



Sustainable Urban Transport: Avoid-Shift-Improve (A-S-I)

The traditional approach applied to deal with increased transport demand has been the provision of additional road space by means of new and larger road infrastructure. This supply-side oriented approach has however not delivered the expected benefits. Induced traffic has been created and roads continue to exhibit unacceptable levels of congestion, GHG emissions and other externalities. For this reason, the traditional approach is nowadays regarded as obsolete. Therefore, a new approach to tackling current transport problems is required.

GIZ's Approach to Sustainable Mobility

Based on the above statement, GIZ has committed itself to promoting a different approach. Inspired by the principles of sustainability, this alternative approach focuses on the demand-side, as opposed to the previous one. The approach, known as A-S-I (from Avoid/Reduce, Shift/Maintain, Improve), seeks to achieve significant GHG emission reductions, reduced energy consumption, less congestion, with the final objective to create more liveable cities. The objective of the A-S-I approach is to promote alternative mobility solutions and to develop sustainable transport systems.

The Avoid – Shift – Improve Concept

The A-S-I approach entails three main avenues:

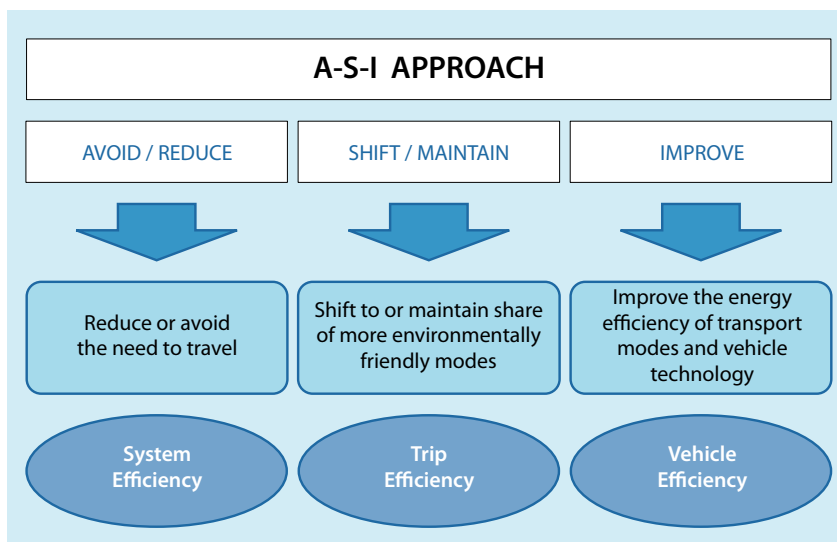
- **Avoid/Reduce**
- **Shift/Maintain**
- **Improve**

Firstly, “*avoid*” refers to the need to improve the efficiency of the transport system. Through integrated land-use planning and transport demand management the need to travel and the trip length may be reduced.

Secondly, the “*shift*” instruments seek to improve trip efficiency. A modal shift from the most energy consuming urban transport mode (*i.e.* cars) towards more environmentally friendly modes is highly desirable. In particular, the shift towards the following alternative modes:

- **Non-Motorised Transport (NMT)**: walking and cycling. They represent the most environmentally friendly options.
- **Public Transport (PT)**: bus, rail, etc. Although PT also generates emissions, lower specific energy consumption per pkm and higher occupancy levels imply that the associated CO₂ emissions per passenger-km are lower compared to cars.

Thirdly, the “*improve*” component focuses on vehicle and fuel efficiency as well as on the optimisation of transport infrastructure. It pursues to improve the energy efficiency of transport modes and related vehicle technology. Furthermore, the potential of alternative energy use is acknowledged.



Co-Benefits

The benefits of improving the three aforementioned dimensions –transport demand, mode choice and technology– can be substantial. The ASI approach has the potential to contribute to emission reductions beyond current expectations. Vitalization of public spaces, better urban air quality and many other important co-benefits can be expected from the application of the ASI approach.

