Best Practices of Sustainable Urban Transport

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I. TRAFFIC CALMING BEST PRACTICES

BRASIL – Bus Rapid Transit System in Belo Horizonte

Photo credit: Mariana Gil/EMBARQ, Brasil, Belo Horizonte


The city of Belo Horizonte, Brazil, implemented a new urban sustainable mobility plan, including bus rapid transit system. The city became more pleasant and safer and, the streets people-oriented places. In Brazil, 3 cities (Belo Horizonte, Rio de Janeiro and São Paulo) have been honored with the 2015 Sustainable Transport Award of the Institute for Transportation and Development Policy, one of the most prestigious institutions promoting sustainable transport.

Since 2005, this award has been given annually to a city that has achieved innovative and sustainable transportation and urban liveability projects in the past year. These projects “must improve mobility for all street users, reduce transportation and air pollution emissions, as well as improve safety and access for cyclists and pedestrians”.

Rio de Janeiro reduced traffic congestion, improved road safety, and implemented high quality public transit while São Paulo developed 320 kilometers of exclusive bus lanes, public transit is faster and more efficient. It has reduced the average travel time for passengers by 18.4%. According to the estimations, these improvements have reduced CO2 emissions by 1.9 tons per day garnering their recognition as co-winners of the 2015 Sustainable Transport Award.

Cycling paths in Holland provide clear delineation of space providing safety for all road users and supporting a suitable environment for the development of active mobilities.

There are more bicycles than residents in The Netherlands and in the capital, Amsterdam, there are around 500 kilometers of cycle paths and up to 70% of all journeys are made by bike where 63% of the inhabitants use their bike daily. According to estimations, there would be 800,000 bikes against 263,000 cars in the city.

Source:
FRANCE – Bicycle Kilometre Compensation

Since January 2016, France implemented new measures to stimulate employers to encourage their employees to bike for their work journey. If a company puts free use bikes at their employee’s disposition, it will benefit a tax reduction in the limit of 25% of the purchase price of the bikes fleet. Furthermore, a bicycle kilometre compensation has been set up in July 2015. It allows employees who bike to their work from their place of residence to receive 25 cents per travelled kilometer.

FRANCE – Companies’ Financial Participation To Public Transport Monthly Subscription

Since 2009 in France, every employer from the private and the public sector has to finance 50% of their employees’ travel cost by public transport for their home residence-work travels. This is a mandatory measure regardless of the distance separating the two places which is valid for any kind of transport: bus, train, tramway or even by rented bike, and it can concern either, annual or monthly subscription. The amount of the participation is reimbursed each end of the month by the employer and is tax-exempted for the company and the employee.


The MOMO Car-sharing project is an Intelligent Energy Europe (IIE) project to promote a sustainable mobility culture. In March 2005, Switzerland, the Swiss Federal Council developed the “climate cent” project which goal is to collect a cent on every litre of imported petrol and diesel fuel. This collection is used by a Swiss foundation to finance climate projects. In August 2014, “Catch a car”, a pilot project, has been launched in the city of Basel by the cooperative company Mobility. This a car-sharing service that operates without dedicated parking stations, the driver can locate a car via app or online. Switzerland's urban car owners mostly use their cars for travels of five kilometres or less, “Catch a Car” aims to provide an intelligent and cost-effective alternative. The project was a success with more than 5000 users of the free-float. According to the Swiss Federal Institute of Technology in Zurich (EPFZ), this service is an additional useful mean of public transport contributing to the decrease of traffic. This plan reduced the number of cars in the city of 363. The use of private vehicles has decreased of 560,000 km per year, i.e., 45,000 liters of fuel or 104 tons of CO₂ emissions. The project will be spread to other cities in the country.

Source: https://www.mobility.ch/fr/a-propos-de-mobility/news/mobility-journal/mobility-journal-02-2016/catch-a-car/
THE NETHERLANDS – The “Woonerf” Concept

Example of a “woonerf” in Trondheim, Norway.

“Woonerf” is a Dutch concept that means “convivial street”. It implements pedestrian-friendly initiatives to create a better quality of life in the city designing streets for a pacific cohabitation of users where the priority is given to pedestrians. This kind of street planning animates residential streets making them safe and pleasant thanks to the principle of shared-spaces.

The concept was so successful for better urban environments that Belgium, France, Denmark and Germany rapidly developed this model. It is now a more and more adopted practice across the world.

