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Sustainable mobility: getting people on board

Module 1e

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Update 2018

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Sustainable mobility: getting people on board

Carlosfelipe Pardo

January 2018

Sustainable Urban Transport Sourcebook Module 1e

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Box 1. About the publication and the author



This publication is a major update of the “Training document on public awareness and behaviour change in sustainable transport” published in 2006 by GIZ. It has broadened its scope to a more ambitious, policy-change aim and has revised many of its recommendations from more than ten years ago.

The author of this publication has not changed since then: a psychologist whose work experience has focused on sustainable transport policies and their implementation with an interest in decision-making processes and awareness and behaviour change towards more sustainability.

Compact and extended editions

This module has a complementary and more complete version (training publication) which provides details on some of the issues presented here, as it describes steps to be taken in order to implement many of the strategies and lists a greater set of theoretical references to this topic. Readers are encouraged to consult that document once they have read this one in case they feel they need more information on how to achieve and develop a complete ABC strategy.

Box 2. Who is this publication for?

This publication provides the essential tools for awareness and behaviour change initiatives in this field, and is especially tailored for:

- **Mayors, decision-makers**
- **Technical staff**
- **Individuals** aiming for policy or behaviour change, willing to gain support from high-level policymakers for sustainable transport policies or the awareness from citizens
- **Consultants or experts** willing to convince sceptical colleagues of the usefulness of sustainable transport

Steps of an Awareness and Behaviour Change (ABC) Strategy – Where to find what

Step	Create project team	Define goals	Identify groups	Gather information	Review goals	Design and implement strategy	Choose Initiatives, Interventions	Monitor and review
Description	Identifying the best professionals to implement a complete ABC strategy	Describe what needs to be done in terms of awareness, ASI goals, respect or others	Identifying target groups in terms of their relation to transport policy or transport mode	Collect knowledge and perceptions on issues surrounding sustainable transport	Based on previous steps, revisit goals, identify complementary needs, compare goals and groups	Choose media, define messaging, inform/persuade/act and strengthen complements	e.g. Travel feedback programmes, commuter challenge, Tactical Urbanism, gamification, Bike rides, car-free events	Review results of strategy in short, medium, long term and review goals, groups or components accordingly
Section with more info	Introduction	Chapter 2	Chapter 3 and 4	Chapter 4	Chapter 2	Chapter 5	Chapter 5	Chapter 4



Quick guide for urban policy-makers and activists

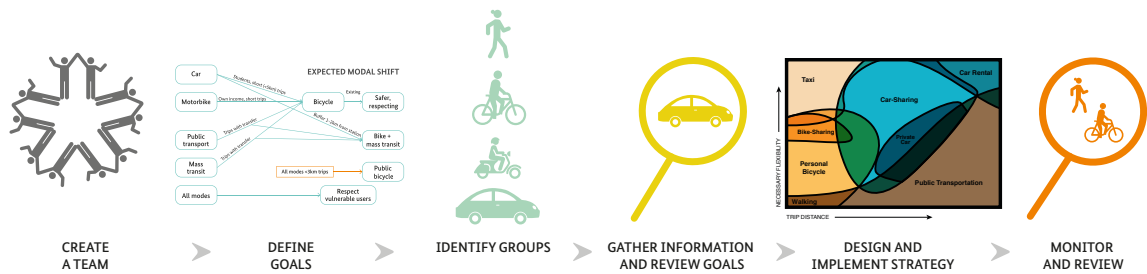


Figure 1. Steps of an ABC strategy, shown graphically. Source: Own elaboration.

Initiatives	Target Group	Example	Pages
Travel Feedback programmes	Public Transport users	Australia, Japan	30
Commuter Challenge	Users of different modes of transport (bike, motorbike, car, public transport)	Santiago (Chile)	31
Educational campaign	General public, in this case car drivers	“El poder del cono”, Bogotá (Colombia)	31
Data collection	General public, in this case cyclists	“Fietstelweek”, Netherlands; “Bicycle count”, Kiev (Ukraine)	32
Tactical Urbanism	General public, policy makers	Quito (Ecuador)	33
Gamification	Employees, groups of friends	Wheels, Colombia	33
Free trips on PT	Public Transport users	Transjakarta, Jakarta (Indonesia)	34
Bicycle rides	General public, policy makers	Bogotá (Colombia), Western Cape Province (South Africa), Kiev (Ukraine)	34, 35
Car-free events	General public, esp. car users	“Ciclovía”, Bogotá (Colombia)	35
Mass Media	General public	-	36
Social Media	General public	-	36
Small Scale Media	Specific audiences	-	37
Initiatives	Target Group	Example	Pages
Key Data	Media, general public	-	37
Visual Tools	General public, policy makers	Streetmix, drawings and sketches, before-and-after images, 3-D models	37
Technical study tours	Policy makers	Bogotá (Colombia)	39

Table 2. List of ABC initiatives and where to find them





Photo: UN-Habitat



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1. Introduction

Walking, cycling and public transport, also known as **sustainable transport modes**, are usually not seen as convenient as driving a car, and leaving one's vehicle in the garage for the day implies an effort to change. These transport modes are also perceived as a not "modern" approach to city development and the objective of many policies is still to widen roads. Other common problems when promoting sustainable mobility are:

- **Messages are too complicated:** Many awareness strategies show a large amount of technical information to someone who is not necessarily interested. For instance, demonstrating that passenger-per-kilometre indexes are better in one public transport system than in a business-as-usual scenario is an inconvenient way of gaining the attention of politicians and the public.
- **Goals are too distant and abstract:** Describing sustainable transport as a tool to mitigate greenhouse gases or congestion that requires a long list of implemented measures will not convince audiences as these expect to have short-term and palpable results. Despite the great urgency of combating climate change, the public (and many policymakers and technical experts) are not truly interested in the intricacies of how to deal with such issues on a daily basis and will not be convinced by arguments solely focusing on them.

- **Changes proposed are far-fetched (or sacrifices too big):** switching from driving to riding a bicycle as a daily transport mode, though a very sustainable option, does not seem feasible for someone who just wants to get from A to B every morning and afternoon. They will not get on the bike or on the bus (or walk) because it represents a challenge and a sacrifice to leave their car home.
- **Poor research of audiences:** messages are sent to different audiences than those who should receive them, or with ineffective messages because of poor prior research on specific population's interests, problems, attitudes or behaviours.

Improving

Our main goal is to help solve the aforementioned issues by presenting the key elements of an **A**wareness and **B**ehaviour **C**hange (ABC) strategy where tools, messages and activities are more flexible, smarter, strategic and systematic.

A successful ABC strategy will get people who generally do not listen, to pay attention, become aware of sustainable transport as a viable option and, ideally, change their behaviour and take better decisions regarding policies, investments and daily travel.

Box 3. Awareness and behaviour change

What is awareness?

Awareness can also be referred to as consciousness or knowledge. It refers to the process by which the population (or a single person) gets to know a topic and incorporates it, becoming conscious of its characteristics, the issues that are behind it, and how one can act with respect to it.



What is behaviour change?

Behaviour change refers to actually carrying out the action that one wishes to promote. In the case of this module, it is when a person changes his or her habits regarding mobility to begin walking, riding bicycles, and/or using public transport on a daily basis but achieved progressively and with a multi-modal attitude. In some cases, behaviours can be referred to reassigning budgets, supporting specific projects, respecting other road users. It is the complement of raising awareness, because it converts the understanding of sustainable transport to effective action and is what creates real impact. Because of this, this module emphasizes both aspects in developing a complete strategy. In turn, behaviour change without awareness may be ineffective in the longer term¹ – later sections will also describe how better policies, infrastructure, regulation and services can greatly enhance the probability of both awareness and behaviour change.

¹ This debate between actual change of awareness, behaviour and the maintenance of the desired behaviour is theoretically very complex and will not be dealt with in depth here.



Figure 2. A Dutch city where the public is completely sensitised to riding bicycles, even in an extreme situation. Source: Oscar Díaz

Creating a team for an ABC strategy design and implementation

The first step when developing a strategy is defining the group you will work with to do this task. In some cases, the group is pre-existent (members of a non-profit organization or a department of the municipality or a consultant), but in others, various additional people can be integrated. It is very important that all members of the group have as much experience working with different economic, social and cultural groups as possible. It is also good to include community leaders and experts in citizenship participation (preferably in transport) in the group. Even members of

labour unions might be useful for this purpose. In any case, it is recommendable to include professionals from the following fields in an ABC strategy of sustainable transport:

- **Psychology, anthropology, sociology**
- **Communication, journalism, social marketing**
- **Graphic design**
- **Architecture, urban planning and engineering**
- **Data analysis**

2. Getting them busy: goals of an ABC strategy



An ABC strategy must have goals that are **not only** to get people to walk, ride bicycles or public transport. An effective strategy that will really create significant change in the existence and use of sustainable transport must have a broader scope.

That being said, an ABC strategy should aim to:

1. **address policymakers (and citizens in general), create awareness and change their points of view towards**
 - a. implementing appropriate policies
 - b. directing funds to sustainable transport modes
2. **get support from others** to promote messages
3. **create agreements with private sector and industry** to have **better transport options (or technologies)** that promote sustainable transport
4. **include messages and activities related to modal shift** (changing to sustainable transport modes as a daily travel option)
5. **improve attitudes towards those who use sustainable transport**
6. **have its results monitored periodically**

Creating awareness

The first goal is to create awareness. That is, to have people understand what sustainable transport is about and understand why it is being proposed. As was seen previously, this awareness is the first step before having any behaviour change and can be by itself a goal because it will make all other changes possible. A population or audience that is not aware of sustainable transport will not change their views, policies, investments or behaviour – or, if they do so, it will not be for a long time or with decisive changes.

1. Address policymakers

A key goal often ignored in promotion strategies is that improving sustainable transport also means improving transport policies, and this requires changing policymakers' mind-sets about transport in general. A comprehensive ABC strategy must also have this as a goal, and it may even be the sole goal of a strategy because changing the minds of policymakers will enable better decisions and improve the outcome of any sustainable transport policy in future.

2. Getting support from other groups of society

Citizens can be approached in order to get their support to sustainable transport, and to help promote the messages that you want to get across to different audiences. A message is better understood and interiorized if it is heard by an array of stakeholders. Cities generally have advocacy groups that promote some form of sustainable transport (in many cases, cyclist organizations), but many times they lack thorough knowledge of technical issues or are very narrow in their promotion agenda.

3. Creating agreements with private sector and industry, improve technologies and driving styles

Improving transport technologies has many forms, and can be the goal of a promotion strategy. However, this strategy should target not only users (to purchase better vehicles and drive better) but also manufacturers and policy makers in order to improve technologies and develop appropriate regulations. In terms of driving styles, there are various successful experiences related to what is generally called "eco-driving" (see module 4f of this sourcebook on eco-driving), which refers to economic and rational driving styles that reduce fuel consumption and emissions. This also includes driving at safer speeds, with less risk to others and with respect toward others.

Concerning better technologies, it refers to producing/buying more efficient vehicles in terms of their fuel consumption and emissions of CO₂, NO_x, PM_{2.5}, etc. per km driven. This can apply to individual vehicles (cars,

motorcycles) and to public transport vehicles (buses, etc.). For more information on these topics, see modules 4a and 4d of this Sourcebook.

3a. Sharing more vehicles, services

Drivers can be persuaded to share their own vehicle with other people (generally called carpooling), which is made easier by company-led initiatives and aided by mobile (or web-based) applications within a company. Another option is to promote services dependant on privately owned vehicles but rather on businesses that provide a service of car mobility to users on demand and paid by time segments. This applies to automobiles (the typical car sharing services) but can also mean shared (public) bicycles.



Figure 3. Advertisement for carpooling in New Zealand. Source: <http://fivenonblondes.files.wordpress.com/2008/11/carpooling.jpeg>

3b. Being multimodal: Mobility as a Service

Another service that is being greatly promoted in European cities is the concept of “mobility as a service” (MaaS). This refers to abstracting the assumption that all mobility take place with a vehicle and concentrating on mobility as something that can be achieved by many forms and that users should be able to choose from various options with the aid of information services.

