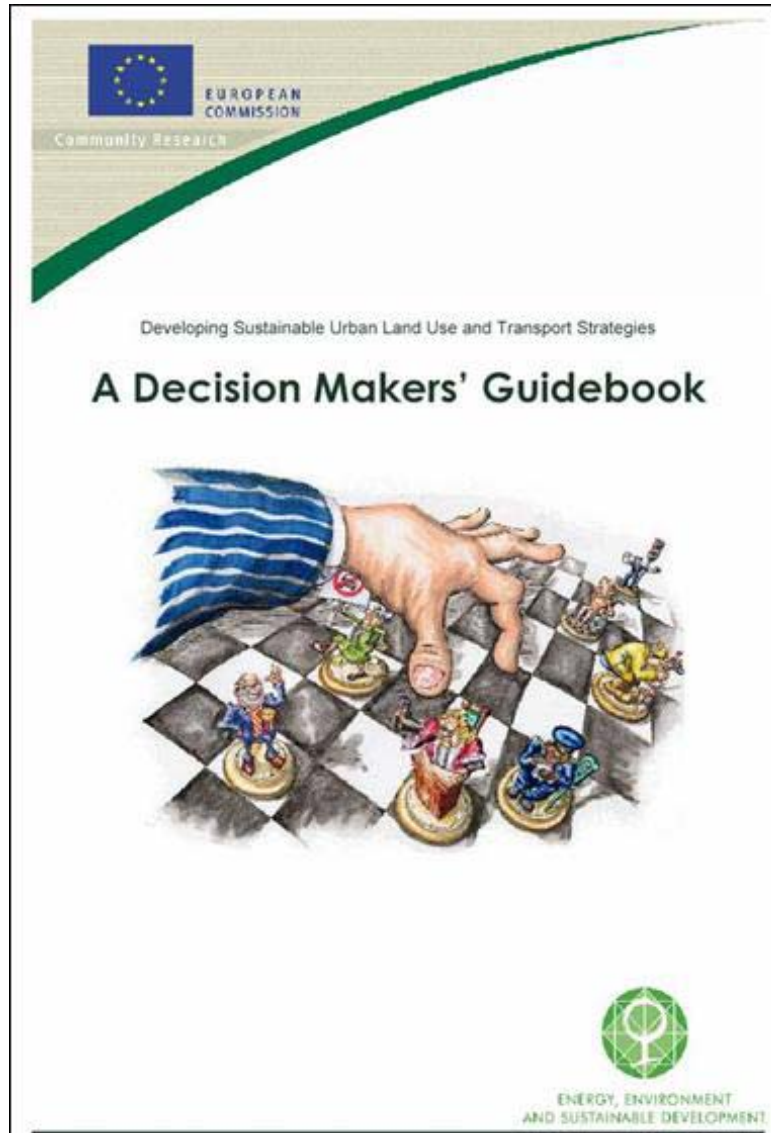


# **A logical framework for urban transport planning: The Decision-Makers' Guidebook**

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# The Decision Makers' Guidebook



# The Decision-Makers' Guidebook

- First published in 2003, based on the EC City of Tomorrow project PROSPECTS
  - Procedures for Recommending Optimal Sustainable Planning of European City Transport Systems
  - Providing cities with guidance in generating optimal land use and transport strategies to meet the challenge of sustainability in their particular circumstances
- Revised in 2005, based on the results of all twelve EC City of Tomorrow projects ([www.lutr.net](http://www.lutr.net))
- But still based on the needs and experiences of European cities

# The Decision-Makers' Guidebook

- Relevance for South East Asian cities tested
  - In the series of SPARKLE workshops
    - To be summarised later
  - In a current PhD study of light rail projects in Malaysia
- Opportunities being sought to produce one or more South East Asian versions
  - So comments and suggestions welcome!

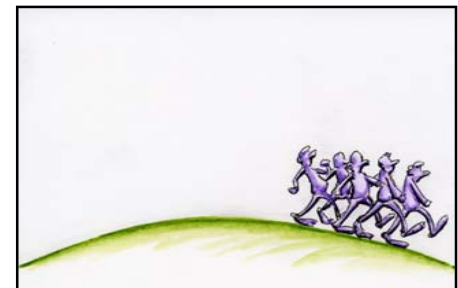
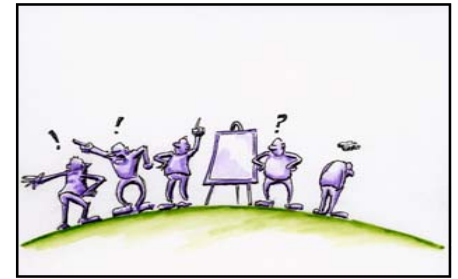