Sources: http://www.salon.com/2004/05/20/traffic_design/
http://www.nytimes.com/2013/04/28/automobiles/where-share-the-road-is-taken-literally.html?_r=0
THE NETHERLANDS – The Woonerf Concept

In the 1970s the Netherlands was the pioneer in a new street design known as the woonerf, aiming to pacify the conflict between people and urban traffic in the streets. A few key features allow the woonerf to enhance the street environments for bicyclists and pedestrians (mainly paved street where walking is allowed everywhere) restricting the motorized traffic. Most research project confirms that the speed of motorized traffic in woonerven is lower than in traditional streets with an average of speed of 13 to 25.

The world’s first woonerf in Delft, located close to the train station.

Source: https://psudelft2015drewdevitis.wordpress.com/2015/07/12/the-woonerf-living-streets-for-people/
USA, SEATTLE – Implementation of the Woonerf Concept

Seattle has been one of the first city in the US to apply the Dutch concept of Woonerf in order to rebuild living streets for people. The project, ended in 2014, on the Bell Street created a more human centric street environment to establish a shared road space between pedestrians, bicyclists, and car drivers. A new open space design of the street has been created by removing a traffic lane. This measure improved the neighborhood, restricting car access and planting trees, transforming the area in a vibrant, safe and green public space.

Source: https://psudelft2015drewdevitis.wordpress.com/2015/07/12/the-woonerf-living-streets-for-people/

Bell street before the new design.
Source: http://nacto.org/case-study/bell-street-park-seattle/

Bell street new design.
Source: http://www.svrdesign.com/bellstreetpark/
USA, LANCASTER – Rewards for Sustainable Initiatives

In 2012, Lancaster, USA, has been rewarded by The Environmental Protection Agency (EPA) with the National Award for Smart Growth (NASG), created in 2002 to recognize innovative approaches for development that protect the environment, encourage the economy and enhance the quality of life. The Lancaster Boulevard suffered from high-speed traffic, poor pedestrian facilities and too much parking. The project of a new design for the Boulevard, reused infrastructure and reduced emissions from car travel by taking advantage of a central location that has shortened driving distance and encouraged walking, implementing a pedestrian friendly environment with sidewalks, trees, arcades, and fewer travel lanes.

![Lancaster Boulevard before and after the project.](www.cnu.org)

![Market, Lancaster Boulevard.](www.walkablewpb.com)
AUSTRIA - Greener Transport on Existing Infrastructures


Except energy generation and industrial processing, transport is a major factor in excessive carbon dioxide emissions and is considered as one of the sector with the fastest growth in environmental pollution. “Current levels of air pollution cause severe health impacts in the enlarged European Union, resulting in 370,000 premature deaths each year, increased hospital admissions, extra medication, and millions of lost working days.” Buses represent 60% of the public transit in Europe, and 95 percent of those use gasoline or diesel fuel ([Source: European Commision, 2005](http://www.nytimes.com/2013/07/08/business/energy-environment/greener-transit-in-europe-built-on-top-of-older-infrastructure.html?_r=0)). From 2012, Vienna, the capital of Austria, shifts to electric buses with new systems that can create a cleaner and a quieter city. The fleet of electric buses is a brand new initiative that allows to recharge the bus’ batteries in 10 to 15 minutes through older tram’s overhead power lines at end stations. According to the Technical University of Graz estimations, each ElectriCity bus reduces emissions of 5.3 tons CO₂, 1.7 tons NO and 0.06 tons NO₂ per year.
In 2001 in Hungary, general speed limits for rural roads, expressways and motorways were raised by 10 km/h. But, according to a Dutch study (CE Delft) lower the speed is better for the environment! It is a common acknowledgement that vehicles burn less fuel per kilometre at lower speeds. Indeed, CE Delft study reveals that the speed limit to 80 km/h on railways would reduce transportation-related CO₂ emissions by 30 percent. Furthermore, reduce CO₂ emissions and improve air quality are just one of the benefits of lower speed limits. The installation of speed limit signs is believed to have effective outcomes to improve road safety, air quality, traffic noise and congestion. This measure has its importance not only for road safety issues but also at an ecological level.
Traffic Noise as a Factor of Stress

Traffic noise is a major source of pollution in urban areas but the least recognized and regulated of all pollution sources. Noise is a cause of people’s stress and can have impacts on citizens’ health. In OECD countries (Organisation for Economic Co-operation and Development), about 130 million people are exposed to road traffic noise. According to the World Health Organisation, who recognised it as a serious public health problem, cumulative with prolonged and repeated exposure to traffic noise can lead to sleep disruption, chronic stress, headaches, fatigue, irritability, depression, concentration loss, disturbed cognitive functioning (learning and understanding - especially for children) and cardiovascular disease. In 2000, more than 44% of the European population were regularly exposed to over 55 dB of road traffic noise, a level potentially dangerous to health. However, there are various cheap and relatively easy ways to reduce transport noise significantly. Speed reduction and traffic management are good examples, they involve low cost investment and allow to have a direct effect on traffic noise, but also it improves air quality and safety.

