Division 44

Environment and Infrastructure

Training Course – 2nd edition:

Public awareness and behavior change in sustainable transport

gtz | Proyecto sectorial Servicio de Asesoría en Política de Transporte

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

Overview of the Sourcebook

Sustainable Transport: A Sourcebook for Policy-Makers in Developing Cities

What is the Sourcebook?

This *Sourcebook* on Sustainable Urban Transport addresses the key areas of a sustainable transport policy framework for a developing city. The *Sourcebook* consists of more than 20 modules.

Who is it for?

The *Sourcebook* is intended for policy-makers in developing cities, and their advisors. This target audience is reflected in the content, which provides policy tools appropriate for application in a range of developing cities.

How is it supposed to be used?

The *Sourcebook* can be used in a number of ways. It should be kept in one location, and the different modules provided to officials involved in urban transport. The *Sourcebook* can be easily adapted to fit a formal short course training event, or can serve as a guide for developing a curriculum or other training program in the area of urban transport. GTZ is elaborating training packages for selected modules, being available since October 2004.

What are some of the key features?

The key features of the *Sourcebook* include:

- A practical orientation, focusing on best practices in planning and regulation and, where possible, successful experience in developing cities.
- Contributors are leading experts in their fields.
- An attractive and easy-to-read, colour layout.
- Non-technical language (to the extent possible), with technical terms explained.
- Updates via the Internet.

How do I get a copy?

Please visit http://www.sutp.org or http://www.gtz.de/transport for details on how to order a copy. The *Sourcebook* is not sold for profit. Any charges imposed are only to cover the cost of printing and distribution. You may also order via transport@gtz.de.

Comments or feedback?

We would welcome any of your comments or suggestions, on any aspect of the *Sourcebook*, by e-mail to transport@gtz.de, or by surface mail to:

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Germany

Further modules and resources

Further modules are anticipated in the areas of *Financing Urban Transport* and *Benchmarking*. Additional resources are being developed, and an Urban Transport Photo CD-ROM is available.

Modules and contributors

Sourcebook Overview and Cross-cutting Issues of Urban Transport (GTZ)

Institutional and policy orientation

1a. *The Role of Transport in Urban Development Policy* (Enrique Peñalosa)
1b. *Urban Transport Institutions* (Richard Meakin)
1c. *Private Sector Participation in Urban Transport Infrastructure Provision* (Christopher Zegras, MIT)
1d. *Economic Instruments* (Manfred Breithaupt, GTZ)
1e. *Raising Public Awareness about Sustainable Urban Transport* (Karl Fjellstrom, GTZ)

Land use planning and demand management

2a. *Land Use Planning and Urban Transport* (Rudolf Petersen, Wuppertal Institute)
2b. *Mobility Management* (Todd Litman, VTPI)

Transit, walking and cycling

3a. *Mass Transit Options* (Lloyd Wright, University College London; Karl Fjellstrom, GTZ)
3b. *Bus Rapid Transit* (Lloyd Wright, University College London)
3c. *Bus Regulation & Planning* (Richard Meakin)
3d. *Preserving and Expanding the Role of Non-motorised Transport* (Walter Hook, ITDP)
3e. *Car-Free Development* (Lloyd Wright, University College London)

Vehicles and fuels

4a. *Cleaner Fuels and Vehicle Technologies* (Michael Walsh; Reinhard Kolke, Umweltbundesamt – UBA)
4b. *Inspection & Maintenance and Roadworthiness* (Reinhard Kolke, UBA)
4c. *Two- and Three-Wheelers* (Jitendra Shah, World Bank; N.V. Iyer, Bajaj Auto)
4d. *Natural Gas Vehicles* (MVV InnoTec)
4e. *Intelligent Transport Systems* (Phil Sayeg, TRA; Phil Charles, University of Queensland)
4f. *EcoDriving* (VTL; Manfred Breithaupt, Oliver Eberz, GTZ)

Environmental and health impacts

5a. *Air Quality Management* (Dietrich Schwela, World Health Organization)
5b. *Urban Road Safety* (Jacqueline Lacroix, DVR; David Silcock, GRSP)
5c. *Noise and its Abatement* (Civic Exchange Hong Kong; GTZ; UBA)

Resources

6. *Resources for Policy-makers* (GTZ)

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About the Author

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1 Introduction

1.1 Characteristics of this training course

This training course has been designed for people interested in developing a complete strategy of public awareness and behavior change in a specific population. It can be used both by people from the public sector (municipal governments, departments of transport, environment or others), or the private sector (civil society organizations, people interested in the topic).

The primary interest of this course is to guide the development of the different steps of a strategy of awareness and behavior change (ABC), which is often developed in an incomplete manner or whose potential could be more fully realized.

The course has been designed to emphasize the importance of awareness and behavior change of citizens in a sustainable transport project, considering that this component is often not integrated (or not sufficiently integrated) into large infrastructure projects. Usually these projects are not as successful as those that have included an ABC strategy for the public. The cost of an ABC strategy is usually small when compared to the total cost of a sustainable transport project.

This course is structured as follows: it begins by defining awareness and behavior change and their importance as related to parallel actions in sustainable transport (***chapter 2***). It goes on to describe the different groups that should be taken into account when devising an ABC strategy and the different types of information that they can receive (***chapter 3***). ***Chapter 4*** explains a series of information gathering techniques to get to know a population better, and ***chapter 5*** describes the different actions that can be taken to develop an effective strategy for awareness and behavioral change in the selected groups. ***Chapter 6*** describes the different tools available to disseminate the results of the results of the project. Finally, the course contains an exercise for developing an ABC strategy (***chapter 7***) and presents a list of resources for further information on these topics.

There are few documents that treat this topic as part of sustainable transport, or that consist of one document dedicated exclusively to this topic. Some documents about transport in general include chapters about communications, awareness, or promotion, or short documents (flyers, pamphlets) on the topic. This document is an effort to provide information about ABC strategies in a comprehensive, detailed manner.

For this reason, the information in this course has been compiled from information from various sources, especially the documents about public awareness campaigns and the environment and promotion of physical activity, whose advances are significant and whose relationship to sustainable transport is quite direct. This document uses theories of human behavior and environmental psychology that provide a theoretical basis that is more solid than what is written here (although this book does not go into detail on these topics). Lastly, the book takes into account aspects of social marketing and environmental communication. Chapter 8 presents the various resources consulted for each area of specialization.

It is also important to emphasize that almost all of the information in this training course is base don strategies that have worked in ***cities in developing countries***. Although the book does contain some examples from developed countries, these are not emphasized because they are not always applicable in developing countries. The reference section presents a list of many of these resources from developed countries.

1.2 Scope of a strategy

Following what is stated above, the strategies that are proposed here describe how to generate awareness and change behavior related to public transport. The book emphasizes the present and potential use of sustainable transport modes by citizens, and the political attitude that the population in general (and decisionmakers in particular) hold about problems regarding urban transport, as well as their opinions regarding sustainable transport solutions (walking, riding bicycles and using public transport).

"In some situations it is necessary to invest up to 80% of the budget in awareness activities. Without this component, a transport project can fail entirely." Axel Friedrich.

With the strategies that are formulated here, a change can be effected regarding the perception of environmental problems of a city and their possible causes (concentrating on those problems related to sustainable transport), the social inequalities caused by transport and the economic problems of a city and their eventual improvement through sustainable transport policies. Often, the problem behind a transport system is really the way it is conceived, more than the financial resources available or the technical capacity of the members of a department of transport.

1.3 Governments and communities working together

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.

The government should be in charge of the policies that should 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.

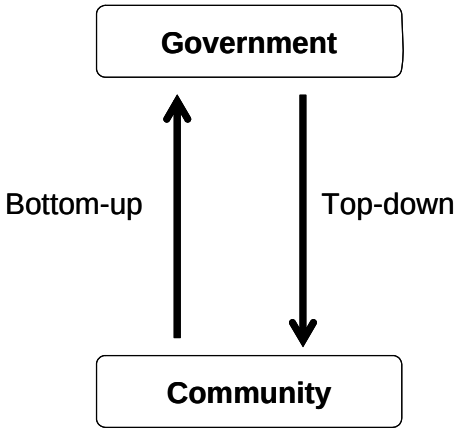


Figure 1. Two ways of approaching a policy issue, in this case ABC for sustainable transport.

Nevertheless, this does not happen frequently enough to focus this course strictly on municipalities. On other occasions, it is the civil society that has to take the initiative and seek to change the transport behavior patterns (including policies) of a city. This course 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 1).

It is also important to emphasize that the ABC initiatives in sustainable transport can be different among cities in developed countries and developing countries, given that there cultural, social, economic and urbansitic differences that make each city unique. That is why the specific analysis of each situation and the designing of activities and messages that are appropriate for each city are so important.

In an ideal situation, both the city and the community contribute to generating a change. This can be seen when the government works with organizations from civil society, forming working groups to achieve coherent strategies. Communication between these two groups is always productive, because the government learns of civil society's opinions in a direct manner, and because the civil society can complement the government's activities, giving them greater impact.

1.4 Activism vs. diplomacy

It should be clear that there are various ways to conduct public awareness activities. These can be seen as a continuum where activism is on one extreme and diplomacy is on the other. On the side of "activism," activities are much less formal and try to get the greatest public exposure. When you analyze awareness from the "diplomatic" side, activities are much more formal and involve a direct contact with decisionmakers but involve less participation. Nevertheless, these two types of activities should be structured and thought out with equal care. In some cases, one of these approaches will be better than the other, but neither is more effective or better structured. This depends on the people that are behind each type of activity.

Figure 2. An organization from Bogotá is blocking one of the most important streets in the city to protest the high levels of contamination from transport. Source: Por el País que Queremos.

Figure 3. The Brazilian group Transporte Ativo develops various activities to promote the use of bicycles, including generating changes in the regulation of transport of their cities. Source: Jose Lobo, Transporte Ativo.

In relation to this concept, normally the government is expected to be more "diplomatic" and the civil society more "activist." However, if these tow actors can act in synergy, perhaps purely activist actions are not necessary, and measures that are more formal and diplomatic are preferable. If both groups work together, this will make it easier to carry out actions of any kind with more coherent results.

1.5 Degree of interventions

Another key topic when developing ABC strategies is to what kind of messages you should transmit, and how complex those messages should be. For example, in some contexts it will be impossible to implement an activity like "bike to work" if the population has little knowledge of bicycle riding or doesn't have the economic resource to buy a bike. Similarly, a massive approach to non motorized transport can not be implemented of there is no medium or high quality infrastructure for cyclists or pedestrians. Once again, the interventions should correspond to the context they are being applied to, meaning the level of knowledge of the population and their existing physical resources (personal or citywide).

Figure 4. The state of transport politics in Thailand makes it difficult to carry out large scale sustainable transport events. In the photo, a small pedestrianized street in Chiang Mai on Saturday afternoons. Source: Carlos F. Pardo.

An ABC strategy can prevent this by consulting a population and getting to know its levels of awareness and action regarding sustainable transport (described in Chapter 3). When implementing the specific activities of an ABC strategy it is important to take special care regarding timing and carefully define when it is appropriate to transmit a message or propose a specific activity. This is described in greater depth in Chapter 7, which includes an exercise to develop an ABC strategy.

Figure 5. In Bogotá, 30 years after the first event of Sunday cycling, it is possible to close 121 kilometers of public roads for non motorized transport. Source: Carlos F. Pardo

2 What is awareness and behavior change and why are they important?

2.1 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.

It is important to note that, strangely, although somebody has been made aware of a topic (meaning they understand it and know how they should act) does not mean that this person will act according to what he or she has learned. It is necessary to apply behavior change strategies that make the person, in our case, use sustainable transport. This means that raising awareness is one step, but not the only one, to achieve changes in the public's habits regarding sustainable transport.

2.2 What is behavior change?

"The search for a sustainable planet is not possible without the extension of pro-environmental patterns in its inhabitants, given the wasteful lifestyles of the present historical moment"

Raymond De Young. "Changing behavior and making it stick"

Behavior change is when a person in fact carries out the action that one wishes to promote. In the case of this document, 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. It is the complement of raising awareness, because it converts the understanding of sustainable transport to effective action. Because of this, this document emphasizes both aspects in developing a complete strategy.

Figure 6. A Dutch city where the public is completely sensitized to riding bicycles, even in an extreme situation. Source: Oscar Díaz.

Greencom®, an organization that promotes changes in environmental behavior, affirms that it is even necessary to concentrate on the behavior of individuals, given that the behaviors have observable consequences and because raising awareness about an environmental problem will not necessarily solve that problem (although a behavior change will). Appropriate behavior toward a problem is what will bring about a real change. Nevertheless, this document shows the need to generate awareness as well as behavior changes among citizens.

"You learn about a topic, but you also learns to learn, analyze and evaluate what you are learning, to be able to apply it to a community or territory" Lake Sagaris

2.3 Parallel Activities important to complement ABC

Although awareness and sustainable behavior regarding transportation are important factors when implementing a successful transport policy, it is also necessary to generate other parallel activities that form part of a complete urban intervention, especially in developing cities.

"The instruments that can be used to improve urban transport should consider the main aspects that govern the behavior of automobile users" Luis Alberto Noriega y Jaime Waisman

Figure 7 presents the three Basic components of a successful implementation of sustainable transport, which comprises a clear transport policy, an infrastructure intervention and respective education or promotion (ABC).

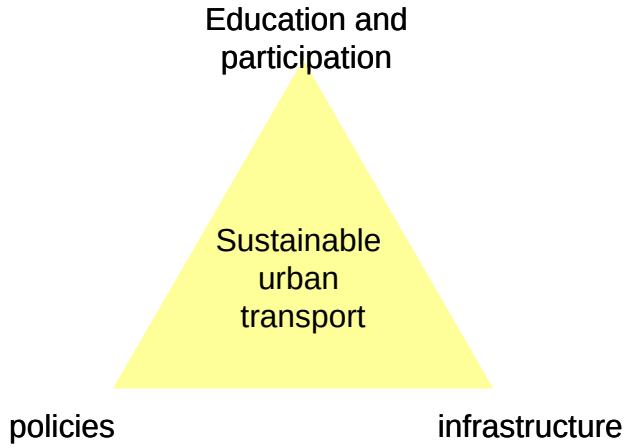


Figure 7. Three Basic components of sustainable transport: policy support, infrastructure development and education-promotion (ABC)

"Holding one or even 12 bicycle rides or car-free days means nothing if the public sees it as something an isolated and a 'special' thing". Aimee Gauthier

It is important to recognize that a transport policy by itself will not be effective without a significant intervention on infrastructure. At the same time, such interventions are made stronger by carrying out strategies of public awareness and behavior change. Finally, it is necessary to obtain the largest possible participation to effect comprehensive processes of change. A poignant example of the necessity to formulate a clear strategy of sustainable transport is that of Lima, Peru in the 1990's. Although a preliminary policy of sustainable transport was developed and bikeways were built, the lack of a plan to promote cycling meant that the infrastructure was underutilized, as seen in Figure 8. However, this document includes information on the work that is presently being done to encourage bicycle and bikeway use in Lima.

"If they continue the way they are going, as appears to be the case, high gasoline prices will make a large amount of people (that never would have before) question their blind faith in the automobile." Dr. Howard Goodell.

It is also important to emphasize that there are other factors that that directly influence the use of one transport mode or another. As the quote above shows, gasoline prices can be an "ally" to change the attitudes and behaviors regarding the use of an unsustainable transport mode such as the automobile. In these cases, it is very appropriate to present other, less costly (and more sustainable) transport options, such as the bicycle and mass transit.

Figure 8. The photo above presents the bikeways of Lima (Peru), 8 years alter their construction in 1994. The lack of a clear promotional strategy in 1994 made it unlikely that the public would use the bikeways, despite the presence of adequate infrastructure in the beginning. The photo shows how the bikeways have been covered in dust because of lack of use (and maintenance). Source: Fundación Ciudad Humana, GTZ Transport Photo CD.

2.4 Influencing the debate

The interesting thing about generating an ABC strategy in a city is that it can foment the creation of policies and infrastructure that prioritize sustainable transport, and can lead to the formation of strategic alliances among public functionaries evolved in the topic.

One of the strengths of awareness is that it can change the opinion of a high-level policy maker in the public sector, who could change transport policy without necessarily changing his own behavior. Only an attitude change through awareness activities could make the mayor or transport director of a city change toward a more sustainable policy, directed to human beings, and centered in non motorized and public transport above automobiles. Another way to achieve this is by generating "social demand" from the public toward sustainable transport.

Figure 9. The opposite example: An advertisement in Istanbul announces the construction of a new vehicle bridge as an important advance in its transport policy. Source: Lee Schipper

On the other hand, an ABC can also provide more tools to governments and technicians to become familiar with issues related to sustainable transport.

2.5 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 compromise to generate a component of sustainable transport. The topics could be easily adapted to the modules of the Text of Reference 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 decisionmakers, 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 behavior 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).

3 Groups of the population

3.1 What is a target group

One of the ways of defining groups within a population is according to people's work or private interests. This chapter describes the groups according to their activity level in transport, but the following chapter goes into greater depth defining the groups of actors as a strategy to obtain information about the population.

Figure 10. All of these people are target groups in transport, as are many others. Source for all of the images: Carlos F. Pardo.

3.2 Activity levels

The important groups in the general public when thinking of disseminating information regarding sustainable transport can be divided into groups according to levels of "activity" (from the most active to the most passive) in sustainable transport. Figure 11 presents an image of these groups.

