

## **SMART CHOICES IN URBAN TRAVEL FOR SUSTAINABLE FUTURE<sup>1</sup>**

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### **Abstract**

Causing negative environmental impacts, urban transport represent the biggest source for life quality degradation. Urban areas have to continuously function and to keep their prosperity on the path to sustainability, but available environmental friendly modes of urban transport aren't the only thing needed. More important is to be directed and motivated for usage of sustainable transport and its wider promotion.

A wide range of smart choices exist, applicable for Bitola town, with a potential to influence on everyday decisions for travel and to relieve the pressure of motorized transport on the environment. Smart choices motivate and provide more effective travel planning and increase the number of journeys made by sustainable transport. Where applied, these choices already contribute for positive changes in the way of urban travelling [1].

Based on current level of development of sustainable transport options in Bitola town, this paper analyses the possibility for approaching to and applying those smart choices that have a potential to create and support an efficacious, attractive, and most importantly, sustainable urban transport.

**Key words:** smart choices, sustainable transport, Bitola town

### **INTRODUCTION**

Uncontrolled development of motorized urban transport, neglecting the sustainable options, is a cause for serious environmental problems. The similar situation is in Bitola town, where problems in urban transport, such

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<sup>1</sup> original scientific paper

as old and numerous urban fleet, low quality of public transport, shortage of parking places and undeveloped cycling infrastructure have significant negative influence on life quality [8].

The problem is not comprised only by air pollution which decreases life quality, making the town less desirable and less prosperous place for the inhabitants. Air pollution is just a consequence of unsustainable trends in urban transport. A bigger problem at the moment is undisturbed priority of motorized transport in urban plans and strategies. It is clear that time is needed to change things in the urban development and to introduce and develop sustainable alternatives for the passenger car.

Therefore, this paper highlights the significance and advantages of smart choices in urban travel that have a potential to contribute for building a sustainable future for all citizens. Smart travel choices have proved to be popular between citizens and smoothly accepted [1].

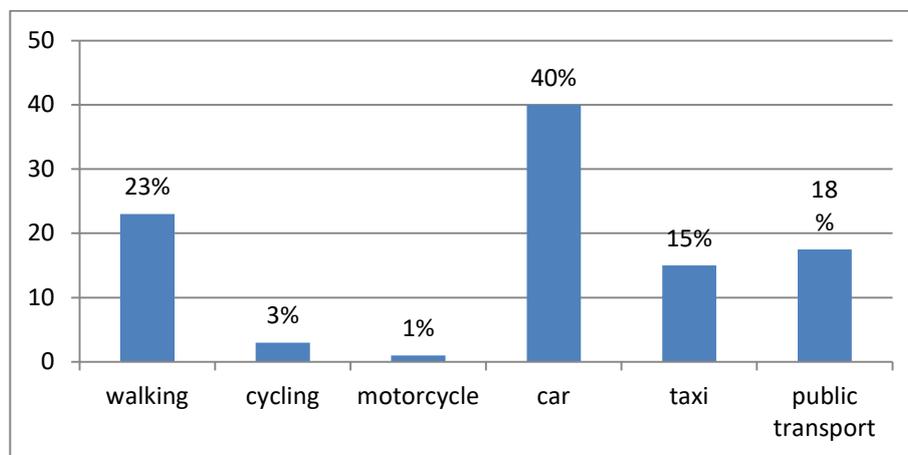
With smart choices, drivers of passenger cars would be motivated towards sustainable transport modes, such as walking, bicycling and public transport. At the moment these options in Bitola aren't developed or aren't sufficiently developed. Still, a challenge has been placed in front of the decision makers to recognize the potential benefits from the smart choices measures in order to create a program for their support. This should be a first step for integration of smart choices in urban transport strategies, alongside with the development of sustainable options. Not only that smart choices will contribute for decrease of air pollution, but will provide authentic choice for travel. Moreover, they will contribute for effectiveness of other priorities, such as strengthening of social inclusion, maintaining environmental quality and increasing the level of physical activity.

Hence, the analysis in this paper shows the essence of smart choices and their potential in dealing with the problems in urban transport in Bitola town.

## **TRENDS IN URBAN TRANSPORT IN BITOLA**

What is specific for the town of Bitola referring sustainability in urban transport? Unfortunately, the present changes in that direction are happening with a very slow rate [8]. Public transport is undeveloped, with poor service quality, old vehicles, and for many parts of the town this service, no matter how much questionable, isn't available at all. There aren't any cycling paths in the town, so for the cyclist is very difficult and dangerous to cycle on the streets along with vehicles. Some changes happened in parking policy, by introducing zone parking and parking charge. Still, sidewalks are interrupted by parked vehicles. In brief, a huge effort and patience is needed to take direction toward sustainable modes of travel [8].