FRANCE – Roundabouts

Since the development of motorized-transportation, most streets have been built mainly for cars, impacting people’s interaction and environment. Indeed, the dominance of traffic has lead to a decline in the quality of life in urban areas. Heavy traffic have irritating effects on citizens, especially in large residential areas, not only when it is related to safety but also to pollution and noise. Obviously, calming devices such as speed limits, roundabouts, speed bumps, pedestrian crossing etc, can easily be implemented to reduce and calm down the traffic. Those initiatives proved their worth around the world improving citizen living conditions. For example, roundabouts are a very safe and efficient means of intersection control. France holds the world record of roundabouts with an approximative number of 30 000 in the whole country with 80% of them situated in urban areas. Traffic circles are recognized as promoting the public interest concerning urban traffic issues. Indeed, they improve the traffic flow and secure roads reducing the speed of traffic between 30 and 35km/h and so the pollution. Furthermore, a European Commission report reveals that an intersection redesigned in a traffic circle, where stop signs or traffic lights were previously used for traffic control, reduced injury crashes by 75 percent. They are also mean to embellish the living environment and to boost a greener city representation.

FRANCE, PARIS – Pollution Peak Alert

We each breathe in average 10,000 liters of air every day, but what do we actually breath that goes in our lungs? PM10 is the name of the main pollutant that is harmful for us. It is constituted of invisible particles including dust and smoke from home heating as well as smoke from industry and cars. The PM10 level is particularly high in winter as the smoke doesn’t go away with the cold.

In Paris, a measure has been set up when the city faces pollution peaks. This measure is called “Pollution peak alert”. During the days of a high level of harmful particles for the health in the air, the government imposed an alternative ban on automobiles with license plates ending in even and odd numbers from the roads of the French capital and 22 towns surrounding it, speed limits are lowered, suburbs offered free street parking and the city offers free public transportation to encourage people to use them.

The World Health Organization recommends exposure of no more than 25 micrograms per cubic meter of particulates a day while during pollution peaks, it had already reached 180 at its maximum, a real threat for the health.
GERMANY – Low Emission Zones

Since 2006, the German capital, Berlin, implemented environmental zones (Low Emission Zones, LEZ) to combat air pollution. This law requires German drivers to have a special environmental sticker in their car (Umweltplakette) in order to enter “green zones” of many Germany’s cities. This law is also applied for foreigners visiting the country. The german law has been passed after Germany failed to meet EU pollution standards for fine particles level in the air. There are three different stickers. A green one which certifies that the vehicles meet the expectations regarding the environmental standards. A yellow one for vehicles using diesel or older gasoline-powered and finally, a red one for a vehicle that doesn't meet the environmental standards. The measure begins in 2011, cars have been required to have the sticker for zone entry in several German cities. Others began a green sticker requirement in 2012. A sign indicates which color sticker vehicles must have to enter the “ecological zone”. No sticker, no entry!
Since 2003, a toll has been implemented to enter the city of London, England, in order to discourage traffic congestion in the city center and incite people to use public transport. An article published in The Guardian newspaper in 2007, promoted the success of the measure. According to his writer, "each day in 2006 there were almost 70,000 fewer vehicles entering the charging zone". The reduction of traffic has contributed to the growth of the use of bikes with an increase of 72% in the number of cyclists. “Green” cars using fuel alternatives are exempted of this measure while excessively polluting cars such as four wheel drives (4X4s) and larger sports utility vehicles, have to pay 25£ a day while other users have to pay from 9 to 14£ a day. The toll implementation also raises £130-150 million a year in revenue which is used to improve public transport in the capital.
Pedestrians are among the most vulnerable group of road users. In Budapest, most of pedestrian crossings are faded and are not anymore or only partially visible. Pedestrian visibility in city streets is important not only to insure people safety but also to reduce traffic speed. Budapest's zebra crossings would need to be repainted especially in residential areas. Furthermore, some areas totally lack of crosswalks and so people cross anywhere and drivers do not focus their attention on pedestrians who may cross the road anytime. Thus it is a measure which can be easily implemented for a low investment that enables to develop pedestrian infrastructure with well-connected facilities that will benefit the whole community and enhance pedestrian safety thanks to the road network system.

https://essenceetsens.wordpress.com/category/exemples-damenagement/
Photo: Ch. Rouaud
DENMARK, COPENHAGEN – The Most Liveable City