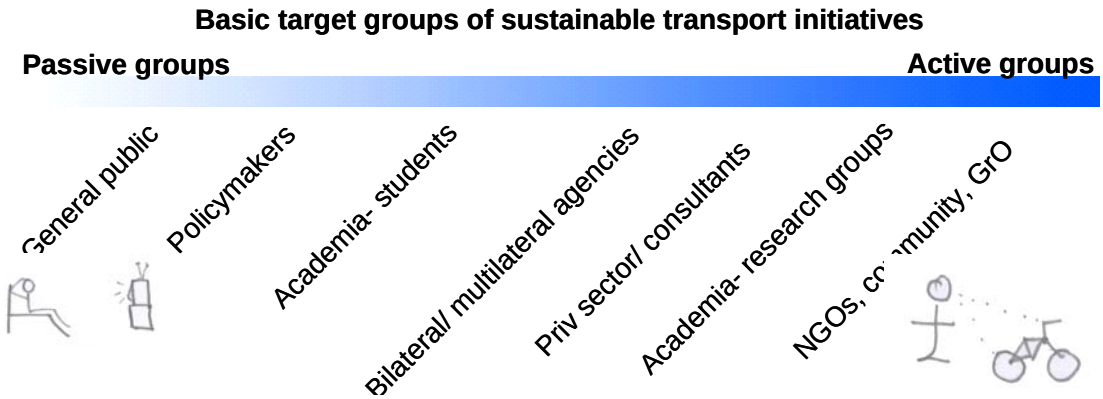


Figure 11. Basic groups of the population according to the level of activity regarding sustainable transport. Created by Carlos F. Pardo

According to this diagram, the ***general public*** (that has not been a part of an ABC strategy), even though it might use public transport on a daily basis, does not have a direct relation with the information relevant to sustainable transport. This group is shown as the least active (and most passive) regarding sustainable transport. To clarify, a member of the general public whose awareness has not been raised might take a buss, a bicycle, or an automobile without thinking of the environmental, social, or economic consequences of the action that he or she is taking. Transport is simply something that is a part of his or her daily life, and he or she does not think of the consequences of using one transport mode or another.

A key distinction of this group is that it can involve individual or collective actions, given that an individual makes decisions or acts alone regarding transport, but there can also be group actions. In any case, more critical and complex reflections can be constructed in these collective spaces.

On the other hand, ***decisionmakers,*** although their awareness might not be raised, will eventually approve or reject transport policies (sustainable or not) for their cities. A mayor can decide which methods of transport are going to take priority in a city, with or without knowledge of its consequences. This makes them a bit more active than the general public.

Regarding the university ***students*** that study topics related to transport (architecture, urbanism, transport engineering, physical education, health, nursing, etc), these might have a captive interest in the topic of transport, which in some cases has more to do with the necessity of having to study the topic than their own initiative. In the cases of physical education and health, transport appears as a parallel topic but with important repercussions for health.

The ***private companies*** are another group that has a certain degree of activity regarding sustainable transport, but in fact these interests are more economic than social. Companies that manufacture sustainable transport vehicles can be included in this group, as well as those that provide intelligent transport systems, or fuels, among many others.

For their part, ***multilateral agencies*** have as their general goal the improvement of development level of a country, and one of the main topics they must deal with is transport. Their search for solutions for other countries makes them have greater interest and activity in this continuum.

The other academic group that has a stronger interest and is more active regarding sustainable transport is made of academic ***investigators***. This group actively searches for information to test and generate new knowledge about. They are characterized by the interest in constant renovation and their contribution to knowledge with greater information and analysis.

Regarding sustainable transport, the group with the greatest activity, understanding and outreach capability are ***Non-Governmental Organizations (NGOs)***, as well as the ***community*** and ***Community-Based Organizations (CBOs)***. These groups, like the academics, are constantly looking for information on sustainable transport (or related topics), but their aim is not to acquire knowledge but to generate specific actions and effect behavior changes in the population. The dynamic of these three types of organizations is different, but they have very similar goals and makeup.

3.3 Types of information

Another important categorization to complement these groups is the ***type of information*** that is presented about sustainable transport and its level of attention required (this will be extensively addressed in the chapter on communication). The most important forms are described in Figure 8 below, from those that require the least attention to those that demand the most attention from the audience.

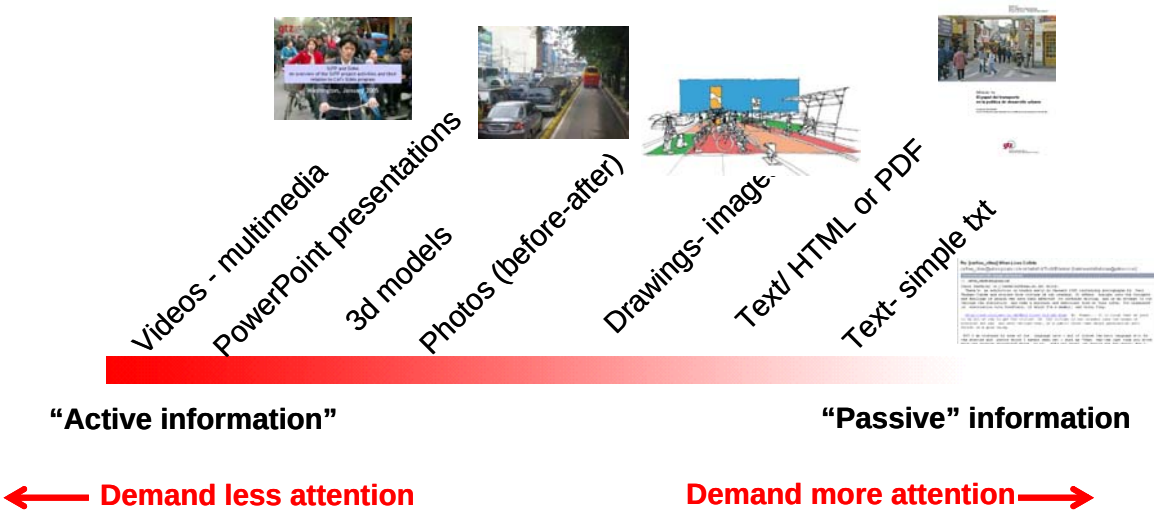


Figure 12. Types of information according to level of activity and attention required. Created by Carlos F. Pardo

The type of information that requires the least active attention from the public is ***videos and multimedia***. This information captures the attention of a person with greater ease because it has movement as well as sound and does not demand a great amount of activity from the person perceiving it.

Another tool that is widely used in the World of information are ***visual presentations*** Dutch as Microsoft ® PowerPoint ®, which can be highly dynamic with much movement, with a strong graphic element and specific, easily understood information. These can complement a presentation in various contexts, are easy to edit and adapt. Other types of presentations include Macromedia ® Flash ®, which is also highly dynamic but is more complex in terms of editing.

Figure 13. PowerPoint presentations are a versatile audiovisual tool

The third tool to transmit information in sustainable transport is ***three dimensional models***. For example, a Buss Rapid Transit or bikeways project could be presented through a three dimensional simulator of the routes, the vehicles, and their general functions. These also capture the attention of an audience easily.

Photographs are another way to present information that has the advantage of being real examples of a specific situation in transport (see figure 10). However, the level of attention they require is greater than that of the dynamic information contained in 3-D models or videos.

Figure 14. Here is a clear image showing how mass transit can occupy less space and transport the same amount of people than a much larger space for private motorized transport. Source: Carlos F. Pardo

A third type of information is the ***drawings*** that normally present a future transport situation en a city where sustainable transport projects have not been implemented. These require a level of attention similar to that of a photo, but are not as realistic.

The next large group of information is base don ***text*** and is static. The advantage of this type of information is that it can communicate more complex information, and in ***HTML*** formats (such as webpages) it can be more dynamic than information that is presented only as ***simple text***. Clearly, this type of information requires a great deal of attention form its audience. That is why it is the most "passive" of all types of information in Figure 8.

3.4 What to whom

Based on what is described above about the groups of the public (according to their level of activity) and the type of information available (according to the attention they demand), a logical schematic that integrates the way information must be transmitted according to groups, as presented in Figure 15.

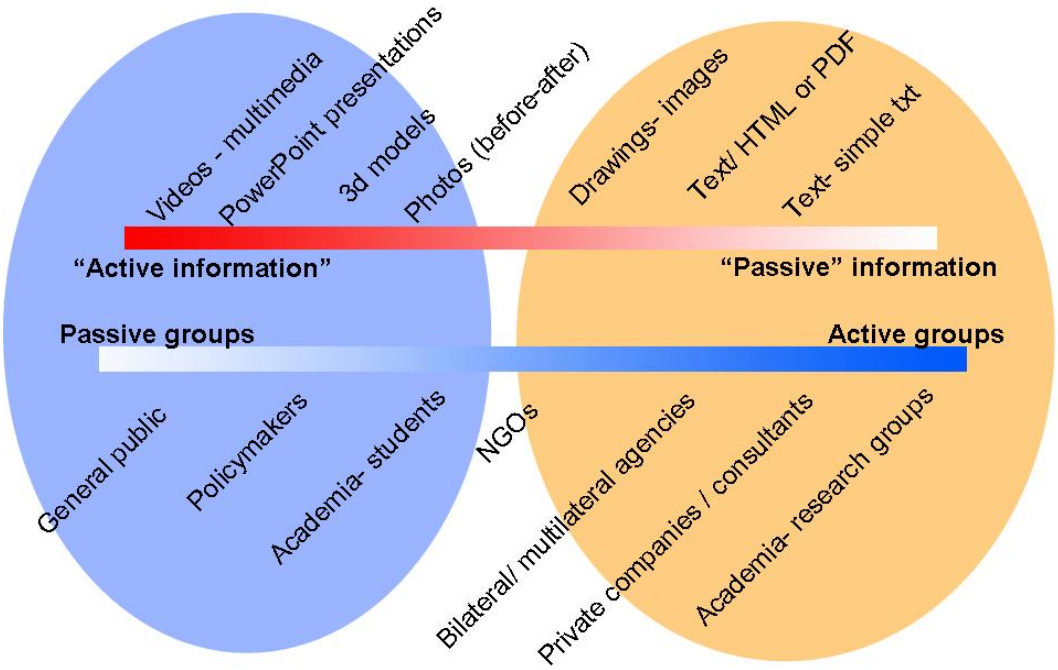


Figure 15. Types of information according to groups. Active information should be presented to passive groups, and passive information should be presented to active groups. Created by Carlos F. Pardo

Basically, the information above can be presented in two points:

- Passive information (simple text, HTML) can be presented to active groups (investigators, NGOs), given that they have a strong interest and do not require active information to be able to concentrate on the topic. Besides, they encounter more meaningful information that is more useful to them in textual forms, given that active information is not as complex and might appear repetitive to them. This can be seen in Figure 16.

Figure 16. Active group with passive information.

- Active information (videos, multimedia, and presentations) can be presented to passive groups (the general public, decisionmakers) so that these can understand the basic information of an initiative without requiring a large effort to pay attention. Figure 17 shows this.

Figure 17. Passive group with active information.

What was just described is a first step toward the development of a strategy of awareness and behavior change of a specific population, according to the groups as they are generally defined. However, the following chapters will provide specific tools to determine the level of awareness of a population regarding transport as well as its attitudes and practices regarding transport, as well as develop a clear and effective strategy in key groups of the populating and behavior change strategies that achieve lasting results.

4 Know your population: Basic information to gather

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.

In some cases, ABC strategies are designed without knowing the audience in depth. The result is awareness strategies that are taken out of other contexts and applied to different ones, with results that are different (and in some case contrary) to those that were awaited. On the other hand, it is also important to note that typical awareness strategies and/or behavior change normally used have been developed in the context of developed countries. This makes a strategy that is developed without knowing the population even weaker.

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

4.1 Stakeholder analysis

Stakeholder analysis is a technique by which an organization o 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 18. 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:

- ***They are permanent***: 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).

"It has been shown that stakeholder analysis for the development of specific policies generates greater support for their implementation."

Procedure of stakeholder analysis

When beginning to develop stakeholder analyses, the following procedure should be carried out:

1. ***Identify*** the stakeholders: this should be done based on the nature of the issue (in this case, sustainable transport), and the groups that could potentially be affected by the decisions that are made. A general categorization is that which was made by Simioni (2003) according to "structural" and "functional" actors, as is shown in Figure 19, where *structural* actors are those that are "related directly to the evolution and solving" of the problem at hand (sustainable transport), and the *functional* actors are those that have a role of "acting as a nexus between structural actors and environments (in our case, the environment of urban transport with the state and civil society). These actors have a job whose goal is action on transport as such, while functional actors are those that catalyze reactions, opinions and mobilize people.

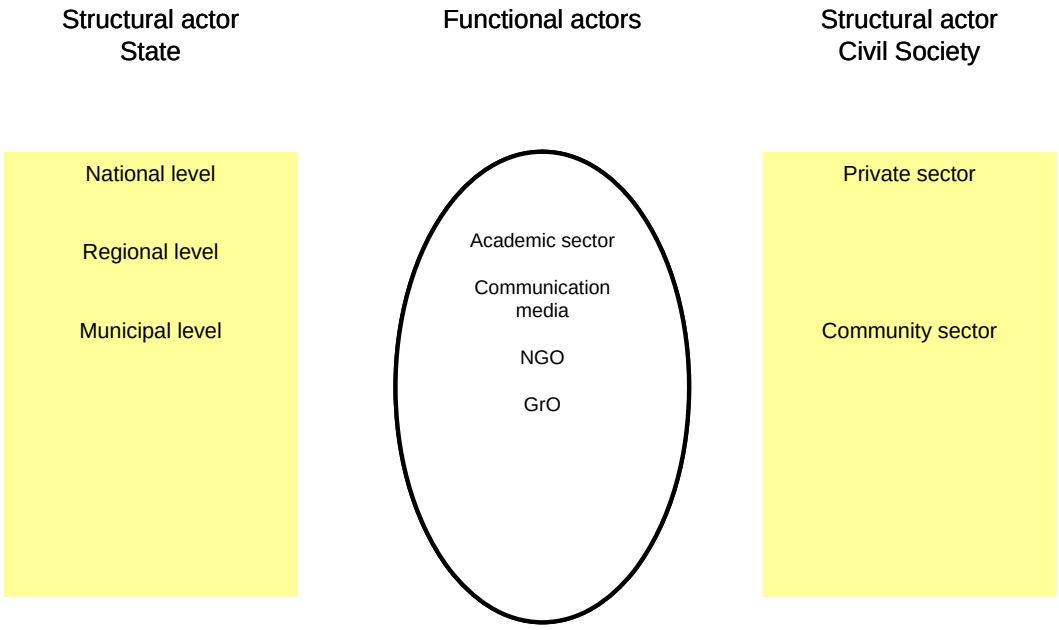


Figure 19. Categorization of key actors (adapted and elaborated by Simioni, 2003 for contamination).

These groups that are typically related to the problems mentioned here are the population, the public sector, the private sector, civil society organizations, religious organizations, political groups, and external organizations (bilateral agencies, etc). Some of these fields (represented by groups) that are related to transport problems are listed below:

- ***Health sector***: Transport is a sector related to health for various reasons. First, road safety is a health aspect that that should be solved by acting directly on the problem of transport and its users. Besides, the use of non motorized transport and public transport implies a higher level of physical activity than the use of private

automobiles. Finally, the emissions form motors pose a great risk to public health in terms of respiratory illnesses. In this way, the health sector should definitely be involved in a transport project, and in most cases should be involved in initiatives of public awareness.

- ***Environmental sector***: similar to the health sector, the environmental sector is a key group that should be taken into account when conducting a stakeholder analysis, given that transport is one of the largest contributors to the greenhouse gas emissions and other pollutants in a city.
- ***Department of transport/transit***: The local entity responsible for transport should obviously have a voice and stake in any problem or initiative related to transport.
- ***The general public***: The entire population is the basic element behind the improvement (or worsening) of a transport situation, and the potential beneficiary of the improvements. These can usually be divided in users of each transport mode: automobile users, bicycle users, public transport users, and people who walk to work or school.
- ***Drivers (public transport)***: this group is related to the transport sector through its work and has a large influence on any transport problem and its solution. Their contribution to stakeholder analysis is crucial.
- ***Transport operators***: Although these are sometimes constituted by drivers and vehicle owners, the companies in charge of operating in transport represent a group of great strength and political pressure. In the case of a system change (for example, introducing a buss rapid transport system), this is the group that might be the most effected, and/or they might constitute a considerable portion of the future operators.
- ***Labor unions***: organized groups of workers (in various sectors) can give very useful opinions regarding their work conditions and their relationship with day-to-day transport.
- ***Automotive industry***: Many economic interests are involved in the transport sector, especially form the automotive industry (which is sometimes the sector whose production one is trying to reduce). Its inclusion in the development of a good ABC strategy is crucial to, because this sector could be the quickest to generate measures to counter these efforts. The opinion and eventual collaboration of the automotive industry is key to developing an effective ABC strategy.
- ***Non-motorized transport industry:*** This is another industry whose point of view should be heard, and that should be actively integrated in any discussion on sustainable transport is that of non-motorized transport, or the bicycle industry. Often this group is not included in discussions and its resources and mandate to generate more favorable opinions toward and promote sustainable transport can give strength to an ABC strategy.
- ***The private sector in general:*** many groups in the private sector will be in favor or against the measures in an ABC strategy of sustainable transport. One could say that the largest group is made up business in general. Some businesses, such as those that provide private parking in the city, might have a strong interest in providing a better service to sustainable transport modes, since these would be a new client segment with which they could work.

2. ***Know the position*** of the stakeholders: The stakeholders can have any position regarding public transport or a specific mode (bicycles, public transport, etc). For this reason, you should have knowledge of this position as seen in Figure 20, which goes from a person who completely supports sustainable transport to a person who is an opponent of bicycles, public transport, or pedestrian areas. It is as important to know the reported position of each stakeholder (the position that it/they report) as the position that is perceived by other stakeholders.

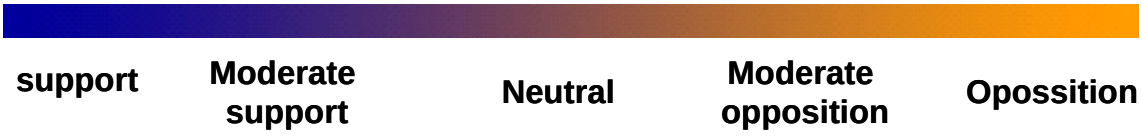


Figure 20. Spectrum of the possible position of stakeholders. Adapted from LACHSR.org

3. Investigate their ***interests***: These interests can be direct or indirect. Direct interests are related to those that have a direct relationship to sustainable transport. For example, a person from the bicycle industry can have commercial interests toward a policy of bikeways for the whole city. In addition to these interests the suggestions that each stakeholder about sustainable transport or the specific policies can be included. On the other hand, there are also indirect interests that could be related to positive consequences of the use of one transport mode or another (for example, the use of the bicycle to improve one's figure, health, etc.), or the problems that unsustainable transport modes generate.
4. Know their ***resources and mandates***: the resources that a stakeholder controls affect the power that a group has to generate the activities proposed (encourage the use of bicycles, etc.) or to hinder their development (a stakeholder from the automotive sector could generate other incentives for automobile use, or a publicity campaign against the one developed by the ABC strategy). These resources can be financial or non-financial (including opinions, political influence or voting in favor of or against an initiative). Mandates refer to the formal authority that an institution has over transport. For example, a department of transport usually has an important mandate over decisions that are made on that topic, while the industry does not have such a strong mandate. Possibilities that a group or actor has to take advantage of a situation can be included within these mandates. For example, a business might have more clients if it promotes the use of the bicycle to save parking spaces.
5. Understand the ***perceived problems*** of sustainable transport: This refers to the specific problems or the negative conditions of one policy or another regarding sustainable transport (bikeways, mass transit, and pedestrianization). In the case of the development of a system like Buss Rapid Transport, you can expect the public to perceive that there will be more congestion because one traffic lane will be dedicated to the system.