In a situation like this, passenger car is always a first choice (fig. 1). On the other hand, the economical situation in the town and in the country in general defines the average age of the town's vehicle fleet. The biggest part of the vehicles (around 47%) have 14-20 years and above 20 years [2]. Exhaust emissions from these vehicles are higher, because of the obsolete technical characteristic and out-of date equipment for exhaust gasses treatment (or total absence of this kind of equipment).



*Fig. 1: Distribution of transport modes for everyday journeys in Bitola town*  
**Source:** [3]

On the other hand, these old vehicles are in frequent everyday use and comprise the biggest part of passenger kilometres travelled in the town, in respect to their representativeness [2].

If the usage of passenger car continues with the same rate and with further potential to increase, it will contribute for [4, 5]:

- decrease of average speed in peak hours
- increase of travel time
- safety problems
- more noisier, polluted and stressful streets
- negative health impacts
- bigger problem with body weight because of the car dependence
- decrease of the town's competitiveness as a result of traffic jams
- insecure energetic security caused by import dependence of fossil fuel for the transport sector
- increase of the greenhouse emissions.

To change this trend in which passenger car always has priority in urban travels, to effectively decrease environmental problems and to raise life quality in Bitola town, it is necessary to perform modal change from private motorized transport to sustainable transport modes [8]. Hence, priority should be given to sustainable transport modes, which should become available, attractive and qualitatively developed. For our town, applicable sustainable options are public transport, walking and cycling. And smart choices have that potential for directing potential users to these transport modes, making them widely accepted and used.

### **SMART CHOICES CONCEPT**

Smart choices are new measures that influence people's travel behavior, directing them to sustainable options. Sometimes they are called "soft" measures because they reduce passenger car traffic, without need to build new "hard" transport infrastructure [1].

Smart measures in our town would be successful if joined with measures that limit traffic volumes [6]:

- reassignment of roadway capacity
  - more space for walking and cycling
  - reprogramming of the signalization: more time for pedestrians, buses and cyclists
- parking control
  - severe parking standards in new zones
  - parking payment
  - payment for parking at work place
  - reorganization of parking spaces for more productive uses
- „livable“ streets
  - traffic calming
  - parts without traffic in urban center
  - residential zones
  - walking zones
- reinforced regulative and speed control.

With intensive programs for smart choices, it should be expected that policies for limitation of traffic volume developed alongside, most probably would become more effective, facing with less confrontations.

### **SMART CHOICES STRUCTURE**

Smart choices measures mainly comprise recognition and promotion of current alternatives for passenger car, as well as motivation for their usage.

There isn't simple definition for the activities included in smart choices. However, based on the current level of sustainable development in Bitola town and deficiencies of sustainable options, activities presented in fig. 2 can be pointed out.

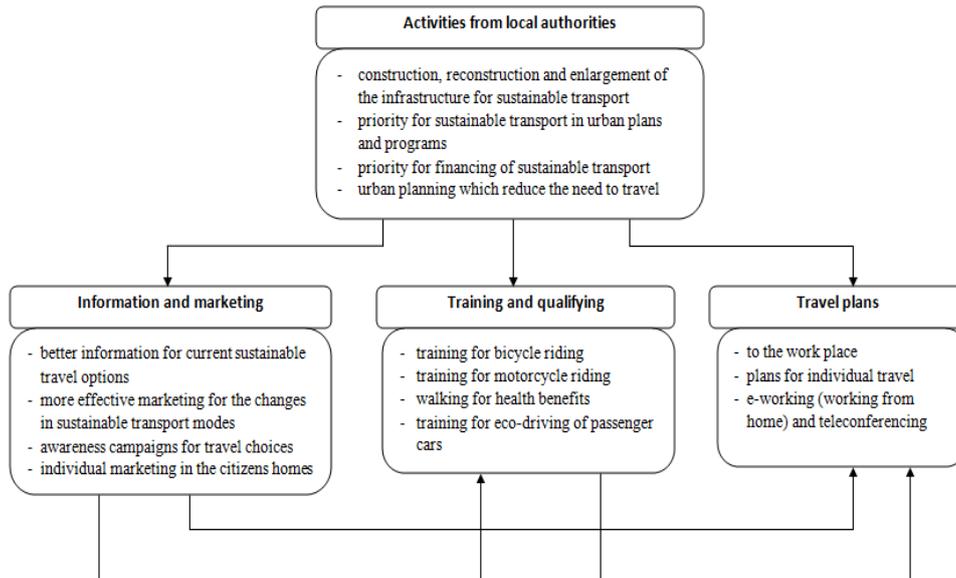


Fig. 2: Organization chart for applicable activities in smart choices

Source: made by authors

Organized in this way, smart choices can contribute for accomplishment of the following goals [7]:

- support and promotion of sustainable transport options
- promotion of travel modes that bring health benefits
- reduction of traffic impacts on life quality and environment – which is acute problem for Bitola
- minimization of time loses and traffic interruptions
- delivering sustainable choices to wider range of potential users, especially those without access to passenger car
- reduction of need to travel, especially by passenger car
- support of planned urban development, insuring that new zones adequately provide requested sustainable transport options and decrease traffic impacts.

