P | PUSH & PULL

16 Good Reasons for Parking Management

push-pull-parking.eu

Controlled ZONE
Mon - Sat
8.30 am - 6.30 pm

PUSH&PULL - "Parking management and incentives as successful and proven strategies for energy-efficient urban transport"

The main objectives of **PUSH&PULL** are to:

- Save energy through a modal shift from car to other more sustainable modes;
- Help local economies by encouraging a more rational and managed approach to parking and helping cities to save money by avoiding the costs of construction of additional parking; and
- Build the capacity for followers who want to implement a similar system with the knowledge required to help to alleviate parking problems, and build political arguments to support them.

The project includes implementation of parking and mobility management in 7 cities and 1 University. All implementers will set up the core-funding mechanism to use money gained from parking to finance sustainable mobility.

This publication was developed by collecting information from existing studies and publications by project partners and third parties, then re-wording texts and adding additional text. We kindly invite you to use and copy the contents of this brochure. When you use and disseminate material from this brochure we ask to refer back to the website push-pull-parking.eu

This brochure has been developed and written by the following persons from the **PUSH&PULL** consortium:

Tom Rye, Giuliano Mingardo, Martina Hertel, Jörg Thiemann-Linden, Robert Pressl, Karl Heinz Posch and Marta Carvalho.

Contact:

Robert PRESSL
E-Mail: pressl@fgm.at
Forschungsgesellschaft Mobilität FGM - Austrian Mobility Research AMOR

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Since private cars are in use for on average only one hour per day, it is easy to understand why stationary traffic needs special attention. But construction of large parking lots at destinations is expensive and often environmentally contradictory. The smarter approach is to deal with parking in a more efficient way – parking management! There are very few areas in urban development and transport that could bring so many benefits for quality of life, behaviour change and modal shift than parking space management.

But parking is seldom discussed rationally in public debate. It is much more often a purely emotional judgment by citizens and journalists that prevents decision makers from implementing an intelligent and sustainable urban transport policy.

This brochure provides the knowledge required to build sound, political arguments to help to alleviate parking problems and in so doing to support sustainable transport. It should strengthen the position of politicians, decision makers and multipliers such as journalists in the process of taking what may be, at first glance, unpopular, but in fact rational and sustainable decisions to manage on- and off-street parking.

The arguments are developed in the format of facts and figures with a picture / diagram and an explanatory text that it is easily understood and quickly summarises the key arguments. For more complex issues, links to more detailed descriptions are provided.

The **PUSH&PULL** project aims to improve urban mobility in European cities by means of parking space management combined with mobility management measures. By introducing paid parking, increasing parking fees, reducing or restraining parking supply or implementing comparable measures, car drivers will be "pushed" to use more sustainable transport. At the same time, the income generated from parking space management can be used to promote alternatives, thus "pulling" or attracting users towards public transport, walking, cycling and other sustainable modes.

This approach is an innovative one in several cities in Europe that has high potential for transferability to other cities. The potential to raise revenue for cities from such a core funding mechanism – revenue that can be used to finance measures to encourage alternative forms of transport - is important especially at a time of economic crisis.

Robert Pressl
Coordinator of **PUSH&PULL**

Comparison of push measures

parking management	road pricing / congestion charging

- well accepted
- quick implementation
- little investments

- political controversal
- mid term implementation
- high investiment

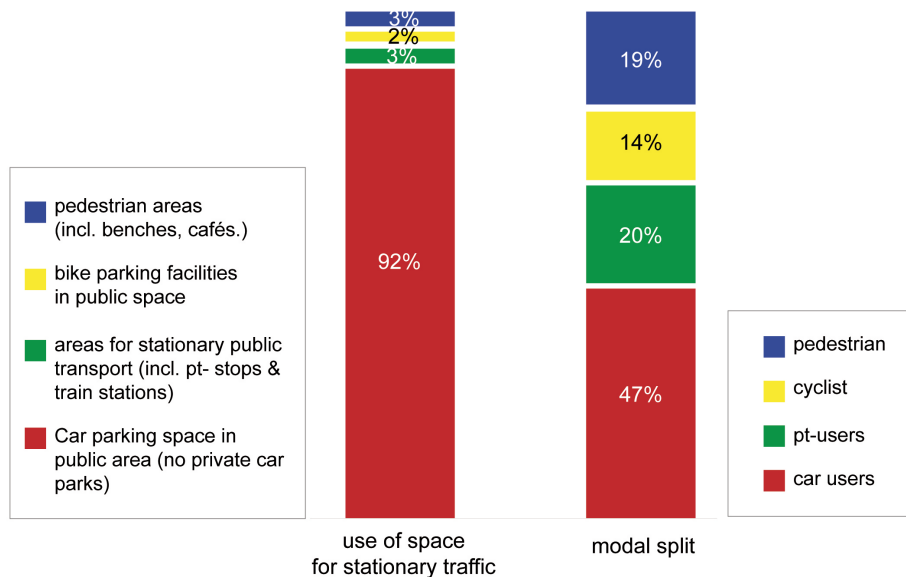## The fact is: Parking Management is key to managing urban mobility.