Copenhagen city emphasizes that walking and cycling are essential for residents quality of life and it is certainly why the Danish capital was named the most liveable city (Global Quality of Life Survey 2013) by Monocle magazine. Indeed, in the city cycling is the most favoured mean of transport. The city has also been named the European Green Capital in 2014, an award to promote and reward sustainable efforts and initiatives in urban areas where two thirds of Europeans live. According to the jury, Copenhagen is a successful role model for the green economy especially thanks to its efficient communication strategy. The city’s goal is to become the world’s first CO₂ neutral capital by 2025. According to study, Danes are considered as the happiest people in the world, which is not a surprising fact regarding to the green areas, open spaces, clean water and cycling opportunities that the country offers. Actually, only 29% of the households in Copenhagen own a car.

http://www.ifhp.org/ifhp-blog/copenhagen-most-liveable-city
BELGIUM, BRUSSELS – Electric Scooters

In September 2016, a Brussels startup, named Scooty, will make electric scooters available to inhabitants of the Belgian capital. This initiative has been developed by two friends, desirous of improving the mobility in the city with a smart, convenient and eco-friendly solution. Users would only need a smartphone and an app to trace, rent and enjoy the scooter which will be equipped with a helmet. Two options will be proposed, the user would be able to choose whether he or she wants to rent it for a ride or to take out a subscription. An option made to measure will even be proposed to business companies wishing to propose the device to their employees for a more advantageous price.

http://www.lecho.be/dossier/mobilite/Scooty_le_scooter_electrique_de_location_pour_les_Bruxellois.9787298-8327.art?ckc=1&ts=1468241596
To rent an electric scooter that looks like a vintage Vespa is possible in Barcelona! It’s called YUGO. “With the YUGO smartphone app, you can find a nearby scooter, book it before you get there, and when you reach the scooter it’s yours to ride” (Yugo website). This new service is a clean and quiet project for the city, initiated by a French team, whose aim was to develop a sustainable and smart mobility. The growing fleet of electric scooters is 100% electric and contributes to the well-being of the city, providing quiet rides that produce ZERO emission!
ITALY, MILAN – Congestion charge


The Italian city, Milan, launched in 2012 an 18-month pilot program, the “Area C” which aimed at facilitating traffic flow and reducing the levels of emissions in the city as well as promoting public transport use. In order to do so, new rules for car entering the historical center have been implemented during the working days. Indeed, the access of the area has been restricted by a congestion charge of 5€ a day (1600 HUF). Only electric and hybrid cars can enter the area for free. The measure has been definitely approved in march 2013 and recorded a decrease of the number of cars of 30%, i.e. about 700.000 vehicles less a month. The program lead to a revenue of 20,3 million Euros contributing to increase services on the Milan Metro and to extend the BikeMi’s fleet in the city. The plan has been welcomed by the Europeans Greens as an efficient way to improve life quality for Milan citizens and to counter air pollution in the center where black carbon level in the air decreased by 30% and PM10 by 23%.
INDIA, NEW DELHI – Car Free Day

According to a World Health Organisation report (2014) New Delhi, India, is the most polluted city of the world with 600,000 deaths from air pollution a year which represents 80 persons a day. Since October 2015, the city implemented a “car-free day” once a month. Even if this measure is mostly considered as a “symbolic initiative” (Greenpeace), the national Indian Center for Science and Environment claims that “pollution levels were 60% lower than the levels observed in the same place, at the same moment” the day before. This initiative of the Delhi government helps lower the toxic exposure in the capital and it proves how the growing car numbers aggravate air toxic pollution. The monthly project is also meant to raise awareness toward the public to implement solutions to control the number of cars in order to significantly reduce harmful pollution.
People have tried to control traffic and speed since the development of the car. What if art could be a solution? In the United States, the principle of beautify the roads and intersections with hand-painted murals proved its worth. This is one of the principle of Streets for People, implemented in the city of Rochester, aiming at create better places to live, work, play and raise a family. The pilot project called BoulevArt has been implemented in June 2012, it is a local street painting program which combines neighborhood traffic calming practices with community building. The result is not only the embellishment of the streets but also the achievement of a traffic calming effect. Indeed, the quality of life has been improved in the concerned areas where painting streets have been a fun proven way for slower traffic and create a safer environment!
In 2015 in Montclair, New Jersey, citizens including parents, kids, local business and institutions gathered to make their community a safer and vibrant place. The project was called the Montclair Community Street Quilt, made up of a “patchwork” of painted intersections in the whole neighborhood. One hundred volunteers get together with the project which implementation took only 4 months thanks to a solidarity investment. Indeed, the whole project and all the necessary supplies have been entirely funded by volunteers and good will (for instance, donations of paints have by offered by a local paint shop). The painting’s impact has gone well beyond traffic calming. It has fostered a sense of community, and it has also helped to develop similar projects across the city. The project contributed slowing down cars and providing residents with a safer place to walk, cycle, or admire the work of their community. An easy project to realise for a small budget and an efficient effect on traffic!
UNITED KINGDOM – Go Ultra Low City Plan