The basic results of a stakeholder analysis are registered in a table such as Table 1. A table created for a project in Palmira is presented in Table 2 (this table does not include on of the columns described here).

Table 1. Basic table de develop a stakeholder analysis

Groups (not individuals)	Position	Interests	Resources and mandates	Perceived problems
Group 1				
Group 2				
Etc				

With this tool, it is possible to know a large amount of interests, resources and mandates regarding public transport, non-motorized transport encouraging the use of one mode or another, and the implementation of specific changes in the city. After analyzing what the stakeholders have said, it should be possible to indicate the changes in the practices and attitudes to develop, and you can begin to formulate a coherent ABC strategy. You can also begin to analyze possible alliances regarding the problem and how to solve them, as well as the different power structures developed in the specific context that has developed. This should take into account the measures that will be taken the population as such as well as the organizations and social groups among others. The analysis can also show the changes desired from the point of view of a decisionmaker, the potential resources that could be available for the stakeholders, and which other contributions are necessary to improve a situation. The chapter on implementation of an ABC strategy will further explain this topic.

Table 2. Study of a case of improving public transport in Palmira. Source: IADB- Logical framework course.

Group	*Interests*	*Resources and Mandates*	*Perceived problems*
Passengers	• Have a low cost, reliable transport system	***R:*** intention to pay for a reliable transport system with busses	• Unreliable buss transport system • Drivers do not drive with care • Accidents occur frequently • Passengers are frequently injured • Vehicles break down frequently • Drivers are rude
Non passengers	• Congestion reduction	***R:*** Some intention to use busses if they are reliable	• Frequent traffic jams
Driver's labor union	• Better work conditions for buss drivers	***R:*** Strong influence of buss drivers, 100 % membership ***M:*** To represent the interests of its members in collective negotiations	• Low salaries Long work hours • Vehicles in bad condition • Streets and highways in bad condition
Public buss company	• Provide an essential, safe and efficient public service	***R***: Buss fleet ***R***: Operating budgets, including subsidies M: Provide an essential, safe and efficient public service	• The buss fleet is old • Busses are badly maintained • Tariffs only cover 75% of the operating costs • Demand is decreasing • Many passenger complaints
Department of public works	• Improve the roads in Palmira	***R***: Annual operating budget of the city ***M:*** Build and maintain adequate streets in the city of Palmira (including outer neighborhoods)	• The roads are in bad condition • The budget is insufficient • Traffic congestion is increasing
Mayor of Palmira	• Have a reliable and low cost public transport system • Reduce congestion	***R***: Has popular support ***R***: Has veto power over the city council ***M***: Serve the interests of the city ***M:*** Serve as executive and manager of the city	• Traffic congestion is increasing • Many passengers complain about the public transport system
City Council of Palmira	• Decrease congestion • Have a reliable transport system	***R:*** Approve and oversee the yearly budget of Palmira ***M***: Serve the interests of the residents of Palmira ***M***: Make the final decision about projects that will be financed in Palmira	• Increased congestion

4.2 Focus groups

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 group interview 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 science

professionals and have experience in these types of investigation methods to obtain optimal results.

Procedure of an interview of a focus group

The basic procedure of a focus group is as follows:

4.2.1.1 Participants

The people that participate in the focus group should be selected according to clear criteria, and could come from groups that are similar to those described in the section on stakeholder analysis. Those that organize the sessions will consider conducting many or few focus groups (this usually is determined by the time and budget available for the focus group). Ideally, you would have one focus group for each target group. When inviting the participants, you should give them a brief but clear description of the intention of the focus group interview (for example, to learn the opinions of the group about transport in the city).

4.2.1.2 Beginning

The focus group interview begins by establishing a rapport, where the moderators make various general comments to "break the ice" among the participants. Next, each participant presents themselves, stating their profession and the intention or expectation that they have regarding the meeting according to what they have been told.

In this phase of the interview, the moderators explain the objectives, what the information will be used for, where the information will go, and that the data gathered will remain confidential. In the case of sustainable transport, moderators can mention infrastructure, policy or ABC projects that are being designed for the city, and the necessity of learning the opinions regarding these projects to modify them according to their points of view.

Moderators will also give instructions on how the interview will be carried out, and that it will be recorded for analysis. Moderators should emphasize that participants should openly express their opinions, and that they do not expect expert opinions from the participants. The main objective of the meeting is an informal conversation on the topic.

4.2.1.3 Development of the session

The focus group interview begins by treating general and neutral topics that are not directly related to transport or the projects that will be explored in the majority of the interview. The session can begin with a conversation on urban development and the city government, and in this way begin to introduce the topic of transport policy, the activities being carried out and the problems that people are having related to the topic.

Figure 21. Focus group interview developed in Bangkok to study the improvement of pedestrian areas in Rattanakosin. Source: UNESCAP TTD.

At this point, the moderators should steer the conversation toward the topics that will be researched during the session. Box 1 shows some possible topics that can be addressed in a focus group, and a guide to presenting the questions during an interview of this kind. Important to a focus group is that the moderators should constantly direct the conversation toward the pertinent topics, and direct the changes from one topic to another, encourage all of the participants to speak, and very importantly, summarize the opinions at the end of each section before continuing to the next topic.

Box 1. Guide to questions for a focus group

(Adapted from Bonilla and Rodriguez, 1998)

- Short questions are recommended
- The questions should be clear (not use confusing words, not used closed questions (that can be answered by "yes" or "no")
- Explain a topic when it is not very clear for participants
- Ask about the participants' personal experiences
- Do not assume that people agree or disagree. Ask the question directly.

Possible topics for questions about sustainable transport

- Factor they perceive to be creating traffic congestion in the city
- Personal experiences in distinct transport modes
- Their opinion about each transport mode (public, bicycles, pedestrian zones, automobiles)
- How transport could be improved in a city
- Who is responsible for transport improvements (citizens, government, etc.))
- What it would take to get them to change from the mode they most frequently use to using a bicycle, public transport, etc.
- How they perceive specific groups (women, people in business attire, etc.) on a bike or a bus or another mode
- In general, what information they have regarding sustainable transport

4.2.1.4 Ending the session

When nearing the end of the session, you should indicate this to the participants, and give them a moment to ask questions and make observations. Moderators should thank the participants, and if a further interview is programmed, this should be mentioned before closing the session. A brief summary is also useful at this point.

4.2.1.5 Information analysis

After the first meeting, the data gathered from the participants should be analyzed and categorized, and the key points should be identified (this is usually called the *discourse analysis*). This information will be the basis of an ABC strategy that will be developed. Graphs such as the one presented in Figure 22 can also be useful.

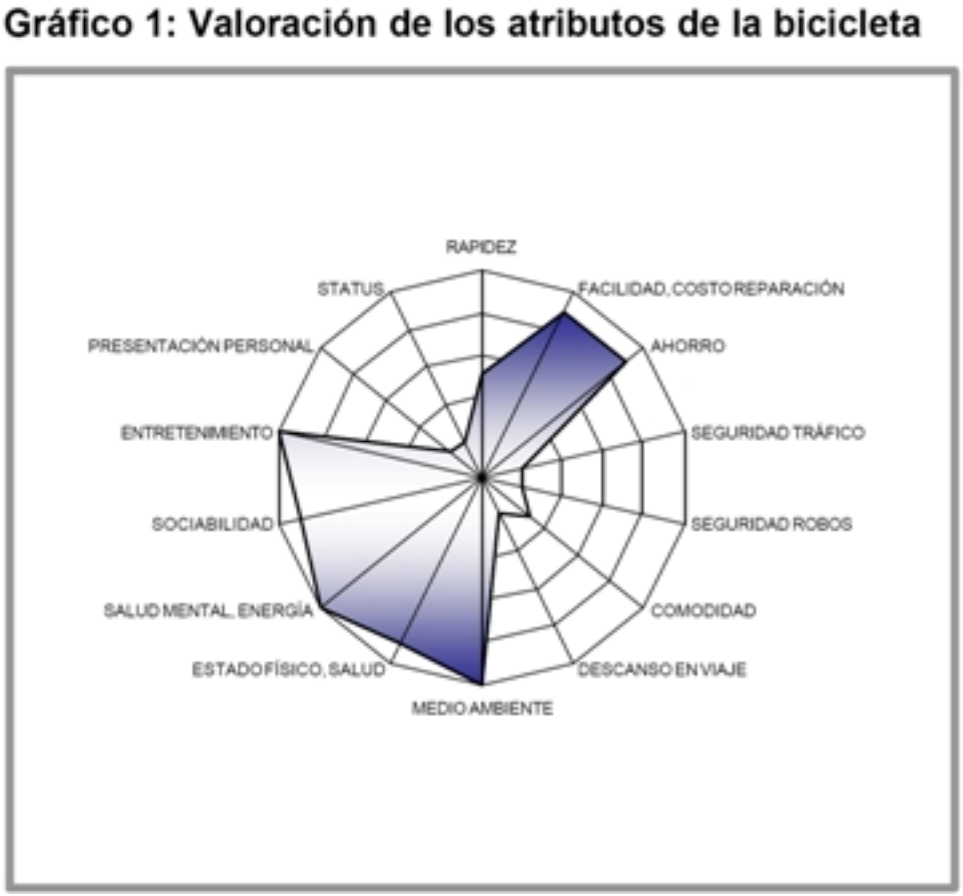


Figure 22. One of the results of a focus group developed in Lima, Peru about perceptions, attitudes, and practices regarding sustainable transport in the city. Source: FONAM, 2002

Spatial setup for the session

The focus group should ideally be conducted in a closed space with windows that can be opened. A round table is crucial; if none is available, you can place seats in a circle and speak without a table. The circular setup of the group is designed to equalize relations and facilitate a conversation between any group member. The group members that will investigate the topics should distribute themselves among the group (if there are six people and there are three investigators, these should sit with two people between each). Genders should also be distributed evenly (people should sit "boy-girl boy-girl," as in Figure 23).

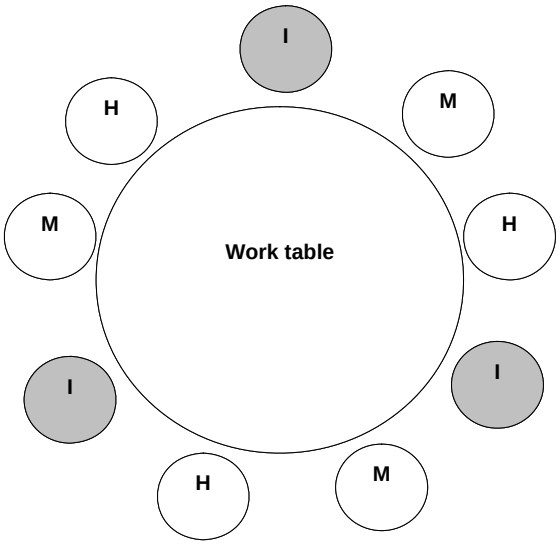


Figure 23. Spatial setup of investigators and focus group participants (I= investigator, H= man M= woman)

Box 2. Techniques to manage a focus group

(Adapted from Bonilla and Rodriguez, 1998)

Clarify: explain and repeat questions to go into depth on a topic.

Substitute: change the questions by substituting words, without changing their meaning.

Reorient: use answers of the participants to ask others questions, calling the participants by their names.

Neutralize: avoid visual contact with dominating participants, encouraging more participation from others.

Induce altruism: the moderator should admit knowing nothing about the topic and emphasize the importance of gathering opinions to learn more about the topic in this context.

Flatter the expert: if there happen to be specialists on the topic among the participants, carefully explain the objective and procedure of the interview so that the expert feels that his/her knowledge is accounted for.

A note regarding focus groups: the information provided prior is only a description of a focus group. These should be developed by professionals with experience in this field, given that they a considerably complex activity that require a complete understanding of their working and especially of their evaluation.

4.3 Observation

Observation is one of the research methods that is least popular but that could have very interesting results when trying to know a population. This method can be an effective way to learn of the behavior of a population in a specific context and has the advantage of being able to register this behavior 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 ANBC strategy, observation

can be used to know the problems of behavior 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 behavior of a driver regarding compliance of traffic laws (for example, respecting pedestrian crossings). With this information one can learn of the attitudes and behaviors 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 behavior 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.

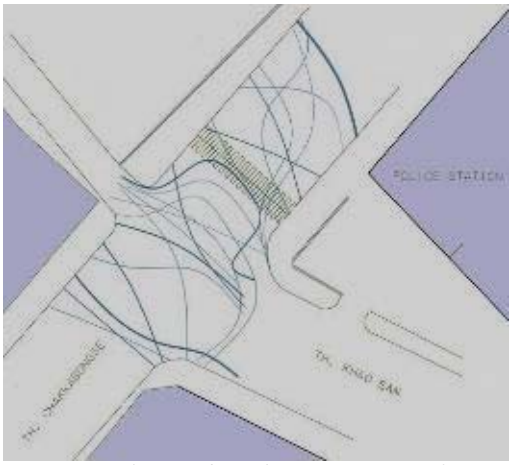


Figure 24. The use of an observation: Desire lines in a study of pedestrians of Khao San (Bangkok). Source: Michael King.

Procedure of an observation

There are many types of observations, and this document will examine observations that provide quantifiable data and that have pre-established categories. The steps to develop an observation are as follows:

1. Define the ***topic to be observed***: in this phase you should define if infractions of traffic laws or the behavior of specific groups will be observed or
2. ***Define the specific behaviors*** that will be observed: in this phase all of the behaviors that you want to observe should be defined. For example, drivers' behavior around a stop sign in an intersection where many traffic accidents occur can be observed.

Figure 25. Drivers in Bangkok are often difficult to educate. In the photo, a tuk-tuk crosses at the last moment of a red light, risking injuring various pedestrians. Source: Carlos F. Pardo.

3. Define the ***places and times*** that you will observe: depending on the number of investigators and time available, you can define various critical places in the city where specific behaviors can be investigated. In the case of "stop" signs, these can be defined according to accident statistics, specific intersections, and times of day.
4. Elaborate the ***format*** of the observation: The units of time must be defined that the behavior will be registered in (for example, every 10 minutes), and a format that conforms to these times. The idea is to follow a format similar to the one presented in Table 3, where the amount of drivers that respect and do not respect stop signs can be registered.

Table 3. Sample observation format for two variables

Observation- respecting stop signs and crosswalk use			
Observer: A.H.T.	***Date***: 14.04.2006		***Place***: Calle de los Olivos
Day of the week: Friday	***Hour***		
Action	***10:00-10:05***	***10:06-10:10***	***10:11-10:15***
Respect the stop sign	*(amount of people that respect the stop sign between 10:00 and 10:05)*		
Do not respect the stop sign			
Cross on crosswalk			
Do not cross on crosswalk			

5. Execute the ***register*** of the observation in the places and times established: The registry can be made on paper, or on electronic devices (for example, PDAs) that can automatically make a register on a grid.

Figure 26. Some situations are difficult to observe and quantify. In the photo a street in Delhi has pedestrians, cyclists, busses, bicycle taxis, motorcycle taxis… Source: Carlos F. Pardo.

6. ***Analyze*** the information and create graphic reports with the results. This is useful for the ABC strategy and for other components of the design of an ABC strategy for sustainable

transport (for example, the redesign of an intersection, the construction of speed bumps, etc).

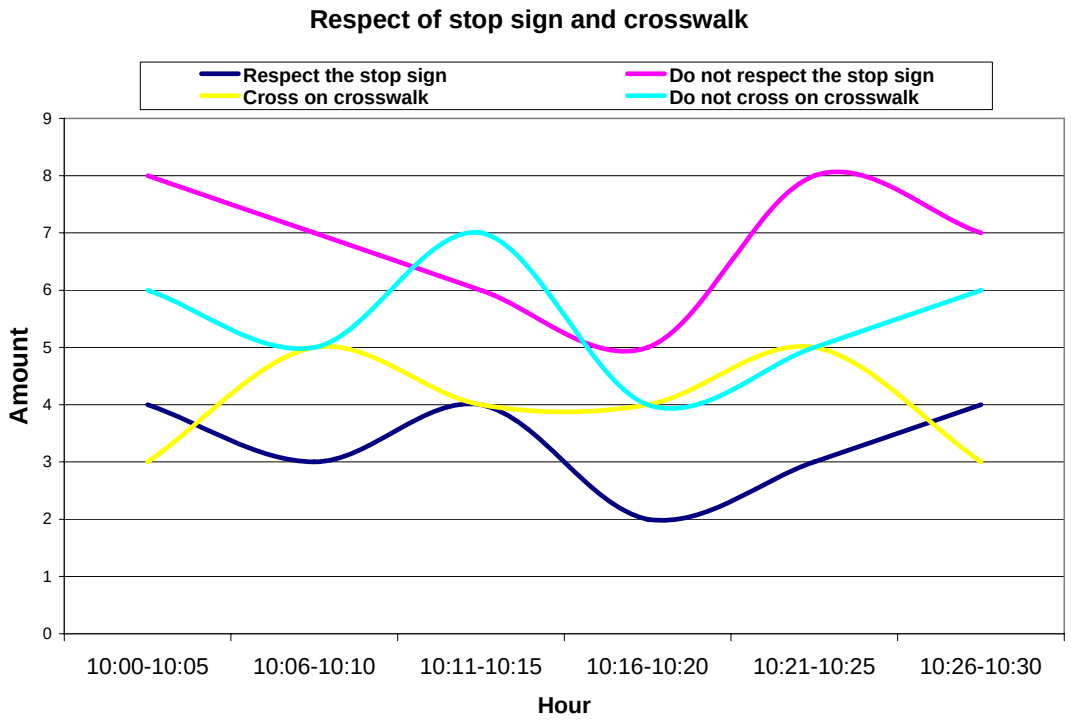


Figure 27. Example of an analysis of intersection of respecting stop sign and crosswalk.