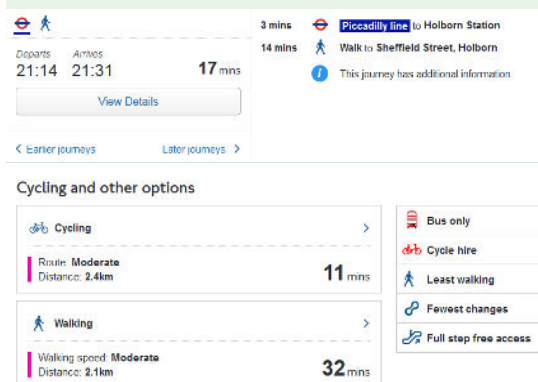


Figure 4. London's TfL provides a range of travel options based on origin and destination queries. Source: TfL.gov.uk

3c. Providing better options to employees

This topic mostly applies to large businesses, but that could also be of use for public authorities or small enterprises. It includes improving infrastructure (creating lockers, showers for cyclists, improving access to good parking for shared vehicles, adequate bicycle parking, etc.) and internal rules (days off for those who cycle for 30 days to work, increased travel allowance to those who use sustainable transport, etc.). In some cases it refers to “negative” rules and options, such as charging for parking (Barter, 2011; Broaddus, Litman, & Menon, 2009; Litman, 2006).

3d. Providing technological options and improving technologies

Many stakeholders can improve technological options in different ways: employers can allow staff to work from home via telework options (sometimes these are well regulated by governments and are easier to implement), governments can improve options of payment of public services online, and technology suppliers can create or modify apps to have solid transport options embedded into transport. Manufacturers (of cars or motorbikes) can improve the technological capabilities of cars to link them to carpooling services, increase fuel efficiency and have vehicles comply with speed limits according to zones.

4. Include messages and activities related to modal shift

One of the main goals in promoting sustainable transport is to generate a shift towards modes with fewer social, environmental and economic externalities. These include walking, cycling, public/mass transport, or some combination of these modes. It is important to recognize that said trips must shift **from** other modes. This is especially

important for medium-distance trips (up to 10 kilometres). Figure 5 presents an exercise from a workshop in Rosario, Argentina. The exercise looked at potential mode shift to bicycles from other modes; the modes shifted away from are on the left while the ones shifted towards appear on the right. The arrows indicate specific mode shifts, with the trips or populations likely to make this change.

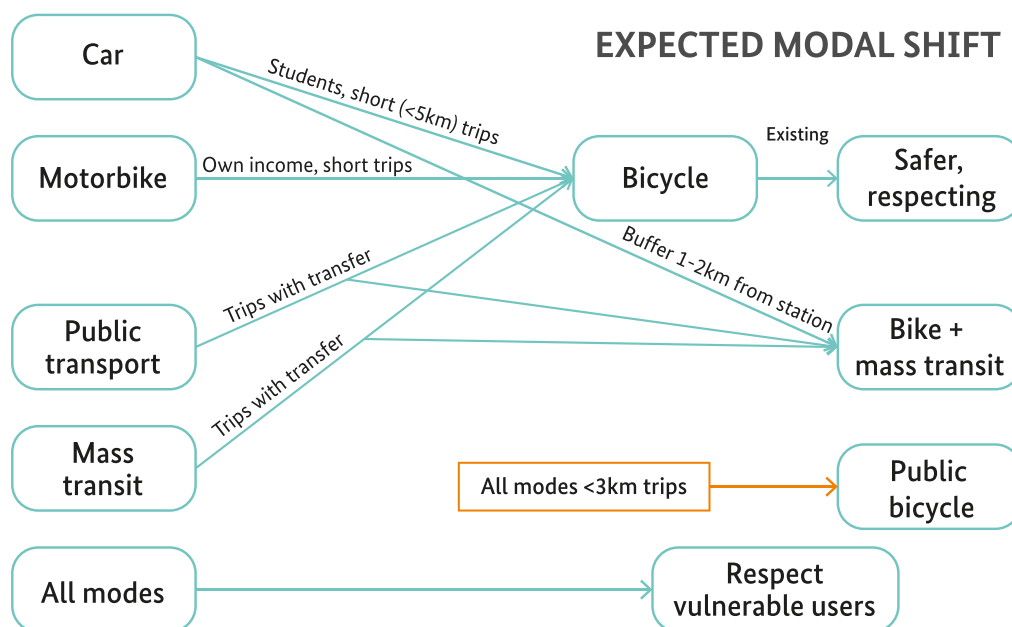


Figure 5. Mode shift model used in a workshop in Rosario, Argentina. Own elaboration.

Shift from (below)	Shift TO						
	Car	Motorcycle	Public transport	Bicycle	Walking	Integrated (eg bike+bus)	No transport
Car	--	Not necessarily sustainable, riskier	Must increase quality of service	Difficult... but in young users	For short trips	e.g. Bike+bus (but need adequate services – bike parking at stations etc)	When possible or allowed: Telework, digital communications, online shopping.
Motorcycle	No	--	Must increase coverage	Emphasize actual savings and health benefits	For short trips		
Public transport	No	No	Strengthen conviction	Not so important	For short trips	Can reduce trip duration if currently too long	
Bicycle	No	No		Strengthen conviction	For very short trips		
Walking	No	No	If long trips	If long trips	Strengthen conviction		

Table 3. Shifting to and from modes of transport, and what it implies. Own elaboration.



Figure 6. Heavy traffic can become a first disincentive to use a car. Source: Carlosfelipe Pardo.

4a. Using cars for less trips

In general, using motorized private transport should be reduced to those trips that really need to be made in those modes. If a trip is very far, no alternative exists to travel there, and/or it includes carrying very large packages, an automobile could be the best choice (though cargo bicycles can also be useful if available). However, those trips are made seldom, except for places where densities are very low and land uses are not mixed.

An ABC strategy must have a focus on identifying the automobile trips that could be made in other modes, and presenting these as potential mode shift opportunities to users. This will begin to solve the problem that was raised earlier about unrealistic goals, and people will be more prone to change since it will require partial mode shift (at least at the beginning).

4b. Using more public transport

As with other sustainable transport modes, public transport is usually not seen as an option but rather as an obligation for people of lower income and those who depend on it for having no other alternative. Breaking this perception is difficult (some ideas are given in the following chapters), but it is possible to promote public transport as a viable option for many trips. As

is also discussed later, this is easier when adequate services are available (high frequencies, low crowding inside vehicles, large network, exclusive right-of-way, good quality of service, etc.). In any event, promoting public transport must be a goal of an ABC strategy, specifically focussing on getting daily car users to do trips on public transport that would be longer (in duration) if done by car, to more congested areas or with little parking supply.



Figure 7. High quality public transport will increase its probability of use. Source: Carlosfelipe Pardo

4c. Using more bicycles

Bicycles are one of the most efficient modes of transport for trips shorter than 10 kilometres, though in general an ABC strategy should focus on shorter trips (5-7 kilometres maximum), since longer trips are generally made only by those who are forced to do so (because of low income) or who have already been cycling for considerable time. Interestingly, there is a very large share of trips in many cities (except for many cities in the United States and other countries with low urban densities) that are shorter than seven or even five kilometres. As indicated before, cycling is known to generate greater wellbeing and is positively associated to good experiences (Humphreys, Goodman, & Ogilvie, 2013; Martin, Goryakin, & Suhrcke, 2014), though research on this topic has been generally done in countries with relatively good cycling infrastructure.

Another useful goal of increasing public transport mode share is to get people who are doing trips that are too long to do on a bicycle or walking, and provide facilities for bicycle parking to do an integrated trip (or provide space in or in front of vehicles). Integration of cycling with public transport can reduce the lack of flexibility while increasing the distance of trips begun by cycling. This is explained in more detail in GIZ's Cycling Handbook (Pettinga et al., 2009).



Figure 8. Bicycle users enjoy their rides when they're given good conditions. Source: Carlosfelipe Pardo.



Figure 9. Integration of bicycles and public transport can enhance both modes. Source: Carlosfelipe Pardo.



Figure 10. There are many short trips in most developing cities, and walking can be a good choice of transport. Source: Carlosfelipe Pardo.

4d. Walking more

Walking is the most sustainable mode of transport for short trips (up to 3 kilometres). Similar to what happens with bicycles, there is a considerable share of trips that are within those distances and currently made in many cities, but for some reason people prefer to do these trips by car. There is great potential in mode shift to walking, especially in cities where congestion is very high, the quality of cycling infrastructure is inadequate and

public transport is of low quality. In any city that is dense and with mixed land use, there is great potential for modal shift towards walking.

On a survey implemented in Bogotá, people appeared generally hesitant to walk as their main mode of transport. Main concerns are safety (being run over), security (being robbed) and the conditions of their trip (infrastructure, lighting, pollution) (Quiñones et al., 2017).

Worse aspects of walking reported in Bogotá

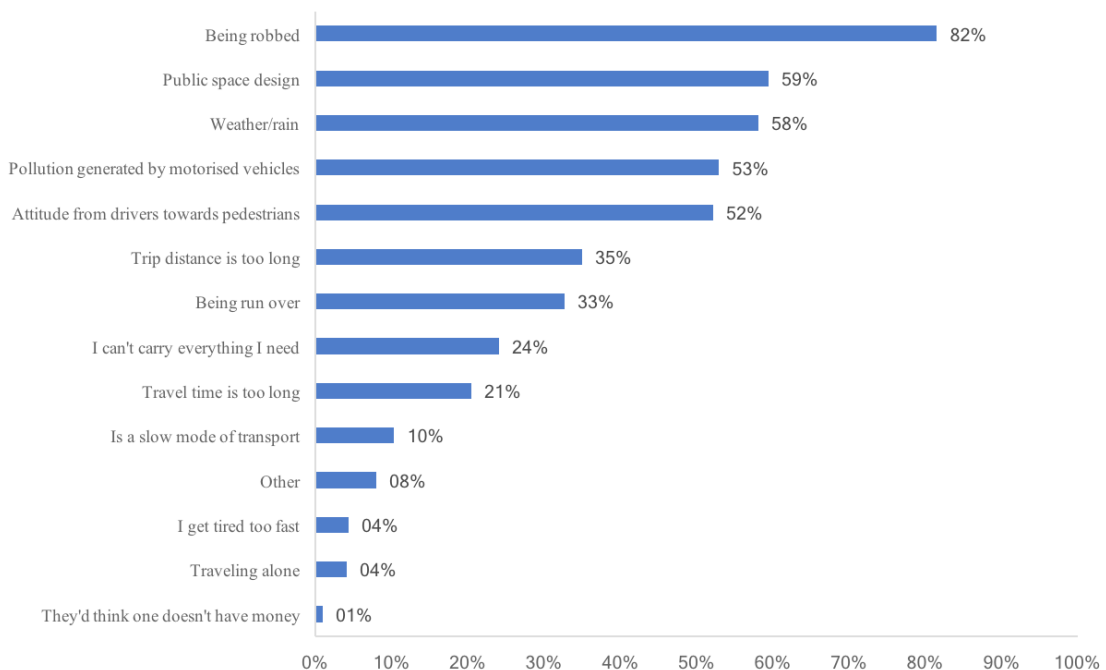


Figure 11. Worse perceived aspects of walking in Bogotá. Source: Quiñones et al 2017.

5. Improving attitudes towards those who use sustainable transport

It is also important to make sure that sustainable transport users are not seen by public opinion, employers etc. as less smart, cool, or important than car drivers.

6. Have results monitored periodically

A large set of activities that is fundamental to a successful ABC strategy is to monitor the performance of the strategy, assess which options, messages and transport modes are getting the most attention and how mode share is changing according to the evolution of the strategy.

Box 4. The A-S-I Approach: Avoiding and reducing trips, shifting modes and Improving technologies and driving Styles

The A-S-I, or Avoid-Shift-Improve approach, as proposed by Dalkmann and Brannigan (2007) (see also module 5e of this Sourcebook) deeply intersects with the ABC strategy and also complements it. The A-S-I goals are mostly related to transport users, but can also be used as a basis to elaborate on policy-led promotion goals when discussing these with policymakers since they require considerable policy change to achieve their goal.

A: Avoiding and Reducing trips

Many cities (especially developing cities) have medium-to-high density and it is possible to make one trip to achieve various purposes (e.g. going to the market while taking children to school or when coming back from work). Choosing destinations that are closer rather than further down the road (e.g. preferring a local market to a “big box mall” generally implies a trip with shorter distance) is also an option.

Replacing trips with technology, freight - choosing a teleconference over a “live” meeting is one way to avoid travel. Telework as a broader arrangement for companies is a more comprehensive way to reduce trips.

Switching trips to freight (i.e. ordering merchandise online rather than going to a store) can also be a way to avoid or reduce trips and promote sustainable transport, as long as the freight option is more efficient (i.e. less emissions per ton-kilometre) than the actual trip to purchase an item in a store.

Shifting working hours - Working hours are associated to a fixed schedule (typically 9am to 5pm), despite the inefficiency that this generates in traffic. Shifting the beginning and/or the end of the work day by one or two hours back or forward is a simple practice that people (and businesses) can do to reduce the pressure on peak hour traffic – this relates mostly to public transport and automobiles, though in some cities

it may also be useful for people riding bicycles. This type of shifting is generally called “Flexitime”.