In order to combat urban air pollution, United Kingdom implemented the Go Ultra Low City Plan to encourage and promote the use of the electric and/or hybrid car in the country. The government awarded four cities which schemes proposals help support the adoption of the electric car. Indeed, the cities submitted innovative plans which will be funded by the government in order to contribute not only to improve the air quality but also to create jobs in the car industry and to help achieving their goal of zero emission from cars by 2050. The funds allow to develop free fast charging hubs and to provide parking spaces free of charge in those cities for electric car drivers who are also able to use bus lanes to facilitate their daily travel around the city. A great initiative that will certainly boost sustainable drives and benefits eco drivers.

https://www.goultralow.com
GERMANY, STUTTGART – Sustainable Mobility

The city of Stuttgart, Germany, faces major problems concerning air quality due to the heavy traffic in the region and decided to support companies with the development of management mobility activities. In order to reduce the number of car trips, a measure called Mobility Information and Service Center Stuttgart has been implemented since 1998. The center provides information to the public on transport aiming at influencing the personal mobility behavior in the German city. To reach this goal, the municipality set a number of objectives such as improving sustainable mobility, reducing traffic noise and lower emissions, developing environmental friendly transport modes including car-sharing to reduce private vehicle trips and improving public transport mobility, air quality and stress in the city. For several years the city made tremendous efforts to green the city and it implemented projects including the e-Bikes project with a fleet of 600 e-bikes with 100 public charging stations, then a fleet of electric cars, hybrid buses, e-scooters and improved the public transport network as well as cycle paths. Currently, charging infrastructures are providing for two- and four-wheelers with more than 500 charging points all over the city. Furthermore, the city has also developed a plan for events from 2014 to 2016 including several activities with a theoretical part and a practical part and the possibility to test the different e-transports.

Source: CIVITAS
Eco-driving habits could save drivers 20% on fuel. An environmentally friendly drive has a direct and positive influence on the reduction of vehicle emissions and it allows drivers to save money reducing their fuel-consumption. In 2008, the Greek Ministry of Infrastructure, Transport and Networks carried out an advertising campaign promoting eco-driving. The message broadcasted in the press and on television was simply “Don’t drive mechanically. Think Green” in order to raise awareness among citizens of the efficient and positive impacts on the environment and their wallet by changing their driving habits. In 2015, South Yorkshire, England, free eco-driving lessons has been offered to the residents and the vehicles were provided. In 2011 in Tallinn, Estonia, the city developed a training programme on energy-efficient driving for bus drivers in order to decrease buses’ fuel consumption and increase road safety. The measure improved emissions level and accident rate in the city as well as passengers’ comfort.
POLAND, GDANSK – Mobility Management

Since several years the city of Gdansk is developing a new transport strategy in order to promote active mobility (walking, cycling), public transport and improve mobility management. In 2014 the city edited an update cycling map of Gdansk printed in 16 000 copies, available also on internet for free and co-financed by the European Union. The city established a cycling campaign as well as built roads and parks to promote cycling among citizens. The campaigns for active mobility are numerous and organised by city council as well as by local initiatives in the city such as Bike May, Bike Mass, Shop by Bike, Pimp my Bike, or Bike to Work that for instance organise bike gathering, school competition, workshop, events and claims for spaces and parking.

Source: http://urbanplanet.info/urbanism/improving-sustainable-mobility-gdansk-poland/
RUSSIA, MOSCOW – A Friendly City

Since 2013, Moscow, Russia, works out its main objectives for a better quality of life in the city under the principle “Moscow, a city for life”. In order to develop comfortable living conditions and to encourage citizens to drop using their personal car, the city implemented seven priorities including: a mobile city, a comfortable urban environment and a healthy city. The main part of these goals is based on the development, the improvement and the modernisation of public transportation. The public transport could also become free of access for the less fortunate population. Furthermore, Moscow is already considered as a green city with 40% of its territory consisting in green areas, i.e, around 96 parks, 100 square kms of forests and 700 public gardens. Some green spaces are even official protected areas and considered as essential for citizens’ quality of life and for a healthy city.