The results of a well developed observation can from a basis for the development of a very effective ABC strategy, given that data about very real and convincing situations about transport problems will be available. Similar to the results of focus group interviews or stakeholder analyses, the results of an observation provide a clearer perspective of a situation for which an intervention will be designed.

Box 3. Some more complex observations

(Adapted from Anguera, 1998)

- Facial expressions
- Body movements
- Interpersonal distance (intimate, personal, social, public)
- Spatial distribution
- Walking speed

4.4 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 28. Conducting of a survey in Bogotá to determine the citizens' views on bikeways. Source: Carlos F. Pardo

Surveys are a qualitative instrument but they have quantitative properties: their results are numbers that can be examined through statistical analysis. Their disadvantage is that they do not use essentially qualitative information, as other techniques do. 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, something that neither stakeholder analysis nor focus groups have.

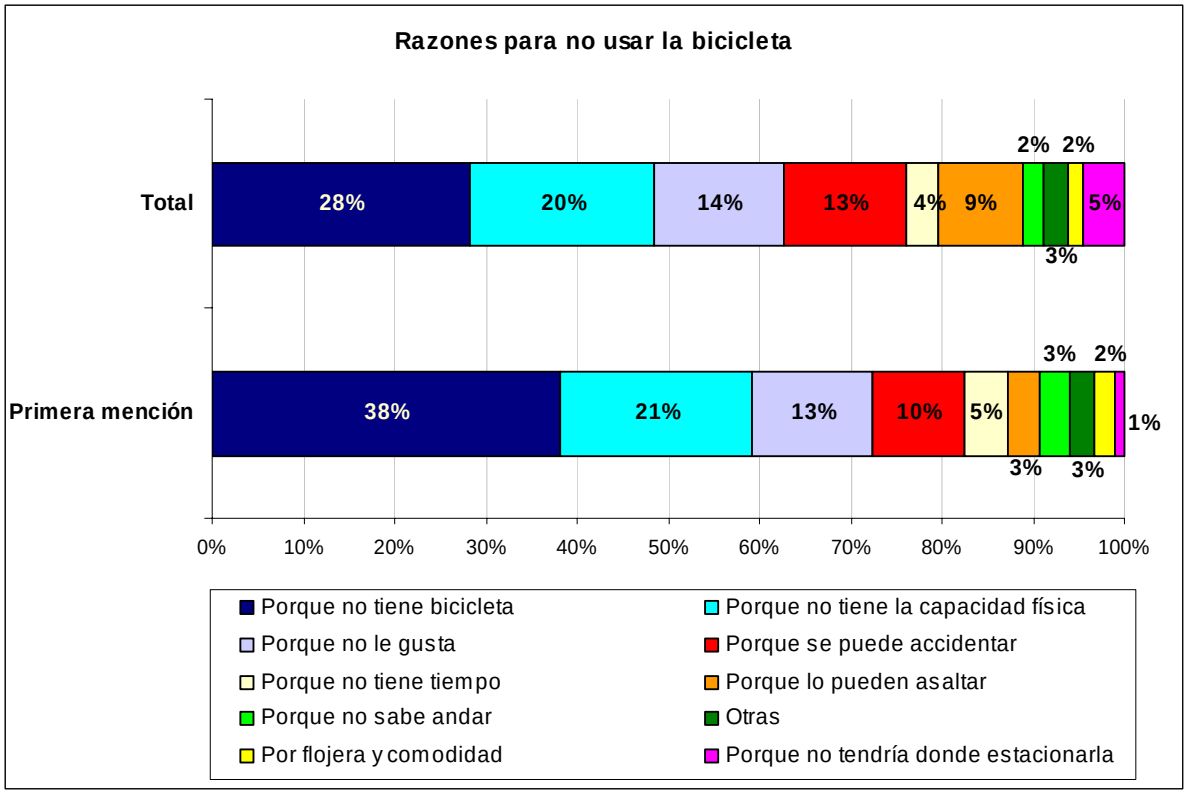


Figure 29. Example of a survey conducted in Santiago de Chile on bicycle use. Source: Comisión Nacional de Seguridad de Tránsito, Chile.

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 document describes later on.

Box 4. Sample of possible questions (and options) for a survey on transport:

On attitudes:

- What is the largest obstacle for you to stop using your automobile? (comfort/travel time/prestige/no other option/other)
- The bicycle is a means of transportation (for poor people/wealthy people/anyone)
- The bus is a means of transport (for poor people/wealthy people/anyone)

On knowledge:

- Who is responsible for maintaining the infrastructure of the city? (knowledge)
- Which means of transport pollutes the least (automobile/bus/metro)*
- What is your average travel time between your house and office/studio? (less than 30 min/ between 31 min and 1 hour/ more than 1 hour).

On practices:

- What is your primary means of transport? (automobile / bus/ metro/ bicycle/ walking/ taxi / other)
- How frequently would you use a bicycle as a means of transportation if the city had adequate infrastructure? (Every day/ weekends/ up to three days a week/ once every two weeks/ once a month/ never).

*bicycles and pedestrians are not included because they are modes that do not pollute at all, and knowledge of motorized or non-human propulsion vehicles is sought here.

Although surveys in terms of behavior of people in transport are not 100 % precise, they are an important tool to take into account when a rapid compilation of information on a determined population is needed. Table 4 shows a survey developed in Bogotá, Colombia. It shows the results of a survey question related to the bikeways in Bogotá and the reasons people do not use them. The survey was conducted just after the bikeways were constructed.

"50% of the population surveyed would be in favor of switching transport modes if they had more information"

For example, a study realized by Handy, Weston and Mokhtarian in 2005 showed how almost 50% of the population surveyed would be willing to change transport modes if they had more information on how to use another mode. At the same time, 19 of the 43 surveyed individuals said they drove more than necessary, and 34 of them drove more than they wanted. This type of information is very useful to determining the probability of change toward more sustainable transport modes.

Table 4. Results of the question regarding the obstacles to bikeway use from the survey "How are we doing, Bogotá"

Aspect	*2002 (%)*	*2001 (%)*
Lack of education among cyclists	36	13
Lack of appropriate infrastructure	32	18
Not enough bikeways	32	20
Badly designed bikeways	30	26
Unsafe and dangerous bikeways	28	23
People are in the way	25	12
Lack of maintenance	9	6
Lack of promotion	5	7

4.5 Levels of awareness of a population

To develop an effective intervention on a population, it is as necessary to be familiar with their characteristics as it is to be able to divide them into specific subgroups. In the case of transport, the adaptation of a common paradigm (states of change) is useful.

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.

The worst of these states are those people that do not know anything about sustainable transport and do not use sustainable transport. The best situation is where people are completely conscious of the consequences of non-sustainable transport and act according to this knowledge by using sustainable transport modes. The five states are described below, and are shown in the schematic Figure 30. The next chapter contains explanations of the tools to be used to address each group.

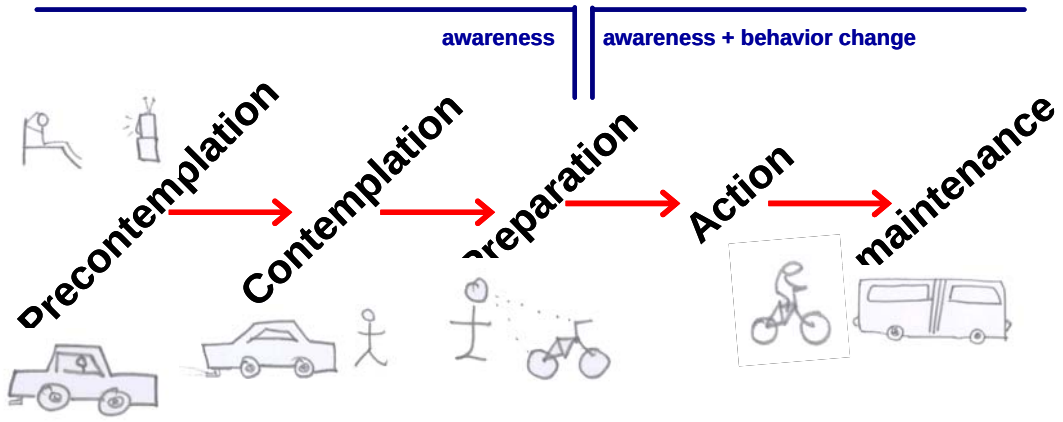


Figure 30. Schematic representation of the levels of awareness of a population in terms of its knowledge and actions in sustainable transport. Created by Carlos F. Pardo

Those that use the automobile 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 is not sustainable. 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 decisionmakers are part of this group. The technical name for this level is ***precontemplation***.

Figure 31. 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: Carlos F. Pardo

Those that know of other options but still use an automobile

This group includes people who have been presented with 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 all of their trips, if these are 2 or 20 kilometers 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***.

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 32. People who have tried using sustainable transport are a lower percentage of the population, but are an important group that supports these initiatives. Source: Jonas Hagen

Those that have begun to use sustainable transport

The group before the last one includes people that have already begun to 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 33. 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, these constitute a captive group that must be educated in sustainable transport. Source: Carlos F. Pardo

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***.

It is important to note that the models of the different states of sustainable transport can be useful to describe a population and act in each of these groups according to their level of awareness or action. However, sometimes the usefulness of an intervention that is segmented according to these groups has been questioned, and it could be useful to complement them with other actions according to other categorizations (income levels, groups of involved actors, etc.) or with interventions for the entire population.

Awareness levels- how do you measure them?

Given that the levels of awareness or states of change were created to measure levels of physical activity, the methods to measure these states have been elaborated for the same goal. The most commonly used of these surveys is the IPAQ (International Physical Activity Questionnaire), which can be downloaded for free at www.ipaq.ki.se. English, Spanish, Arabic, Italian, Malaysian, Polish and Korean versions are available (Portuguese is not available yet). Clearly, the survey would have to be significantly modified to be used for transport, but it is a good departure point.

4.6 Groups of active use- groups of passive use

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 is something that a person will or will not do, urban transport includes all citizens. A person must use one or another mode of transport. Income level is one of the factors determining the transport mode that will be used (for this reason, a country's GDP is directly related to the number of motorized vehicles), and a person with low income levels might use a sustainable transport mode such as public transport or the bicycle. That does not mean that this group that this group is in the last stage of change (maintenance), but that they use sustainable transport by coincidence. People with low income levels might form a captive part of the population, as seen in Box 5.

Box 5. Captive populations of sustainable transport

To the left, a gardener uses his bicycle because he sees no other transport option. To the right, residents of Montevideo use bicycles because of an economic crisis. Source: Carlos F. Pardo and Luis Sosa.

An interesting question when discussing levels of awareness regarding sustainable transport is if a gardener who uses his bicycle as a daily means of sustainable transport could be correctly categorized as someone who permanently uses sustainable transport (maintenance), and therefore must not be made aware of his or her choice of a sustainable transport mode.

The gardener uses sustainable transport everyday, even if he or she does not do so because of its environmental, social or economic benefits, but simply because he or she might not have any other transport options. If the gardener had money to buy an automobile, they would do so without hesitating. In fact, many of these workers save their money to buy a motorcycle (or even an automobile!) in the future.

On the other hand, up to 15% of the citizens of Montevideo use bicycles because of the economic crisis of 2001-2002. At the moment, there is neither a bicycle friendly policy nor clear strategies to encourage bicycle use. This has lead to a decrease in bicycle use in recent years.

The basic problem behind this situation is the use of sustainable transport out of necessity rather than choice. Obviously, sustainable transport should be promoted in these groups. If it is not, as soon as peoples' purchasing power increases, those that use bicycles or public transport will buy a car, because of their lack of awareness regarding the topic.

4.7 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 the methods and categorizations used (the groups as well as the questions and issues). The important thing is to organize this information 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 actors involved and positive or negative attitudes sustainable transport, or according to stages of change (levels of awareness), or both at the same time.

A clear strategy to organize the information consists of presenting all of the results according to the categorization that was first made, and generating a summary that consolidates the information and provides conclusions that can identify the topics most important to the

intervention. An ABC strategy should concentrate on a finite number of issues that do not include all possible behaviors and attitudes, but rather those that are the most important to creating an important change in awareness and the behavior of the citizens. For example, if you find that the majority of the population sees the automobile as the most convenient mode for any trip, the ABC strategy you develop should concentrate on modifying this attitude and generating appropriate behavior. On the other hand, if you find a segment of the population that perceives the bicycle as a quick and convenient vehicle but does not use it, the ABC strategy should concentrate on generating "pro-bicycle" behavior. These conclusions can also be useful for formulating recommendations for infrastructure to be built and sustainable transport policies.

5 Interventions: Three types of actions

"Peoples' perceptions of conditions, not real conditions, are what determine their modal choice" Collection of cycle concepts.

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 analyzed during the focus groups, interviews, and the divisions of the group into awareness levels must be taken into account.

There are various ways of dividing the form in which an intervention can be made on a population. One way is to divide the intervention into the three basic "channels": 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 behavior change in the target audience.

With respect to awareness and behavior change as two basic and complementary components of an intervention, it is important to note that the informative and persuasive messages are centered around raising awareness, while the intervention of specific activities seeks to change the behavior of a specific population so that the entire intervention is completely effective. As seen before, an intervention that generates only awareness or behavioral change is not as effective as an intervention that generates both in a population. The case of a gardener shown above presents an example of a case of a person whose behavior is sustainable but who is not aware of that fact. This is explained graphically in Figure 34.

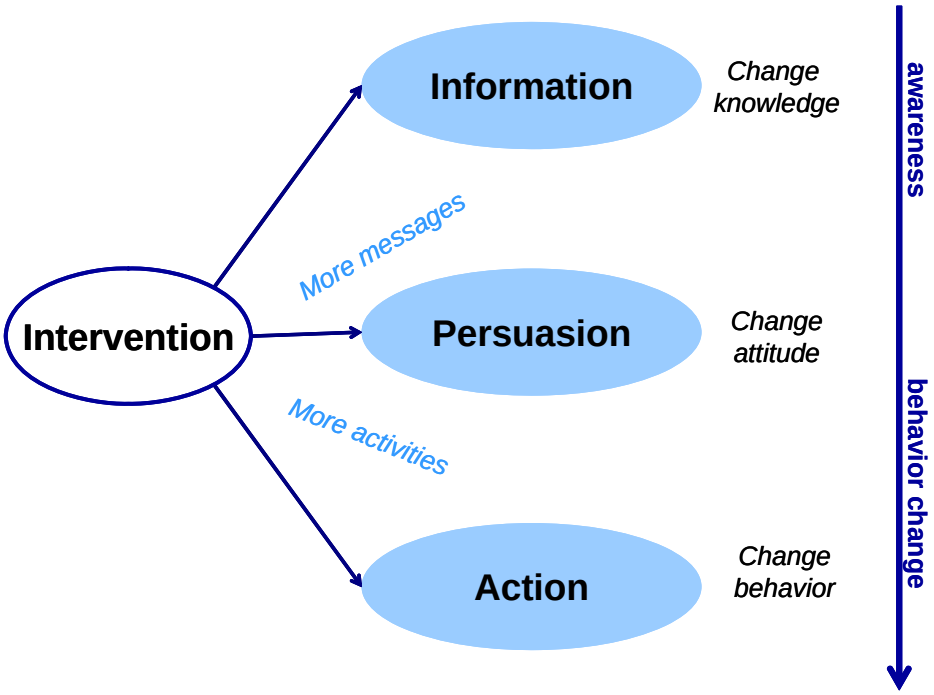


Figure 34. Schematic of interaction between different groups and types of messages and their consequences in the population

5.1 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 GTZ Reference Text. Simioni 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.

"Pollutionography Exposed"
City News - March 31, 2006 – Jakarta Post

Showing art in public spaces is an attempt to connect with people who might not normally enter an art gallery, and help them gain an appreciation for the value and underlying messages of art.

An exhibition that opened Wednesday and runs until April 29 is trying to do just this. Organized by SwissContact, state railway company PT KAI, busway operator TransJakarta and environmental group Generasi Peduli Udara Bersih, the exhibition will showcase 174 photos and other pieces of art dealing with air pollution in Jakarta caused by vehicular emissions.

The works are on display at the Dukuh Atas and Kota train stations, and shelters along the busway corridor from Blok M to Kota.

Busway and train passengers (photo) will be able to stop for a moment and consider the effects of air pollution in the capital.

"About 300,000 people pass through train stations every day and 80,000 people are around the busway shelters. But many others are expected to leave their cars at home to enjoy this exhibition," SwissContact campaign program officer Tory Damantoro said.

He said one of the goals of the exhibition was to promote the use of public transportation.
"If more people left their cars at home they would help reduce pollution because most of the air pollution in the city is caused by private vehicles.

"Many people don't realize that 70 percent of air pollution is from their vehicular emissions," he said.

"While it may be difficult to find time to go for a run or to the gym, people can get exercise during their daily travel, with great health benefits, particularly when intermodal integration, bicycle-transit, is available. It is absurd to get into a car to go to the gym, ride a stationary bike for half an hour, when you can achieve the same exercise through daily travel." Lake Sagaris

Ziizika also says that "the availability of information may have a determining influence in the way that it associates the actions of the population with environmental risk and individual responsibility, as well as indicating exactly the appropriate measures to avoid this risk, in addition

to involving people in collective activities." In this way, information can be used as the first component for action.

According to Lake Sagaris, "the context of where and when the information is distributed is key. If a group of neighbors organizes a barbecue to celebrate a neighborhood event, and they receive information about walkable neighborhoods, sustainable transport, etc., information is very well received. People talk about the ideas and make them theirs, thanks to an information format that is horizontal and very friendly."

Figure 35. This method of feedback to citizens regarding real levels of air contamination in Lima is an innovative idea to emphasize the importance of air quality in a city. Source: Jon Bickel, Swisscontact

Further, graphs and other visual media can be used. The information can be most effectively distributed through presentations, conferences, modules and digital and print media. In this way, this module of the Reference Text is a key tool for informational messages about sustainable transport. The information should be adapted for each population so that it is easily understandable and so that it can be understood in the context they live in. For example, you must think which images will have the greatest impact and significance in a population.