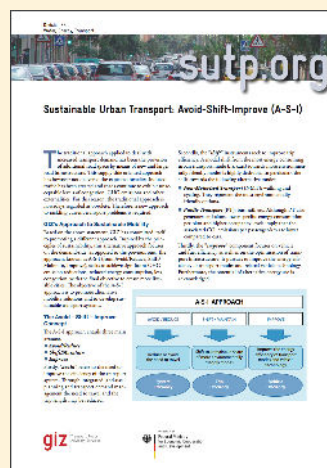
Living closer to work/study - Residential choice is a difficult thing to change in a home, but it can become one of the most potent household changes in terms of their impact on travel demand and the length and frequency of trips. Moving to a neighbourhood with higher density and more mixed land uses (and closer to work or study) will significantly reduce the actual kilometres travelled. This, of course, is assuming that all household destinations are in similar areas.

S: Shifting Modes: see point 4 of ABC strategy goals

I: Improve Modes: see point 3 of ABC strategy goals

See also GIZ's Factsheet on the ASI approach:

http://sutp.org/files/contents/documents/resources/E_Fact-Sheets-and-Policy-Briefs/SUTP_GIZ_FS_Avoid-Shift-Improve_EN.pdf



3. Who should be addressed with ABC – and what's in it for them



One of the ways of defining groups within a population is according to their work or private interests. This chapter describes the groups according to their activity level in transport. This chapter describes:

- The typical target groups in a population based on their position within the transport sector
- Other stakeholders based on the sector in which they work
- A description of activity and passivity of stakeholders
- How stakeholders work together
- The different stages in which transport users can be categorized.

Typical target groups

a. Policymakers

Policymakers are one of the most coveted audiences for many reasons, political or otherwise. They are people who hold considerable power and can change the way that cities operate to a great extent. This clearly depends on their level in hierarchy and to their mandate in city, borough or other geographical division, and how government distributes roles of policy decisions, design, implementation between national, state, city and district level.

A key characteristic of policy-makers is that their interest is generally two-fold: achieving the best policy solution for a given problem (e.g. congestion) but at the same time finding a suitable solution that can be implemented (at least partly or visibly) during their term in office. Another characteristic is

their short attention span due to their limited availability. In that sense, messages aimed at them must be straightforward and to the point, and must clearly identify what they can get out of a proposed solution that is within their mandate (or that they can delegate to someone that responds to them). For instance, a presentation or meeting with them to promote an ambitious parking plan must focus on what are the key decisions they must make, and how they can focus their attention on the medium-term goal of reducing congestion in city centres rather than the short-term impact of negative press. Showing real-life examples of solutions that have worked in comparable cities (of similar GDP, size and hopefully within the same region) is also useful.

b. Experts and consultants

Experts and consultants, and those professionals who have worked in the transport sector for various decades, are also a very important audience. They are generally those who advise policymakers when it comes to taking important decisions, and are respectable in technical circles and often outside of them. However, in many cases they have views that are not similar to those of sustainable transport and focus on supply-driven solutions (i.e. building roads, flyovers, etc.). If they are approached to discuss relevant topics of sustainable transport, they can be persuaded to change their views regarding important topics such as the potency of travel demand management as a congestion-reduction instrument, the importance of a wider variety of mass transit solutions or the relevance of having pedestrians as the most important mode of transport that must have priority over bicycles, public transport and individual motorized vehicles (in that order of importance). Having them as allies in promoting these topics can become a great asset and is worthy of an ABC strategy.

c. Technology providers and vehicle manufacturers

Those who are in charge of defining industry parameters of vehicles are a specific group that can be approached to improve their production (or importing) of higher-efficiency vehicles (of any fuel technology) and in increasing safety standards and promoting them. Achieving this can be more probable when policymakers and sectoral ministries have agreed on improvement of fuel, emissions and safety standards for vehicles in their country, so that the industry can follow their lead in having a pro-active approach to having a cleaner fleet available for customers rather than becoming an obstacle to those improvements.

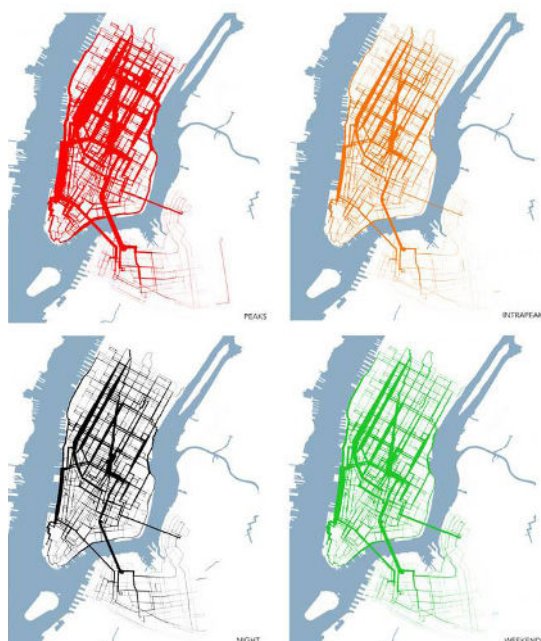


Figure 13. An example of open data analysis of New York's public bike share data. Source: <https://www.treehugger.com/bikes/citi-bike-reveals-how-new-yorkers-ride-their-bikes.html>

d. Company executives

There are various specific goals that can be achieved by focussing on companies. Creating plans for employees is one great way to promote sustainable transport, but company executives are the main audience that must be convinced. When it relates to large businesses, they are similar to policymakers in the sense that they have short attention spans and must have clarity regarding what is the main benefit and what key actions that must be done to achieve goals, but the difference is that their interest is mostly related to the company's profit and overall employee satisfaction as a broader goal.



Figure 14. Company executives are frequently the only ones with enough power to decide on issues such as repurposing parking spaces of a building. Source: Equipo GDT, Secretaría de Movilidad de Bogotá.



Figure 15. Citizens reclaiming public space in Medellín, Colombia. Source: Isabel Calderón

e. Civil society

Cities have many civil society groups that can be wonderful allies of an ABC strategy if properly addressed. They have great commitment to values related to sustainability and can contribute with people-power to activities. They can also enhance messages and provide greater emphasis to problems in the transport sector such as road crashes in various modes, personal safety in public transport, inequalities in fares or charges to different users. They are generally more in tune with local problems and citizen concerns. The main effort that one can achieve with civil society is to enhance their technical capacity and provide them with tools and information to support their concerns with actual facts, detailed information and policy options. Providing training on negotiation skills and public speaking or interaction can become a key goal as well. In some cases, civil society can become a partner in development of an ABC strategy or even in policy analysis.

f. Students

Students are a target group who can be easier to change their behaviour. They have a greater probability to change, they are more receptive, and they are part of a relatively small community (their school/education institution) that can be easier to work with and generate programs and incentives. Also, they are at a good age that will make it easier for them to change permanently to sustainable transport when they leave school and begin to work (i.e. having a salary and disposable income).

g. Neighbours

Some interests are not represented by the mode that people use but rather by their geographic location. Neighbours of a specific area sometimes are concerned with road safety problems in their streets and the need for strict enforcement of speed limits surrounding schools or parks. These can be approached in the same way as civil society groups, and are sometimes better organized in neighbourhood associations that have clearly defined rules of participation and in some cases good connection to municipal (or district) government in voicing their concerns.

h. Champions and supporters

One generic way to categorise a segment of the population (rather, individuals) who are great supporters of a topic and have individual qualities that make them visible to

the wider population is the term “champion”. This type of person can support an ABC strategy (and sometimes lead it) and get support from others and convince specific segments of the population. These champions must be given information and useful tools to complement their skills in communicating a message, and they can be of great value to an ABC strategy. However, they may sometimes have political interests that can get in the way of a strategy in the sense that it can be politicized.

Institutional “champions” or supporters are normally embodied in different cooperation entities (multilateral, bilateral, UN agencies, development banks, international NGOs) that have institutional capacity and credibility to support a message that is a tough sell. Having them on board is useful as they are normally a very credible and reliable supporter who can even provide funds or institutional support to a cause.



Figure 16. Some drivers will never change their mode of transport, but they could respect infrastructure and users of other modes. Source: Carlosfelipe Pardo.

i. Those who are not worth your while (but need attention)

There are audiences that will never change their mind. Despite the fact that the goal of an ABC strategy is to create awareness and behaviour change in many people so that sustainable transport can be implemented widely and cities are more liveable, one must also know that there are those where efforts to create awareness will be wasted and no resources should be spent on getting their attention. These are those who will not change their mode of transport regardless of the congestion or expenses that they incur in daily to park, or those who do not really care about externalities of excessive travel. There may also be company bosses who do not see the point in changing the rules of employee parking or creating incentives to have them arrive by bicycle to work. Sadly, there are also city mayors who will not change their policies to favour pedestrians.

Stakeholders working together

Many of the stakeholders described above as target groups can work together to achieve common goals, but care must be taken in order to achieve them usefully and without conflict. Below are some indications on these issues depending on the nature of stakeholders and their interests.

A recurring question is who should lead an ABC strategy, if it is the public in general or the government. Really, a successful strategy involves both as agents of change.

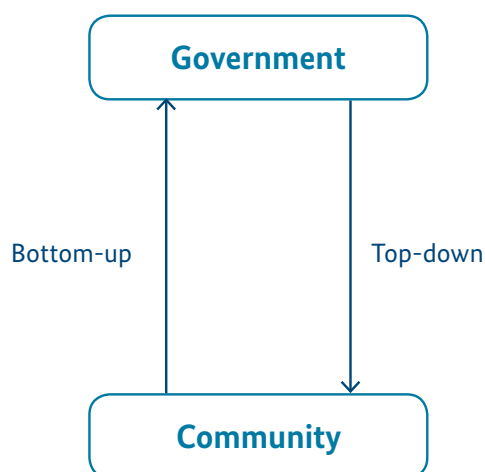


Figure 17. Two ways of approaching a policy issue, in this case ABC for sustainable transport. Own elaboration

The government should be in charge of the policies to be formulated, and should be conscious of the necessity to raise awareness of a population with respect to its attitude and actions regarding transport in the city. Hence, the government should develop ABC strategies that seek to generate a significant change in the population. This has been the case in cities such as Bogotá, Seoul and Dar es Salaam, where the mayors have been the agents of change. This is called a “top down” initiative.

Nevertheless, this does not happen frequently enough to focus this module strictly on municipalities. On other occasions, it is the civil society that has to take the initiative and seek to change the transport behaviour patterns (including policies) of a city. This module also seeks to support these groups by providing activities and initiatives that they can develop on their own. These types of actions are called “bottom-up” (see Figure 17).

Transport users and their “stages of change”

One cross-cutting analysis of a population is in terms of the way in which they see themselves and how they react to proposals to change their mode to, for instance, riding a bicycle. The indications below adapt an existing theoretical construct (“stages of change”) from promoters of healthier behaviour (Prochaska & DiClemente, 1992) as a conceptual basis to understand people’s views on their modes of transport and how they change. Obviously, there is a great influence of existing policies and available infrastructure and services when it comes to assessing the potential of behaviour change. This discusses the stage of change where citizens are assuming that they all live in the same city and with similar availability to different transport options.

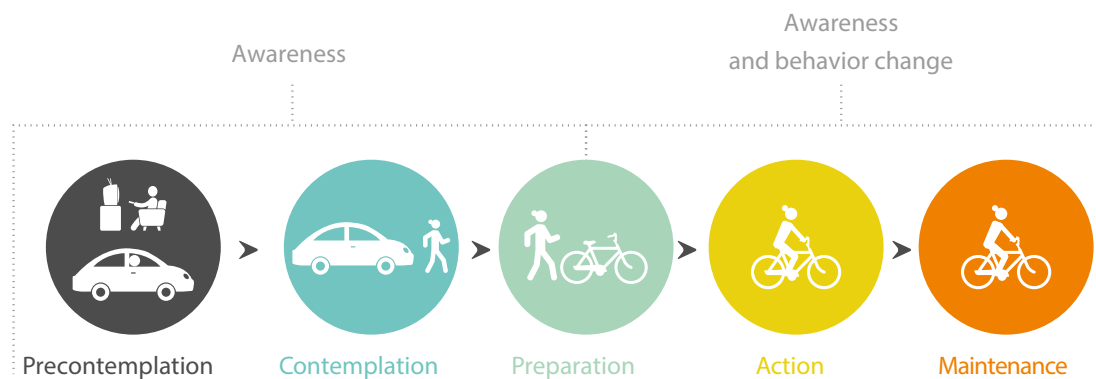


Figure 18. Stages of change (Prochaska et al), adapted to sustainable transport

What follows is a description of where people might be with respect to levels of awareness or action in sustainable transport, according to the model that was developed to study the physical activity levels of a population (Prochaska & DiClemente, 1992).

a. Those that use unsustainable transport and see no other option

In sustainable transport, this first group of the population may be the largest. In this group, people have no awareness of sustainable transport, and do not know that using the automobile as the primary and permanent means of transport carries several negative impacts towards them and the rest of the population. They do not completely understand the idea behind sustainable transport and do not see any reason to ride a bicycle or use public transport to get to work. Typically, the people in this group come from all age and income groups. This group is not aware of nor does it act coherently regarding sustainable transport. Unfortunately, some decision makers are part of this group. The technical name for this level is **precontemplation**.



b. Those that know of other options but still use unsustainable transport options

This group includes people who have seen other options and are somewhat informed of sustainable transport and the benefits of using a bicycle, walking, or public transport. They understand the arguments but still do not act accordingly. They still use the automobile for most of their trips, if these are 2 or 20 kilometres long, and for any purpose (recreation, work, etc.). This group is still closer to a change than the first group, and in some cases they might have tried to use a bicycle or public transport to go to work, but they might have arrived at their homes sweaty and unhappy. This group is somewhat sensitized but still does not act “sustainably” regarding transport. The technical name for this level is **contemplation**.

c. Those that have tried using sustainable transport a few times

This group is a source of greater hope than the first two. At this level of awareness, people have tried to use sustainable transport more than once, and might think that it is a good idea to continue doing so. However, they are not completely convinced yet. This group is quite sensitized and has taken some action regarding sustainable transport. This level is called **preparation**.

