TRANSPORT PLANS FOR TOWNS AND REGIONS

JASPERS GUIDANCE

Praha
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JASPERS a dopravní plány v městech / regionech

Součást EIB/cca 30 lidí v sektoru dopravy

Podpora přípravy velkých projektů OPD i programů/strategií

Poskytujeme písemní „guidance notes" – i pro ČR

Pomáháme i ad-hoc s přípravou plánů v konkrétních městech

Zatím v městech zejména v Rumunsku, na Slovensku

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Obsah/zaměření prezentace

Obecně o městských/regionálních dopravních plánech

Sběr dat a analytická fáze

Dopravní Model

Stanovení vize, cílů, indikátorů

Něco o Opatření

Requirements of a TMP – What it is and is not

❑ **What it is (or should be)**
- A <u>strategic document</u> for defining and pursuing transport goals and to integrate local transport/mobility with other planning documents
- A <u>long term commitment</u> to ensure stability and continuity in the development of transport/mobility strategies
- A <u>planning instrument</u> to identify, assess and select/prioritise measures

❑ **What it is *not* (or should *not* be)**
- <u>Not just an infrastructure investment plan</u> – should also cover operations and organisation of the sector
- A <u>wish-list</u> of projects disconnected from real needs of the society
- An <u>unrealistic/idealistic vision</u> which cannot be achieved/ implemented

Structure of a TMP
From Problems/Potentials to Strategy to Measures/Projects

❑ **Framework/set-up**

Requirements, constraints, capacities, plan concept

❑ **Starting points/assumptions + Analysis**

Information, data, trends, opinions, models, developments
Problems, challenges, potentials.

❑ **Vision, Objectives, Targets**

Basic strategy, reference for defining measures and assessment
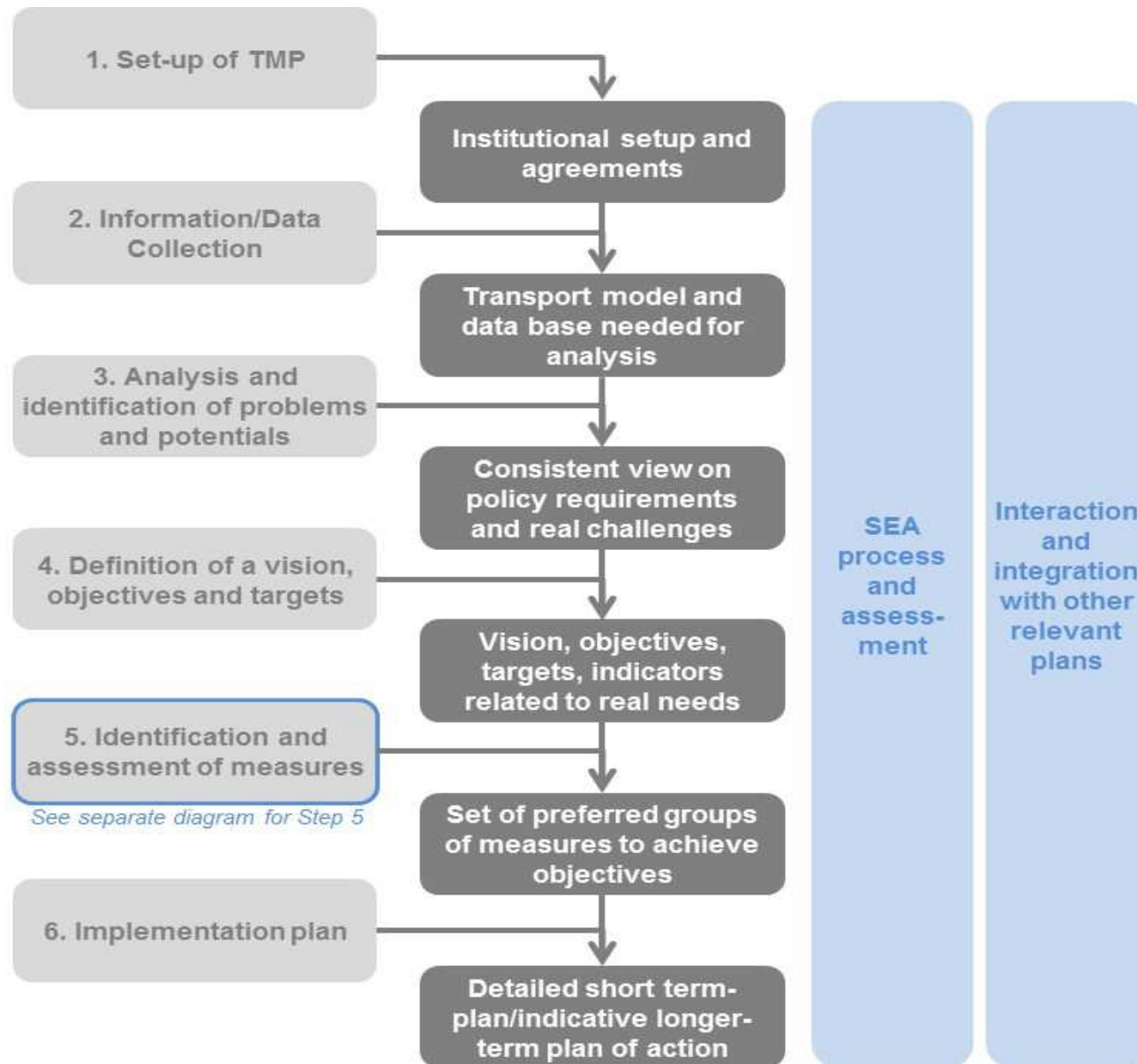
❑ **Measures**