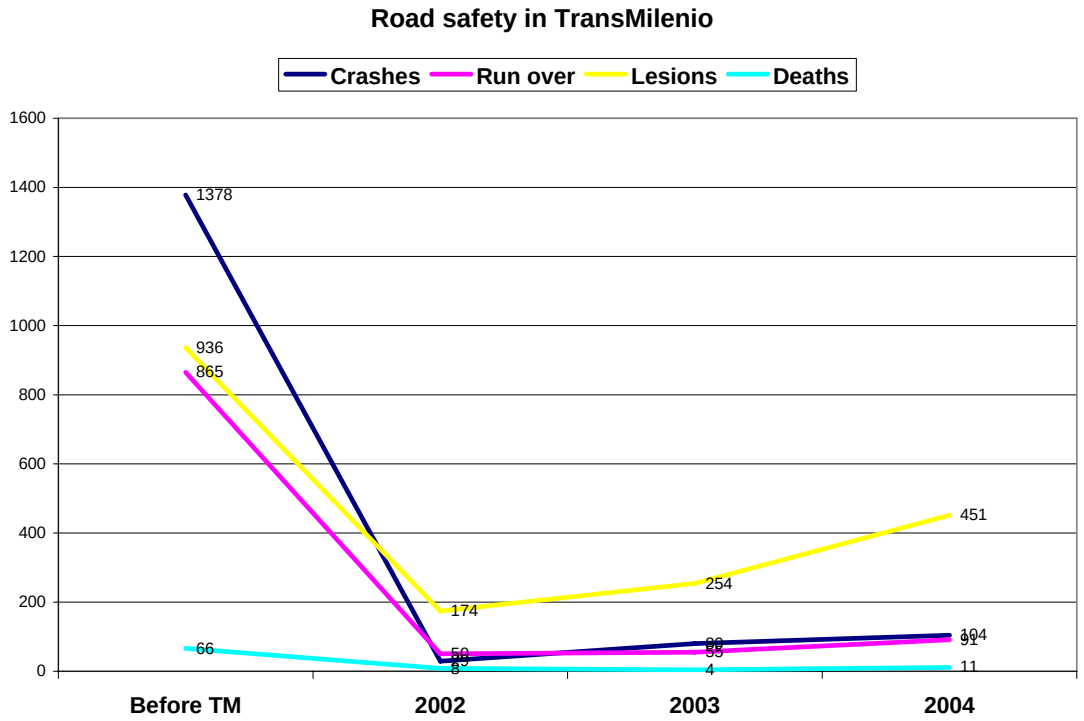


Figure 36. Graphs are a good way to show interesting information quickly, and an effective tool to communicate information to people. Source of data: TransMilenio. Created by: Carlos F. Pardo.

However, this information also has key aspects that should be taken into account. For example, messages should be clear and concise, given that a community must go through the following stages with that message: understanding, processing, acceptance and action. Thus, the graphs

should be easy to understand and with little confusing information. They should present important statistics that can be of interest to the general population. For example, the quantity of accidents in a city (or one part of a city) is always important information that everybody would like to know and on which people will want to act. Box 6 presents some relevant information that can be used any context of awareness y behavior change in sustainable transport.

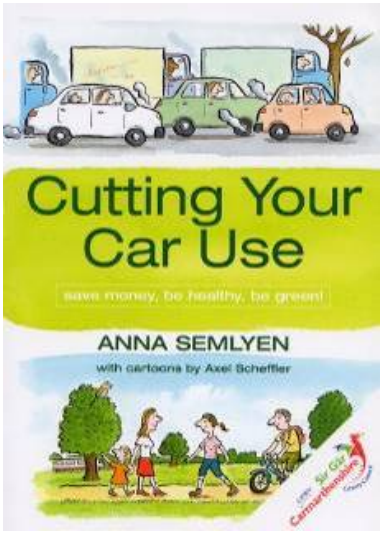


Figure 37 (left). An example of information given to citizens of Chandigarh about the responsible use of bicycle-taxis. Source: Traffic Organization Chandigarh. Figure 38 (right). A document that informs of actions necessary to reduce automobile use. Source: www.CuttingyourCarUse.co.uk

Finally, an additional function of informative message is that they can be used as to create predictions for future transport implementations. For a mayor, it is more difficult to implement a sustainable transport system if citizens will be opposed to the systems for a prolonged period of time. In the contrary case, it is much easier: a system of urban tolls 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 favorability toward the measure, and greater support to similar initiatives that solve transport problems of the city.

Box 6. Brief sample of key information on sustainable transport

- Road infrastructure expansion causes only temporary improvements in traffic congestion, but their long-term effect is the worse congestion than before their construction ("traffic generation").
- 80% of roadway space is occupied by 14% of the population – those that travel in cars. The remaining 86% of the population must travel within the 20% of space that is dedicated to sustainable transport systems.
- A pedestrian zone generates an increase in sales of between 30 and 60 % in neighboring businesses, and leads to a 40% increase in the safety (road and personal) of the area and property values.
- 1% of the energy produced by an automobile is used to transport the driver. The other 99% is used to move the vehicle.
- Urban transport is responsible for more than 25% of the global emissions of CO2, and this percentage is growing
- Congestion pricing in London reduced traffic 13% and increased traffic speeds 22%
- Loss of urban density generates depression in residents
- Overweight and obese people are at a much greater risk of chronic disease, including type 2 diabetes, cardiovascular illness, hypertension and heart attacks
- The cost of road traffic accidents is an average of 2% of the GDP of a country (7% in the European Union counting related health problems). The global cost in 2004 was estimated at US$ 518 billion/year, and reached close to 880,000 deaths a year and 10 million injuries
- In Africa, more children die of traffic accidents than HIV/AIDS
- If nothing is done about the problem, road traffic safety will be the third largest health problem of the world in 2020, after heart disease and major depression.
- On Montreal's Car-free Day in 2004, there was a 90% reduction in the level of NOx and a 100% reduction in CO, with a 38% reduction in noise pollution.
- In the United States, between 10,000 and 24,000 people die every year due to traffic-related pollution.

Note: The reference list has a section dedicated to publications with this type of information, and includes the sources of all of the information provided here. The CD with supporting documents includes them as well, and the GTZ Reference Text module contains further information.

Informative messages with feedback

A way to ensure a greater likelihood that informational messages will generate a significant behavior change is by soliciting feedback of those that receive the information. Studies have shown that a conference on its own does not have a significant impact regarding behavior change, but if it is complemented by written activities and feedback is given, a significant attitude (and possibly behavioral) change may take place. Box 8, below, shows an intervention of this type. Box 7 shows another type of activity, where users of different transport modes show the fastest and slowest ways of getting to work.

Box 7. Comparative test of transport modes in Alovera

By Juan Merallo

A cyclist, pedestrian, and motorist traveled from the Central Square to the Cultural Center, passing by City Hall, today Wednesday 26 of April, as part of the activities of Bicycle Week in Alovera. In each case, traffic rules were obeyed.

The cyclist was the fastest, followed by the pedestrian (a father with his six-year old child) and lastly, the automobile. If we analyze the cost of this trip, the modes of transport would go in the following order, from best to worst: pedestrian, cyclist, motorist. With respect to energy consumption, the automobile is the most wasteful means, as the table below shows, and therefore, the most polluting.

Definitively, within a town a car is the slowest means of transport that uses the most energy and is the most expensive, while the bicycle is the cheapest, quickest and most efficient in terms of energy use.

The conclusion is clear: making short trips by bicycle or walking is good for an individual's economy, for citizens' health, and saves time and leads to a rational consumption of resources.

RESULTS
(In parenthesis the annual figure for continuous travel with the specific mode)

Transport Mode	***WALKING***	***BIKE***	***CAR***
TIME (Minutes)	7'52"	4'40"	7'57"
ECONOMIC COSTS	0	0,01 (3,65€)	0,45 (164,25€)
ENERGY USED (*)	1,25 (456)	1 (365)	87,5 (31.937,5)
POLLUTION (Hydrocarbons - CO2)	0	0	0,3105 (113kg. /year)

(*)Data in relative units ("Human" energy, non-contaminating)

5.2 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 behavior 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.

Box 8. Awareness and the rational use of automobiles in Sapporo (Japan)

In Sapporo (Japan) an awareness program was developed to reduce automobile use to more sustainable levels. The technique used consisted of basically two elements: conferences and follow-up (see the figure).

After a first conference, participants were asked to keep a diary with their transport activity for the first 7 days. After this, participants attended a second conference where they received a diagnostic checklist on automobile use, and a diary like the first one they received. After a third conference, participants were given a final diagnosis regarding their use of transport modes.

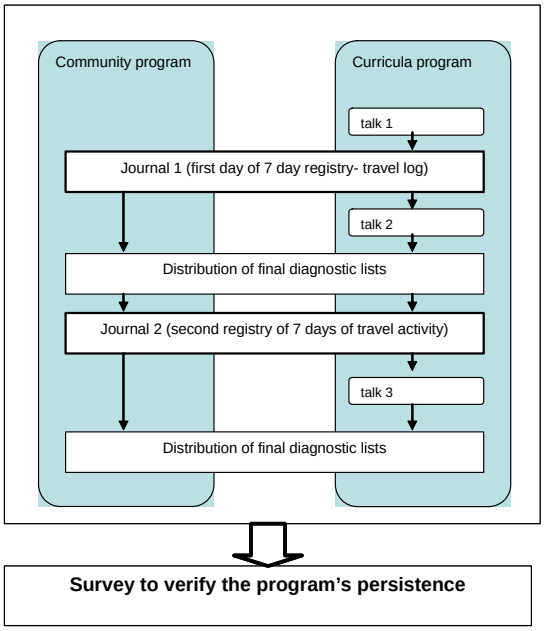


Diagram of the intervention, adapted from RISPO/IGES

With the use of permanent feedback and the written activity of the participants, significant reductions in automobile use were achieved, even one year after the program's implementation. This shows that conferences, which by themselves do not generate behavior change, can be effective when using active components and immediate feedback.

Source: http://www.iges.or.jp/APEIS/RISPO/inventory/db/pdf/0070.pdf

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 a mode 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 factors (la Figure 39 presents amore complex model):

- Perceived travel time
- Perceived cost
- Perceived access

- Perceived comfort
- Perceived liberty
- Perceived flexibility
- Perceived safety

Figure 39. Factors that determine travel decisions have been elaborated in models as complex as the one shown here (Bayesian network). Source: Wadell, IATBR

If a person is certain that a car is favorable in all its aspects, he or she will choose it as a means of transport. However, a persuasive message can change this showing the real travel times of a car and all of the costs associated with its use (buying the car, parking, taxes, gasoline, maintenance, insurance, etc.). It is likely that the comfort and security are not greater than other means of transport, but these are factors that should generate uncertainty in the user so that he or she uses other means of transport. Sustainable transport modes can be characterized by their other attributes, including:

- Greater equity among transport users
- Better physical shape for those that walk or bike
- Less damage to the environment

These persuasive messages should show the user that sustainable transport fulfills 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 say:

> *"The environmental impact of one's own behavior 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 behavior in transport."*

Figure 40. The Love-Your-Bike initiative developls highly persuasive and creative messages which relate to factors Duch 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 methods of sustainable transport 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

Figure 41. A role model like actor George Clooney standing with a bike can generate positive reactions in people who see the cover of this magazine. Courtesy of Gatopardo ®

- 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)[1]

- 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 behavior (see Figure 41)
- Describe reachable and realistic behavior
- Refer to morally and socially accepted rules, beliefs and conducts
- 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

"The environmental impact of one's own behavior is rarely taken into consideration..."- Rita Seethaler

Figure 42 and Figure 43. Sometimes the reality of mass transport is not easy to change with persuasive messages. A comfortable system should exist to be able to promote to achieve behavior change more effectively. Source: Carlos F. Pardo.

It is important that persuasive messages that are being formulated be realistic and adapted to the existing transport situation of a population. Figure 42 and 35 present a situation that is experienced in some mass transit systems, which is difficult to "disguise" as a comfortable system. However, speed is the added value that a system like this has, as well as cost-effectiveness versus private automobile use.

[1] 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 44. This woman riding in front of the Römer (City Hall) in Frankfurt might be one of the best examples of why people ride bicycles for pleasure. Source: Carlos F. Pardo

Box 9: How transport should be seen, or how it is perceived

Means of transport are frequently seen or perceived differently than how they really are. This is strongly has a strong influenced by publicity. For example, automobiles are normally perceived as the ideal means of transport. Frequently, these vehicles are shown traveling at thigh speeds on an empty highway, giving people an erroneous idea of what actually happens. An image like the one below could never be part of an advertisement for cars. However, car owners almost always end up in traffic jams each time they drive.

How automobiles should be seen

How busses should be seen – how busses should be perceived (and presented). Source of all of the images: Carlos F. Pardo

On the other hand, busses are usually perceived by people to be dirty, slow and uncomfortable, and for poor people. This is in part due to situations like the one seen above and left, where busses do in fact travel slowly, are very uncomfortable, and unsafe. In the case of TransMilenio (above and right), the system's image is one of the greatest factors that promotes its use. The image is guaranteed by contract, given that operators must wash their busses daily or they will receive a fine.

However, 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." 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 45. A family riding bicycles: the added value of bicycles is their ability to evoke pleasant experiences. In the photo, a family riding bikes in Bogotá. Source: Carlos F. Pardo.

The category of persuasive messages can directly reflect ***moral values*** and ***ethical standards***. For example, values of protecting the environment, greater social equity and poverty reduction are closely related to sustainable transport. It is also important to emphasize that the messages developed should have strong social support, given that support for support from people from the same community and/or culture makes it more likely that an attitude (and the resulting behavior) changes toward a more sustainable one. A clear example is the social support for recycling in various cities around the world, another is that few people smoke in enclosed areas because of the social sanctions they would receive (this has been converted into law in many countries).

Figure 46. Children are a recurring theme in any persuasive communication strategy. In this poster for the World Carfree Network, a child is drawing a city without cars for the celebration of World Carfree day. Source: www.worldcarfree.net

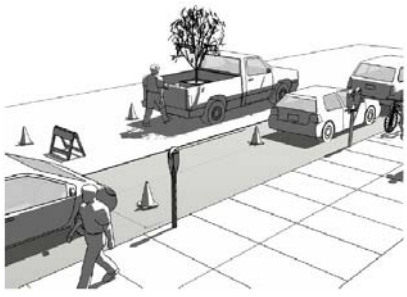
Finally, ***quality of life*** can also be taken as an argument with persuasive messages. People will understand that a situation with an improved environment, better road safety and public space will influence their lives in a positive way.

Figure 47. Although this format is not very attractive, this is a clear message for quality of life and calmness from citizens (It reads: Reduce the velocity / Take life with ease") Source: Carlos F. Pardo

Box 10. Park(ing): An innovative (and strange) initiative to reclaim the streets

The first Park(ing) experiment. All of the images courtesy of Rebar Group/Andrea Scher/Jeff Conlon.

On November 16, 2005, the Rebar group realized the initial Park(ing) intervention, where they realized a "legal" reclamation of the street for citizens, in the strictest sense of the word. Their idea was to pay two hours of parking (using the meter on the street) and use the space in a different way: create a small, "portable" green zone with a tree and a small bench. After having paid the first two hours, the group let other citizens contribute by paying the next two hours of parking to continue enjoying the temporary green space.



The group defines the initiative as "an investigation into reprogramming a typical unit of private vehicular space by leasing a metered parking sport for public recreational activity." After the meter ran out, the group gathered up the green zone and left the area. Rebar estimates that they generated 24,000 square-foot-minutes of public space that afternoon.

This initiative was created by John Bela and Matthew Passmore (Rebar) with the help of Blaine Merker and Gregory Kellett. Further information is available at: www.rebargroup.org .

Strangeness factor

An important topic when undertaking any of citizenship awareness is its degree of novelty. There are many ways to capture the attention of an audience (or a person), but some of these ways have been used so often that they are no longer effective. A basic characteristic of each activity that will be implemented with the help of this module is that it will not be a typical activity, rather, an

individual idea that will come from the basic principles described here. A new approach to a problem will always have an important impact on the people affected and will therefore be very effective. See Box 10 and Figure 48 for two examples.

Figure 48. The road safety campaign in Bogotá reduced traffic accidents by 34% (July-August 2003) with an innovative campaign called "black stars," in which yellow stars were drawn on black backgrounds in the exact places where someone had died because of an accident. The next phase included the person in the photo, who could hold signs saying what pedestrians should (or should not) do. Source: Carlos F. Pardo

However, sometimes "old" ideas simply need a "new twist." For example, in the last years it has been shown that a car-free day is an interesting way to generate public awareness regarding automobile use and the possibility of using bicycles or public transport. However, in 2005, a new approach to car-free days was created: voluntary car-free days instead of obligatory ones. This simple change of character renovated the concept of car-free days in places they had already been implemented. Finally, it is not recommendable to take measures "as they come," even less so if they have been applied beforehand in contexts that are different than today's. When implementing public awareness activities, you must be very careful to take the context into account.

Status? The dilemma

An interesting subtopic regarding affective messages that promote sustainable transport is if it should be promoted as a status symbol. For example, some say the bicycle should be promoted as a status symbol. This is used to argue against the commonly held notion in many developing countries that the bicycle is a vehicle for poor people. However, there are various contradictions when promoting a vehicle in terms of status, given that sustainable transport has much to do with social equity and one should not differentiate one transport mode as having greater status than another. Rather, it should be promoted as the more sensible vehicle. For example, public transport or bicycles can be promoted using the principal characteristic of a healthy life and a more equitable society.

However, in countries where bicycle use is high, this mode is not specifically related to status or any other variable. People use the bicycle because of its inherent qualities as a vehicle: efficient, fast and simple. Besides, as Sagaris notes, it is interesting to see how advanced countries are those that have the largest amount of trips by bike, walking, or public transport.

In any case, it is also important for sustainable transport to have a clean image, instead of being populating as sloppy and dirty. This is similar to the discussion about the image and perception of busses in Box 9.

Figure 49. In some cases, bicycles are used as a means of transportation, without taking into account their status. In the photo, a commuter in Paris uses a bicycle to go to work. Source: Carlos F. Pardo

5.3 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 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 behavior can really be changed, with the previous help of information and persuasive messages.