Figure 19. Typically, people who use automobiles everyday have not had the opportunity to learn about sustainable transport and do not have any opinion or knowledge of the environmental consequences of using non-sustainable transport means. Source: Carlosfeliipe Pardo



Figure 20. People who have tried using sustainable transport are a lower percentage of the population, but are an important group that supports these initiatives. Source: Carlosfelipe Pardo

d. Those that have begun to use sustainable transport

The group before the last one includes people that have already begun to walk, use a bicycle or public transport as a daily mode of transport with an established frequency (for example, every Monday and Thursday). Perhaps they still use a car, but they have begun to understand that it is not completely necessary in all cases. This group already has made more progress toward sustainable transport, and its awareness is complete. The technical name for this group is **action**.

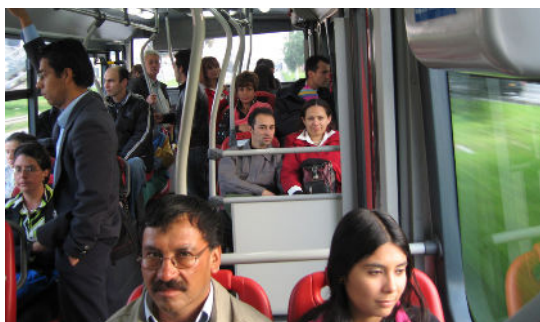


Figure 21. TransMilenio in Bogotá is not only used by people that do not have other transport options, but also by people who understand sustainable transport. It is simply seen as a better option to travel in Bogotá. However, the former constitutes a captive group that must be educated in sustainable transport. Source: Carlosfelipe Pardo

e. Those that are using sustainable transport on a permanent basis

The final group is made up of people that do not need to be made aware of the benefits of sustainable transport, because they already have knowledge of and are constant users of sustainable transport. These cases are at a level called **maintenance**.



Figure 22. A citizen from Kampala who uses a bicycle by obligation. Source: Carlosfelipe Pardo.

f. Understanding captive users

Because the categories of the stages of change in transport were created to measure physical activity, their adaptation to urban transport should be made cautiously. A crucial difference is that, while physical activity as recreation or sports is something that a person chooses to do, urban travel includes all citizens (and generally regardless of their intentions): a person must use one or another mode of transport to get to their destination, but income level is one of the factors determining the transport mode that will be used. For this reason, a country's GDP is many times related to motorisation levels, and a person of low income will use a sustainable transport mode such as public transport or the bicycle as an obligation and not a choice. That does not mean that this group is in the last stage of change (maintenance), but that they use sustainable transport by "coincidence" and not by conviction. People with low income levels might form a captive part of the population.

4. Gathering information from stakeholders



Before developing an ABC strategy, you should know the group that you are targeting. This implies familiarity with the criteria used to divide a population, the groups that are formed by an initial categorization, their knowledge of and attitudes toward sustainable transport and their use of different transport modes. This is very useful since ABC strategies that are designed without knowing the audience in depth can generate unexpected or even contrary results. This is also why monitoring and having adequately defined indicators and measures is important to assess change – indicators and goals should be defined according to “SMART”: Specific, Measurable, Attractive, Realistic and Timed.

This chapter will begin by presenting the basic guides to analyse a population in qualitative terms (and some quantitative terms) to determine the tools that are best suited when beginning to design an ABC strategy.

Knowing a population



Figure 23. Users have varied interests (including taking pets in public transport) that are not always known. Source: Carlosfelipe Pardo.

Stakeholder analysis

Stakeholder analysis is a technique by which an organization or person who wants to develop a strategy (in this case, an ABC strategy) can know which groups and organizations are directly or indirectly related to a specific problem. This is done to consider their interests, potential and limitations when designing a project, to be able to get their support during implementation.



Figure 24. A simulation exercise involving stakeholder analysis during a training course held in Montevideo. Source: Jonas Hagen.

It has been shown that stakeholder analysis for the development of specific policies generates greater support for their implementation, and that this results in collaborative learning, at the same time as it can help develop a long-term vision. Two basic characteristics of stakeholder analysis are as follows:

- **It is permanent process:** the idea behind a stakeholder analysis is that it should be done throughout the project, from the planning phase to the final execution, to give a complete evaluation of the entire process and obtain the most information.
- **It takes many points of view into account:** Stakeholder analysis, similar to other methods of investigation of populations, is neutral in the sense that it does not concentrate on the points of view of the groups most directly related to the problem or those that have the greatest interest in finding a solution. Based on this, all of the related groups take each other into account when carrying out these analyses. Strategic alliances of various sectors are also taken into account (such as health or education).



Figure 25. Business representatives participate in a focus group to discuss how to develop gamification in their companies. Source: Despacio.org

Focus groups

The main assumption when using tools such as focus groups is that questions and goals of research (and policy planning) are very clear so that the results of these methods are most useful. Implementing a focus group (or survey or observation) should always have clear questions to be solved and policy planning goals attached to them.

Focus groups are another technique that can improve the knowledge of a population that will play a role (active or passive) in an ABC activity for sustainable transport. Focus groups are a rapid evaluation technique similar to a group interview, in which a moderator leads a group discussion on a specific topic.

The focus group is a way to collect a significant amount of qualitative information quickly and in an in-depth manner. This is based on a discussion between a group of people that is guided by an interviewer to show their knowledge and opinions on specific topics. They are exploratory in character and they are moderately lead, given that they are a discussion among all of the participants on specific issues. A focus group can be composed of 6 to 12 participants, and a typical session can last approximately two hours. The investigators must be social sciences professionals and have experience in these types of investigation methods to obtain optimal results.

Observation

Observation is one of the research methods that is least popular in transportation policy planning but that could have very interesting results when trying to know a population. This method can be an effective way to learn of the behaviour of a population in a specific context and has the advantage of being able to register this behaviour exactly as it appears in a specific place and without any intervention. In transport, observation can be used to know the “desire lines” of pedestrians (for example, the paths that a pedestrian prefers to utilize in a specific crossing). For an ABC strategy, observation can be used to know the problems

of behaviour between different actors in transport. For example, one can register the people trying to cross a street and the difficulties they encounter because of the speed of automobiles. One can also observe the behaviour of a driver regarding compliance of traffic laws (for example, respecting pedestrian crossings). With this information, one can learn of the attitudes and behaviours that must change in the city, and the groups of the population that should be the target of actions. Observations can also determine the effect of space on the behaviour of people (for example, observing the amount of people that pass through a pedestrian area), with the intention to use the observation to continue developing (or stop developing) a specific intervention.

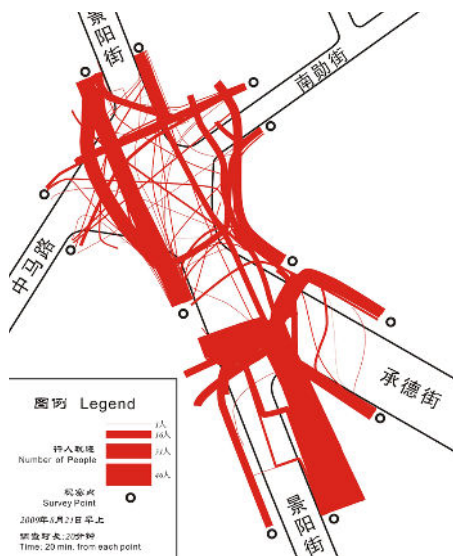


Figure 26. The use of an observation: Desire lines in a study of pedestrians of Harbin, China. Source: Michael King.

PROPORTION OF COPENHAGENERS WHO FEEL SAFE WHEN CYCLING IN COPENHAGEN

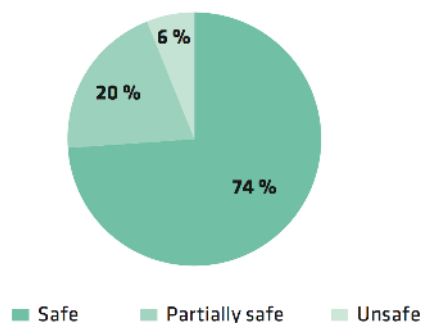


Figure 28. Example of a survey conducted regularly in Copenhagen – Bicycle Account. Source: (The Technical and Environmental Administration, 2015)

Surveys

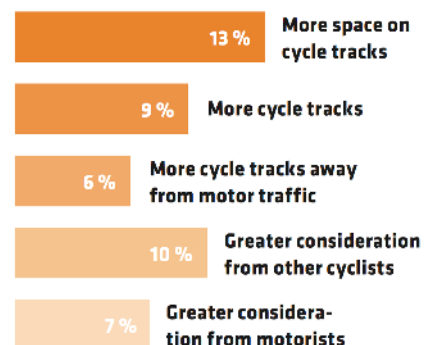
Some of the tools presented do not involve numeric information and cannot be presented using a basic statistical analysis. This has some advantages (greater depth of oral and comprehensive information) but other disadvantages (difficult to extrapolate to a complete population, cannot be used to create charts), but for this reason it is important to use quantifiable methods, such as observations and surveys.



Figure 27. Conducting of a survey in Bogotá to determine the citizens' views on bikeways. Source: Carlosfelipe Pardo.

Surveys are a qualitative instrument but they have quantitative properties: their results are numbers that can be examined through statistical analysis (this can be true of other methods as well, such as observations or focus groups, but surveys are especially designed as a quantitative tool). Their disadvantage is that they do not use essentially qualitative information, as other techniques do – surveys do open questions but their formulation and request are very narrow when compared to the possibilities of an interview. However, they have the added value of representing qualitative information with quantitative properties such as graphs, frequency distributions, medians, means, modes, etc. This is possible because surveys have pre-determined response options (or narrowly-defined open options), something that neither stakeholder analysis nor focus groups have.

WHAT WILL MAKE CYCLING COPENHAGENERS FEEL MORE SAFE?



Surveys are widely used as a method to quickly obtain information from citizens that has been previously categorized and specified. Questionnaires are predesigned with set answers that are applied to a segment of the population (this segment will hopefully be representative of the entire population) and give a general view of the attitudes, knowledge or practices reported by a group of people. This can easily be adapted to the categories of intervention that this module describes later on. It must anyway be noted that specialists in surveying (especially in producing surveys adequately) must be engaged for this type of work, so that the process, methods and results are adequate and representative.

Big and open data

Another great source of data are the platforms that provide free and anonymized² data from their own information, which can be used to understand travel patterns and complement other qualitative approaches as described here. The World Bank has recently launched an Open Data Platform (World Bank, 2016) which increases the availability of data from various sources. GIZ has also published a module on Open Data in the transport sector (GIZ, 2015).

