycle-pedestrian lane on the pavement for "turtle" cyclists
In Italy, there are still few experiences of 30 km/h Zones.

Their benefits are not adequately explained, the issue of road safety and accident rates are not vigorously treated, mainly because our politicians seem to be afraid of losing support.

However, people seem to be ready for a change. Let’s consider residential streets not only as axes for motorized traffic flows but primarily as spaces for relationships among a variety of users and functions, as demonstrated by the success of the "experiment" that I personally tested in Terni, the Italian town near Rome.
The first experimental 30 Km/h Zone realized by means of a "bottom-up" process in Italy

FESTIVAL OF ARCHITECTURE 2013 - FESTARCHLAB - TERNI

Lesson with the children of the elementary school district
The first experimental 30 Km/h Zone realized by means of a "bottom-up" process in Italy

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The workshop with residents, citizens and political representatives
The first experimental 30 Km/h Zone realized by means of a "bottom-up" process in Italy

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The status quo...
The first experimental 30 Km/h Zone realized by means of a "bottom-up" process in Italy

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In conclusion… our vision

1. Safety measures of the main roads to reduce the car accidents and improve the safety of all the road users.

2. Development of the main cycling network provided by BMP along the main axes, to be developed primarily through bike lanes on track.

3. Creation of 30 km/h zones in all the residential areas, excluding the main road network.

4. Safe cycling and walking paths for all kinds of users, in particular for the most vulnerable ones (‘turtle cyclists’), through the 30 km/h zones and by making safe all the crossing points along the main roads.
The results of these interventions in Reggio Emilia

Results provided by the Municipality in relation to the cycling flows and accidents are encouraging

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<th>Bicycles entry to the historic center</th>
<th>Injured cyclists and pedestrians</th>
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<td>annual % change</td>
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<td>1,5% 9,6%</td>
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![Trend Injured Years 2006-2012](image-url)
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