Virtually every car trip ends in a parking space. Accordingly, managing parking spaces means managing the demand for car use and congestion. Compared to other transport policies aimed at managing car use, parking presents two clear advantages:

- Parking management does not usually require large investments, such as new roads or the extra public transport supply, and it can thus be realized in a relatively short time;

- Some kind of parking management can already be found in almost all larger towns and cities in Europe. This makes the public acceptability of parking management much greater than new ways to manage car use, for example a congestion charging scheme.

A more detailed version of this argument can be found at:
http://push-pull-parking.eu/docs/file/20150204_push_pull_a4_en_extended_argument_1.pdf

Use of space for stationary traffic and modal split in Graz, Austria

use of space for stationary traffic

- pedestrian areas (incl. benches, cafés.): 3%
- bike parking facilities in public space: 2%
- areas for stationary public transport (incl. pt- stops & train stations): 3%
- Car parking space in public area (no private car parks): 92%

modal split

- pedestrian: 19%
- cyclist: 14%
- pt-users: 20%
- car users: 47%

Source: Austrian Mobility Research 2011 and City of Graz 2013

The fact is: Public space has a high value and therefore should be paid if used for parking.

Each parking space consumes from 15 m^2 to 30 m^2, and the average motorist uses 2 to 5 different parking spaces every day. In dense European cities, a growing number of citizens began to question whether dedicating scarce public space to car parking was a wise social policy, and whether encouraging new buildings to build parking spaces was a good idea (Kodransky and Hermann, IDTP, 2011).

Public space in dense built-up areas has a higher value from a social, economic and environmental view if it is used for something other than parking cars free of charge. Like many other rare collective goods this space should be managed by price. Research has shown that e.g. providing green space could have a bigger positive impact on the value of a city house than providing surface parking. So, in general no public space should be given over to free parked cars in city centres.

A survey in Graz, Austria, on the use of public space by stationary traffic showed that 92% is used for parking cars (private parking and garages are note included in this!). Only 2% is for bicycle parking, 3% are areas that could be summarized as being for pedestrian use (included are benches, street cafes etc.) and 3% is dedicated to public transport (incl. PT stops and train stations). This survey shows the incredible privilege of the use of public space for parking cars in relation to the actual modal share.

See also: Case Study on "The Historical Compromise – The parking supply cap in Zurich, Switzerland" at http://push-pull-parking.eu/docs/file/cs07_push_measures_supplycapzurich.pdf