# Different cities – different circumstances

- Differing visions and objectives
- Differing problems
- Differing trends
- Differing powers and responsibilities
  
- So no one solution or approach is best
- Hence the emphasis is on guidance, not prescription

# Different approaches to decision-making

- The visionary leader
  - Knows what needs doing
  - Benefits from strong technical support
- The planning authority
  - Develops forward plans
  - Needs a structured approach
- The consensual city
  - All stakeholders work together
  - But need a common understanding
- Most cities adopt a mix of these approaches

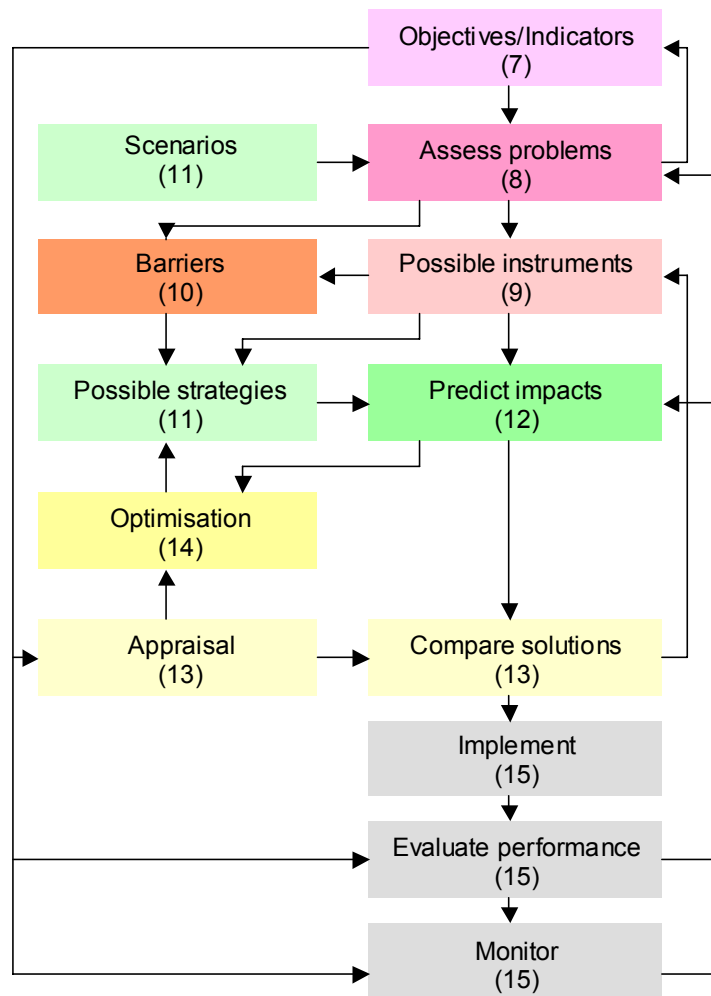


# A logical structure

- Designed to support all of these approaches
- By providing a structured approach to analysis of problems and possible solutions
  - Based on a clear understanding of vision and objectives
- Hence providing technical support for visionary leaders and a common understanding for consensus formers
- The one prescriptive part of the Guidebook!

# The logical structure

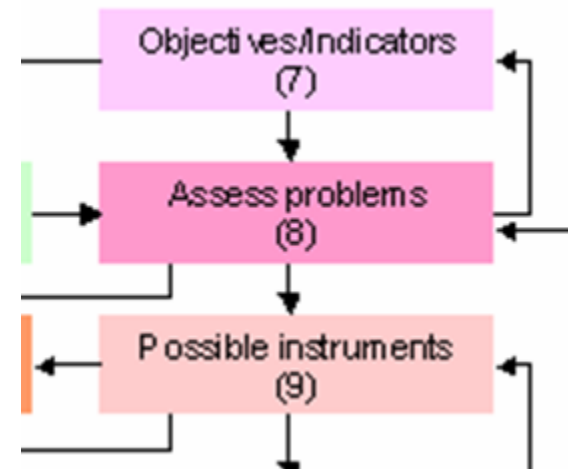
Source: PROSPECTS





# Clear objectives are essential

- As contributors to the overarching goal of sustainability
- Specified as desired outcomes of the strategy, not elements of it
- As a basis for understanding problems, identifying and appraising solutions
- The PROSPECTS list
  - Economic efficiency
  - Environment
  - Liveable streets
  - Safety and health
  - Equity and social inclusion
  - Economic growth
  - Intergenerational equity



