



PEDESTRIAN QUALITY NEEDS
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Rijkswaterstaat
Ministerie van Verkeer en Waterstaat

Supporting Pedestrians' Quality Needs

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Chair COST 358 PQN





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Outline



- Introduction
- Why a Systems Approach?
 - *Modelling the system*
 - *Shaping a Reference Vision*
 - *Evaluation of Actual State of the System*
 - *Exploration of improvements*
 - *Decisions on interventions*
- The PQN Final Report
- Some preliminary conclusions



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Introduction



- Limited effect of traditional approaches
- 'We can do better' → COST 358
 - 20 countries, 49 organisations, 70+ researchers
 - started November 2006, ends 2010
- 3 perspectives:
 - Functionality (what can be measured)
 - Perception (opinions and intentions)
 - Durability and Future prospects (how will it evolve)
- Started with Country reports (state of affairs)
- Progress reported in WALK21's and ICTCT's



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Why System Approach?

Systems Approach:

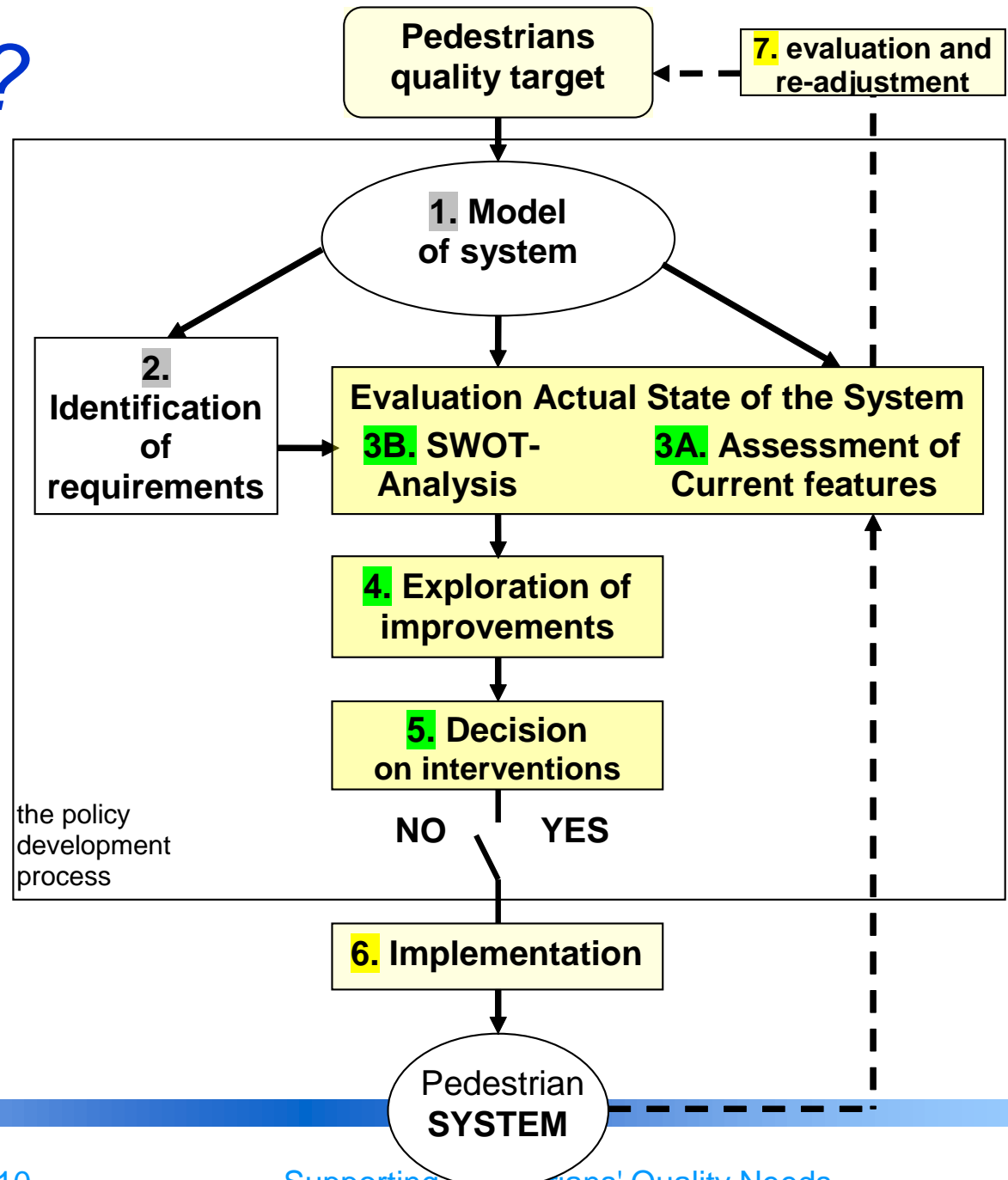
- Aims at improving **quality** (= more than just solving problems)
- Covers:
 - **Proces**: organisation of systematic coverage (slide 5)
 - **Content**: affects all elements and interrelations (slide 6)
 - **Context**: impact on 'outside' world (Slide 6 & 13)
- Brings:
 - Covers all options
 - Offers best value for money
 - Improves field's image (if done properly...)