Measures, groups/synergies, alternatives, comparison, selection

❑ **Implementation plan**

Implementation, funding, timetable, actions, evaluation

Structure of a TMP - From Problems/Potentials to Strategy to Measures/Projects

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Data collection and analysis – getting started

❑ **Identify the scope of data and analysis required**

   ✓ Initial scoping of issues/needs through expert analysis/use of existing tools/strategy

   ✓ Set the level of geographic scope including passive/active nature

   ✓ Prepare an inventory of available data/analysis and identify the gaps

❑ **Evidence of problems/potentials is needed, not just opinions**

   ✓ Strategy analysis and Specific problems/potentials analysis

❑ **Plan for this in your Transport Plan concept and Consultancy ToR**

Strategy analysis

❑ **Make link between TMP and other planning documents/legislation**

❑ **Create cohesive view on the transport related strategic issues from**

✓ Higher level transport policy and plans

✓ Current local transport policy, plan(s)

✓ Local/regional development strategies

✓ Land-use planning documents

✓ **SECTORAL :** Health, education, waste management, social inclusion/accessibility, economic efficiency and business/industry/tourism/citizen friendly development, environmental policy, safety, crisis management …
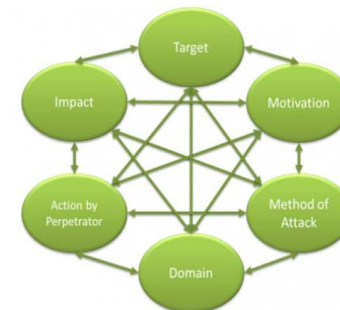

FIGURE 1 - CYBER TERRORISM FRAMEWORK, SOURCE: AHMAD AND YUNOS (2012)

❑ **Identify strategic objectives/priorities/issues/developments**

✓ Guide to specific analysis focus

✓ Input to objectives and forecasting

Specific Analysis – Problems and potentials

☐ Specific analysis can back up the strategy analysis with more evidence

☐ Of the system

☐ On the network at different levels (overall, key points, corridors, areas..)

☐ Need to define the criteria of what makes a problem !

☐ Need the right tools – e.g. transport model
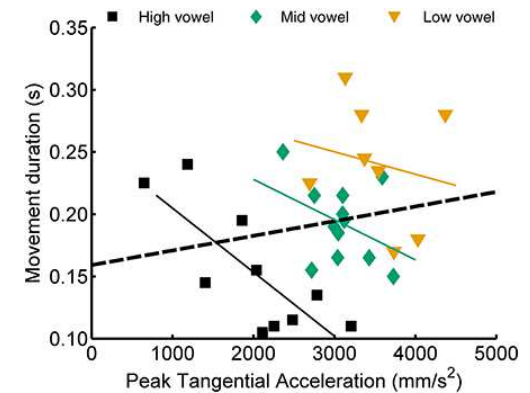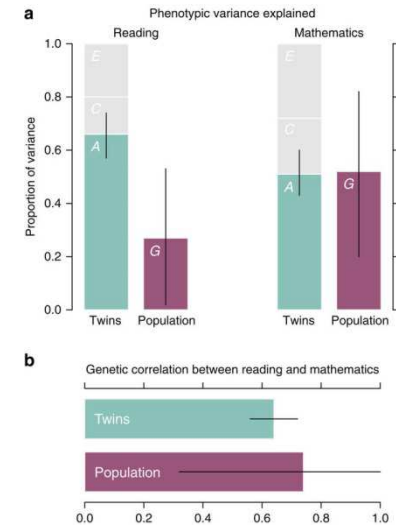
Specific Analysis 1 – Demand/efficiency, ops/organisation/infrastructure