Results of active parking management in Munich
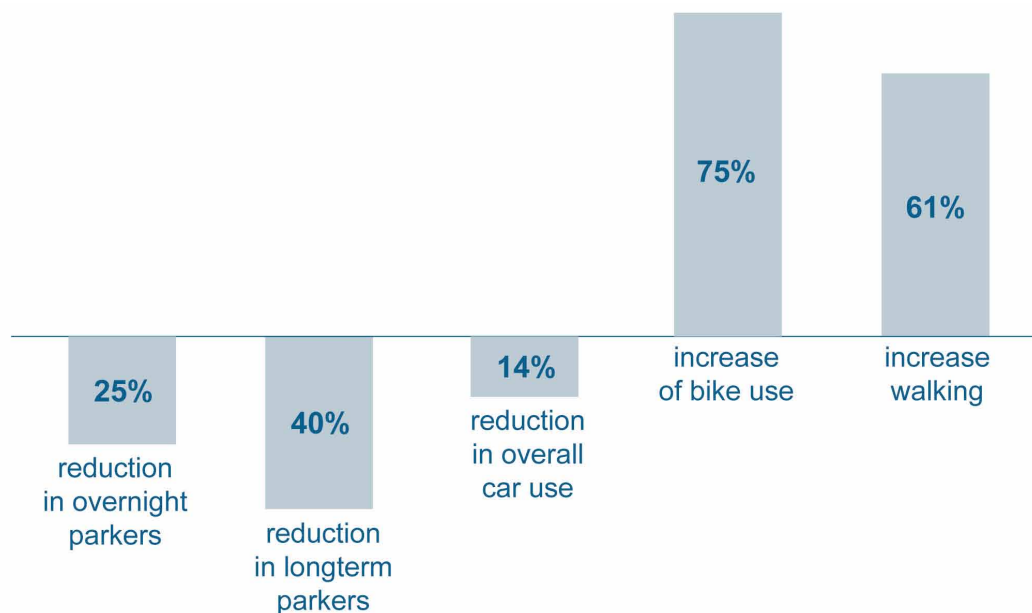
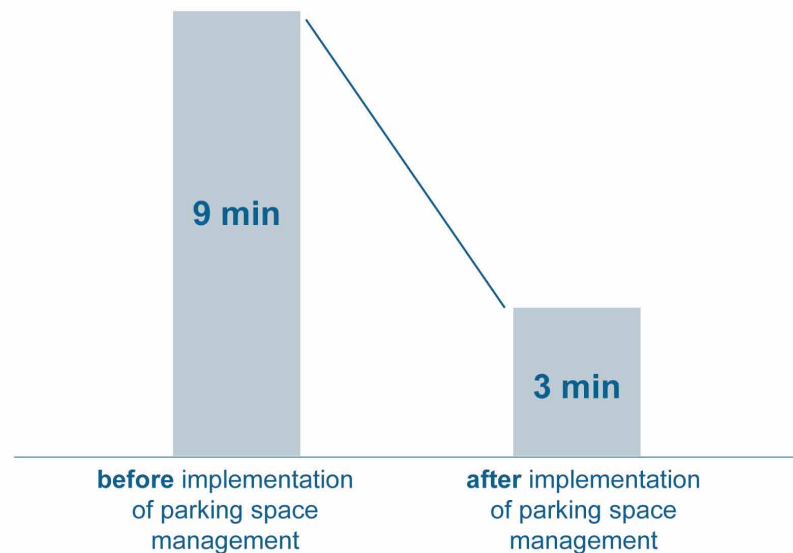Source: Kodransky and Hermann, ITDP, 2011

The fact is: Parking management contributes to a better modal choice and therefore quality of life.

A policy of excessive parking supply contributes to traffic congestion and hinders accessibility for all: pedestrians, cyclists, public transport users or car drivers. Despite the provision of additional parking supply in cities over many years, traffic congestion has worsened; this clearly shows the need for parking management. Effective parking management strategies are the smart way to deal with limited accessibility and scarce public space.

In the beginning of the nineties the city of Munich started to focus on parking management as a way to reduce car use in the city centre. At that time congestion and long-term parkers were recognized as key issues affecting quality of life. Several measures were introduced; among others two residential neighborhoods were selected to reduce cruising for parking (driving round, looking for a vacant space). After carefully studying the right mix between residential and visitors parking, active parking management was introduced. A year later the results were astonishing: a 25% reduction in overnight parkers, a 40% reduction in long-term parkers and cruising and illegal parking almost eliminated. In 2008, after almost a decade of active parking management, in the whole inner city car use was reduced by 14%, bike use increased with 75% and walking by 61% (Kodransky and Hermann, ITDP, 2011).

Average time to find a parking space
Vienna, districts 6-9

9 min

3 min

before implementation
of parking space
management

after implementation
of parking space
management

Source: COST 342, 2005

Fact is: Parking Management leads to less park search traffic!

Cruising for parking (parking search traffic) leads not only to additional costs for drivers (extra time and fuel) – but it has also negative externalities for society such as extra pollution, noise and accidents. Kodransky and Hermann, ITDP, 2011 estimate that up to 50% of traffic congestion is caused by drivers cruising around in search of a cheap parking space. Evidence suggests that effective parking management with economic mechanisms that harmonize on-street and off-street parking fees can considerably reduce cruising for parking.

A before-after evaluation in Vienna's districts 6-9 shows a decrease in parking search traffic from 10 million passenger car km per year to 3.3 million km, that is, two thirds. While before the introduction of the management of parking places parking search accounted for 25 % of the total volume of traffic, it now accounts for only 10 %. It was ascertained in the districts 6 to 9 that the average time it takes to find a parking place has been reduced from about 9 minutes to barely 3 minutes after the implementation of parking space management (COST 342, 2005).

A more detailed version of this argument can be found at:

http://push-pull-parking.eu/docs/file/20150204_push_pull_a4_en_extended_argument_4.pdf

See also Argument "Striking the right balance is what brings success!"