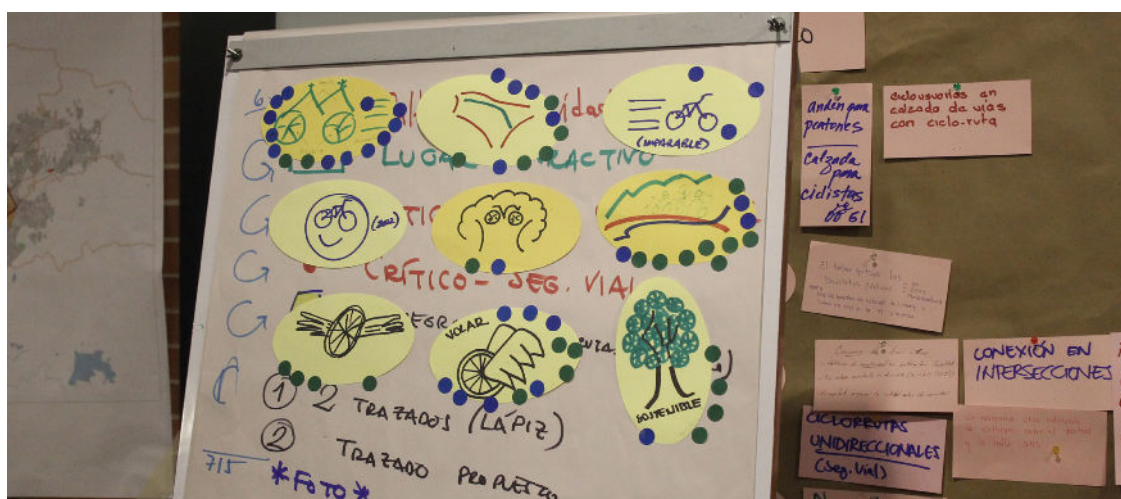


Figure 29. Result from a GIZ participatory workshop to define the essential message of an infrastructure project. Source: Despacio.org

Organize the information

After having obtained all of the information from the research instruments that were used, it is crucial to organize this information to have a general idea of the population and the groups that are related to the transport problem that the intervention will address.

The information obtained depends on having established goals of research (questions) and then on methods and categorizations used (the groups as well as the questions and issues). The important thing is to organize this data so that it can be easily adapted to the intervention that will be carried out, based on what is presented in the next chapter. In this way, the information can be identified according to the groups of stakeholders involved and positive or negative attitudes sustainable transport, or according to stages of change (levels of awareness), or both at the same time.

Gathering information as monitoring mechanism

Gathering information is not just to prepare a strategy, it is actually very useful as a monitoring mechanism whereby one can review the impacts of a strategy and revisit original perceptions or even mode shifts based on the strategy. This is a necessary step once an ABC strategy is implemented, and should be done so regularly to correct and redefine components and activities.

The monitoring of an ABC strategy can last as long as the strategy itself. The beginning of the strategy defined the indicators to measure the goals and the time the behaviour change should be seen in. The stage of evaluation will show how effective the intervention activities were, which elements could be improved, and which errors were committed along the way.

² There is considerable debate whether data is truly anonymous, since the fact of collecting is already intrusive. For the purposes of this module, I am assuming that "anonymized" data refers to data whose specific person cannot be identified.

5. How to address target groups?



*“Peoples’ perceptions of conditions, not real conditions, are what determine their modal choice”
Denmark’s Collection of cycle concepts (Andersen et al., 2012).*

When the composition of the population in question has been organized in terms of what has been researched with the methods described above, it is possible to begin an intervention adapted to those the population segment that will be targeted. To do this, all of the information analysed during the focus groups, interviews, and the divisions of the group into awareness levels must be taken into account, as well as goals and target groups.

Combining target groups and ABC goals

To prepare before going into the types of messaging that can be developed, and in order to provide better guidance regarding how to use the information given in chapters 2 (goals) and 3 (who should be addressed), Table 3 presents a summary of those two dimensions and how they relate to each other, providing more concrete guidance on what type of messages should be presented to whom and how they relate.

WHO /What	Awareness and supporting SUT	A: Avoid and reduce trips	S: Shift modes	I: Improve technologies and driving styles	Monitor success and evaluate strategies
Policymakers	Awareness and financial decisions	NA	NA (unless strategic)	NA	Dedicate staff and resources
Experts and consultants	Awareness of newer technical discussions				Support methodologies
Technology providers and vehicle manufacturers	Awareness of relevance of SUT (with specific focus on private sector)			Improve vehicles, safety, emissions, technology options	Develop tools and applications for monitoring and reporting
Company executives	Awareness of relevance of SUT (with specific focus on corporate issues)		Promote in company	Promote, enable carpooling or carsharing options	Invest in monitoring to understand impacts
Civil society	Support SUT	Enhance and support messages	Enhance and support messages	Enhance and support messages	Support in fieldwork and analysis, outreach
Neighbours	Awareness of safer driving and SUT in general			Safer driving	Demonstrate impacts of safer speeds and driving
Champions and supporters	Awareness and key talking points of SUT	Understand essence of message	Understand essence of message	Understand essence of message	Understand essence of message
Those who are not worth your while	Respect others when driving				

Table 4. Combining target groups and ABC goals. Own elaboration.

Types of messages

In terms of the production of messages for ABC strategies, one way is to divide them into the three basic “channels” or types: information, persuasion, and action. The three types of interventions are **informative**, **persuasive** and specific **activities**. This categorization comes from the psychological elaboration of specific attitudes and how they are subdivided into rational, affective and motor components. However, it is important to emphasize that each of these components by itself will have little impact when seeking to a real behaviour change in the target audience.

a. Informative messages: specific data

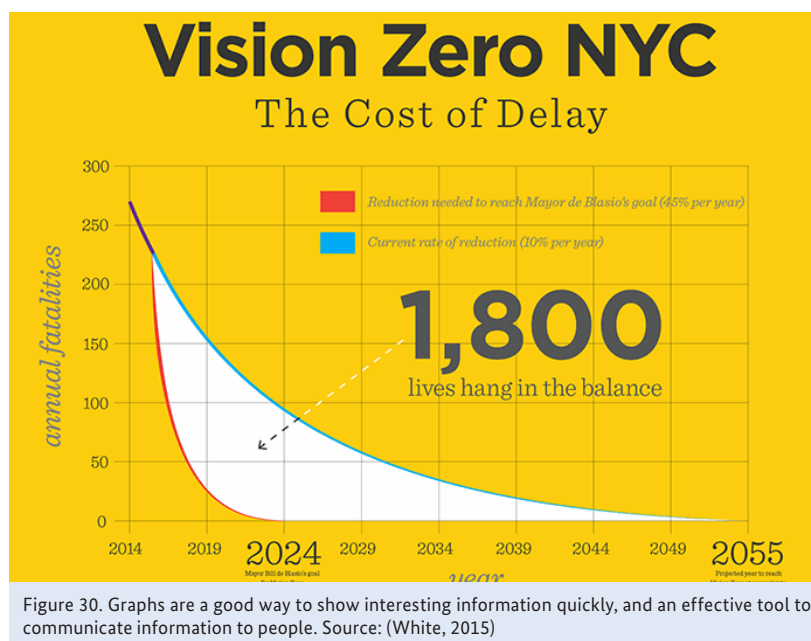
One type of activity that can be developed during an intervention is of an informative nature. For example, clear facts support the following arguments:

- Public transport, bicycles, or walking are the most sustainable forms of transport;
- Motorized vehicles are a large source of pollution and health problems;
- Road traffic safety is a serious problem around the world;
- Actions to make transport more sustainable improve quality of life, the economy of a city and its environment;
- Information about the quality of space, environmental impact, or about poverty before (and after) the application of a sustainable transport initiative.

All of this information has been widely developed in the GIZ Sourcebook. Simioni (2003) also defines some of the elements necessary for effective information, albeit designed for environmental consciousness. With a few adaptations, the information you are transmitting must have the following characteristics or must follow these guidelines:

- Make citizens aware of the environmental, social and economic problems of urban transport;
- Explain and relate the causes and effects of transport problems and what individuals can do to address these problems;
- Publicize activities of different actors that have encouraged sustainable transport, and
- Spread knowledge of sustainable transport as widely as possible and ensure that the all sectors (including public and private) have access to these discussions.

Informative messages can also be used to promote an unpopular message: a congestion charging system in Stockholm generated an initial negative reaction from citizens. However, the impact was so immediate that one week after implementation, 32% of citizens approved of the measure, and a month later, this level was at 62%. This has generated greater favourability toward the measure, and greater support to similar initiatives that solve transport problems of the city (Stockholmsforsöket, 2006).



b. Persuasive messages

“Persuasion is more effective than force”

Aesop (620 AC-560 AC)

The second type of action that can be used to change the behaviour of a population is of an affective nature, meaning what people feel and what is beyond their cognitive control. Anything that persuades people to do something is because they will feel much better after doing it. A clear example is happiness and comfort. A persuasive message should make someone feel that what is being proposed will generate more comfort or they will feel better. The automobile usually causes such feelings in many people.

In this way, publicity for automobile has a large advantage over the promotion of sustainable transport. Motorized vehicles have been associated with pleasure, comfort and even happiness. Further, they are always shown traveling at high speeds and on large highways, never in traffic jams (this can be used as an argument against the realism of such advertisements). In any case, it is also true that cars have been designed to be more comfortable than any other means of transport, but in detriment to values such as equity and sustainability. Operators of public transport should also take this factor into account when promoting sustainable transport.

Generating persuasive messages regarding sustainable transport is helping people change their attitude toward modes such as the bicycle or public transport. Something to take into account is that a normal person usually chooses a mode of transport according to the following:

- Perceived travel time
- Perceived cost
- Perceived access
- Perceived comfort
- Perceived liberty
- Perceived flexibility
- Perceived safety

These persuasive messages should show the user that sustainable transport fulfils goals greater than individual ones, and using these modes for everyday travel does not have as many disadvantages as is believed. However, you must take into account what Seethaler and Rose (2006) say:

“The environmental impact of one’s own behaviour is rarely taken into consideration... the immediate personal benefits of motorized transport end up winning over the benefits the community perceives that could result changes toward more sustainable behaviour in transport.”



Figure 31. The Love-Your-Bike initiative develops highly persuasive and creative messages that relate to factors such as speed of the bicycle and lack of exercise of those who use the private automobile as a mode of transport. Source: www.loveyourbike.org

There are other characteristics of sustainable transport, and the values associated with automobile travel (time to think, to be with your children) can be easily achieved using more sustainable transport means (public transport or bicycles), and can be achieved to a greater degree, given that these modes are often not as affected by traffic. In this sense, it is recommendable to investigate peoples' perceptions in the phase of gathering information about the population, and it is also necessary to generate positive, persuasive messages. To achieve this, the following rules should be followed:

- Include children in the messages
- Show sustainable transport modes to be comfortable
- Show **losses that are generated** (in terms of time, money, and activity) from continuing to use the automobile and not changing to sustainable transport modes, rather than showing the gains of using sustainable transport
- Give clear and attractive messages
- Orient the messages in terms of a life-cycle strategies (thinking of people in different stages of their lives, their necessities/interests, and orienting messages specifically to them)³
- Generate a commitment (if possible written or declared in public) in the people receiving the message
- Specify what should be done to resolve the problem
- Present someone (a role model) engaging in the desired behaviour
- Describe reachable and realistic behaviour
- Refer to morally and socially accepted rules, beliefs and behaviours
- Associate the violation of the "rules" to social sanctions
- Give information suitable for individual, family, and/or collective action (organizations of different kinds)
- Present the information so that it is clear that other people (peers) have sustainable transport habits

Sustainable transport can easily be promoted through persuasive or affective messages. As the Collection of Cycle Concepts mentions, "...the bicycle has a positive image in many ways. It is associated with good experiences, clean air, sun and summer. It is seen as a healthy, sociable and environmentally friendly transport alternative that is accessible to all." (Jensen Andresen, T., Hansen, W., Kjaergaard, E., Krag, T., Larsen, J., Lund, B. & Thost, P, 2000) The bicycle is a vehicle that is associated with personal experiences of happiness in various places, given that it is usually a toy for children or a vehicle for sports for a young person.



Figure 32. A family riding bicycles: the added value of bicycles is their ability to evoke pleasant experiences. Source: Carlosfelipe Pardo.

Finally, **quality of life** can also be taken as an argument with persuasive messages. People will understand that a situation with an improved environment, better road safety and public space will influence their lives in a positive way.

It is necessary to define the behaviours that you hope to achieve using specific verbs (ride, use, etc.) instead of broader terms such as "improve the situation," "increase use," given that these definitions will be utilized for the activities that will be carried out. It is also important to group the behaviours according to the stakeholders (or levels of awareness, or the portion of the population that is given priority) to later be clear about what you will do with whom. It is also important to "try out" behaviours with a small group to see if they will be understood and if they are effective at achieving their intended goals.

³ Regarding this, Lake Sagaris says: "For adults, for example, time is not as important as money (time-rich, money-poor, as Barbara Adam says in her studies). For the woman, walking or riding a bike means that the bicycle can carry packages that one has to pick up, and/or there is no additional charge when combining a series of errands with different destinations (travel-chaining)."