❑ **Demographic/land-use and economic development plans/patterns, other drivers of transport behaviour**

❑ **Assessment of current and future demand**

   ✓ Traffic demand volumes/mode share

   ✓ Transport functionality (OD patterns, trip types and motivations), user needs

❑ **Organisation/Operations/Infrastructure/Performance of the transport sector**

   ✓ Institutional setup (including planning basis, organisational model, contracting etc.)

   ✓ Financing of investment and operations

   ✓ Quantity and quality of infrastructure network and rolling stock

   ✓ PT service offer – frequencies/ticketing/speed etc.

   ✓ Passenger and freight traffic management including ITS, parking, urban freight organisation...

   ✓ Maintenance and operations - actual/requirements

   ✓ Door-to-door accessibility/congestion (time/cost/service coverage based)

   ✓ Transport capacity, Bottlenecks and Level of Service

Typical Specific Analysis 2 – Social, health, environment

❑ Safety and security of the transport system.

❑ Equal access for passengers, especially for people with reduced mobility and for social inclusion reasons.

❑ Emissions, noise/vibrations, energy sources/efficiency.

❑ Mitigation of impacts on the environment (in generally and more specifically on areas protected under EU environmental legislation, e.g. Natura 2000 sites, areas protected under water, air or noise law).

❑ Climate change mitigation/adaptation, disaster vulnerability/resilience.

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Transport Model

❑ **Can be used to model demand, time savings, accessibility, emissions, …**

❑ **Undertake scoping exercise with expert support**

- Complexity/scope depends on network assessed + nature of measures and demand

- Consider indicators/measures and impacts to be modelled

❑ **Model should be detailed/flexible enough (with sufficient quality data) for the intended purpose**

❑ **Current State Transport Model needs thorough calibration**

❑ **Future model needs to consider likely base developments and uncertainty**

❑ **Ownership by the authority ?**

Transport Modelling – Typical requirements

Level 1 – Multi-modal TMPs including large urban areas with more complex transport networks (usually with towns above 100 000 persons)	
MODEL CONTENT – 4 STEP/PHASE	**TYPICAL MINIMAL DATA REQUIREMENTS**
ROAD NETWORK	Counts covering all relevant modes
PUBLIC TRANSPORT NETWORK +TRANSPORT SERVICES	Statistical data on population and business, travel
GENERALISED COST (GC) MODEL FOR UTILITY/IMPEDANCE FUNCTION	Detailed behaviour surveys (usually household)
TRIP GENERATION/DISTRIBUTION MODEL – DEOMGRAPHIC SEGMENTED	Population growth and spatial distribution forecast, area activity structural changes, economic growth forecasts
OVERALL (GENERATED) DEMAND MATRICES	
MODE SHARE STAGE APPLIED TO OVERALL MATRICES WITH INTER-LINKED MODAL ASSIGNMENT MODELS	

Transport Modelling 3 – Typical minimal requirements

Level 2 – Other TMPs	
MODEL CONTENT – 2 STEP	**TYPICAL MINIMAL DATA REQUIREMENTS**
ROAD NETWORK	Counts covering all relevant modes
PUBLIC TRANSPORT NETWORK +TRANSPORT SERVICES	Statistical data on population and business, travel.
GC or TIME BASED UTILITY FUNCTION	**Simple O-D surveys – uni-modally on the network (e.g. stopping cars/SPZ, brief interviews at PT stations).**
MATRICES PER MODE SUPPORTED BY EMPIRICAL OD DATA	Population growth and spatial distribution forecast, area activity structural changes, economic growth forecasts.
ASSIGNMENT MODELS FOR CAR/PT SEPARATELY	
SIMPLE MODE SHARE/INDUCED DEMAND MODEL FOR TESTING MEASURES	