5 MANAGING PARKING – EFFECTIVE AND ACCEPTABLE!

Fuel saving vs. public acceptability of measures
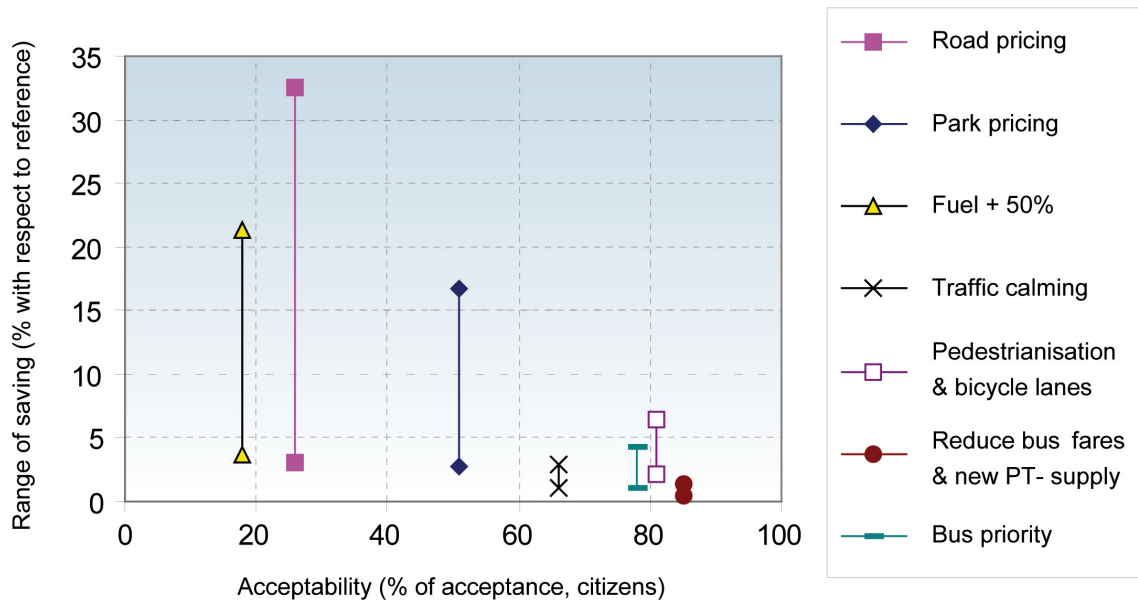
Source: EU-project: PORTAL 2003

The fact is: Parking management has a good impact – acceptance – ratio!

Paid parking - a crucial component of parking space management - has the best impact-acceptance-ratio in a comparison of a range of different measures to cut transport energy consumption and save fuel.
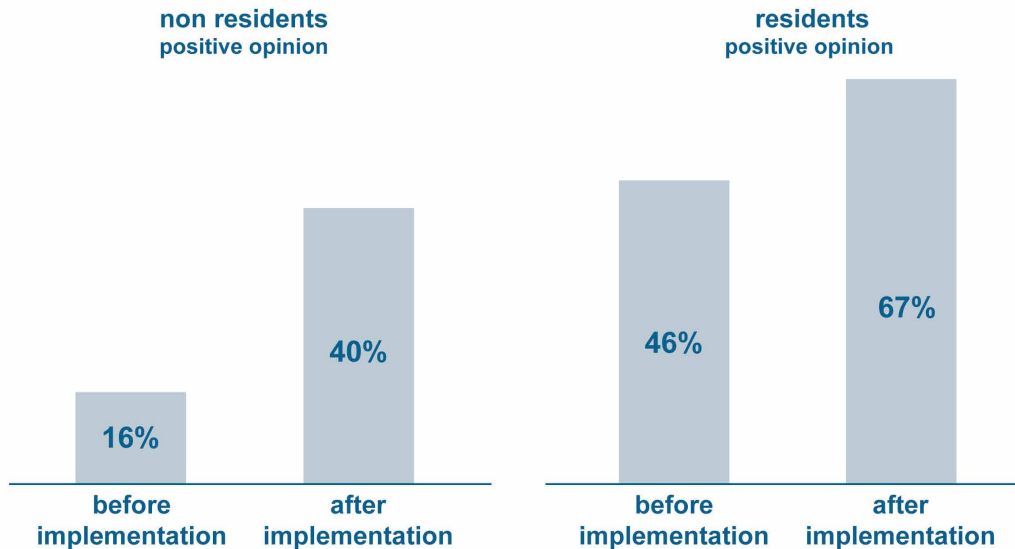
Although for an example a doubling of fuel prices or road pricing / congestion charging have bigger impacts, their acceptance among citizens and stakeholders is limited. Reduced or even zero fares on public transport are of course highly acceptable but their impact on saving energy or reducing car use is very low since their main impact would be to convert cyclists and walkers to public transport.

In comparison paid parking is highly effective and moderately acceptable.

Another survey on the impact of these kind of measures shows that doubling parking fees reduced car use by 20% while a similar increase in public transport frequency was predicted to only decrease car use by a meagre 1-2% (Kodransky and Hermann, ITDP, 2011).