## **RECOMMENDATIONS FOR LOCAL PROGRAM FOR SMART CHOICES IN BITOLA**

Initial point for starting with smart choices is to provide the infrastructure needed for sustainable transport, especially cycling and walking network.

In the process of planning and implementing measures for smart choice, local authorities should give their support through [4]:

- creation of a basis for starting with smart measures
  - infrastructure issues
  - better service in public transport
  - zones with calmed traffic
  - priority for cyclists and pedestrians.
- team play: establishing proper partnership relations with businesses, organizations and institutions in order to develop and support smart choices.

The balanced local program for smart choices can include part or everything from the following [6]:

- Program for individual marketing and travel planning, targeting particular number of inhabitants every year, most often by municipalities or homes, in order to improve their awareness for sustainable options through proper advice, information and stimulation.
- Partnership with local bus operators for promotion of the improvements in public transport.
- Wide campaign for awareness of travel choices, including initiatives for sustainable transport.
- Series of smaller projects for some of the measures, with which local authorities most often aren't occupied. For instance, clubs for bicycle trainings or centers for bicycle renting/maintenance.
- Introduction of new transport services, focused on targeted market, such as work places or residential zones.
- Improvement of organization of services in order to better meet the requirements of specific population groups (referring social category, level of physical disability etc.).
- Teamwork with public and private sector for creation of plans for travel to working place. Apart of bigger industrial capacities in town's periphery, which have their own bus transport for employees, the choice for travel to administrative and commercial working places in town is left to the workers themselves. Created team for this purpose can set up plans for car-pooling to work place and promote sustainable working

habits including e-working (working from home or some other location) and teleconferencing (virtual conferences using phones, video or computer connection).

In short term, some measures for smart choice most probably will have bigger effect from the others. The evidence suggests that measures targeted to travel to work (travel plans, car-pooling programs and e-working) can deliver about half of the potential reduction of total traffic [6]. But, this is expected for bigger urban areas. For Bitola, as smaller town, it's real to expect that biggest contribution will arise from strengthening sustainable travel options, as well as from individual marketing and awareness campaigns. Results from the projects for individual marketing worldwide suggest that it's possible to reduce the use of car for 7-15% in urban areas and maybe even less in rural areas [6]. Here should be stressed that giving priority to some smart choice activities in Bitola doesn't mean that others should be completely neglected.

Smart choices affect travel habits and behavior to travel choice – these observations suggest that local measures can create an “effect of snow ball” - meaning, the change at the beginning can be very slow, but can speed up as people see how their colleagues or neighbors change their own travel habits; discovering that result works and subsequently becoming more open for changes in their proper lives [6].

### SMART CHOICES BENEFITS

Measures for smart choices have economic, social and health benefits, and contribute for decrease of the carbon amounts [4].

**They are good for the businesses:** help for the release of traffic volume on roads through reduction of unnecessary travels by passenger car; less traffic jams mean less deficit for the businesses.

**Better life quality:** Less noisy streets mean more pleasant communities, less air pollution, less time spent for travelling and better social interaction. The result from [4] is very interesting: residents on streets with high traffic volumes have about 25% less friends compared with those living on calmed streets.

**Health benefits:** apart of the improved air quality, health has direct positive benefits from the growth of cycling and walking.

**Reduction of carbon emissions:** Measures for smart choice contribute for reduction of carbon emissions in areas were undertaken (for instance, in Great Britain, it's calculated that use of smart choice measures on national level will save about 2.9MCO<sub>2</sub> at

year [4], which is much more from the savings if all domestic flights were grounded).

## CONCLUSION

Smart choices for urban travel can provide the shortage of information for sustainable options to be overcome and can motivate to try those options. This is very significant, having in mind that lack of information and insufficient motivation and promotion are main obstacles for directing to sustainable transport [1]. The goal of smart choice is to motivate each individual to think why and how he make choices for urban journeys and to take into account the influence that travel decisions have not only personally, but to others as well.

What we need at the moment in Bitola town is a good local program for development of sustainable urban transport, as a basis for application of the measures for smart choice. Measures for smart choices should be financially acceptable and should optimally utilize the current infrastructure. Applied even in this way, they will reduce pollution and deliver health and environmental benefits, as well as benefits for the community. Smart choices have high potential for change of the current situation in Bitola, where quality of life is seriously endangered because of the pressure coming from motorized urban transport.

The citizens of Bitola town are concerned because of the traffic impacts on the environment, so their support for promotion and prioritization of smart choices for sustainable travel car can be expected.

Applied, smart choices have potential to decrease negative environmental impacts from traffic, to make sustainable transport options more attractive and to improve life quality [6]. It is real these benefits to be expected in Bitola.

Smart choices are successful, cost-efficient methods for motivation of behavioral changes towards healthier and cleaner way of travel. Providing the information accessibility and offering attractive alternatives for travelling, smart choices will give control to all of us referring travel decisions, which are better for us and for our environment.

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