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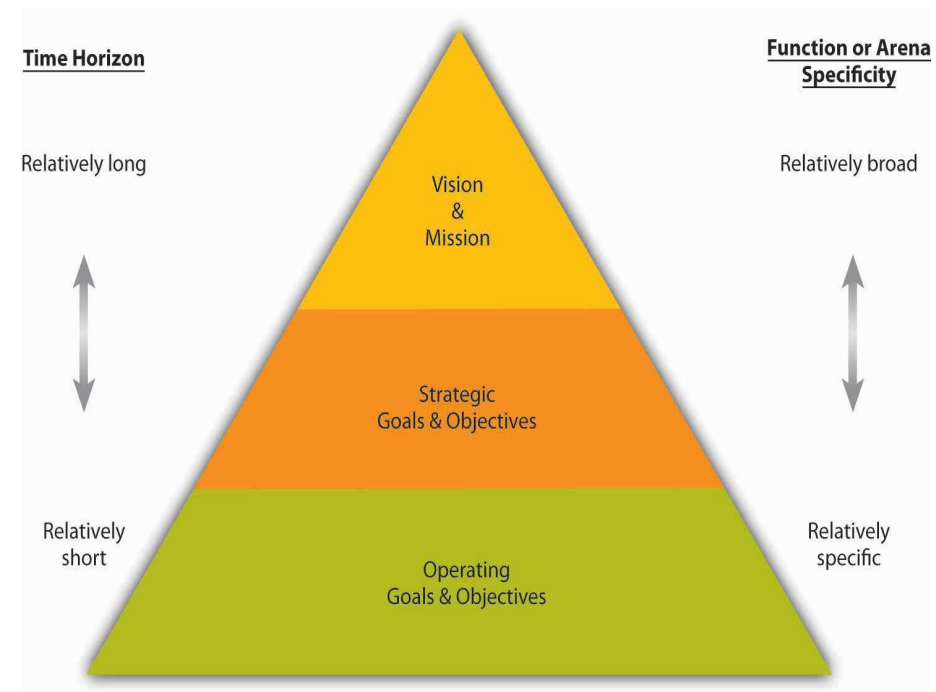Sběr dat a analytická fáze

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Něco o Opatření

Vision, objectives - basics

- Vision expresses in a single statement a future view of the transport system

- Limited number of priority High Level (strategic) Objectives aimed at the plan level

- Specific (operational) Objectives can be defined to respond to more specific problems

- Objectives more aimed at results and impacts

Time Horizon

Relatively long

Relatively short

Function or Arena Specificity

Relatively broad

Relatively specific

Vision & Mission

Strategic Goals & Objectives

Operating Goals & Objectives

Example of a Vision

To develop a transport system which helps support economic growth across Wiltshire's communities, giving choice and opportunity for people to safely access essential services.

Transport solutions will be sensitive to the built and natural environment, with a particular emphasis on the need to reduce carbon emissions.

Example of High Level Objectives

National Goal	Importance
Support economic growth	Most Important
Reduce carbon emissions	Most Important
Contribute to better safety, security and health	Important
Promote equality of opportunity - Least important	Least important
Improve quality of life and a healthy natural environment	Important

Example of High Level Objectives

Ref.	Strategic objective	National transport goals	Community plan objectives
SO1	To support and help improve the vitality, viability and resilience of Wiltshire's economy and market towns.	••	••
SO2	To provide, support and/or promote a choice of sustainable transport alternatives including walking, cycling, buses and rail.	•••	•••
SO3	To reduce the impact of traffic on people's quality of life and Wiltshire's built and natural environment.	••	•
SO4	To minimise traffic delays and disruption and improve journey time reliability on key routes.	•••	••
SO5	To improve sustainable access to a full range of opportunities particularly for those people without access to a car.	••	•••
SO6	To make the best use of the existing infrastructure through effective design, management and maintenance.	••	••
SO7	To enhance Wiltshire's public realm and streetscene.	•	••
SO8	To improve safety for all road users and to reduce the number of casualties on Wiltshire's roads.	••	••
SO9	To reduce the impact of traffic speeds in towns and villages.	•	•
SO10	To encourage the efficient and sustainable distribution of freight in Wiltshire.	•••	•
SO11	To reduce the level of air pollutant and climate change emissions from transport.	•••	•••