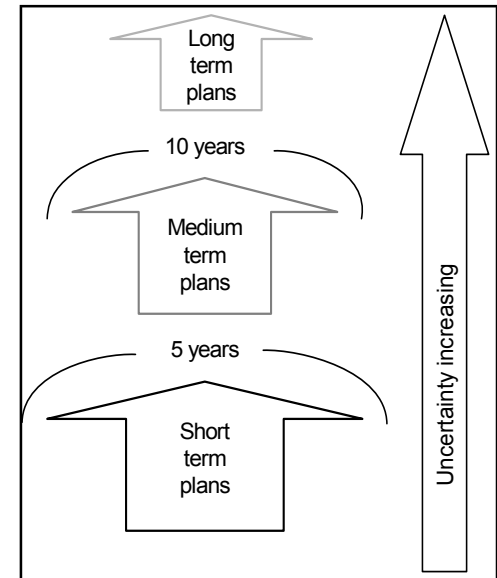
# Performance indicators and targets can help or hinder

- Help to identify problems, suggest solutions, monitor performance, benchmark against others, allocate funding
- But indicators need to be appropriate
  - Measuring outcome indicators related to all objectives
  - Not simply measuring actions taken or travel patterns achieved
- And targets must be based on these outcome indicators, be realistic and mutually consistent
- PROSPECTS recommendation:
  - Formulate the strategy first
  - Then set targets which are consistent with it
  - As a means of monitoring progress



# Scenarios and horizon years

- Need to plan for the future: how far ahead?
  - Far enough to reflect the impacts of policies
  - Not so far that prediction becomes too uncertain
- What will the future context be like?
  - Alternative scenarios give alternative futures
- What are the main attributes of scenarios?
  - Population growth
  - Economic growth
  - Land use distribution
  - Car ownership
  - Others?
- But some of these will be affected by the strategy!



# Identifying problems

- Identifying today's problems is not too difficult
  - Based on suitable outcome indicators
- But what will the problems be like in the future?
  - Use a predictive model
  - Assess what will happen
    - If no new policies are implemented
    - Under each scenario
  - Use the same outcome indicators to assess the problems
- Given these problems, what are the possible solutions?



# Seeking solutions

- An increasingly wide range of types of policy instrument
- But relatively little guidance on which to consider
- So many cities fail to innovate
- Two sources of guidance
  - The KonSULT knowledgebase
  - New methods for option generation
- An integrated approach, using a package of measures, will be more successful



# KonSULT

## ([www.konsult.leeds.ac.uk](http://www.konsult.leeds.ac.uk))

- First principles assessment
- Case studies
- Contribution to objectives
- Contexts
- Barriers
- Complementary measures
- Filter search



# Contribution of policy instruments to objectives: city centres

Contribution of policy instruments in City Centres								
	Efficiency	Environment	Liveability	Safety	Health	Equity	Economy	Future generations
Land use	◆	◆	◆◆		◆		◆◆◆	◆◆◆
Infrastructure	◆◆	◆◆	◆◆	◆◆			◆◆	◆
Management	◆◆◆	◆◆◆	◆◆◆	◆◆◆	◆	◆◆◆	◆	◆◆
Information	◆◆	◆		◆		◆		◆
Attitudes	◆	◆◆	◆	◆	◆◆			◆
Pricing	◆◆◆◆	◆◆◆	◆	◆◆	◆◆	◆◆	◆◆	◆◆◆◆
Key: ◆ Minor contribution ◆◆◆◆ Major contribution								