http://urbanplanet.info/urbanism/moscow-city-life/
http://bridgetomoscow.com/curious-fact-moscow-parks
Since November 2015, engaged and conscious citizens of Montréal, Canada, for climate change will now have the opportunity to get around the city on board of an electric taxi. Indeed, a new fleet of green taxi service, called Téo taxi, has been implemented in the city. The new company desires to be part of the solutions for a sustainable and innovative urban world. In addition to the fact the fleet produces zero emission, thanks to an efficient mobile app, the customer is not only able to book a green taxi but also to share the ride with another customer.
In June 2016, Sweden launched the world’s first electric system highway for trucks. This new Swedish initiative has been implemented as a part of the climate protection strategy. Indeed, transportation is the cause of more than one-third of the Scandinavian country’s air pollution, which nearly of half of it is caused by freight transport. The pilot project consisted in a 2 km series of wires hanging overhead with a pantograph mechanism diesel hybrid trucks can connect to, designed to reduce harmful emissions. When connected the vehicle is able to deactivate its fuel-burning engine to switch for electricity. Not only is the system claimed to cut energy consumption by half, but it has the advantage of reducing local air pollution. The Swedish plan is to establish a carbon-free road transit system by 2030 as electric vehicles are the most potential vehicles in terms of ecological and economic benefits.
A German company has developed a new sustainable vehicle concept. It consists in an electric vehicle that can be driven in the bicycle lanes thanks to its small size, easing congestion, and which has a motor assist combining pedal-power and electric drive. It is of course an emissions-free vehicle, cutting air pollution, whose conceptor describes as “a solution for future urban transport”.

https://twitter.com/schaeffleruk
On 27th September 2015, Paris became a car-free city and the eight-lane Champs-Elysees, usually overrun with traffic, was replaced by smiling people. The initiative has been taken by the mayor of the French capital in order to gather citizens and allow them to enjoy wandering in calm streets and opened public spaces. Each citizen was invited to drop their car to discover the capital in a previously unseen view. This project aims at making people think of a possible greener mobility and a better share of the public space in order to speed up behavior changes and imagine the city of the future. Educational and playful activities, including eco-friendly ones, had also been organised. This project was very successful among the citizens who enjoyed and appreciated the idea in such a way that the mayor planned to reiterate the project this September, this time to a widen area (45% of the territory) and every first Sunday of the month on the Champs-Elysées. Thanks to this measure the city also benefited a decrease of nitrogen in the air by 40% this day.
Here is the Lopifit (the electric walking bike), a surprising Dutch invention which allows you to bike and to walk at the same time! Indeed, the new vehicle is half a bike, half a treadmill and an other fun and healthy reason to drop your car at home! Start walking on the treadmill and the electric motor propels the bike forward. You will walk four times faster than usual as the walking bike can reach 25 km/h. It is a quicker way to get around and an alternative to the tradition, healthy for the environment and a real advantage to avoid traffic jams.

See the video presentation here: https://www.youtube.com/watch?v=GneGKnKXHQ
USA – CAR2GO

http://www.dispatch.com/content/stories/local/2013/10/18/car2go-used-to-bumps-in-the-road-ceo-says.html

Road congestion has an important negative impact on air pollution. A study conducted in North-America by the Transport Sustainability Research Center revealed that Car2go, a car sharing one-way service, i.e the user don’t have to return the vehicle at the place he took it, helps to improve urban mobility and air quality. Indeed, the results showed that the use of car2go, reduces the number of private vehicles on road and miles traveled while it participates in the decrease of traffic and parking congestion. The system became the largest car sharing system in the world, effective in 9 countries and 30 cities.

Source: phys.org
A Dutch woman, Judith Un-van der Toorn, living in France solicitous about mobility and sustainable development created the project ECOMMoBILE which helps to implement and develop projects to finance actions for a sustainable mobility. For instance, the association “Vélo-école” has been created to promote active mobility, more especially biking. People who want to move in bikes but who do not feel comfortable with this means of transportation are now able to participate in theoretical and practical lessons. This apprenticeship takes place in 5 steps with mechanical parts and circulation in the city in order to become more confident regarding bike’s use. She runs the E-Commobile committee the goal of which is to provide guidance on behavioural changes for ecological transports. “The objective is to increase the modal share for daily bike users from 2.4% now to 10% in 2020, in large and medium-sized cities”. She also developed the cargo bikes, initially implemented for child care professional. This is a concept which allows to get around on a bike with children on board!