Acceptance of parking space management
Vienna, district 6-9

non residents
positive opinion

residents
positive opinion

16%
before implementation

40%
after implementation

46%
before implementation

67%
after implementation

Source: COST 342, 2005

The fact is: People usually moan before new parking management is introduced but initial opposition turns to support when they realize the impacts!

Parking Management improves quality of life in cities and though they might moan when it is planned, your citizens will like it once it is implemented. Cities like Amsterdam, Copenhagen, Munich, London, Gent, Zurich, Strasbourg, Barcelona and so on have a long tradition in the implementation of parking management and the citizens benefit from this policy.

 "The impacts of these new parking policies have been impressive: revitalized and thriving town centres; significant reductions in private car trips; reductions in air pollution; and generally improved quality of life" (Kodransky and Hermann, ITDP, 2011). This quote – from American researchers studying the European approach to parking management - perfectly summarizes the potential of parking management for creating better cities.

In Vienna a 'Before-After' survey shows the difference in attitudes before and after the implementation of parking management in Vienna. Summing up, the acceptance after implementation was considerably higher than before. For non-residents, those with a negative attitude decreased from 68% to 54%, whereas positive opinions increased from 16% to 40%. The positive attitude of residents increased after implementation to 67% (from 46 % before), whilst negative attitudes decreased from 34 % to 30 % (COST 342, 2005).

How do you want your city?

Source of Photo: City of Gent

The fact is: parking management protects European historic cities from the invasion of parked cars.

Old city centres are not only important to attract tourists, but are key to local identity and citizens' pride. Virtually none of the dense old European cities were constructed to deal with a high number of parked cars. In addition to access restrictions, clear regulations and management of where to park, who may park, for how long and how much are essential to protect historical cities from an overwhelming invasion of cars and to bring about a rational use of the scarce commodity of high quality urban public space.

Within the overall framework of its urban regeneration, the City of Barcelona aimed to strengthen commercial, economic and leisure activities in the centre by implementing an integrated concept for public space. On-street parking was reduced to 24% and car reduced public space was increased. The reduction in the on-street parking supply had no influence on tourist activities, which in the period 2003 - 2007 increased (27% increase in demand for accommodation, 13% increase in tourist / leisure time activities like visiting restaurants, travel agencies etc.).

From the mid 1990s the City of Gent removed parking from streets and public spaces in its historic city centre, creating a 35 ha pedestrian zone instead. From 1999 to 2008, the city's previous population decline reversed, whilst investment per person was 20% above regional average and growth in new firms was 25% above regional average. This economic success cannot be attributed solely to the quality of life improvements flowing from conversion of on-street parking to public space, but these changes played a part in delivering economic benefits.

Retail floorspace per off-street parking space related to retail sales, GB city centres
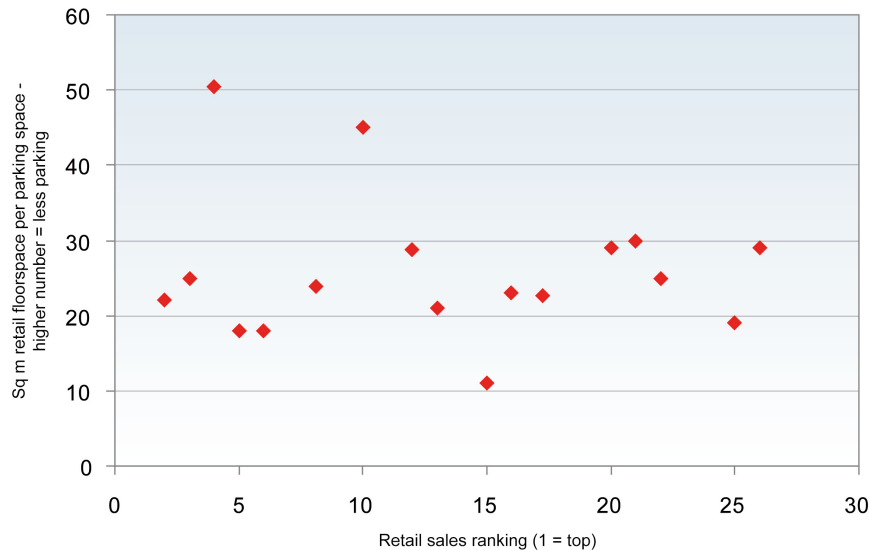
Source: City of Edinburgh, 2005

The fact is: Parking Management will not kill your high street - it will support the local economy.

Parking in an attractive city is less important to successful shops than shop-owners think. People choose where to shop based on the range and quality of shops, and the atmosphere of the place. Parking plays a role, but it is not the main factor. Research shows that there is no (direct) relationship between the turnover of shops and the transport mode used by customers and the amount of parking spaces provided.