Example of High Level Objectives

Ref.	Strategic objective	National transport goals	Community plan objectives
SO12	To support planned growth in Wiltshire and ensure that new developments adequately provide for their sustainable transport requirements and mitigate their traffic impacts.	•••	•••
SO13	To reduce the need to travel, particularly by private car.	•••	••
SO14	To promote travel modes that are beneficial to health.	••	••
SO15	To reduce barriers to transport and access for people with disabilities and mobility impairment.	•	••
SO16	To improve the resilience of the transport system to impacts such as adverse weather, climate change and peak oil.	•••	•••
SO17	To improve sustainable access to Wiltshire's countryside and provide a more useable public rights of way network.	•	•
SO18	To enhance the journey experience of transport users.	•	•

••• Major relationship   •• Moderate relationship   • Minor relationship

Example of Specific Objectives

❏ Significantly reduce public transport travel time from major suburban housing estate <u>A</u> to the centre of the city

  ✓ *Transport model shows high car modal share on this corridor and accessibility analysis shows poor relative travel time performance for PT compared to car*

Indicators and targets - basics

❑ **SMART (Specific, Measurable, Achievable, Relevant, Time-bound)**

❑ Can be set based on policy/overall analysis of problems

❑ Indicators/targets can not always be easily defined for some objectives

❑ Hard to set precise targets, sometimes a target range is better

❑ Cost of data collection is often an excuse

❑ Might be refined later after more impact assessment
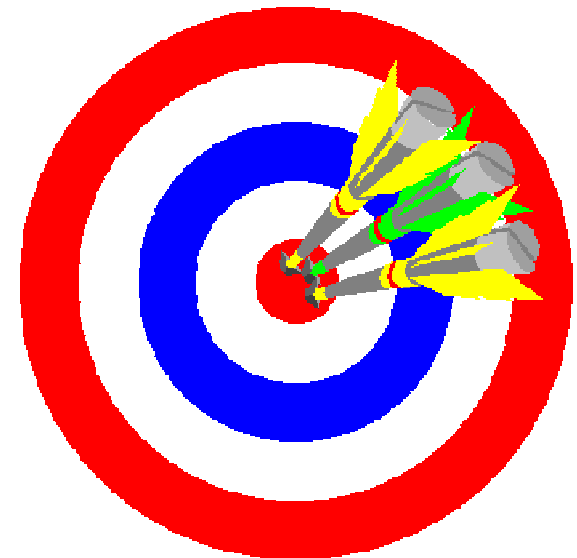
Example of Indicator/Target

❑ Indicator of road safety improvement goal is road deaths

❑ *Analysis shows the current local situation is in line with the national average and that there are a number of black-spots with potential for „softening" of infrastructure and improved warning signs.*

❑ Target reduction of 40 % fatalities on roads under regional control by 2030 in line with national and regional policy, considered realistic.