Sources:
https://bicycledutch.wordpress.com/2015/11/03/coeur-bike-utrecht-a-cargo-bike-tour/
http://ecomobilebourgogne.blogspot.hu
NASHVILLE – Pop-Up CrossWalks

In order to find solutions for pedestrians in a city unfriendly city to pedestrians. The Sidewalk Foundation, in Nashville, invented a temporary effective and funny initiative called the Pop-Up CrossWalks. This concept is a creative solution to help to visualise a possible project and make people realise how nice and practical it is to have a crosswalk at this or that place. The idea has also been extended to bike lanes, trees and pedestrian paths to show where those implementations could be an asset for the city. The aim of those ephemeral projects is to raise interest among citizens to enhance and safer the streets. It also allows to alert drivers to the presence of pedestrians and bikers.

Source: http://shadeparadenashville.blogspot.hu/2014/07/pop-up-cross-walks-could-also-be-used.html
II. INAPPROPRIATE PARKING SITES IN BUDAPEST

As a foreigner, I have been able to notice how cars are privileged in the capital of Budapest, especially in the Pest side, while pedestrians are disadvantaged. Parking sites is part of the inconveniences for citizens who sense oppression by tarmac and cars while wandering in the streets. Globally, thanks to a field work I noticed that three main parking areas in the centre of Budapest represent potential space for citizens’ flourishing as well as for an improvement of the city’s environment.

Városháza Park

I was surprised when I have been introduced to Városháza (City Hall) Park as a park. According to me, and to what I know of parks, it is way too small and poorly arranged to call it after the name of a park. The area is an undervalued space that could significantly benefit the pedestrians and the environment where the traffic is dense, if it would be enlarged. This could be easily done as the huge panels at the Western side of the park hide a large parking site at the Budapest City Hall building. Indeed, the parking is a clumsy place where we can observe by the gaps of the panels that the space could be an asset to create a real park. There is in fact a great space to exploit to consider.

Propositions:
• To remove the parking
• To enlarge Városháza Park with the surface of the parking site to create a real park and a green area for people.
• To green the area replacing tarmac and gravels by plants, trees, grass, etc.
• To implement a pleasant area for citizens with spaces dedicated to hang around and rest in order to create a green meeting place.
Városháza Park
Before the Hungarian Academy of Sciences

The parking before the main building of the Hungarian Academy of Sciences on Széchenyi István tér (square) is also a waste of space to the pedestrians’ disadvantage. According to me, this parking site could be easily removed and replaced by a green area because it is obviously not a parking place that has a significant utility. It dangerously blocks the mobility of pedestrians as well as the visibility for both: drivers and pedestrians. Furthermore, cars drive pretty fast on the roads that surround the parking site which represents an obstacle to people’s safety. In addition to its riskiness, it seriously damages the environment. The view of the building is deteriorated by the cars parked just before it and the arrival on the riverside is spoiled by the view of traffic, the noise and pollution. Again, it is a real assault course to pass through the traffic, the parking site and the cars. Crosswalks are not enough and we have to walk quite a long distance between two to be able to go to the riverside.

Propositions:

- To ban the through traffic on the Northern side of Széchenyi István tér, and leave only place for cars which arrive at the Academy, but they should be permitted to stop there only for the time while passengers get in our out of the car.
- To make the road on the Southern side of Széchenyi István tér two-way (instead of the present one-way), so that all the traffic can be diverted from the Northern side to the Southern side.
- To transform the parking site into a green area by extending the one which already exists.
- To improve the environment by planting trees, grass and placing benches or places to sit and rest.
Along the Pest riverbank of the Danube

Along the Danube, cars are omnipresent, preventing the pedestrians from an enjoyable mobility. Indeed, as a walker, biker, tourist or simply as a citizen, it is impossible to fully enjoy a walk along the Danube because of the wide presence of cars on roads and parking places which not only ruins the trip but also seriously damages the landscape and the environment. The space between non-motorized and motorized mobility obviously lack of a better share. It is really a shame and quite frustrating as the Danube is a beautiful part of the city which could serve as a pleasant environment for residents as well as tourist. In this way, it is hard to appreciate what a walk along the Danube could offer. Furthermore, I also noticed that it is frustrating and difficult to easily move from a point A to a point B on a very short distance, especially to simply cross a road, because of the significant lack of walkways and crosswalks for pedestrians. Cars are complicating the access for pedestrians, and when it comes to reach the waterside I had to face a real assault course. As a consequence, I experienced insecurity and irritation while I had a go to cross the road that leads along the river and it seriously decreased the pleasure of the discovery.

I truly believe it is a pity not to be able to fully enjoy a place that could be very pleasant to walk along and which could be very beautiful for pedestrians as well as for cyclists.