People who walk, cycle and take public transport to the shops visit more often and visit more shops than those who come by car.

If parking is not regulated, shoppers and visitors coming by car might experience difficulties in finding a place available close to where they want to be. When there is no parking management, parking in front of shops is often used by long-term parkers (not uncommonly by shopkeepers themselves!) instead of being available for customers. Henley is one of the many towns in UK where this is a problem; "It would be much better use of that bay if it had restricted parking in order to open it to a lot more users" is the suggestion of the Town centre manager about some of the parking in his local high street (Henley Standard, 2013).

A more detailed version of this argument can be found at:

http://push-pull-parking.eu/docs/file/20150204_push_pull_a4_en_extended_argument_8.pdf

Quality of pedestrian routes between parking garages and shopping areas

Source of Photo: Harry Schiffer - ELTIS

The fact is: User-friendly parking areas within walking distance of key locations is acceptable!

Ever increasing numbers of cars in many EU cities gives the impression that there is never enough parking space. People would like to park in front of the shops. To achieve a balance between parking needs and available spaces in shopping areas, reasonable walking distance to parking is key to effective solutions. Surveys show that well designed routes to walk from parking garages to the city centre's destination are well accepted. So the challenge is to influence the „mental map" of car drivers who almost always overestimate the time and distance to walk from parking to their final destination. Maps or signposts are a good support.

Copenhagen is a good example of a city that has reduced inner-city parking spaces by many hundreds and at the same time invested in a high quality pedestrian network and bicycle paths.

Smart use of a company's scarce real estate

Source of Photo: FGM-AMOR

The fact is: Parking Management won't stop companies investing in your city!

The City of Amsterdam has been reducing the number of parking places in the city centre since the nineties and it has some of the highest on-street parking fees of Europe. In spite of this, Amsterdam is still one of the best places to do business according to the CEOs of the largest European companies (Cushman & Wakefield, 2012).

In a survey about the business climate in the 30 largest cities and towns in the Netherlands commissioned by the Dutch Ministry of Economic Affairs, no evidence was found of any company relocating because of lack of parking (Ecorys, 2005).

The City of Oxford, England, stopped allowing parking to be built with new buildings in its city centre in 1973. It remains a highly successful city economically (Oxfordshire County Council, 2005).

Investments in bicycle parking that use space formerly occupied by car parking serve a much bigger number of employees by using the same or less space. This is a smart use of a company's scarce real estate.

A more detailed version of this argument can be found at:

http://push-pull-parking.eu/docs/file/20150204_push_pull_a4_en_extended_argument_10.pdf

See also the case study on the Nottingham Workplace Levy at

http://push-pull-parking.eu/docs/file/cs02_push_measures_nottinghamwpl.pdf

See also the case study on the Parking Management System at the Technical University in Graz at http://push-pull-parking.eu/docs/file/cs05_push_measures_tugraz.pdf

Influence commuter trips!
Employees with/without guaranteed parking in France
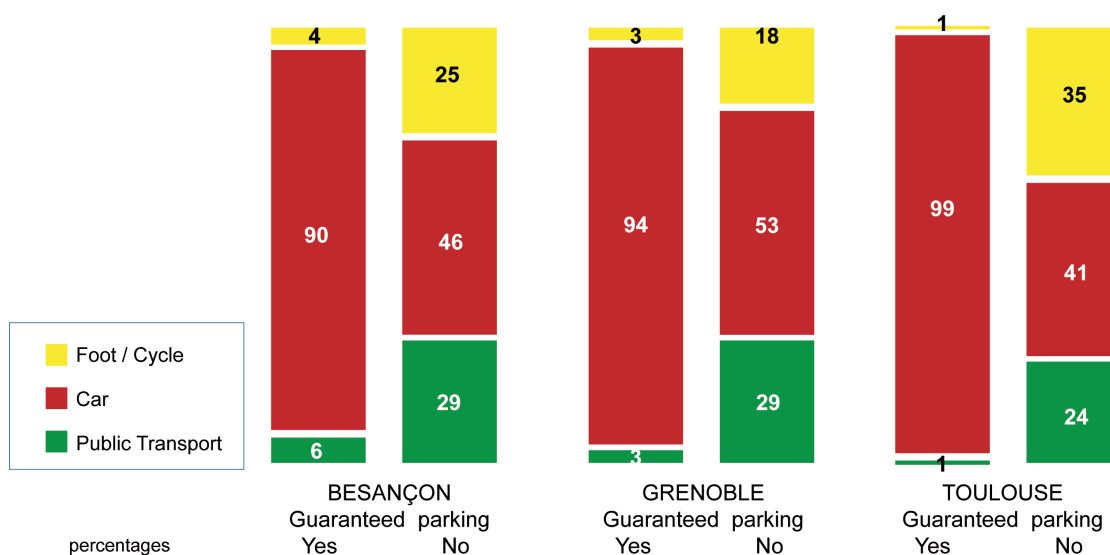
Source: Citadins face à l'automobilité - a compared analysis of the local communities of Besançon, Grenoble, Toulouse, Berne, Geneva and Lausanne, 1998.

