Sustainable Transport System: Planning and designing national urban Sustainable Transport Systems

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Humans love to move, travel, discover… by different ways and modes…
The adverse impacts of growth in motorization - in economic, environmental and social terms - are ruining the quality of life in our cities and our global climate.
In most cities, mobility is dominated by personal motorized transport. Many people choose cars to move around...
Challenges in developing cities

10-25% of urban areas are taken by road transportation infrastructure - a lot of space for cars!
Challenges in developing cities

Road transport is a major contributor to air pollution and climate change. Transport contributes to now 27% of energy-related CO2 emissions and is still growing!
Challenges in developing cities

Worldwide, 1.3 Million road deaths and up to 50 Million people injured per year
Challenges in developing cities

...where is the space for people?
the silent pedestrian, the invisible cyclist must be seen
Failures in Urban and Transport Planning

Trends in cities
- Rapidly increasing car ownership and use
- Declining mode share of public transport, walking, and cycling
- Declining city centres; rapid decentralisation into car-oriented suburban sprawl

Focus on providing mobility:
- More infrastructure for cars
- More space for motorized vehicles, which let to less density and often to sprawl
- Unsustainable focus
Context: Failures in Urban and Transport Planning

There is no way out of congestion…

Source: Claudio Olivares, based on Wuppertal Institute
Solution: What are our options?

Alternative 1:

- Capital-intensive solutions – focus on supply side (road width/flyovers)
- Give greater capacity to the road network in the hopes of relieving congestion

By following the current trend, this is where we’re getting to… is it what we want?
Road construction can never keep up with demand. Road building is an expensive way of dealing with travel demand. With already now 1,2 billion cars on our planet, where will this end? Some forecasts see 4 billion cars by 2050. This scenario calls for sustainable options.

Source: Karl Fjellstrom
Solution: What are our options?

Alternative 2: Paradigm shift

Over time, achieving greater sustainability in transport means...

... investing in schemes and initiatives that improve accessibility and developing more livable cities based on non-motorized transport and public transport.
how do you realize such a vision?

• Design and development of Sustainable Urban Transport Plans
What is the purpose of the Sustainable Urban Transport Plans?

A Sustainable Urban Mobility Plan aims to create a sustainable urban transport system by addressing – at least – the following objectives:

- Ensure the accessibility offered by the transport system is available to all;
- Improve safety and security;
- Reduce air and noise pollution, greenhouse gas emissions and energy consumption;
- Improve the efficiency and cost-effectiveness of the transportation of persons and goods;
- Contribute to enhancing the attractiveness and quality of the urban environment and urban design.”
Overview of the Sustainable Urban Transport Plan design cycle:

1. Determine your potential for a successful SUMP
2. Define the development process and scope of plan
3. Analyze the mobility situation and develop scenarios
4. Develop a common vision
5. Set priorities and measurable targets
6. Develop effective packages of measures
7. Agree on clear responsibilities and allocate funding
8. Build monitoring and assessment into the plan
9. Adopt Sustainable Urban Mobility Plan
10. Ensure proper management and communication
11. Learn the lessons

Starting Point: “We want to improve mobility and quality of life for our citizens”

1. Commit to overall sustainable mobility principles
2. Assess impact of regional/national framework
3. Conduct self-assessment
4. Review availability of resources
5. Define basic timeline
6. Identify key actors and stakeholders
7. Look beyond your own boundaries and responsibilities
8. Strive for policy coordination and an integrated planning approach
9. Plan stakeholder and citizen involvement
10. Agree on workplan and management arrangements

Milestone: Analysis of problems & opportunities concluded

Milestone: Final impact assessment concluded

Overview of the Sustainable Urban Transport Plan design cycle
1. Preparing well

1.1 Commit to overall sustainable mobility principles
1.2 Assess impact of regional/national framework
1.3 Conduct self-assessment
1.4 Review availability of resources

1.5 Define basic timeline
1.6 Identify key actors and stakeholders

1. Determine your potential for a successful SUMP

2. Define the development process and scope of plan

2.1 Look beyond your own boundaries and responsibilities
2.2 Strive for policy coordination and an integrated planning approach
2.3 Plan stakeholder and citizen involvement
2.4 Agree on workplan and management arrangements

3. Analyse the mobility situation and develop scenarios

3.1 Prepare an analysis of problems and opportunities
3.2 Develop scenarios

Milestone: Analysis of problems & opportunities concluded
2. Rational and transparent goal setting

Milestone: Measures identified

6. Develop effective packages of measures
   - 6.1 Identify the most effective measures
   - 6.2 Learn from others’ experience
   - 6.3 Consider best value for money
   - 6.4 Use synergies and create integrated packages of measures

4. Develop a common vision
   - 4.1 Develop a common vision of mobility and beyond
   - 4.2 Actively inform the public

5. Set priorities and measurable targets
   - 5.1 Identify the priorities for mobility
   - 5.2 Develop SMART targets
AVOID
Reducing the need to travel

SHIFT
Changing mode choice

IMPROVE
Increasing the energy efficiency of vehicles, fuels and transport operations
Example: Shopping

Starting point: A household requires a wide range of goods, with varying frequency.