"We need to redesign streets to show residents that they do not have to live in awful places. Once people see a better option, they might be screaming to get it. This is happening in China with pedestrian zones. Now all the government districts want one…" Walter Hook.

A fundamental aspect of the activities that they should be promoted as entirely ***voluntary***, given that coercion does not lead to long-term behavior 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 behavior in urban transport.

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

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

Define the behaviors

It is necessary to define the behaviors 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 behaviors 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" behaviors with a small group to see if they will be understood and if they are effective at achieving their intended goals.

Another very effective way to promote desired behaviors is t, before the people engage in the behavior, a ***role model*** or a ***visible authority figure*** show that they also take part in the activities. If a popular mayor takes part in a sustainable transport activity, this shows residents of the city that they can also engage in the behavior and benefit from it, as their mayor already does.

The ***social support*** behind a behavior is also important. This is one of the most difficult topics to face, especially when the use of bicycles or public transport is not approved by certain social sectors. For this, you will have to know the context you are working in very well, and if it is not very favorable, you must work with a larger amount of groups to create a favorable context and a significant social support toward sustainable transport. The techniques of persuasion described above could modify this situation.

These are the criteria to select the most appropriate behaviors for an ABC strategy (according to Greencom):

- ***Potential impact***: the behavior should, besides furthering the goals of sustainable transport, have a visual impact on the population.
- ***Immediate and obvious consequences:*** The most effective behaviors are those that show those that engage in them consequences directly related in time and that cannot be attributed to other events. For example, riding on a Bus Rapid Transit system next to a lane that is congested with automobiles shows immediately that the travel time was shorter and only due to the use of another transport system different than a car. For this same reason, it is so difficult to promote long-term sustainable transport goals (global warming, etc.).
- ***Cultural compatibility***: Behaviors cannot go against the cultural norms and social habits of a place. This also refers to the adaptation of any technique to the local context, and consulting groups of the general population to learn their opinions and reactions.
- ***Cost***: The behavior (use of sustainable transport) should have a clear cost in terms of time, money and effort that is not greater than others (using an automobile).
- ***Simplicity***: A behavior cannot have many steps and should not be very complicated. It should be simple and clear enough for any person to execute easily. In sustainable transport, this is not difficult, but if there are no infrastructure facilities (bicycle parking, public transport systems with defined routes), it is a bit more complex.
- ***Generality***: Usually, one sustainable transport behavior will be applicable to another, if the information is presented in an appropriate way. For example, if you are promoting bicycle use, you should do this within an explicit effort to promote sustainable transport in general, rather than promoting it as an isolated activity. This will make it more likely that you will generate lasting behavior.
- ***Sustainability***: You should promote behaviors that are more likely to last over time, especially after the strategy ends. A program to encourage bicycle use will have little impact if average distances are 15 km, or using public transport where crime is rampant.
- ***Groups***: Behaviors that are developed in groups are more effective than those that are promoted individually, given that social support is a key factor when developing a behavior change strategy.

Figure 50. 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.

Box 11. Project ZOOM- Lima and Callao, Peru

Created by Juan Carlos Thissen and Gina Ortiz- FONAM

The National Fund for the Environment (El Fondo Nacional del Ambiente –FONAM) of Lima is executing the project "Humanizing Transport: Lima and Callao with quality of life," which seeks to promote a transformation of the practices toward less polluting, more economical and healthy transport modes such as the bicycle.

The project's goal is for the population to incorporate the use of bicycles as a transport mode in their consciousness and attitudes; the challenge consists of gradually reducing the barriers that make the use of the bicycle as a transport mode safe and enjoyable bicycle impossible.

The proposal is based on the gradual introduction of the bicycle in pilot zones to later be replicated in other zones or cities. The end goal is for citizens to incorporate the bicycle as a means of urban transport.

For this, a promotion plan was designed that achieved the following activities in 2005:

- Interviews and surveys to measure the perceptions and attitudes toward the use of the bicycle as a means of transport in the city of Lima.
- Development of the concept, logo and slogan "*ZOOM –You do it on two wheels!*" Information was collected through interviews and focus groups, which showed the bicycle to be associated with speed, agility, uniqueness and freedom.
- Graphic materials were created for adults and children and distributed in various courses and activities, in addition to the webpage: www.en2ruedas.com
- Over 4,500 students participated in interactive and playful activities about the bicycle as a means of transport. Schoolchildren from Los Olivos and Bellavista were the main target. A group of promoters, mostly young man and women, carried out these awareness raising activities. The activities focused on school-age children, although they also worked with groups of adults, including transport operators, parents and university students, among others.

- Participants received training in practical skills, from riding a bicycle to basic mechanical skills. This created a user group that will sustain itself over time.
- The courses focused on pedagogical learning through themed fairs that included role-playing and other interactive activities. In 2005, the promoters taught courses in basic mechanics, and urban bike-riding skills, as well as learning to ride. The children also participated in activities such as bicycle caravans, bicycle clinics, informational and motivational talks, inter-district fieldtrips and bicycle fairs.

The municipalities of Lima and Callao supported all of these activities, which were carried out by previously selected and trained promoters.

Examples of activities

The following is a list (not exhaustive) of activities that are used to promote sustainable transport through specific behaviors:

5.3.1.1 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 51, 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!

Figure 51. 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.

5.3.1.2 Bicycle rides

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. Box 12 presents a brief methodology of how to organize and carry out a bicycle ride.

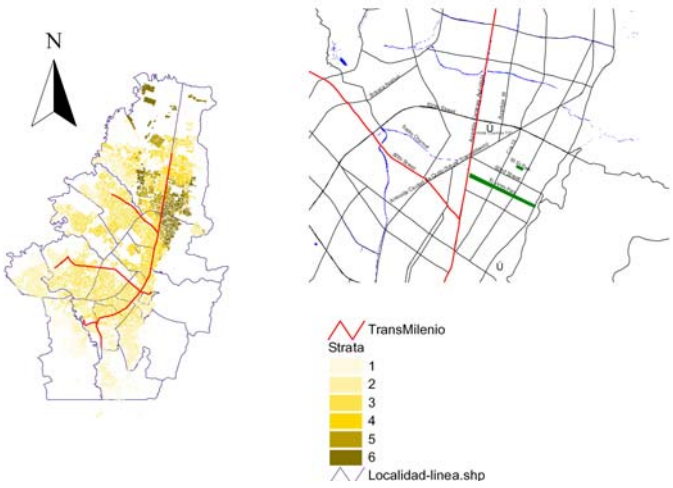


Figure 52. Map created for a 10 km bicycle ride, together with a map of the city. Created by: Adriana Hurtado/Carlos F. Pardo

Figure 53. 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.

Box 12. Methodology of a short ride

To organize a bike ride, you should take the following things into account:

- ***Ride participants***: be familiar with the participants, including their physical state, interest in bicycles, relevant cultural factors, language, and the amount of people.
- ***Group of people that will guide the ride***: this depends on the amount of people. A good ratio is one guide for every 5 participants.
- ***Other relevant groups***: transit police, emergency medical workers, bicycle mechanics.
- ***Number of bicycles and/or bicycle taxis*** necessary: this depends on the number of participants and guides. The condition of the bikes (tires, gears, brakes) should be inspected the day before.
- ***Transport of bicycles to the starting point and after the ride ends:*** a truck or other transport service should be arranged for this.
- ***Specific map of the route***: This should include a description of important and dangerous points, with key information. See Figure 52.
- ***Script of the ride***: Contains what will be said to participants during the ride.
- ***Time of the ride:*** Includes time of start and finish, and must reflect the physical stat of the group. A group of 20 people travels at an average speed of 10 km/hour. The larger the group is, the slower it travels.

Figure 54. Invitation to a ride organized by various organizations: one non-profit, a local pizzeria and a bicycle shop. Source: PPQ.

5.3.1.3 Car-free Days

The idea behind car-free days is quite interesting in terms of actions to promote sustainable transport. Given that this module has a section on car-free days, and the Reference Text has a complete module titled *Car-free Development*, 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 "obligatory" car-free days: people will feel that they have no other option and might have a negative perception of the experience. In some cases, car-free days almost always result in rain (due to meteorological reactions).

However, voluntary car-free days are an option to ask citizens to use another mode of transport of their own free will, without legal force. People could choose between a car and other transport modes to travel on that day. Although this type of car-free day is relatively new, it ha shown impressive results.

Figure 55. The voluntary car-free day in Pasto (Colombia) reached a large number of people from all sectors of society. In the photo, the Mayor of Pasto, Raúl Delgado, walks from his house to his office during Car-free Day on September 22nd, 2005. Source: Pastodeporte.

Table 5 shows the different types of car-free events and the components to organize them. This is addressed extensively in the ***module 3*** on ***Car-Free Development*** of the GTZ's ***Reference Text.***

The resources section includes various references and links, as does the CD of supporting documents for this course.

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

Component	*Ca-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.)

5.4 All three actions are crucial

The 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. They could return to daily automobile use. Similarly, if someone is persuaded and rides a bicycle once or twice, 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 means of transport and has been persuaded to use it, they might not do so. The person might not have any opportunity to do so (for example, no one will accompany them in their first "buss 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.

However, a strategy is important to carry out each of these activities. As long as there is no strict order, it is recommendable to begin with persuasive messages, followed by information and lastly, the action component. These two components should be coordinated in a parallel manner, in order to give the strategy a sense of unity.

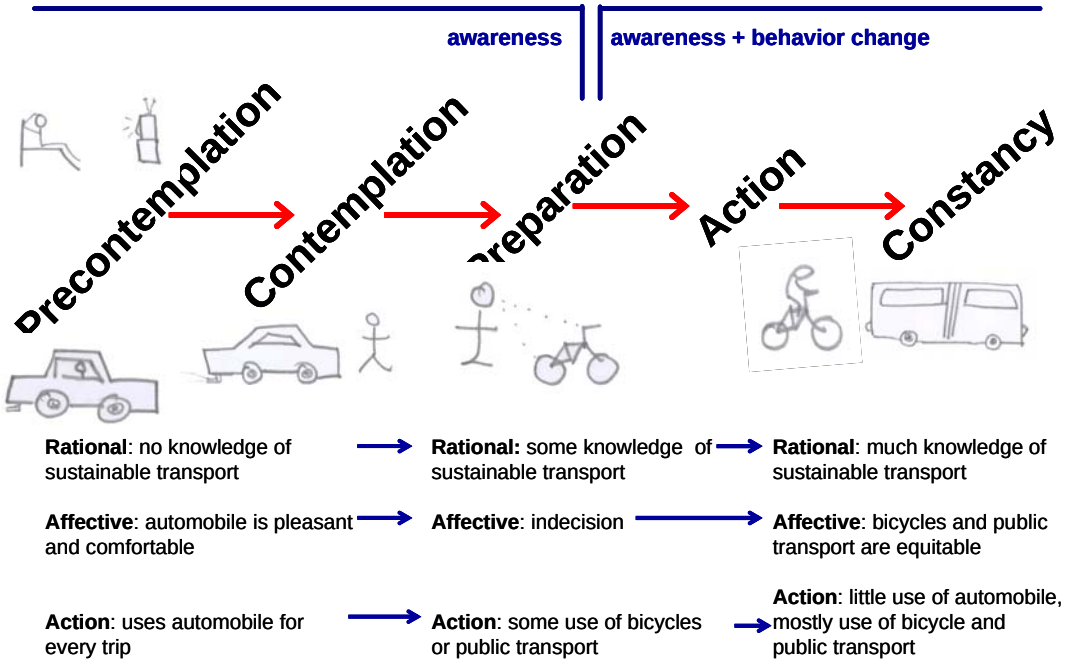


Figure 56. Interaction between level of awareness and degree of actions. Created by Carlos F. Pardo

6 Getting the word out

This chapter has two specific intentions:

- Show how different communication media con form part of an ABC strategy to make it stronger and give greater visibility for the population
- Describe different strategies to publicize the results of an ABC campaign so that it can be applied in other contexts and reviewed by other professionals

"You might have the "best" project/plan/medium possible, but if it is not properly publicized, it might not be successful" Zvi Leve.

The first topic is the most important one for this document, and therefore will be the center of this discussion. However, spreading the results will be mentioned in some sections to specify which elements are crucial to developing this dissemination.

6.1 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.

6.2 Mass media

First of all, mass media have shown that they are ***not*** effective for behavior 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 cold 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.

Figure 57. 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

On the other hand, media such as press and television are key actors in the development of an ABC strategy. Journalists can be an important ally to the strategy, and you should find a way to get them on board. If journalists are not properly handled, you might find yourself in a situation similar to the one described by Jacobi and Valente de Macedo (2000):

> "…it is important to emphasize the role of the media in the case of "Operation Rodizio." The press, in its various forms, did not have a positive reaction to the vehicle restriction measure. During the years 1995 and 1996, principally, the media maintained an ambiguous position, showing the positive results in news reports, but criticizing and attacking the program in editorials and titles. This was the most commonly held attitude in newspapers and radios."

6.3 Email groups (listserves) and web pages

Email groups (also known as "listserves") are one of the most important media to reach those that are directly related to the issue of sustainable transport. They are a very useful resource for people who are very interested in the field and who can send and receive various types of information on specific subtopics and opinions on new tendencies. They are also very useful when communicating the results of an ABC strategy.

The main difficulty with a central listserve is the tendency to generate a large amount of messages in a short time. Occasionally, subscribers to the listserve will stop reading the messages and few of them will follow the discussions on the lists. For this reason, email groups can have an excess of information that does not benefit the messages that you wish to people to receive.

Figure 58. Main page for the email group SUTP-LAC

Various active email groups are included in the "Resources" section of this document. The majority of these are administered by Yahoo ® Groups, or on independent platforms, and or free to subscribe. There are various types of groups (with or without moderators, active or passive, among others) and messages are sent with different frequency, depending on the needs of the group.

Figure 59. Webpage for the ZOOM campaign in Lima. Source: www.en2ruedas.com

Web pages can be used 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, listserve 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.

6.4 Seminars, congresses and conferences

Seminars and similar events are other forms of publicizing messages but are focused on a specific audience and transmit more specific messages. They are a good form to communicate

information to a relatively specialized group of people, but they can also be geared toward participants from varied backgrounds. An event that aims to include the general public can be widely publicized and be free of charge.

Figure 60. An event about air quality and awareness in Bangkok, with the goal of sensitizing decisionmakers and the general public about a topic. Source: Carlos F. Pardo

When deciding to launch a new ABC strategy or a new sustainable transport project in a city, the municipality could organize an event to publicize the activity, and in this way can learn the opinions of the public about an event and possible reactions to its components. An event like this could include speakers that hold public office (that are in charge of carrying out the strategy or project presented), academics (investigators on the topic) and people from the private sector. A balanced presentation that shows different specialists' points of view will give the municipality's initiative greater legitimacy.

6.5 Small scale media (focused)

Media that focus on specific audiences are more effective in terms of behavior change and can be less costly than a mass media campaign. Such efforts can be used to spread ideas and promote change of specific behaviors 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 affirms that "there is an inverse relationship between the number of people reached and the quality of information given/received."

If an ABC strategy is developed using consultation with the various stakeholders and uses different research strategies (as described above) with the population, it will be much easier to organize the media to be used on the different groups of the population, given that their opinions and the topics that must be worked on to change their behavior regarding sustainable transport will already be known. In fact, the activities described above and the specific activates are focused channels of communication that seek to generate a behavior.

6.6 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 accidents on a street before and after it was pedestrianized can show that the measure has protected the lives of the people that live in and travel through that place. Box 13 presents some of these measures and how to register them.

Box 13. Data that should be gathered before, during and after an ABC strategy to promote sustainable transport

Environmental measures: Air quality (PM10, NOx, CO2, etc) and noise levels (dB) are key measures that are usually registered by municipal environmental departments. It is important to register these levels in the places or areas the ABC strategies are will target.

Sales: The sales records of a place that has been pedestrianized are crucial to determining how taking cars of the street affected the productivity of a restaurant or store.

Property values: The property values along transport corridors, or near areas where public space has been improved, or parks and pedestrian zones created.

Traffic counts: Information on the amount of vehicles on the streets according to transport mode. It is important to know the amount of people that travel in the same space before and after an intervention (car free Sunday, bikeway, sidewalk widening, etc.).

Road safety: The amount of road accidents, separated into injuries and deaths, and vehicle types along the places where the interventions are taking place. Showing this information on a map would be very useful to show change before and after the intervention.

Ph***otos:*** Before, during and after an intervention. You should be careful to take the photo in the same place and with the same orientation.

Videos: Before, during and after an intervention.

6.7 Visual tools

Visual media are a very powerful tool to transmit these messages. As the Reference Text modules and other GTZ 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 skeptical people that are not supportive of the project and need visual information to understand the proposed changes. The following is a suggestion for a sustainable transport project: Always take photos! Before, during and after an intervention, event, etc. These days it is much easier 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 below.

Figure 61. Photographs are an excellent tool to demonstrate something. This photo of the TransJakarta system clearly shows how a system of mass transit can be less congested than a system based on automobiles, and can transport more people. Source: ITDP.

Always take photos! Before, during and after interventions, events...

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 62 and Figure 63 show drawings of a bikeway in Lima and Silom Square in Bangkok that were developed to show how an existing place that many people are familiar with can be completely transformed.

Figure 62. Consultants for the Lima project developed this drawing when they designed new bikeways for the city in 2003. Source: FONAM Peru.