The fact is: Guaranteed parking spaces at workplaces influence modal choice significantly.

When deciding on the travel mode at the origin of the trip – often at home - the (expected) availability of a parking space at the destination is a driving factor for decision. A guaranteed parking space directly at the work place is, for example, a crucial factor for employees to decide to use their car for the home to work trip. Surveys in different French and Swiss cities show that employees who have a guaranteed parking space at their work place use their car to travel to work far more than those who have no or limited parking.

Limitation of free parking or availability only of paid parking spaces or any other method of parking space management will lead to a significant change in the travel behaviour of car users.

Stationary traffic also causes risks!

Source of Photo: Robert Pressl

The fact is: Parking management contributes to road safety!

Due to their small physical size children face a high risk of accidents at junctions or pedestrian crossings where cars are parked too close – even at low vehicle speeds in housing areas with dense parking on both sides of the street. Parking management and especially the connected enforcement of regulations and laws make a major contribution to road safety by ensuring good visibility for pedestrians at crossings and all road users at junctions. In high density urban turn of the century neighborhoods, where the streets are 'overused' by parked cars, even the fire brigade argues for proper enforcement to ensure access when there is a fire.

## Parking violation is not a trivial offense!

Source of Photo: Foto Wolf

The fact is: Enforcement of parking violations is necessary – and not harassment of car users.

Enforcement of regulations by staff – which creates new jobs - or with cameras is essential to avoid inconsiderate and dangerous parking and simply to ensure that parking management works. Other transport users benefit – emergency vehicles or delivery vehicles, but also cyclists or people with reduced mobility, in wheelchairs or with walking frames, or mothers with baby buggies. Enforcement to protect society from violation of parking regulations is highly accepted. Placing physical obstacles in streets (such as bollards) to prevent parking violations is only a second best solution because it wastes public space. Missing obstacles could be understood as „free parking space everywhere there is no obstacle" in local mobility culture.

Parking enforcement is necessary to guarantee that car users follow the parking regulations set by the municipalities. In the past the police were supposed to do this job but experience shows that better results can often be obtained by outsourcing of enforcement to private companies, no matter if this is by wardens who patrol the streets or by more technical means such as license plate number recognition with scan cars.

Parking Standards
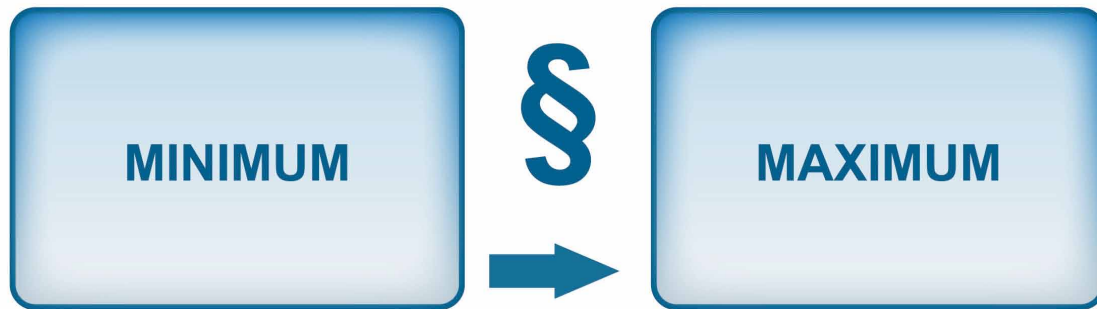
The fact is: Parking standards can have a positive impact on housing and other real estate projects.

Very often the costs for building a parking space in a garage or underground can be between €20,000 and €40,000. In many urban (re)development project parking plays an important role, especially from the point of view of financial feasibility of the project. Parking requirements – also known as parking standards or parking norms – are a fundamental issue for real estate and the key to secure the link between urban regeneration and sustainable mobility. Maximum parking standards should take the place of minimum standards, especially in areas where there is effective control of on-street parking.

Parking standards could be related to accessibility of the area at least by public transport. If an area is well served by public transport less people using the development area need a car. Minimum parking requirements can also be eliminated in order to stimulate sustainable growth, as recently happened in Sao Paulo (ITDP, 2014) or already for a number of years in Amsterdam, Zürich, in some parts of Paris or in much of the UK.