First decision: How far do you have to go?

Second decision: Which mode of transport will you (have to) use?

Third decision: Which type of vehicle + use?

Smart infrastructure planning: Reduces need for travelling!

Encourage use of non-motorized and public transport!

Reduce car size and consider using alternative fuels!

Avoid/Reduce

Shift

Improve
Strategies for improving Sustainable Transport in cities

- Integrating Land Use Planning and Transport Planning
- Improving Public Transport Systems
- Promote Walking and Cycling Activities
- Robust Institutional Framework
- Exploring funding options
- Rebranding SUT modes
3. Elaborating the plan

Milestone: SUMP document adopted

Check the quality of the plan
Adopt the plan
Create ownership of the plan

Assign responsibilities and resources
Prepare an action and budget plan

7. Agree on clear responsibilities and allocate funding
8. Build monitoring and assessment into the plan
9. Adopt Sustainable Urban Mobility Plan

Elaborating the plan
4. Implementing the plan

Milestone: Final impact assessment concluded

Update current plan regularly
Review achievements - understand success and failure
Identify new challenges for next SUMP generation

10. Ensure proper management and communication

10.1 Manage plan implementation
10.2 Inform and engage the citizens
10.3 Check progress towards achieving the objectives

11. Learn the lessons

Implementing the plan
A Landmark: The National Urban Transport Policy (India)

- Focus on moving people not vehicles - public transport
- Integrated land use and transport
- Clean fuels and technology
- Capacity building
JNNURM

- Financial arm for NUTP
- First reform-driven financial stimulus package exclusively targeting urban areas by the central government
- Envisaged “mission projects” for 65 select cities
- An investment of over INR 1,00,000 crores by Centre, State and City Govts.
- Publicly stated aim of the programme: to make cities “investor friendly”; active PPPs

Source: MoUD, 2007
• Has mandatory and non-mandatory reforms
• Preparation of Comprehensive Development Plan (CDP) by city agencies
• Preparation of Comprehensive Mobility Plans (CMP) for cities
• Setting up of Metropolitan Planning Committees (MPC) for metropolitan regions
• Creation of community participation laws which will allow citizens to take part in the city planning process
• Compliance issues:
  • CDPs not integrated with MPs,
  • Some CMPs in itself not sustainable,
  • planning done by UDAs, only few MPCs, funding for roads and flyovers larger share
Comprehensive Mobility Plans (CMPs) in India
How is a Comprehensive Mobility Plan (CMP) defined in India?

“A CMP presents a long-term vision of desirable mobility patterns (people and goods) for a city and provides strategy and policy measures to achieve this vision. It follows the guidelines set forth by National Urban transport Plan which emphasizes on NMT measures, PT systems and sustainable systems”
Main features of CMP

- Optimization of the mobility of people
- Improvement of public transport, NMVs, and Pedestrians
- Integration of land use and transport systems
- Optimization of goods movement

Source: CMP Preparation Toolkit - Guidelines and Toolkits for Urban Transport
What does a CMP do?

- Provides vision for future transport in accordance with the NUTP
- Defines corridors of movements
- Focuses on moving people
- Identifies projects that achieve the vision
- Establishes Service Level Benchmarks
- Identifies phasing and costs of the project
What does a CMP **NOT** do?

- Define the final system configuration of a corridor
- Conduct feasibility analysis of projects
- Detailed cost estimates
- Locate stations and size them
- Detail traffic engineering plans, including one-ways, etc.
- Include alternate analysis
Recommendations

• A **participatory approach** that involves citizens and stakeholders from the outset and throughout the planning process

• A pledge for **sustainability** to balance economic development, social equity and environmental quality

• An **integrated approach** that considers practices and policies of different policy sectors, authority levels, and neighbouring authorities

• A **clear vision, objectives** and a focus on **achieving measurable targets** that are embedded in an overall sustainable development strategy

• A review of transport **costs and benefits**, taking into account wider societal costs and benefits
SUTP Website (Engl., CN, Span.)

- Active since 2002
- GIZ SUTP Publications
- Multimedia (gallery, videos)
- 35,000 visitors (per month)
- Approx. 30,000 downloads (per month)

www.sutp.org
GIZ Sourcebook on Sustainable Urban Transport

• addresses the key areas of sustainable transport policy framework for developing cities
• consists of over 30 modules and training packages
• intended for policy-makers and their advisors

GIZ Transport Publications

• Technical documents, case studies
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SUTP Website www.sutp.org
Write to us for any assistance on making Sustainable Urban Transport a reality in your city

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