Figure 33. Actions are what generate most commitment to sustainable transport, and in some cases there is great satisfaction in using sustainable transport modes. However, it is always best to accompany these actions with information and persuasion. In the photo, the Car-free Sunday in Quito, Ecuador. Source: Lloyd Wright.

c. Specific activities: using sustainable transport

The third type of actions to promote sustainable transport has to do with using these modes for travel. It is very important to promote a transport system as you get people to use it. Although it sounds very logical, many awareness activities do not include this component. The primary interest in promoting sustainable transport is getting people to walk, use public transport or bicycles, especially people that have not used these modes before. This section is important because it describes the ways in which behaviour can really be changed, with the previous help of information and persuasive messages.

A fundamental aspect of the activities is that they should be promoted as entirely voluntary, given that coercion does not lead to long-term behaviour change. The information provided and the persuasive messages conveyed should serve as a basis from which you can develop activities that intend to change toward more sustainable behaviour in urban transport.

A behaviour (the action) has four basic components that must be taken into account:

- Action: The specific behaviour to be promoted should be specified: riding bicycles, using public transport, walking for short trips.
- Target: Is whose behaviour you hope to change, the affected (or benefited!) population: in this case, the general public or even decision-makers.
- Context: How an action will be developed and according to what parameters.
- Time: The moment the action will take place.

Additionally, the fact that people are rewarded for their actions is a very potent way to make them do it again. Rewarding strategies are very well documented in the literature and have been more recently called “gamification strategies” (Castellanos, 2016) but these are an application of behaviourist and cognitive strategies based on operant conditioning (Elliott & Thomson, 2010; Kerlinger & Lee, 2000).

All three types of messages are crucial

Informative, persuasive and specific activities, these three actions should be implemented with public awareness initiatives. If people receive information and ride a bicycle once or twice, they will need to be persuaded that the bicycle is the best way to travel or else they could return to daily automobile use. In addition, they will need to receive the arguments about why they are using a sustainable means of transport. Lastly, even if a person is convinced that using public transport is the best mode of transport and has been persuaded to use it, they might not do so because they do not have the opportunity (for example, no one will accompany them in their first bus ride). Also, someone who is constantly “preaching” about a particular transport means without using it does not lend great credibility to his or her discourse.

Examples of initiatives

The following is a list (non-exhaustive) of activities that are used to promote sustainable transport and could be useful to replicate or adapt in other places.

a. Travel feedback programmes (TravelSmart)

Various activities are described with the term “travelsmart”, which began in Australia as an initiative to understand citizen’s mobility patterns and provide them with personalized improvements to their weekly trips. This normally implies a weekly travel log (people indicate the different trips, times and purposes during every day of the week) and, once they have finished, travelsmart experts provide them with alternatives in other modes (e.g. public transport, cycling, walking) that they could have used to do the same trips. This aims to provide users with an understanding of multimodality and that they can use other modes of transport for certain trips (not the same mode always, nor do they have to change to another mode forever). Research on this topic has shown that there are concrete and positive impacts in terms of mode shift (18% in cars in Japanese initiatives), CO₂ emissions (19% reduction) and especially when linked to participants’ written plans (Fujii & Taniguchi, 2006; Zhang, Stopher, & Halling, 2013).

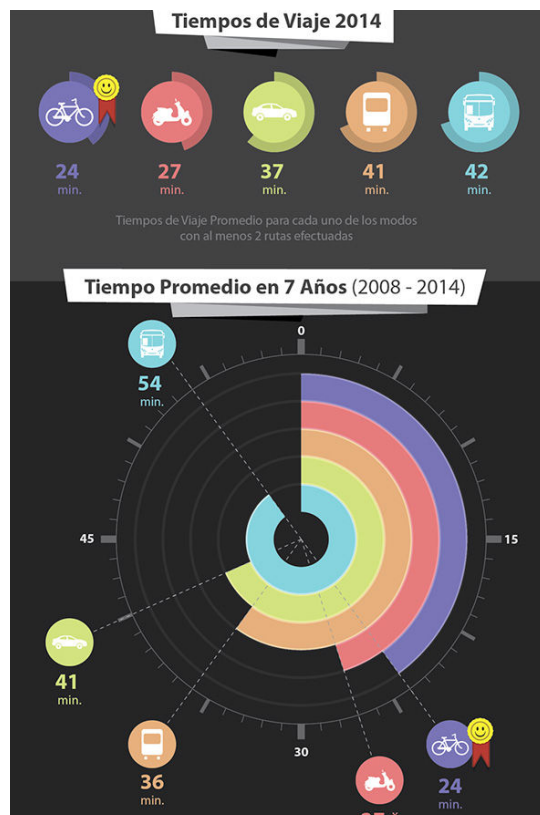


Figure 34. Infographic demonstrating the results of commuter challenges during 7 years in Santiago. Source: <http://www.bicivilizate.com/portfolio/medicion-de-tiempos-de-viaje-scl/>

b. Commuter challenge

Many cities have developed an activity that is very clear and straightforward to demonstrate the actual effectiveness of transport modes, called the “commuter challenge”. It consists of assigning a typical origin and destination and having people ride different modes of transport as they would in any day of the week – during rush hour – and demonstrate “live” who would arrive quickest. The trip must include also walking time to the vehicle, waiting time in platforms and parking and walking to the destination. Typically bicycles win these challenges, but in some cases motorbikes have won as well. Depending on the case, public transport and automobiles arrive latest. This is a great way to gather media attention as well, especially if it takes place during morning peak hour.

c. “El Poder del cono” (The power of the Traffic Cone)

“El Poder del Cono” is an educational campaign that aims to reduce illegal parking in Bogotá. It was designed as an alternative to traditional enforcement, using embarrassment and social sanction as penalty instead of regular fines. The campaign is carried out by groups of actors dressed up as traffic cones, who encircle vehicles that are parked illegally on the streets. The ‘cones’ will sing and call for the driver, which draws attention to them, with the objective of embarrassing the driver for parking illegally and discourage this behaviour in the future. Traffic police are nearby in case drivers are not willing to leave the encroached space, and will issue a ticket.



Figure 35. Public officials dressed as traffic cones combat encroachment of public space. Source: SDM Bogotá <http://www.transitobogota.gov.co/web/node/2061>.

d. Counting cyclists - events



Figure 36. Bicycle Data Week announcement. Source: <http://fietstelweek.nl/data/>

Various Dutch companies, NGOs and government allied to create a week where they could gather as much information as possible about bicycle use through the use of an app, called Fietstelweek (Week of Bicycle Data). This gave all stakeholders a very thorough understanding of how cyclists used their bicycle network and the times they did so, their speeds and other characteristics of their trip. This enabled

them to create policy proposals based on data, and also understand the needs of cyclists better.

A similar exercise was held in Kiev organized by a cyclists Association, which was directly led by civil society and supported by other groups, and citizens were invited to participate according to a pre-defined schedule.



Figure 37. Kiev's "Bicycles count" campaign as organized by their Cyclists Association. Source: Kiev Cyclists Association



Figure 38. Demonstrating how to use a parking space with 40 bicycles. Source: Despacio.org



Figure 39. Repurposing a full strip of parking places into public space on one day and kept during one week in Quito. Source: Despacio.org

e. Tactical urbanism

One type of strategy to create awareness about the use of public space has been called “tactical urbanism” (Lydon, Garcia, & Duany, 2015; Pfeifer, 2013) but has been used for many years. It consists of using public space that was originally used for parking or as a street and repurposing that space to present a message, that can include a better use of that space in terms of efficiency or of enjoyment. Typically, these actions are done in one day or less and are expected to remain for a short term but sometimes become permanent.

Webinar of CAPSUT/SUTP on Tactical urbanism:

<https://www.youtube.com/watch?v=Y7VWedkCLL0>

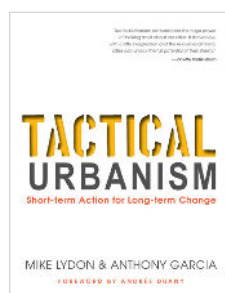


Figure 40. Wheels, a mobile app that provides carpooling services to companies. Source: Wheels Inc.

f. Gamification

One of the strategies for promoting the use of sustainable modes in an organization is by applying gamification techniques. These consists on designing games, in order to promote competition between members (or between organizations) and therefore encourage mode shift. There are various examples of this, many of which are implemented by means of mobile apps. For instance, Wheels is a mobile app developed in Colombia which allows for employees of an organization or groups of friends to form groups for carpooling, taxi sharing or cycling. The app works in alliance with several organizations, providing them with information on who are the most participative users and consequently the organization can reward them. This app addresses two of the main barriers for carpooling: matching and trust.

g. Free trips on public transport

In the case of public transport, the directors of Bus Rapid Transit systems (including TransMilenio in Bogotá or TransJakarta in Indonesia) have given free rides to the public on these busses. This results in experiences like the one shown in Figure 41., where TransJakarta was full of new costumers. When they get free rides, people can “practice” using the system without buying a ticket, and they might even get to their destination. There are some negative characteristics of doing this, especially that crowding can be much higher and it may create frustration to users and may not generate the expected effect of getting them “on board” and switching to the new system.



Figure 41. Transjakarta gave free rides on public transport during the first two weeks of operation (Jan 15-Feb 1, 2004). A great amount of people became familiar with the system through that effort. Source: ITDP.



Figure 42. A trip on the car-free Sunday in Bogotá on a bicycle taxi showed visitors from Africa that a similar event could be very successful in their own countries. Source: Shreya Gadepalli.

h. Bicycle rides and bike to work

Some people think that riding a bicycle is a dirty and sweaty activity that is impossible to do without wearing sports apparel. They might also think that the bicycle is not an efficient way to travel from one place to another. These people's views often change considerably after participating in a moderate-speed bicycle tour that covers a considerable distance. For example, staff members from the Ministry of Transport of Western Cape (South Africa) participated in a bicycle tour during a Car-free Sunday. They immediately returned to their offices to formulate a non-motorized vehicle strategy for their cities. When the Minister of Transport, Ms. Tasneem Essop spoke of the activity, she said that she had not ridden a bike since when was 8 years old, and had forgotten what it felt like.



Figure 43. Bike Mentors, a complement to bike to work as developed by Kiev Cyclist Association. Source: Kiev Cyclist Association.

A well-known variation of this is Bike-to-work. In this initiative, people are invited to use their bicycle to work and specific routes are defined. Experienced riders accompany groups and teach them basic “rules of the road”. Based on a first exercise, repetitions are programmed so that people can continue to ride their bikes to work. There are some cases where cities develop their own “bike to work day”, and in other cases government staff create specific days of the week or month where staff are motivated to cycle to work – and in some cases create competitions between government institutions to see who had the greatest amount of staff participating. In the case of Kiev, their Cyclists Association organizes various activities around bike to work and that same theme, such as a Bike Mentors’ program and a Contest for Cycling Friendly Offices (Kyiv Cyclist Association, 2016).

i. Car-free events

The idea behind car-free days is quite interesting in terms of actions to promote sustainable transport. Given that this Sourcebook has a full module on car-free development (Wright, 2005), it is only necessary to say that in this event people are forced to use other means of transport. In this way, automobile users experience other transport modes. However, there are some negative aspects of “mandatory” car-free days: people will feel that they have no other option and might have a negative perception of the experience, which will increase resistance to shifting to sustainable transport modes permanently.

Table 5 shows the different types of car-free events and the components to organize them. This is addressed extensively in the module 3e on Car-Free Development of the GIZ’s Sourcebook.

Component	Car-free day (annual, existing infrastructure)	Car-free Sunday (weekly, existing infrastructure)	Car-free area (permanent, new infrastructure)
Planning the event	Meetings, pilot exercises	Meetings, pilot exercises	Design, timeline, stakeholders
Information for citizens	FAQ, web page, maps, advertisements	FAQ, web page, maps, advertisements	Graphic simulations of the area (3-D)
Physical resources	Yellow ribbons for crossings, uniforms for organizers	Yellow ribbons for crossings, semi-permanent signs, uniforms for organizers.	Construction materials
Human resources	Each stakeholder should provide human resources	A permanent team of the department/organization that is responsible	Architects, engineers, construction workers
Evaluation of the initiative	Citizens’ perceptions, environmental measures, economic measures, photos	Citizens’ perceptions, environmental measures, economic measures, photos	Citizens’ perceptions, environmental measures, economic measures, photos
Participation of the private sector	Finance the event	Finance the event, publicize the event	Join the initiative (store owners), improve areas close to the car-free area (terraces, etc.)