A more detailed version of this argument can be found at:
http://push-pull-parking.eu/docs/file/20150204_push_pull_a4_en_extended_argument_14.pdf
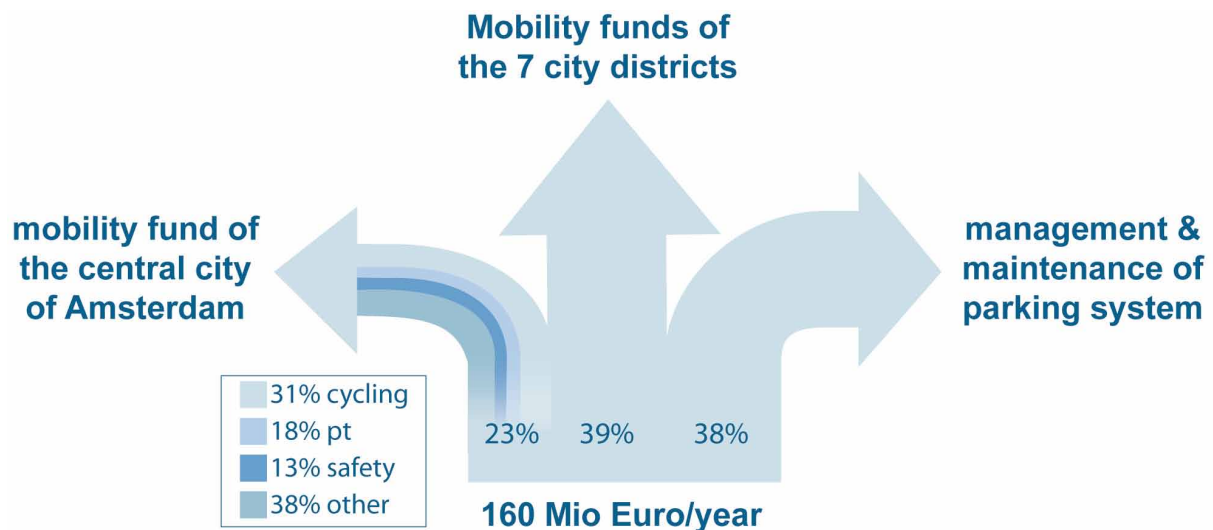
Rates depend on policy and objectives

Source of Photo: ©iStock.com/faberfoto_it

The fact is: Correct rates, prices and appropriate fines are key to the success of parking management.

Long-term investment in parking garages – whether private or public – in most cases has been a core part of the parking policy in many areas. In theory, rates should be well balanced – in the garages as well as on-street. But the relationship between price of off-street and on-street parking is not the same in different cities. Some cities apply higher on-street fees, others have higher off-street prices. Generally speaking, higher on-street parking fees – compared to off-street – might lead to lower search traffic and make garages more competitive. This is an important strategy when negotiating with private investors regarding the building of garages.

See also Argument "Reducing parking search traffic".

Use of parking fees in Amsterdam

Mobility funds of the 7 city districts

mobility fund of the central city of Amsterdam

management & maintenance of parking system

31% cycling
18% pt
13% safety
38% other

23%   39%   38%

160 Mio Euro/year

Source: The Amsterdam Mobility Fund, 2014

The fact is: Parking Management can raise municipal revenue that can be used to encourage sustainable mobility!

Very often cities are dependent on national governments for a large part of their budgets. In recent years cuts in these budgets have taken place almost everywhere. Property taxes are in many cities a primary source of local revenue. With the exception of very few cities, real estate values have decreased overall in Europe, reducing local revenues. Parking management or, still better, the PUSH&PULL approach can contribute to raise municipal revenue without increasing - or even reducing - the fiscal pressure on residents and at the same time improve the quality of alternatives to car use. These revenues should be (at least partly) earmarked for funding sustainable mobility measures.

In Amsterdam, for example, the gross revenue from paid parking for 2012 was ca. 160 Million Euro. Some 38% of this money was spent on the management and maintenance of the parking system, 39% was spent to fund mobility measures of the 7 city districts, and 23% was spent to fund mobility measures of the Central City area (31% for cycling, 18% for public transport, 13% for safety improvements etc.). This forms the Amsterdam Mobility Fund. Other cities like Gent, Barcelona, Graz or Nottingham (with the Workplace Parking Levy) are following a similar approach.

More details on the Amsterdam Mobility Fund can be read here:
http://push-pull-parking.eu/docs/file/tub_amsterdam_mobility_fund_final.pdf

Further information on the PUSH&PULL project is available at www.push-pull-parking.eu

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