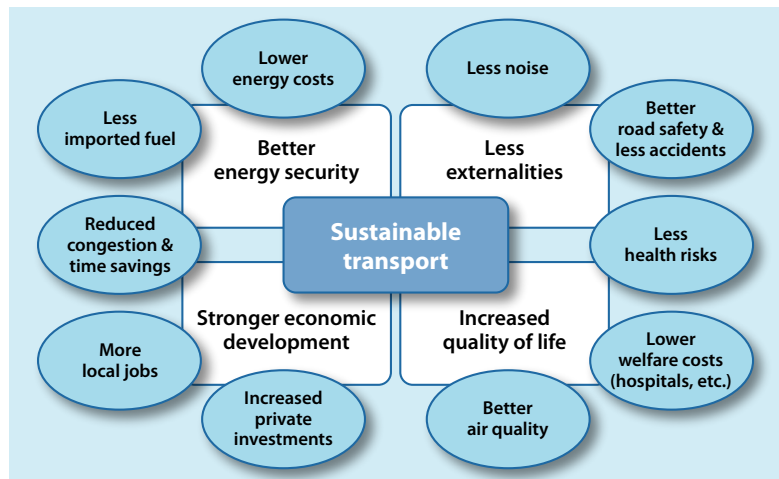
Climate Change: A new agenda

The A-S-I approach also makes a very important contribution to climate change. It allows developing synergies between mitigation and adaptation:

- **Mitigation:** It enables decision-makers in developing countries to develop transport strategies that support climate change mitigation by increasing the efficiency of transport systems.
- **Adaptation:** It also helps define the path towards making transport systems more resilient and to contribute to effective disaster risk management.

A successful climate change strategy in transport requires the adoption of a comprehensive and coherent approach. The A-S-I approach is a suitable framework for that.

For more details of the A-S-I approach, please check GIZ' Sourcebook for decision-makers in developing cities, Module 5e *Transport and Climate Change* at <http://www.sutp.org>.



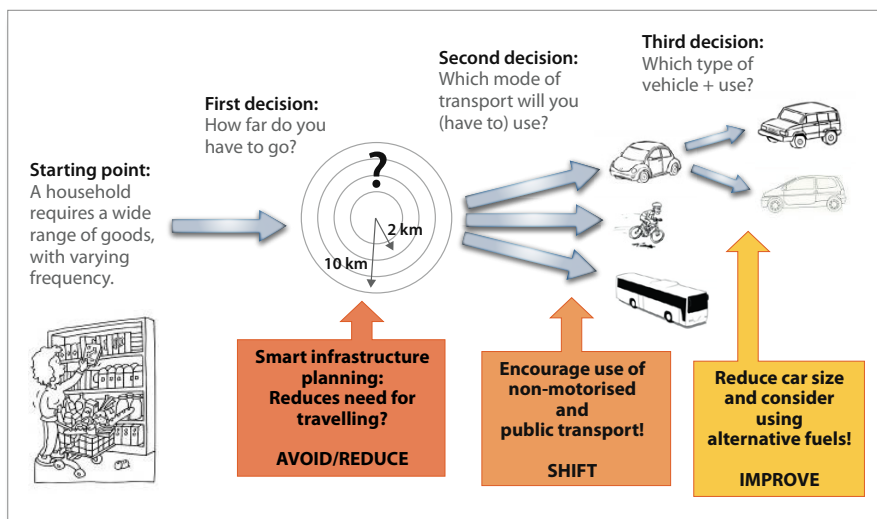
The **GIZ's Sourcebook on Sustainable Urban Transport** addresses the key areas of a sustainable transport policy framework. The Sourcebook for decision-makers consists of presently 30 modules.



Free download at: www.sutp.org, www.sutp.cn

An Example: Shopping

A person willing to buy a given commodity and thus with a need to travel faces the following key decisions:



1. *How far do I have to go to buy the good?*

AVOID/REDUCE: By implementing an integrated land use planning policy travel distances to destinations can be reduced.

2. *Which transport mode is available to me?*

SHIFT/MAINTAIN: By encouraging the use of more environmentally friendly modes, the individual may regard PT as a suitable alternative to car for the same trip.

3. *Which type of vehicle shall I use?*

IMPROVE: In the medium/long-term, the individual may consider reducing the car size or using a vehicle powered by alternative fuels.

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