Propositions:

- To remove the parking along the river in order to create a pleasant and green walkway all along the Danube that fits which the landscape. It would enhance the environment and promote the discovery of the Danube by walking as well as the use of public transport. As the tramway goes along the Danube the access would be very convenient and pleasant as pedestrians would directly arrive on an open space, free of cars, where they would be able to move easily, hang out, rest on a bench, go for a walk, etc.

- To ban the access to cars on Jane Haining embankment in order to increase the size of the walkway and add for instance a bicycle path or a verdant space. It would provide the possibility to create a green area with trees and flowers as well as infrastructures to sit down and rest, playful areas for children etc. It will also decrease traffic noise and allow pedestrians to enjoy a peaceful promenade.
  - To provide some natural green foliage (trees, grass, flowers) to enhance the environment where tarmac is way too predominant.
Today cars occupy the riverbank in the centre of Budapest.

This area could become a perfect place for recreation

(All photos by the author)
III. THE SYSTEM OF FINANCIAL SUPPORT FOR PUBLIC TRANSPORT IN FRANCE

France states a project of development and improvement of transports translated into a National scheme of infrastructures of transport, written by the Ministry of Ecology, Sustainable development and Energy via its Direction of the Infrastructures, the Transports and the Sea.

The states maintains an important relationship with its territory. Indeed, the organisation of the territory allows to control and make accessible some places and calm the traffic. The French characteristic is that the motorway, the railway and the aerial network are all connected to Paris, center of the transport network. From the capital spread out the main lines where all kind of infrastructures are concentrated.

In order to settle a transport European network but also to reduce air pollution, France implemented new objectives which will allow to reduce and make flow the traffic. For instance, a conveyance of trucks by trains has been set up allowing to decrease the carbon impacts of transfers and to unblock the traditional routes.

In Ile-de-France, transports are widely developed and the public transport network is constituted of many lines and various transport modes such as tramway, train, buses, metro. Between 2005 and 2010 the use of public transport had greatly increased (+79% for tramway, +10% for trains, +8% for métro and +18% for buses) especially thanks to measures to strengthen the supply.

A measure to promote public transport.

Since 2009 a new measure saw the light of day. This initiative from the government is not only a way to promote the use of public transportation but also a mean to preserve the environment from pollution. Now workers who take public transport to and from their work will be able to have financial support by their employer who has to cover half of the cost. Any company, public or private, operating in France has to pay up to 50 percent of its workers' monthly, weekly or annual public transportation subscription. This law applies to all workers who have an “abonnement” for the bus, metro, train, RER, tram or even bike.
This is a mandatory measure regardless of the distance separating the two places. The amount of the participation is reimbursed each end of the month, this is normally done automatically through the wages, and is tax-exempted for the company and the employee. Each salaried can benefit this measure, even if they are part-time employees. The employees must furnish a supporting document to account for their purchase.

A measure to promote sustainable vehicles

- An employee using his or her electric or hybrid personal car can be reimbursed the whole or a part of the amount of the power supply and/or fuel. This support is not mandatory but if the employer decide to set up such a measure it should benefit all the employees with the same conditions.
- A more recent law, implemented in 2015, stated that employees can also benefit a bicycle kilometre compensation of 0,25cts by km (i.e, 78 HUF) in order to promote bike travels for salaried while since 2016, the employer can benefit up to 25% a tax reduction as well as a social security exemption (in the limit of 200€ = 62 000 HUF by year and by employee) when they provide their employees with bikes for their daily travels.
  - The amount of the support for public transport or for the cost of electricity and fuel have to be mentioned on the wage slip.
  - The partial repayments of the purchase of the subscription for transport are exempts from taxes.
  - Repayments of fuel or electricity costs are exempts of social security contribution and of tax on revenues in the limit of 200 euros by year.
  - The measure does not take effect for daily tickets.
  - The employer who does not respect this law will expose himself to a penalty.

- **Train:** The Société Nationale des Chemins de Fer Français (SNCF) is owned by the State. It takes care of almost all land transport between counties. The TGV, one of the world’s fastest train served many french cities.
- **Bus:** Public transport including buses, tramway and bikes are local transport companies managed by the municipality. For example, in Caen, Normandie (where I live), the company is Twisto (for bus and tramway), while in Paris it is the RATP. Each city has its own bus/tramway company.
• **Cars (kilometre costs):** People who go by car to their work can actually have a financial benefit. Following the kind of car and the distance driven they can benefit a reduction of taxes. To benefit this financial support, they have to declare the amount with the actual costs in their tax return.

**Sources:**

• Wikipedia
• [https://www.service-public.fr/](https://www.service-public.fr/)
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