# The range of policy instruments



Land use



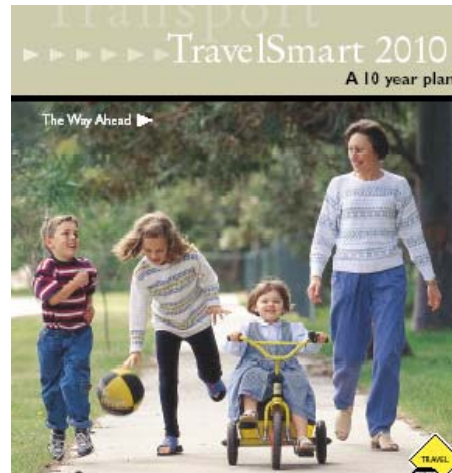
Infrastructure



Management



Information



Awareness

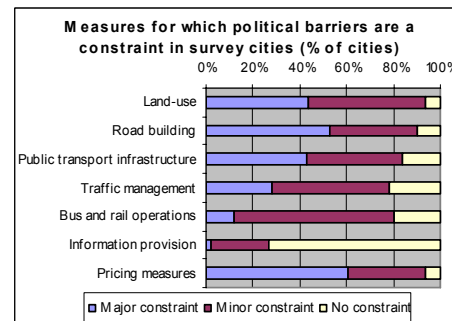
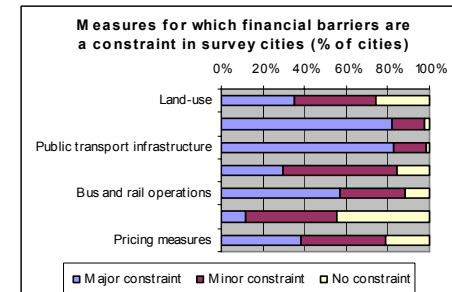
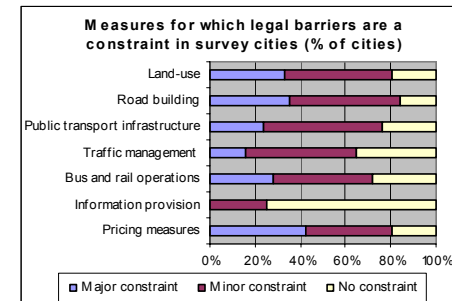


Pricing



# Barriers to implementation

- Legal and institutional barriers
  - Inability to implement
  - Particularly for land use, pricing
- Financial barriers
  - Lack of finance to cover costs
  - Particularly for roads, public transport
- Political and cultural barriers
  - Lack of acceptability
  - Particularly for roads, pricing

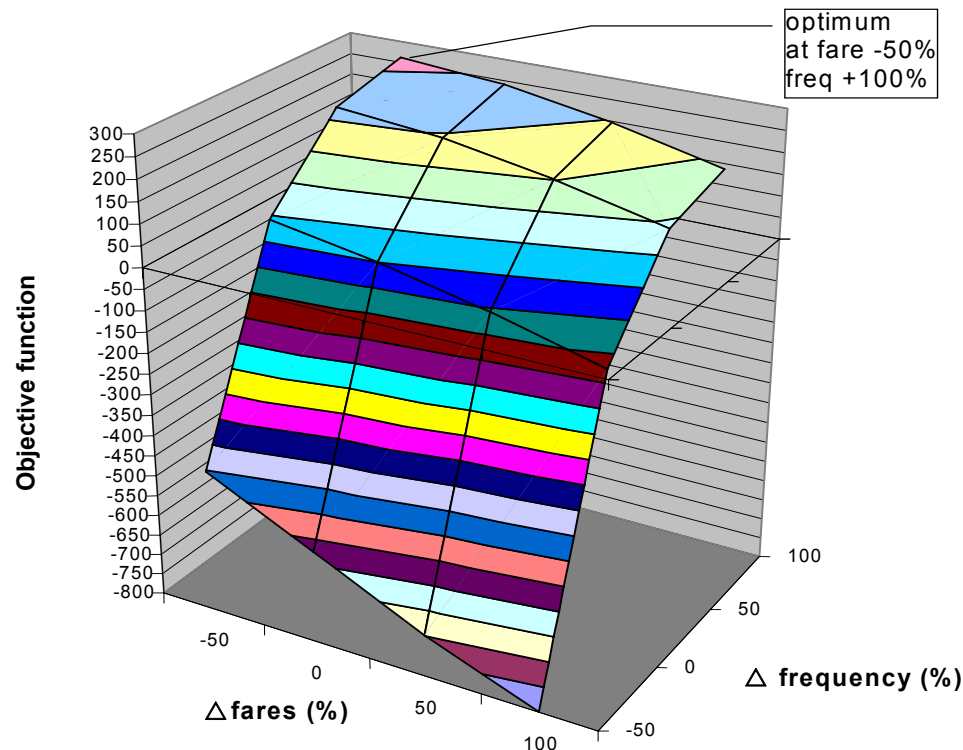


# Integrated strategies

- No one solution to urban transport problems
- So make use of the full range of policy instruments available
  - Given the potential for each to reinforce one another
  - And to reduce the barriers to implementation
- But note that the interaction between policy instruments may be complex



# The effect of different levels of fares and frequencies on benefits



# Ways of achieving integration

- Two principles
  - Achieving synergy or complementarity
    - Benefits greater than the sum of the parts
    - Benefits greater than any instrument on its own
  - Overcoming barriers
    - Finance, political acceptability, unfair impacts
- So combine instruments in four ways:
  - Instruments which reinforce each other's benefits
  - Instruments which overcome financial barriers
  - Instruments which overcome political barriers
  - Instruments which compensate losers