Table 5. Components of a car-free event according to type

Ciclovía (or car-free Sundays) originated in Bogotá in 1974 as an initiative promoted by the citizens. The ciclovía takes place every Sunday and holiday of the year, from 7:00am to 2:00pm. Streets selected for the activity (more than 100 kilometres of roads, many of which are arterial roads) are closed for motorized transport, allowing people to use them for recreation and sport. The event has been replicated in various places of the world with similar conditions, though not with the very large scope of Bogotá. These events can have different messages including sports, recreation or urban liveability. A full document describing how to implement a ciclovía is available in (OPS, Centro Nacional para la Prevención de Enfermedades Crónicas y Promoción de la Salud, Universidad de los Andes, Vía RecreActiva de Guadalajara, & Ciclovía de Bogotá, 2009).

j. A note about the media in public awareness

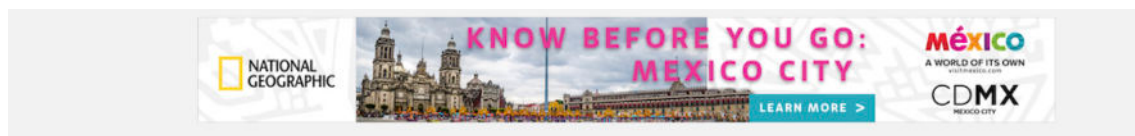
Communications media are a powerful channel that can be used to promote public awareness about an activity related to sustainable transport. However, some issues should be taken into account when developing a complete strategy. These are described below. In addition, a very comprehensive media toolkit for road safety from GRSP is available from <https://www.grsproadsafety.org/resources/advocacy-tools/>.

k. Mass media

First of all, mass media have shown that they are **not** effective for behaviour change as such. However, it is interesting to note that they can be used to increase awareness of people in the first and second levels of awareness described in prior chapters, given that they have little or no information about sustainable transport and are not in contact with the transport sector or some mode of sustainable transport. A mass media campaign might be useful in this sense, but it should be clear that a large portion of the budget could be lost with this low-impact activity, and that these funds might be more effectively used in more focused media to communicate an idea. A television spot where a person is shown riding a bike might be effective in terms of making people conscious of the possibility of using this vehicle, but it is unlikely that this will lead to the person riding to work every day.

Social media

Social media has created a complete new array of strategies to promote sustainable transport, but their actual effectiveness to really create awareness or generate behaviour change is not well known and has generated conflicting evidence. This topic is thus not discussed in detail here. In any event, it is useful to develop web pages to publicize an ABC strategy, and can also constitute a component of the strategy. These pages can contain information about the activities to take place in the near future, maps of the city with infrastructure for different transport modes, manuals on bicycle use and a brief description on mass transport modes, among other things. If a significant part of the audience has internet access, it will be a very important aspect of the ABC strategy. This can also have a discussion area, and the possibility for users to design web logs (blogs). With these resources, collective efforts become a key tool to give strength to any initiative and publicize it.



21 Striking Pictures of How the World Gets Around

From the mighty train to the humble hoof, see unique modes of transportation across the globe.

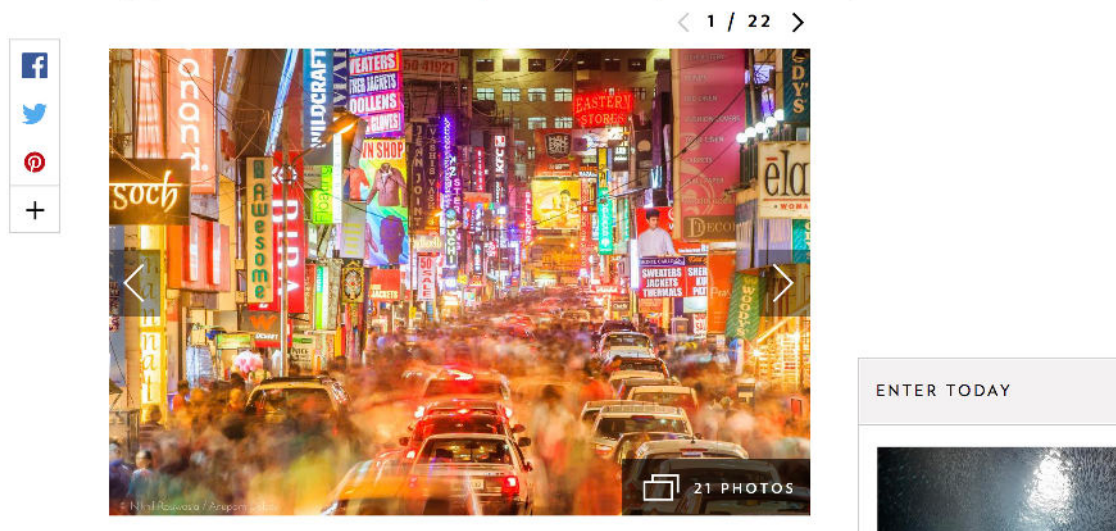


Figure 44. A good way to spread information about sustainable transport is through a magazine of great prestige, such as National Geographic, above. Source: <http://news.nationalgeographic.com>



Figure 45. Focused activities may get more attention from specific populations. Source: Carlosfelipe Pardo.

Small scale media (focused)

Media that focus on specific audiences can be more effective in terms of behaviour change (they can be targeted more effectively since one has specific knowledge and can define concrete messages for them) and can be less costly than a mass media campaign. Such efforts can be used to spread ideas and promote change of specific behaviours by focusing on specific sectors of the population. For example, activities that use a persuasive approach toward people in the contemplation stage could be very effective if they are carried out after a bike ride. This type of activity might be the most useful for promoting sustainable transport. Sagaris states that “there is an inverse relationship between the number of people reached and the quality of information given/received.”

l. Key data

An ABC strategy can have a high impact on the media if it is documented by key data on the interventions that are carried out for sustainable transport. To ensure maximum impact, the data should be gathered before, during and after the implementation of a sustainable transport project. For example, knowing the amount of crashes on a street before

and after it was pedestrianised can show that the measure has protected the lives of the people that live in and travel through that place.

m. Visual tools

Visual media are a very powerful tool to transmit these messages. As the Sourcebook modules and other GIZ materials show, it is very important to show examples with photos, given that visual information is processed, stored and understood better. It also is much easier for people to remember and condenses a large amount of information (and persuasive messages). In this case, it is useful to show how a (public) space can look before and after a proposed intervention. When presenting public space renovations that could take various months to complete, such tools can be very useful for sceptical people that are not supportive of the project and need visual information to understand the proposed changes. It is important to always take photos, before, during and after an intervention, event, etc. It is quite easy to get high quality photos at a low cost (for example, with digital cameras) and distribute them quickly. There are various ways to utilize visual media that are briefly described next.

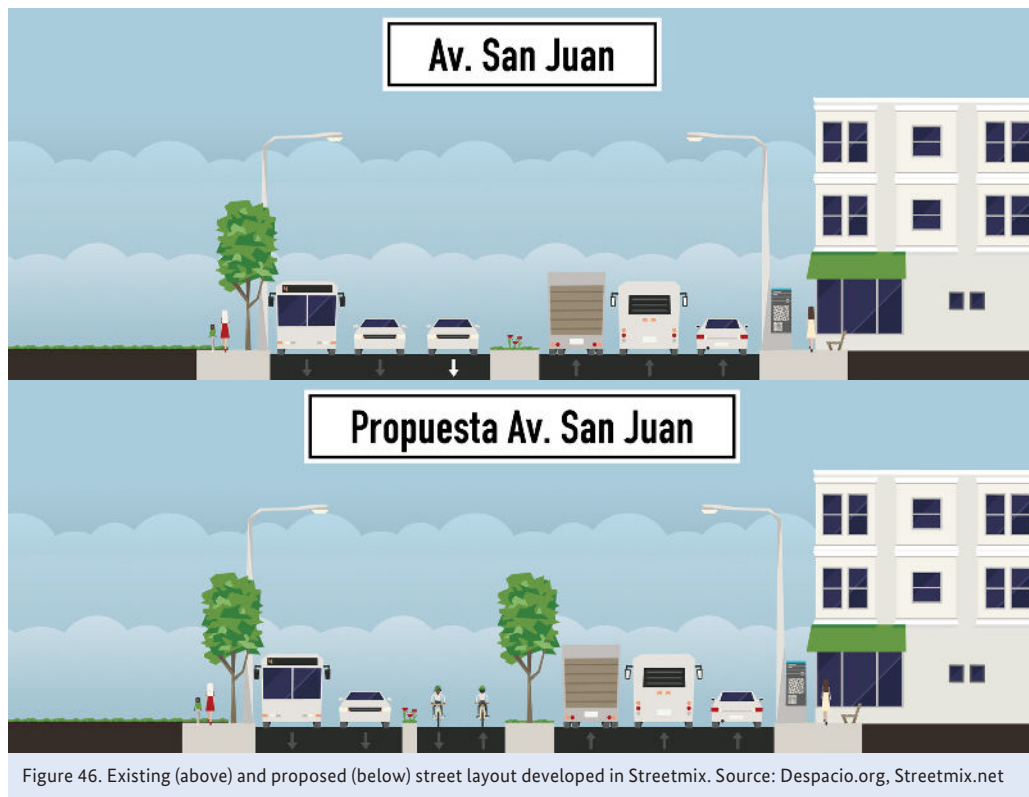


Figure 46. Existing (above) and proposed (below) street layout developed in Streetmix. Source: Despacio.org, Streetmix.net

Streetmix

Streetmix is a free online platform that was developed as part of a hackathon in California to give anyone the possibility to redevelop a street layout with basic components of streets (trees, sidewalks, lanes, segregation elements) and with editing capabilities (location, width, etc.). This is an extremely useful tool to demonstrate the greater capacity of a street and the feasibility of accommodating different modes of transport in a specific road alignment (in some cases, without “eliminating” lanes but rather by reducing their width). Figure 46 shows an example presented to government for the implementation of a temporary bikeway in Medellín.

Drawings of future situations

Drawings can be used as a way to show a future situation. The power of this tool is that it can present a situation that is quite different from the present one. Figure 47 shows a drawing of a bikeway in Lima that were developed to show how an existing place that many people are familiar with can be completely transformed.

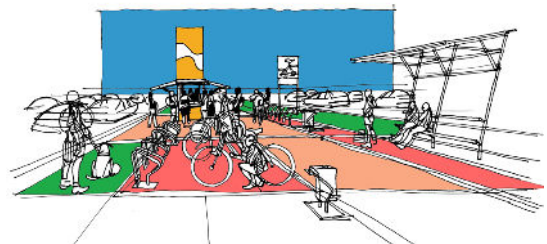


Figure 47. Consultants for the Lima project developed this drawing when they designed new bikeways for the city in 2003. Source: FONAM Peru. 3-D models

3-D Models

Models in 3-D (three dimensions) are the next step in showing a future situation that does not exist in a way that people can easily understand. The software for 3-D development can be used to show people how an area would look in three dimensions, more so than the drawings shown above. However, this might also be costly and need much time and dedication from a specialist.



Figure 48. A parking manager was convinced to include bicycle parking when this rendering was presented indicating the actual space that was needed to build it. Source: Despacio.org.

Before and after images

Another way of showing people how a public space can be transformed is showing the change of an existing situation. Figure 49 showed how Seoul was transformed by a public space restoration project in for Cheonggyecheon. Also, officials in Bogotá were very careful to take photos of places full of parking places before an intervention, and took a photo of the same place after all of the interventions. Later, these photos were used to show citizens how the space had been transformed. These photos are also used to show how the appearance of a certain space changes when sustainable transport projects are implemented.



Figure 49. This restoration project in Seoul was carefully monitored, as these two photos of the same place along the Cheonggyecheon River show. Source: SDIK



Figure 50. Technical study tours are extremely useful to demonstrate projects and potential policy implementation, but expensive. Source: Carlosfelo Pardo

n. Technical study tours

An important tool to convince a decision-maker to transform his or her transport policy is to bring him or her to a best transport practice site. In the case of Bogotá, close to 10,000 decision-makers from around the world have travelled there to see the transformation of public space, the TransMilenio system and the bikeways, and numerous conferences have been held with international participants. This is, of course, a costly activity that should be undertaken if you have a sizable budget and if decision-makers can make the trip.

6. Complements to ABC



Build it and they MAY come

Transport policy experts have long written the phrase “build it and they will come”. This phrase relates to the induced travel phenomenon described earlier, but applies more easily to automobile traffic as building more roads will generate more traffic. However, when it comes to sustainable transport, it is generally the case that building (or creating) new transport systems may not generate immediate

responses of traveling in those modes. In reality, the phrase in the context of walking, cycling or public transport in developing cities should rather be “build it and they **may** come”. To be more thorough, it should be “build it and they will come as long as you have provided all other necessary policy elements”. Another complementary phrase that aims towards explaining the negative effects of bad design could also be “build it badly and they will never come back again”.