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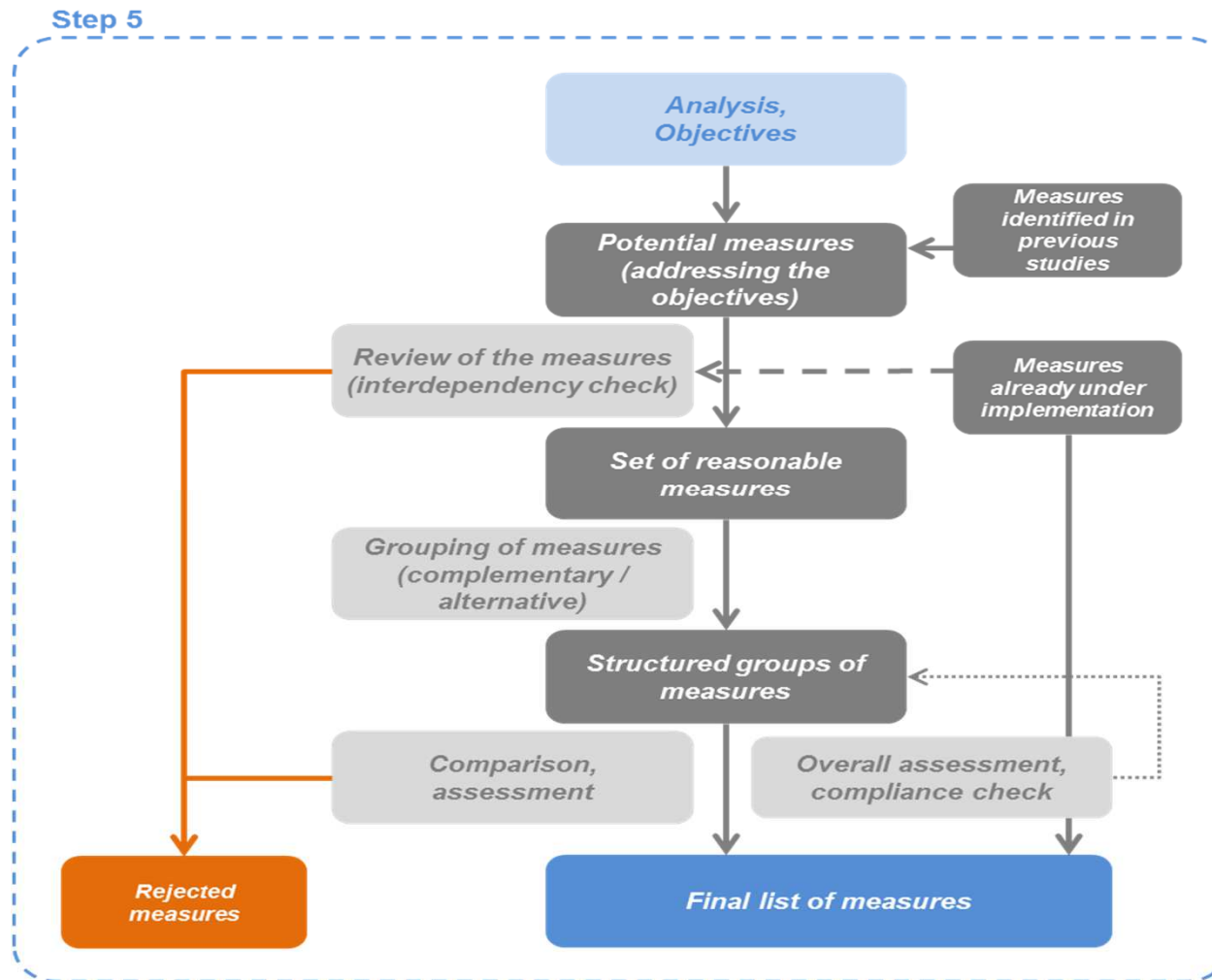
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Measures identification and assessment

Measures identification and assessment - example

❑ **Strategic theme structure to generate measure options**

❑ **Across themes - 73 Conventional, Balanced or Radical Strategic Measure Options considered**

❑ **Short-listed to 23 options in 2 rounds against the**
  - ✓ **national goals/feasibility**
  - ✓ **strategic objectives/SEA/risk/affordability**

Table 5.5 Strategic transport themes

Freight	Cycling	Walking	Maintenance	Road safety
• break bulk • routing • management • information • parking • rail	• network • parking	• network	• carriageway maintenance • structures • rights of way	• education, training and publicity • local safety schemes • school travel plans
Smarter choices	**Network management**	**Passenger transport**	**Other**	
• travel plans • smarter choices	• congestion management • urban traffic control • route/user hierarchy	• bus • rail	• major schemes • car parking	

Measures identification and assessment - examples

Some shortlisted measure options

School Travel Plans

Approach	Radical
Broad description	Develop a bespoke and robustly monitored school travel plan, with appropriate associated measures, for every school in Wiltshire that is fully integrated with the Sustainable Schools agenda.

Passenger Rail

Approach	Balanced
Broad description	Increase rail connectivity through the provision of bus-rail links and assist with the implementation of some new stations. Support the function of rail stations as transport hubs and proactively work with partners to introduce service and corridor improvements particularly between Chippenham, Salisbury and Trowbridge. Cover the administrative costs of community rail partnerships and where appropriate and necessary, safeguard and purchase land for rail improvements.

Key Outcomes of a TMP

Balanced range of Economic, Social and Environmental Objectives based on a thorough Analysis

Balanced focus on Infrastructure, Operations, Organization

Efficient and Feasible set of Preferred Measures and Investments – meeting your Objectives/Targets

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