# The integration matrix

Source: PROSPECTS

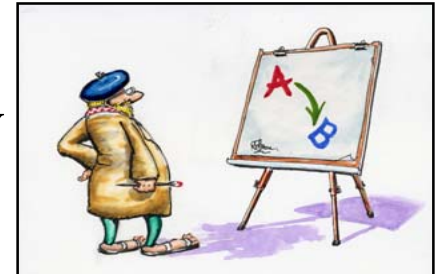
An Integration Matrix						
These instruments	Contribute to these instruments in the ways shown					
	Land use	Infrastructure	Management	Information	Attitudes	Pricing
Land use		●				●
Infrastructure	● ●		●			●
Management	● ●	● ● ●			●	● ● ●
Information	●	● ●	● ● ●		●	● ● ●
Attitudes	● ●	● ●	● ●			●
Pricing	● ●	● ● ●	● ● ●	● ●	●	

Key:

- Benefits reinforced
- Financial barriers reduced
- Political barriers reduced
- Compensation for losers

# Predicting impacts, appraisal and optimisation

- Use the same predictive model to test suitable combinations of policy instruments
  - Ideally against different scenarios
- Appraise, at least against performance indicators, possibly using an appraisal method
- Look for ways of improving the strategy
  - Test others; choose the best, most robust
- Optimisation can streamline this process



# Effective integrated strategies

- Public transport speed, service and fare improvements contribute well
  - But can encourage longer distance travel
- Pricing of car use achieves significant benefits
  - But land use impacts need careful assessment
- Alternative land use policies have little impact alone
  - But can support public transport and pricing measures
- Regulating traffic speeds reduces accidents
  - But cannot alone reduce pollution, congestion
- Infrastructure schemes can provide benefits
  - But only if designed to be consistent with the overall strategy

Source: PROPOLIS

# Effective integrated strategies

- A combination of public transport and car use pricing measures achieves the greatest benefits in terms of all aspects of sustainability
  - Particularly when combined with development focused on centres and public transport corridors
  - And the combination helps overcome financial and political barriers
- Potential benefits of such strategies
  - CO<sub>2</sub> emissions reduced by 15% to 20%
  - Accidents reduced by 8% to 17%
  - Economic benefits €1000 to €3000 per capita

Source: PROPOLIS



# Optimal integrated strategies

- Optimal strategies typically involve
  - Substantial reductions in fares area-wide
  - Increases in frequency within urban area
  - Peak period city centre cordon charges
  - Low cost increases in road capacity
- Optimal strategies typically cost more
  - But strategies with no net financial outlay can be achieved for only 15% lower benefit
  - With economic benefits €4000 to €6000 per capita

Source: Optimal Strategies

# Implementation, evaluation and monitoring

- Good practice in implementation
  - Working with stakeholders to overcome barriers
  - Identifying and protecting potential losers
  - Providing compensation where needed
  - Working with the media
  - Sensible phasing and sequencing of actions
- Evaluation
  - Tells us what worked (or didn't!) and why
- Regular monitoring
  - Assesses progress towards objectives





# Four case studies

Edinburgh



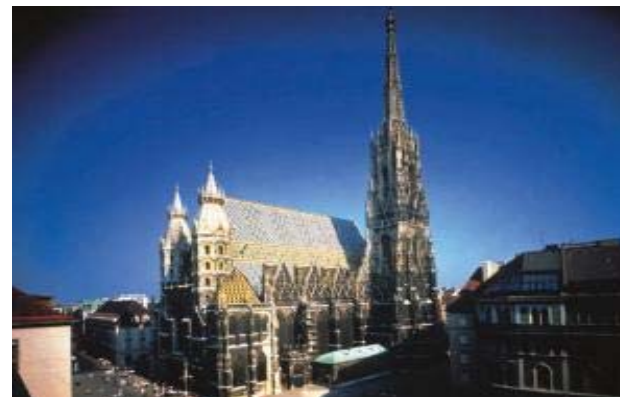
Madrid



Oslo



Vienna





# Eight key messages

- Decision-making is complex!
- Visions, plans and consensus are all needed
- Objectives must be clearly stated
- Long term sustainability must not be overlooked
- Outcome targets are more useful than mode share indicators
- Land use and demand management measures should play a greater role
- Transport and land use must be integrated
- Appraisal is needed to ensure effectiveness