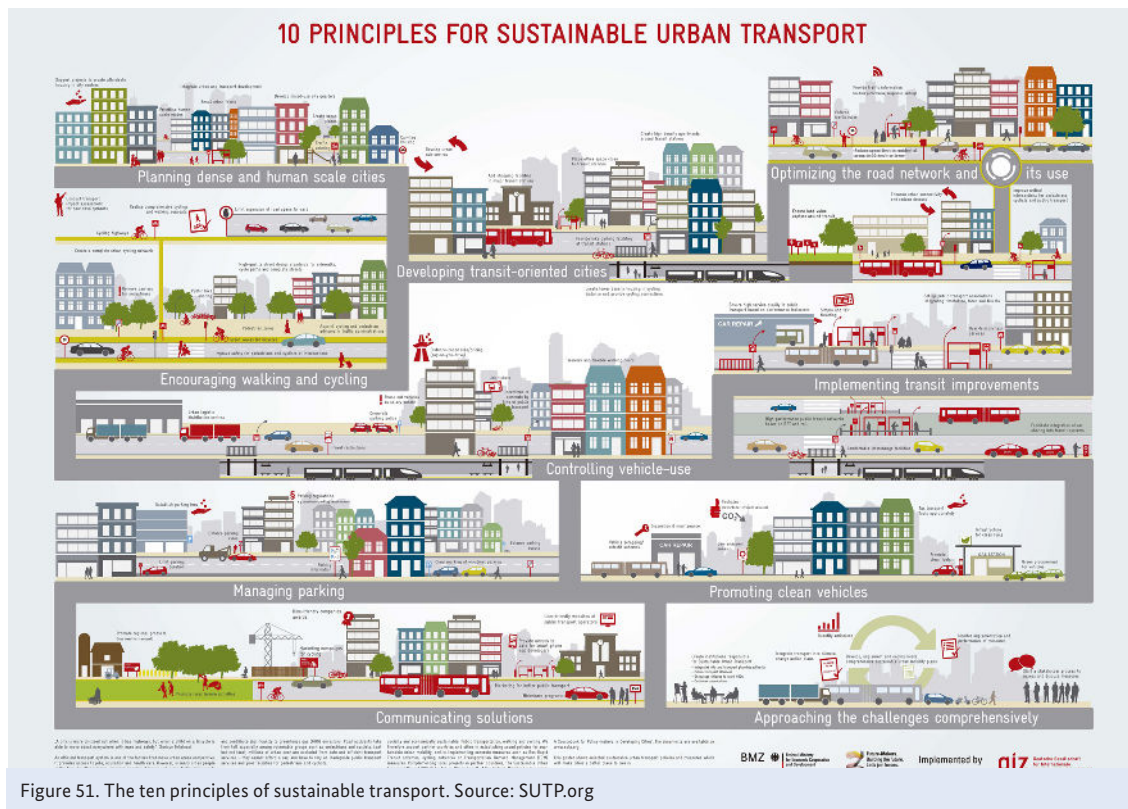


Figure 51. The ten principles of sustainable transport. Source: SUTP.org

This results from a historical lack of attention and promotion of sustainable transport that is reflected in various aspects of policies, infrastructure and regulation. As is well reflected in various policy documents, promotion (and ABC strategies) alone will not be effective in generating mode shift or even changes in attitudes towards sustainable transport. The package of these measures is sometimes referred to as “push and pull” approach. GIZ has also developed a full proposal of how to integrate all elements of sustainable transport into “ten principles” that are presented in an infographic in Figure 51. To have a successful ABC strategy, it should be complemented by at least the following:

- Adequate infrastructure for sustainable transport modes that provides wide sidewalks, traffic-calmed streets, segregated busways and bikeways where necessary, accessible ramps, adequate lighting, safe bicycle parking and other elements of infrastructure that truly represent a high-quality environment for walking, cycling or public transport.
- Institutional, fiscal and regulatory policies that charge automobile drivers the real costs of driving (including externalities). This may include fuel surcharges, ownership charges, parking pricing and supply policies, and congestion charging.
- Adequate financing arrangements for sustainable transport implementation and maintenance. This includes the creation of budget lines that are dedicated for walking, cycling and public transport infrastructure and policies, road safety projects and other measures that will improve conditions for those modes.

The GIZ SUTP website at www.sutp.org provides extensive information on all these policies and provides a full review of how they can be achieved in more than 50 documents of different types. Readers are encouraged to browse that collection for further information.

Generating support to existing policies

An ABC strategy could emphasize one or more topics of sustainable transport, based on the current situation and that which is desired and could achieve in the near future. It is important that, when implementing an ABC strategy, the municipal government show a level of commitment to generate a component of sustainable transport. The topics could be easily adapted to the modules of the Sourcebook on Sustainable Transport, including:

- **Institutional and policy orientation:** This includes topics that have to do with transport policies as Dutch and their implementation through the institutions in charge of urban transport in a city, the participation of the private sector in these policies and the economic instruments that should be established to foment sustainable transport.
- **Demand management and land use:** The management of the use of automobiles (through urban tolls, parking policy and other instruments) and land-use management (mixed-use, high density development, and others) are central parameters to a sustainable transport policy, and should be integrated into an ABC strategy so the public understands them and participates in them.
- **Walking, cycling, and public transport:** These transport modes should be promoted in a policy of sustainable transport. They are the most fair, efficient and clean transport modes, as opposed to the automobile.
- **Cleaner vehicles and fuels:** The best existing options for improving fuels and vehicle safety for public transport should be encouraged among public transport operators and drivers.
- **Health and environment:** The most crucial topics from the point of view of public health are road safety and the positive impact that sustainable transport can have on it, as well as the effects of pollution on the health of citizens and the way in which these can be mitigated through the implementation of public transport systems, the use of bicycles and the modification of patterns of conduct.

Once a municipal initiative to improve the transport situation exists (or if something has already been implemented) it will be easier to develop an ABC strategy. This is also useful when it is linked to a broader process of participation in urban planning. Nevertheless, there are occasions where the development of a strategy of awareness can be focused toward decision makers, in order to generate a policy of sustainable transport in the near future. If this is not possible, a series of activities with the community can generate changes in behaviour with respect to transport, although there could be problems with the existing infrastructure and some activities could become dangerous or inconsistent. It is interesting to see how changes in transport can be generated from the government side (politicians), the private sector (companies that sell transport systems) or civil society (people interested in improving the transport situation).

7. Conclusions: how to move forward



Insights

We provide in this module several insights as summarised here:



- It will not be easy to convince different population groups of the benefits of sustainable transport if:

- Messages are too complicated
- Goals are too distant and abstract
- Changes proposed are far-fetched (or changes are perceived as too demanding).

- An ABC strategy aiming for great impact should:

- Address policymakers and change their points of view
- Implement appropriate policies and direct funds to sustainable transport modes.
- Get support from others to promote messages
- Create agreements with private sector and industry to have better transport options (or technologies) that promote sustainable transport.
- Include messages and activities related to modal shift (changing to sustainable transport modes as a daily travel option)
- Improve attitudes towards those who use sustainable transport.

- Getting to know your stakeholders better and including them in planning is fundamental, for example through:

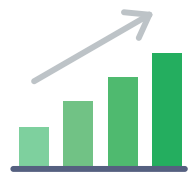


- Stakeholder analysis
- Focus groups
- Observation
- Surveys.



- ABC strategies can vary from games, Tactical Urbanism, to all sorts of tours and rides and media announcements. The key message here is to experiment and start small.

- Make sure to keep track of the results of your strategy, in order to make progressive improvements and changes. Even if the results overcome your expectations, do not rest on your laurels and always aim for greater change in attitudes and behaviour.



- Sustainable transport infrastructure itself will not necessarily attract new users if these are not convinced about its benefits. At the same time, the success of an ABC strategy will also depend on the quality of the local infrastructure, policies and maintenance. See GIZ's "10 principles of sustainable transport" and Chapter 6 of this publication for further information.

Next steps

In order to begin to create your own ABC strategy, you can follow some of the steps outlined here

- Explore literature in the field (see below, plus References)
- Learn from other cities' cases (see below)
- Look for potential partners and allies inside and outside your organization or public authority
- Start small, but with ambition to grow
- Create a team
- Define your strategy: goals, target groups
- Gather information about your target groups
- Implement your strategy and monitor it
- Create Awareness and Behaviour Change towards sustainable transport!

Further reading

The references section lists the documents that have been already mentioned in this module. Other references that complement what is said here are the following:

GIZ

- SUTP resources: Technical documents, case studies, training documents and other resources <http://www.sutp.org/en/resources.html>
- Training document complementary to this module
- Transformative Urban Mobility Initiative: <http://transformative-mobility.org/#>
- SUTP/CAPSUT webinars: <http://capsut.org/resources/sutp-webinar/>

Gehl Architects / Gehl Institute

- A Mayor's Guide to Public Life (2017): <https://mayorsguide.gehl.institute.org/>
- Several publications: <https://issuu.com/gehlarchitects>

Marcos Rosa et al

- Handmade Urbanism: From Community Initiatives to Participatory Practices (2013): https://issuu.com/marcosrosa/docs/handmade_urbanism_pdf

Janette Sadik-Khan and Seth Solomonov

- StreetFight: Handbook for an Urban Revolution

Mark Lydon and Anthony Garcia

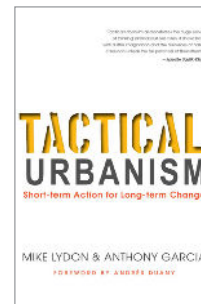
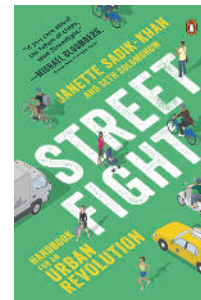
- Tactical Urbanism Materials and Design Guide: <http://tacticalurbanismguide.com/>
- Tactical Urbanism: Short-term Action for Long-term Change (2015)
- SUTP Webinar with Mark Lydon: <http://capsut.org/resources/sutp-webinar/>

Jane Jacobs

- The Death and Life of Great American Cities (1961)

Urb-i

- Before-After Urban Design pictures: ccurb-i.com/before-after



SUTP

Sustainable Urban Transport Project

SUTP – Sustainable Urban Transport Project – SUTP supports decision-makers worldwide to plan and to implement innovative and sustainable mobility solutions. SUTP offers a comprehensive knowledge platform, capacity development, hands-on advice and networking opportunities. Within the past 16 years, more than 5 000 decision-makers, planners

and students have benefited from our training offers. We've produced a rich library of Sourcebook Modules, Technical Documents, Case Studies, Factsheets, Policy Briefs and Reading Lists. All documents are accessible through our webpage, along with a comprehensive photo collection and a video channel. Be invited to use and distribute them!

<http://www.sutp.org>
<https://www.facebook.com/sustainableurbantransportproject>
https://twitter.com/_SUTP



Transformative Urban Mobility INITIATIVE

TUMI - The Transformative Urban Mobility Initiative enables leaders in developing countries and emerging economies to create sustainable urban mobility. It offers technical and financial support for innovative ideas. In TUMI the German Federal Ministry of Economic Cooperation and Development (BMZ) has brought together some of the world's leading institutions working on sustainable mobility with city networks and think tanks to implement projects on site

where they are needed most. Partners include ADB, CAF, WRI, ITDP, UN-Habitat, SLoCaT, ICLEI, GIZ, KfW and C40. A transition towards sustainable urban mobility requires a shift in policy making and investment decisions. TUMI will support projects, leadership development and career building for urban leaders, decision-makers, planners and students; ultimately connecting 1000 leaders worldwide. We believe in capacity building, mobilization of investments and supporting approaches on the ground as the most effective measures to follow the set goals and achieving a more sustainable urban future.

<http://transformative-mobility.org/>



German Partnership for Sustainable Mobility

Sustainable Mobility – Made in Germany

GPSM – German Partnership for Sustainable Mobility – The GPSM is serving as a guide for sustainable mobility and green logistics solutions from Germany. As a platform for exchanging

knowledge, expertise and experiences, GPSM supports the transformation towards sustainability in developing and emerging countries. More than 170 friends from academia, businesses, civil society and associations are participating in the network and are happy to share their knowledge.

<http://www.german-sustainable-mobility.de>
<https://www.facebook.com/germansustainablemobility>
<https://twitter.com/GermanMobility>



GIZ INTERNATIONAL FUEL PRICES

International Fuel Prices provide decision-makers with data on fuel prices on a global scale. GIZ, with its global network of projects in 135 countries, regional offices and representations in 64 developing countries, publishes a biennial study "International Fuel Prices"

on the global fuel sector since 1999. On an annual basis, we are convening fuel regulators to discuss appropriate pricing and taxation schemes for fuel prices.

<http://www.giz.de/fuelprices>
https://energypedia.info/wiki/International_Fuel_Prices

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