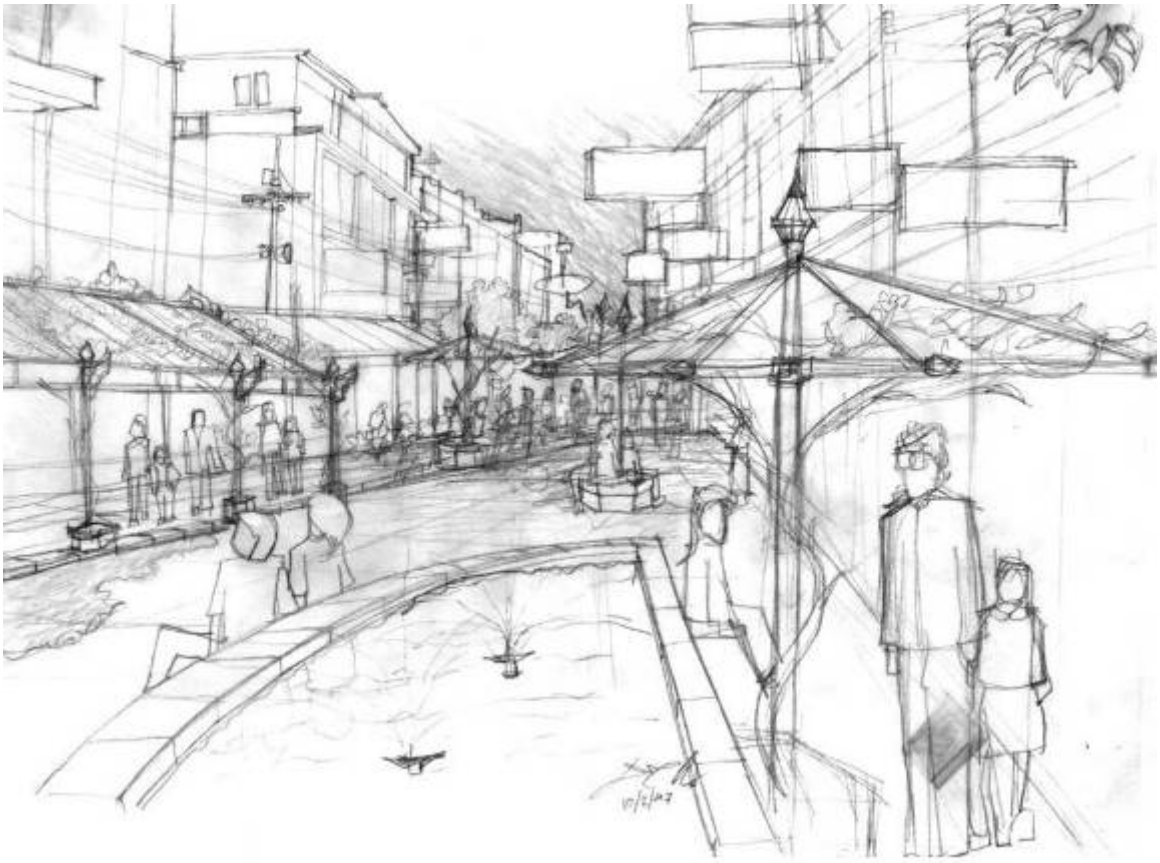


Figure 63. In a study developed by the GTZ in Bangkok, city employees drew a future vision of Siam Square. Source: GTZ- BMA.

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 form a specialist.

Figure 64. The Institute of Urban Development in Bogotá developed these photos to show the citizens of a neighborhood what the street would look like before and after a public space renovation project. Source: IDU- Bogotá.

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 65 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 space changes when sustainable transport projects are implemented. PowerPoint ® is particularly useful for presenting these changes.

Figure 65. This restoration project in Seoul was carefully monitored, as these two photos of the same place along the Cheonggyecheon River show. Source: SDIK

Videos

Videos are similar to 3-D models in the sense that they can show how a space can be renovated, as well as showing the experiences of other places. These vides can also be documentary films that show transport situations, different peoples' experiences, and other information on sustainable transport. GTZ SUTP has developed a video showing the transport situation in Jakarta and how it is perceived by the people. This video can be obtained by writing to sutp@sutp.org.

Visiting a place

An important tool to convince a decisionmaker 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 1000 decisionmakers from around the world have traveled 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 decisionmakers can make the trip.

Figure 66. The delegation from Western Cape visited Bogotá, rode the TransMilenio, bikeways and car-free Sunday in November 2002. Source: Lloyd Wright.

7 Exercise: Development of a strategy of awareness y behavior change

The first six chapters of this training course established the basis to understand the actors, research strategies and forms of intervention and publicity of a strategy of awareness and behavior change. Based on this, this chapter concentrates on describing the steps of an ABC strategy for your specific case, in your specific city. This chapter can also be used as a basis to write the terms of reference of an ABC strategy.

Given that this book has been written to complement a "live" course on the topic, participants in these courses should develop a strategy based on the information in this document, and they should receive feedback on this strategy and revise it as the course goes on. If the reader does not participate in this kind of course, he or she can develop the course and seek feedback on his or her strategy from his or her working group and through tests performed before launching the strategy. In principle, a well designed strategy should generate favorable reactions in the population.

7.1 Define the working group

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 preexistent (members of a nonprofit organization or a department of the municipality), 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 labor 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***: social science professionals can be in charge of the complete strategy or the stage of diagnosing the population, in which the interests, knowledge and attitudes of a population will be researched. These professionals usually have experience in conducting interviews, focus groups, and/or observations.

- ***Communication, journalism, social marketing***: sometimes a group leader will come from one of these professions. These have in-depth knowledge of developing messages and publicity strategies. They might also have training to develop focus groups, interviews, and observations.

- ***Graphic design***: The images of a strategy and its subsequent development following the "laws" of design necessitate a person that is truly capable of doing a professional job. Sometimes, ABC strategies do not work because there was no designer to develop the logos and visual products for all of these activities.

- ***Architecture, urban planning and engineering***: Although these should not be involved during the entire strategy, it is crucial for them to give their point of view on the activities to be developed and the messages that will be communicated. Sometimes, the information that is given to the public is imprecise or ambiguous, and this can be solved with the participation of the architect, urban planner, or technician in the field of transport (an engineer).

- ***Public sector***: If a strategy is generated by the municipality, it is crucial for the public sector to be completely involved in all of the activities. However, if the strategy is developed by a nonprofit organization, the participation of the public sector does not have to be during the entire development of the strategy, but should be familiar with the strategy to see how it can collaborate or what information it can provide.

In the case of nonprofit organizations or individuals, informal groups can be made up of people that are not necessarily members of these professions, especially because nonprofits have a greater interest in acting on the problem and can concentrate on generating specific activities (bike and public transit rides, car-free days, etc.). In conclusion, the character of the group depends on the activities to be carried out in the strategy, the available budget and the duration of the project.

Remember that people will always be needed to collaborate with research in key groups, distributing material and support for the specific activities that are carried out.

7.2 Define the duration of a complete strategy

An ABC strategy does not have to last a specific amount of time. However, a complex strategy that will be applied to a population that is not sensitized to sustainable transport can take several years, while specific activities in a population that is somewhat sensitized can last 6 months or less. The available budget is also a factor fundamental to defining the duration and magnitude of a strategy.

A fundamental tool for creating a timeline for a strategy is called a Gantt Diagram (or chart). These present a list of the activities that will be carried out for the Project and their duration. This tool provides a quick visualization of what will be carried out with the times required. Obviously, to prepare a Gantt Diagram you must have clearly defined the steps of the strategy, including:

- Creation of the working group
- Conceptual development of the strategy
- Consulting stakeholder groups
- Systematization of data
- Design of messages and activities
- Execution of activities of awareness y behavior change (information, persuasion, concrete activities)
- Diffusion of activities and projects
- Evaluation of the strategy and replication

The diagram in Figure 67 describes these steps graphically.

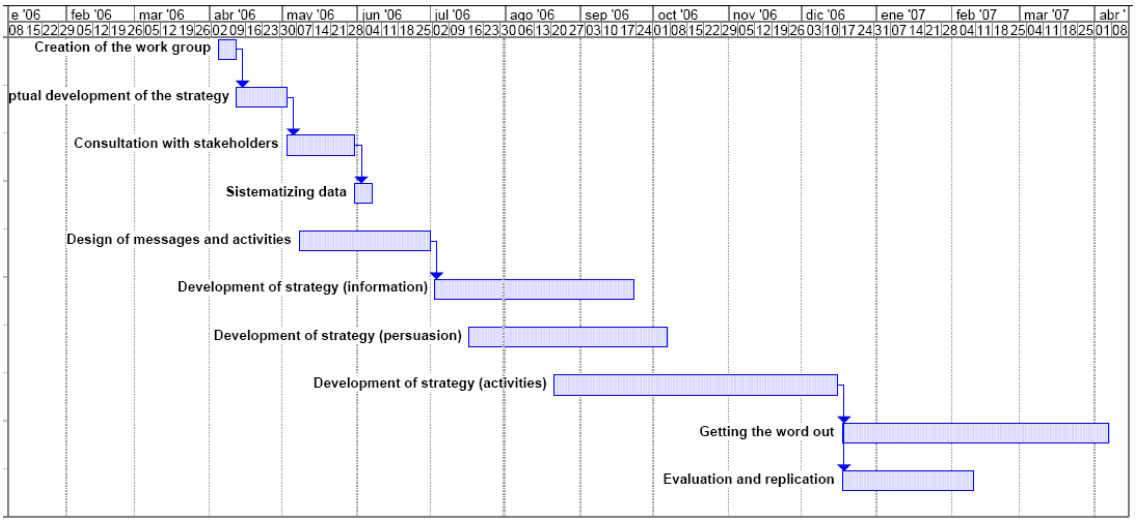


Figure 67. Sample Gantt Diagram for an ABC strategy

7.3 Define the groups of actors

Source of information: Chapter 3- Groups of the population

Once you have defined the strategy and the times for each stage, you can begin to develop the strategy itself. The first step is to define the actors and their groups. For this it is useful to take the information given in the chapter on investigation, specifically on stakeholder analysis. To define the groups, you must answer the following questions:

- Who is ***directly affected*** by the results of a transport project?
- Who is ***not directly affected*** by the results of a transport project?
- Who is ***responsible*** for a component of a transport system?
- Who would be ***against*** a sustainable transport project?
- Who would ***support*** a sustainable transport project?
- Who would ***collaborate*** with the execution of an ABC strategy?

After answering these questions, you can return to the list of actors provided in the chapter on investigation and choose the way you will gather information on these groups.

7.4 Compiling information about the population

Source of information: Chapter 4-Know your population: Basic information to gather

Define the appropriate strategy(ies)

The first step to gathering information is to define what research tools are most appropriate to be familiar with the population. Ideally, you could use two or three tools, but this also depends on the amount of time available and the human and financial resources available to carry out the research. The tool that requires the least amount of time is the survey, but this can require a large amount of money. On the other hand, a focus group is not as expensive, but it may take a long time to show their results. When consolidated groups that have already worked on these topics exist, you can use more specific tools such as key informant interviews or participative observation.

Inviting the participants

The participants can be invited by telephone or in person, and sometimes you can provide an incentive for people that formed part of a focus group or stakeholder analysis. Once you have defined the information gathering methods, you can make these invitations, with a specific script that describes the objectives of the meeting, its expected duration, and the data that will be gathered. It is important to note that you will have better chances of getting more participants and will be able to develop more solid relations according to how personal your contact is to the people you plan to invite.

Applying the information gathering instruments

Once the participants have been invited, you can apply the instruments that you have chosen.

7.5 Organizing the information

Source of information: Chapter 4.7- Organize the information

After gathering data in the population, you organize the information according to the groups selected in a way that you can extract information o develop the strategy. The questions this information should answer will be similar to the following:

- What attitude does group "A" have toward a sustainable transport project (or one of its components)?
- What obstacles does group "B" find to using the bicycle as a transport mode?
- What unfavorable aspects do people between 20 and 25 find in the existing public transport?
- How does the automotive sector see a car-free day? What actions would it take to stop such an event?
- What group can be included in the "precontemplation" category? What group forms part of "action" or "maintenance"?
- Who would be willing to collaborate on an ABC strategy for the city?
- Are there any answers to a particular question that are similar in all of the groups?
- Which group has that would have the most potential (and the most important mandate) to give strength to the ABC strategy?

7.6 Design of an intervention

Source of information: Chapter 5- Interventions: Three types of actio

Once the information gathered on the specific populations is categorized, it must serve to construct an ABC intervention strategy that can raise the awareness and change the behavior of the population in question. Here you must define ***your goals,*** and as much as possible, establish indicators of behavior change that you want to show (in percentage of trips, etc.) and the time you want to see those results in.

Formulate the general idea of the strategy

Based on the information gathered to acquire knowledge of a population with all of the methods used, the working group must define what it wants to convey and create incentives for with its strategy and which activities will be given priority to achieve this. Some questions that can help orient the work include the following:

- Which groups of the population will you work with the most (according to stakeholders, levels of awareness, incomes, ages, etc.)?
- Which other groups can help in the intervention (NGOs, interested individuals, public sector, private sector, community-based organizations, student centers, church groups, etc.)?
- Which values do you want to convey to the population (speed, comfort, savings, etc.)?
- Which modes do you want to promote (bicycle, walking, public transport, a new public transport mode, etc.)?
- What communication methods will you use (print press, internet, festivals, events, etc.)?
- What specific activities will you carry out (bike rides, car-free days, campaigns to go to work by bike, etc.)?

The answers to these questions can be categorized according to group and stage, and various activities and messages should be used, so that every element forms part of a general idea. Every

activity should strengthen the others, and these messages must never contradict each other or each other's goals, even if they are destined to different groups. For example, if you have messages conveying the speed of bicycles as urban transport, you cannot have messages that show the bicycle to be slower than public transport.

Create a more detailed timeline

Although this document includes an initial timeline, when designing an ABC intervention you must create a timeline with all of the steps for each specific case, which may be influenced by the information gathered when consulting a population. This timeline will include the duration, the resources (human and physical) and the approximate costs of the information. You must also create a complete ***budget*** of the initiative, so that you can plan your spending. Sometimes people spend much of their budget on a very expensive intervention, and do not have funds left over to implement the remaining activities.

Corporate image

A strategy must have an image. This means that all of the activities that you carry out and all of the material you send will have the same style in terms of format, colors, fonts and logos. A graphic designer can create proposals for the corporate image, but the work group must meet to define what the corporate image should convey. The graphic designer should base all proposals on the general concept that the work group has developed. For example, if the group has defined a campaign concept which looks forward to promote speed reduction in motorized vehicles and promote bicycle use, the corporate image must incorporate elements that transmit that idea. The group must choose the logo and can also consult people outside the group, and could even conduct short tests with the population. Although you might have consulted the population extensively, you might not have tested the corporate images with them if you have time and resources, you can carry out an additional focus group where you solicit opinions on different logo ideas. The following elements could appear in the logo:

- Bicycles (city bikes, not sports bikes)
- People (children, families) walking
- Busses
- Nature

Dark colors should be avoided, as should green, given that green is already associated with the ecological movement and is sometimes immediately rejected by a part of the population. Figure 68 presents logos from different sustainable transport initiatives that follow these guidelines.

Figure 68. Two well designed logos: one for non-motorized transport infrastructure in Bogotá (CicloRuta), and another for European Mobility Week. They are an important component to define the image of a strategy.

Besides the logo, you can generate a ***slogan*** for the strategy. The slogan should be short and clear, transmitting the message in as few words as possible. It is useful to base the slogan in a phrase that is common in the context where the activities will take place, or a different version of such a phrase. A common saying or song chorus could be used as a basis of the slogan. The slogan should not include negative words or orders; they should be expressed in positive terms. For example, you should not use a slogan like "do not drive quickly," rather, you should say "drive slowly." Neither should the slogan include very complex words, and preferably the words should have rhythm that makes them easier to remember. To choose a slogan, you can put it through the same process as you used to choose a logo, and the person in charge of communication can lead this process.

Information you will give

The strategy should include the information that key groups will receive, based on the guides described above and local information that can be included in the strategy. Statistics from the city (road safety, pollution, etc.) can be useful when arguing that sustainable transport is necessary and will bring benefits to the population. Based on this, you can use data from experiences in other countries, preferably also developing countries or on the same continent. Using examples from developed countries is not very useful in developing countries, because the initial reaction of the population will be to say "that is not possible here, it is easier in Europe." The same could happen if you give examples from Latin America in Asia or Africa, or vice versa. You need to provide a clear identification of the necessities and characteristics of the local context.

In this stage of providing information, you can hold small events or seminar in specific places, where you will lay the groundwork for the interventions to follow.

You should address the concerns of the population and its lack of knowledge of some topics of sustainable transport in this stage. Focus groups will provide the basis to know which information the population (or specific groups of the population) is familiar with and which it is not familiar with.

Techniques and persuasive messages

Once you have defined the principle message and the key information has been compiled and formulated, you can create persuasive messages that are related to the audience and will interest them. Following the guidelines set forth in chapter 5, you can generate these persuasive messages and adapt them to the local context, and test their effectiveness again. This process is similar to that of a slogan, but more elaborated and with more information.

This stage of persuasion is key to changing the attitudes of the population, and for this reason you should generate messages that are "close to the heart" of the groups that the messages will be directed toward. Following the steps set forth in chapter 5, the end of a persuasive message should be able to generate an emotional reaction in the audience (preferably, make them laugh), given that emotion is a factor that increases comprehension and makes later action easier.

Activities to develop

Once you have clear information about the topic of sustainable transport and some persuasion techniques, you can carry out specific activities that encourage real activity. As described above, you can hold bike rides, give free rides in public transport, or even hold a car-free day (preferably, a voluntary one) so that citizens are able to experience a trip using sustainable transport.

After finishing each activity, it is useful to conduct a brief survey of all participants, asking their opinion on the activity, and if they would use sustainable transport (bicycles, public transport, walking) more often. You can not ask participants to use sustainable transport everyday, but you can ask for a small commitment to start to use it one day of the week (they choose the day and say which it is). Studies show that these types of public or written commitments increase the probability of behavior change.

Photographs and video recordings of this stage are important for publicizing the activities and replicating them in other moments and in other contexts. It is also very useful to gather information of the amount of people that will participate in each event, and the different groups that are invited.

7.7 Publicizing the project and results

Source of information: Chapter 6- Getting the Word Out

Once the strategy has been implemented, you should document it appropriately. You should write reports, create presentations and other visual aids that include photos taken during all of the activities and that show the different steps of the strategy and their results.

Once this material is ready, you can publish it in a website and send it to mass or specialized media (distribution lists, congresses, other events) with the goal of getting feedback and being able to replicate it in other contexts.

This information is also fundamental to obtain financing for other stages of the strategy or to increase the visibility of a city, its mayor and/or other stakeholders involved in the cause. If the results are successful (and usually they are), this will open doors to more important events.

7.8 Evaluation of the activities

The ***evaluation*** stage 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 behavior 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.

The goal of the evaluation is to improve some aspects of strategies that will be formulated later, and if the evaluation is conducted throughout the intervention, it can be used to improve the process as it is implemented (meaning, a first conference can be evaluated to improve the second). Although the formal evaluation of the entire process takes place at the end of the strategy, it is useful to have a component of evaluation during each step to improve the strategy as it is carried out.

Resources

This section presents resources for public awareness and behavior change, for transport and other fields, considering that topics like environmental awareness that have been developed more than ABC strategies for sustainable transport have similar components and effects.

This training course is complemented by a CD of supporting documents that contains many of the resources described below. These are marked with the following symbol at the end of the reference. This section also provides website addresses where texts can be downloaded.

Note: the digital version of this resource list is available at www.sutp.org and is regularly updated.

Searching on the web

Although this chapter includes various resources that were used in the writing of this book, it is useful to have a guide to search for more resources using the internet. Some key words that can be useful for searches using such search engines as Google ®, Altavista ® and others are:

- public awareness / awareness
- environmental awareness
- environmental education
- social marketing
- behavior change
- mode shift
- sustainable consumption

Documents – Promotion and publicity of topics of sustainable transport in general.

2005 NRPC Regional Bicycle and Pedestrian Plan- CHAPTER III: BEHAVIORAL CHANGE COMPONENT. Available for download at:

http://www.nashuarpc.org/transportation/transproj_bikeped.htm

CDC Task Force on Community Preventive Services (2005). Recommendations to Increase Physical Activity in Communities. Am J Prev Med 2002;22(4S)

Fylan, F.; Hempel, S.; y Grunfeld, B. (2005) Road Safety Research Report No. 66: Effective Interventions for Speeding Motorists. 105 pages. Available for download at www.dft.gov.uk/stellent/groups/dft_rdsafety/documents/page/dft_rdsafety_611335.pdf

Jones, P. y Sloman, L. (2003) Encouraging Behavioural Change Through Marketing and Management: What can be achieved? Resource paper - Applied workshop 1- 10th International Conference on Travel Behaviour Research. 60 pages. Available for download at www.ivt.baum.ethz.ch/allgemein/pdf/jones.pdf

Litman, T. (2006) TDM Marketing: Information and Encouragement Programs. Available for download at www.vtpi.org/tdm/tdm23.htm

Noriega Vera, L.A.; Waisman, J. (2005) Restriction de la movilidad individual: utopía o realidad. (Restricting Individual Mobility: utopia or reality)Congreso CLATPU 2005. LAN Clatpu

Peterson, L (2004). Countering Car Culture, one trip at a time. Sustainable Transport Magazine, winter 2004. NY: ITDP. Available for download at http://www.itdp.org/ST/ST16/ST16.pdf

Reducing Car Use!? Just do it! Werner Broeg en

http://www.fta.dot.gov/documents/reducing_car_use.pdf

TANIGUCHI, A. HARA, F.; TAKANO, S., KAGAYA, S.; FUJII, S. (in press). Psychological and Behavioral Effects of Travel Feedback Program for Travel Behavioral Modification.

TANIGUCHI, A. HARA, F.; TAKANO, S., KAGAYA, S.; FUJII, S. Awareness Raising for Wise Use of Automobiles by the Travel Feedback Programme in Sapporo. 6 pages (summary) Available for download at www.iges.or.jp/APEIS/RISPO/spo/pdf/sp4209.pdf

Thissen, J.C. (2006) How to sell urban bicycling to adolescents? An approach from social psychology.

Waddell, P. (2001) Towards a Behavioral Integration of Land Use and Transportation Modeling. 9th International Association for Travel Behavior Research Conference (Queensland, Australia). 31 pages Available for download at www.urbansim.org/papers/IATBR_Paper.pdf

Wittink, R. (2005) Social marketing of cycling. Velo-City 2005. 17 pages. Available for download at www.i-ce.info

Institutions - sustainable transport in general

Institute for Transport and Development Policy http://www.itdp.org

Sustainable Urban Transport Project www.sutp.org

Sustran LAC: A network of sustainable transport for Latin America and the Caribbean: www.sustranlac.org

Go for Green is an activist organization that includes information on Safe Routes to School, and "Active Transport": http://www.goforgreen.ca

Ciudad Viva – Chile www.ciudadviva.cl

Fundación Ciudad Humana www.ciudadhumana.org

Bikes not Bombs – www.bikesnotbombs.org

Centre for Science and Environment http://www.cseindia.org is an NGO from India that is interested in the sustainable management of natural resources.

European Cyclists' Federation http://www.ecf.com is a portal for European cyclists' associations.

Intersection online, a Car-Free page- http://www.web.net/~detour is a community-based organization that promotes sustainable transport in Toronto.

Transporte Ativo http://www.ta.org.br/ is a Brazilian organization that promotes sustainable transport modes.

Project for Public Spaces is an organization that seeks to create more humane spaces in cities http://www.pps.org/

Smile Europe www.smile-europe.org is an organization that seeks to help local authorities present best practices and permanently introduce innovative approaches.

Friends of the earth (UK) has a project on the promotion of activities in sustainable transport. Available at: http://www.foe.org.uk/campaigns/transport/

EPOMM http://www.epomm.org/ is an international alliance that seeks to promote transport management in Europe and evaluate implementation among member states of the EU and other countries.

The Rebar group has designed a strategy called Park(ing), which uses parking spaces for other purposes. This initiative is presented in http://www.rebargroup.org/projects/parking/

Cycling promotion and publicity

There are too many cycling promotion and publicity to list. The best sites, with links to materials and other resources, include:

The International Bicycle Fund, http://www.ibike.org , http://www.cyclinginfo.org

The excellent Manual for Bike User Groups, written by Transport Bikewest, The Bicycle Transport Alliance and the Government of Western Australia (1998), can be downloaded at:

http://www.dpi.wa.gov.au/mediaFiles/cycling_bug_manual.pdf

In addition to emphasizing promotion and defense of cycling, this 70 page manual gives practical advice on the vital issues of organization, relevant to any type of public awareness campaign.

Transportation Alternatives is a New York-based group that strongly promotes the interests of cyclists and pedestrians in that city. Their webpage contains information aimed at New Yorkers but can be applied to other contexts. http://www.transalt.org/

The National Center for Bicycling & Walking works to create more bike and pedestrian friendly communities: http://www.bikewalk.org

San Francisco Bicycle Coalition has publicity and awareness material on the use of bicycles: http://www.sfbike.org/?coexist2001

La Asociación de Ciclistas Urbanos de Argentina (Argentine Urban Cyclists Association) has information on the use of the bicycle and on events that promote this means of transport. For more information, check: http://www.acu.org.ar/ .

Advocating for pedestrians

Campaigns oriented explicitly toward pedestrians are relatively scarce, however, walking is the most important part of transport. Begin with http://www.walkinginfo.org .

La Asociación A Pie (The Association On Foot) has information and activities on pedestrian awareness: http://www.asociacionapie.org/

Living Streets is a group that promotes people-centered spaces, calling themselves “the champions of the streets and public spaces for people on foot”: http://www.pedestrians.org.uk

Clean Air Action Group is an environmental NGO in Hungry that has considerable experience with sustainable transport and how to promote it: http://www.levego.hu

Safe Routes to Schools is a well-known organization that focuses on improving safe trips to school by promoting safe streets and other activities: http://www.saferoutestoschools.org.uk

Advocating for transit

The vast majority of the material available on the web comes from cities from developed countries. However, this material can be a useful resource for cities in developing countries. For transit advocates, a good starting point is:

The International Public Transport Union, http://www.uitp.com

The Bus Rapid Transit Policy Center at www.gobrt.org has a large amount of resources.

The Straphangers Campaign, http://www.straphangers.org

TransMilenio http://www.transmilenio.gov.co is the public entity that regulates the mass transit system in Bogotá.

Specific initiatives: Promoting cycling, walking and transit

Although many campaigns deserve to be included in this list, only a few are mentioned as examples, the City of Brisbane, Australia has an active program for cycling, walking and busses, with many and varied events announced on the website of their Department of Transport, http://www.transport.qld.gov.au/cycling

United Nations Carfree Days, http://uncfd.org, provides links to many events and campaigns currently in action.

http://www.learntoletgo.org.uk , in addition to being an aggressive campaign, has a good list of links and other events.

FONAM (National Environmental Fund) of Peru has a webpage to complement its promotional work in Lima at http://www.en2ruedas.com/

One Day Vancouver http://www.onedayvancouver.ca this is a campaign to encourage cycling and other means of sustainable transport.

Transport for London has interesting initiatives and related documents that can be downloaded from:
http://www.dft.gov.uk/stellent/groups/dft_susttravel/documents/sectionhomepage/dft_susttravel_page.hcsp

TravelSmart from Portland, Oregon is an interesting initiative that promotes various forms of transport, according to the users' needs:

http://www.portlandonline.com/transportation/index.cfm?c=36370

TravelSmart of Australia can be seen at http://www.travelsmart.gov.au/

Best has a manual called "How to Reclaim your street" at: http://www.best.bc.ca/streets/guidebook.html

Washington Area Bicyclists Association this is a webpage dedicated to biking to work, available at http://www.waba.org/new/BTWD06/index.php

Love your bike is an initiative from Manchester, England, that has very interesting graphic material to promote cycle use. It can be accessed http://www.loveyourbike.org/

Car-free Days and related events

The best information source for any city that is considering implementing a Car-free Day is Ecoplan's website by Eric Britton, http://www.ecoplan.org , and its accompanying website of the United Nations Car Free Days sight, http://uncfd.org.

Other excellent resources include:

http://www.carfree.com

http://www.earthday.net

European Mobility Week provides a large amount of resources for this week in September promoting sustainable transportation through car-free days. You can access it at http://www.mobilityweek-europe.org/

General communication, support and promotion

The most useful references for communication support, promotion and creation of associations are the following:

Academy for Educational Development (2005)- Tools and Publications. A very interesting general resource on awareness: http://www.aed.org/ToolsandPublications/

Now Hear This (2001); is a guide for communication, support and promotion strategies, prepared by Fenton Communications that can be downloaded at http://www.fenton.com/resources/nht_report.asp . The website includes a list of additional resources and links at http://www.fenton.com/resources/moreresources.asp, as well as links to campaigns discusses in the main report.

Although this site aims to help non-profit organizations, the material is very adequate for local governments of cities in developing countries that are carrying out a public awareness campaign with a minimal budget.

Meeting the Collaboration Challenge Workbook (2002), from the Drucker Foundation, at http://www.pfdf.org/collaboration/challenge/download.html, focuses on partnerships with businesses.

The Virtual Activists' Training Course (2002) centers on using the internet to reach the target audience and organizing, http://www.netaction.org/training/ . It includes reading for Training the Virtual Activist at http://www.netaction.org/training/versions.html

Earth Day Network is another important resource on awareness of issues like environment and health. It is an alliance of 5.000 groups in 184 countries that work to promote sustainability, at http://www.earthday.net

The Center for Disease Control and Prevention (CDC) has a division on health promotion. Given that sustainable transport modes imply a healthier lifestyle (for example, using a bicycle is both transport and physical activity), the page for the CDC on Nutrition and Physical Activity to Prevent Obesity and other Chronic Disease is very relevant to this topic: http://www.cdc.gov/nccdphp/dnpa/obesity/state_programs/index.htm

The Grantsmanship Center provides a practical guide on how to conduct focus groups (Judith Simón, 1999), en http://www.tgci.com/publications/99fall/conductfocusgp.html

Fostering Sustainable Behavior is a very good page that provides a database (article, reports, cases, graphs, etc.) about how to improve sustainable behavior. It requires a brief registration process, and users can enter and leave a discussion group. Enter at http://www.cbsm.com/

GreenCOM is a communications project by the United States Agency for International Development (USAID), which provides services to managers of environmental programs around the world (among others). The webpage is http://www.greencom.org/

http://www.conservation.org/xp/CIWEB/programs/awareness Designing a Communication Campaign: The 4-P Workshop

Jackson, T. (2005). Motivating Sustainable Consumption. Surrey: University of Surrey. 170 pages. Available for download at www.sd-research.org.uk/MotivatingSCfinal_000.pdf.pdf

The Organizer's Database: ODB (2002); is a members' database program, created based on the needs of small non-profit organizations and campaigns of community-based organizations. This program can be downloaded for free at http://www.organizenow.net/odb/odb.php. It can be useful for public awareness campaigns that involve a large number of relatively small donors.

The Benton Foundation has put a "toolbox" online that has the best practices for Communication Strategies in the Digital Age, at http://www.benton.org/Practice/Toolkit/home.html that includes links for additional materials. The "toolboxes" contain various additional links to a large variety of good resources on communication and campaign strategies.

Managing the Media: A Guide for Activists, http://tenant.net/Organize/media.html

Schemer, K, 2005. Stakeholder Analysis Guidelines is 48 pages long and is available for download at www.lachsr.org/

Social Change Media is an excellent resource on techniques of social marketing. Available at http://media.socialchange.net.au/strategy/

Social Marketing Lite is a 170 page document to understand the promotion of social projects from the point of view of social marketing. Available for download at: http://www.aed.org/ToolsandPublications/upload/Social%20Marketing%20Lite.pdf

Tools of Change is a website with information from Social Marketing background with tools and guides to develop public awareness activities: http://www.toolsofchange.com/

Environmental education, environmental psychology

Aragones, J.I. y Amérigo, M – comps. (2000) Psicología Ambiental. (Environmental Psychology) Madrid: Pirámide

Goulias, K.G. y Henson, K.M. (2005) Altruists and Egoists in Activity Participation and Travel. 2006 TRB annual meeting

Holahan, Charles. (1991) Psicología ambiental: un enfoque general (Environmental Psychology: a general focus). México: Limusa.

Hook, W, Wright, L (2002) Reducing greenhouse gas emissions by shifting passenger trips to less polluting modes. A background paper for the brainstorming session on non-technology

options for engineering modal shifts in city transport systems. 43 pages. Available for download at www.itdp.org/read/GEFbackground_nairobi2002.pdf

Iziuka, M. (2003) Importancia de la conciencia ciudadana para promover la descontaminación atmosférica en las áreas metropolitanas de América Latina: el marco teórico. En Simioni, D. (2003) (Importance of citizen consciousness to promote atmospheric decontamination in metropolitan areas of Latin America: the theoretical framework).Contaminación atmosférica y conciencia ciudadana. (Atmospheric contamination and citizen consciousness). Santiago de Chile: CEPAL

Minnesota Office of Environmental Assistance (2002) Environmental Literacy - Scope and Sequence: Providing a systems approach to environmental education in Minnesota. 117 pages . Available for download at http://www.moea.state.mn.us/publications/ScopeandSequence02.pdf

Simioni, D. (2003) Contaminación atmosférica y conciencia ciudadana (Atmospheric contamination and citizen consciousness). Santiago de Chile: CEPAL.

Ubbels, B. Verhoef, E. (2006) Behavioural Responses to Road Pricing: Empirical results from a survey among Dutch car owners. 2006 TRB annual meeting. 18 pages.

Information on transport – statistics

Bull, A. (2003) Congestión de Tránsito: El problema y cómo enfrentarlo. (Traffic congestion: the problem and how to face it) Santiago de Chile: GTZ-CEPAL.

The "Culture for a new mobility" of the URB-AL network has created a webpage with excellent information on mobility, available in several languages. http://www.mobility-cultura.net/

The ADB has an excellent website with focus on the region of Asia and the reduction of emissions through integrated transport policies: http://adb.org/vehicle-emissions .

The Environmental Protection Agency (EPA) of the United States of America. El EPA americano. Verifique las Sources móviles y la sección aérea del sitio (http://www.epa.gov)

The group Ecopolitics has developed a list of important data on transport and its characteristics that can be seen at the following page: http://www.ecopolitics.ca/transportation/publicTransit/index.php

PORTAL (Promotion Of Results in Transport Research And Learning) has a page with much information on transport, although it is basically centered on Europe. One of the topics of Management of Mobility and Consciousness of Trips, and the English language version is available at the following website:

http://www.eu-portal.net/material/material2.phtml?sprache=en&kt=kt7

T&E (2004). TRANSPORT AND THE ECONOMY: THE MYTHS and THE FACTS. 28 pages. Available for download at: http://www.transportenvironment.org/Downloads-index-req-viewsdownload-sid-14.html

Wener, R.(2000) The impact of mode and mode transfers on commuter stress. New Jersey: New Jersey Department of Transportation. 57 pages Available for download at www.utrc2.org/research/compproj.php?viewid=74

World Carfree Network has an extensive list of information and statistics to justify sustainable transport: http://www.worldcarfree.net/resources/stats.php. It also has free resources for downloading: http://www.worldcarfree.net/resources/free.php

Videos and audiovisual resources

Cycling Friendly Cities is a video developed between ITDP and I-ce that shows the benefits of riding bicycles and cities that have treated the bicycle as an important means of transport.

The documentary film "El eco de la bici" ("The echo of the bicycle") http://es.arcoiris.tv/modules.php?name=BigDownload&id=704 narrates the personal vision of a young Italo-chilean that discovers a city through its bicycles.

UITP and UNEP developed a video on awareness of sustainable transport in various languages. It is available at:

http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=424&ArticleID=4718&l=en

Email lists (listserves)

Below are the 10 most relevant email discussion groups, according to language (the order is arbitrary):

1. ***New Mobility Cafe***

Group webpage: http://groups.yahoo.com/group/NewMobilityCafe/
Language: English

2. ***Sustran_discuss***

Group webpage: http://list.jca.apc.org/manage/listinfo/sustran-discuss
Language: English

3. Carfree Café

Group webpage: http://groups.yahoo.com/group/CarFreeCafe/
Language: English

4. ***Carfree_cities***

Group webpage: http://groups.yahoo.com/group/carfree_cities/

Language: English

5. ***Carfree_network***

Group webpage: http://lists.riseup.net/www/info/carfree_network

Language: English

6. ***Kyoto 20/20***

Group webpage: http://groups.yahoo.com/group/Kyoto2020/

Language: English

7. ***SUTP LAC***

Group webpage: http://espanol.groups.yahoo.com/group/sutp-lac/
Language: Spanish- Portuguese

8. ***Cicloamérica***

Group webpage: http://espanol.groups.yahoo.com/group/cicloamerica/
Language: Spanish

9. Ciclovías Unidas de las Américas

Group webpage: http://groups.yahoo.com/group/cicloviasunidas/
Language: Spanish

10. URB-AL Stuttgart

Group webpage: http://groups.yahoo.com/group/URB-AL-Stuttgart/
Language: Spanish- Portuguese

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