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How?



the policy development process

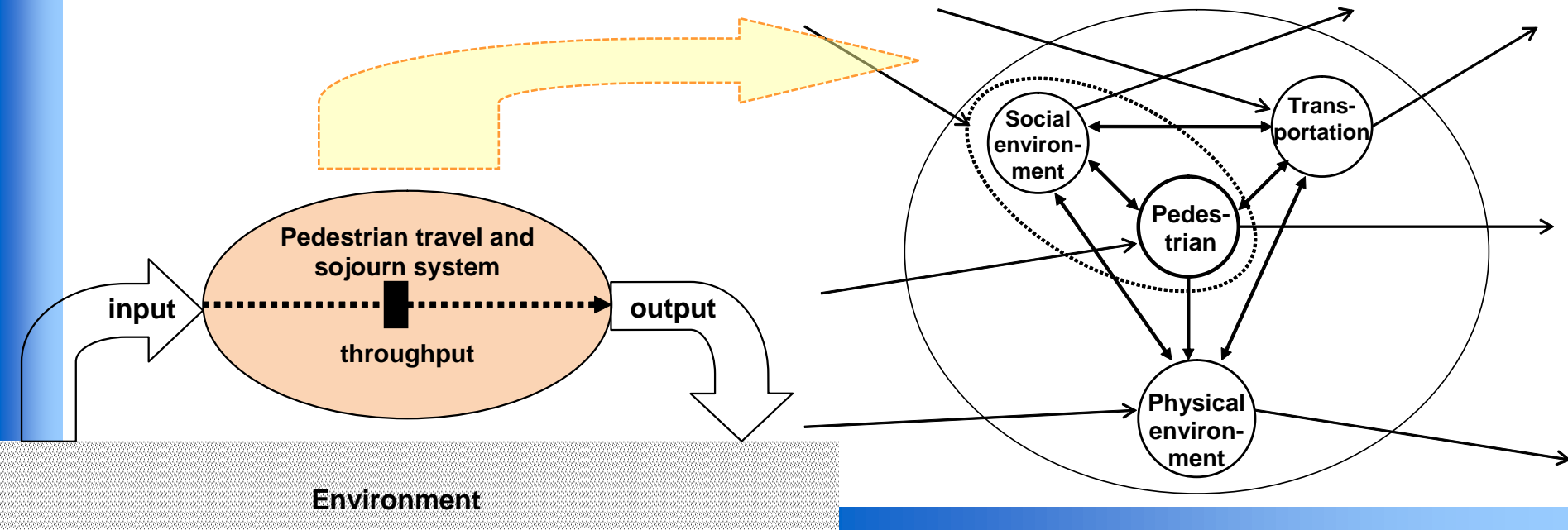


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1 Model of the system

- What system are we talking about?
- 3 system layers:
 - input – system – output (see picture – left)
 - 4 elements (see picture - right)
 - quality determinants (relate to Needs, Opportunities, Abilities)





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2 *Shaping a Reference Vision*

1. Identification of Needs & Abilities

- How to identify the pedestrians' Needs?
- Characteristics of (groups of) pedestrians
- Types of Needs: Survival, Psychological, Aesthetical, Social, Public/political
- basic needs: **survival, mobility, accessibility, safety, health**

2. Identification of quality requirements

- How to identify requirements that fit needs & abilities?
- **pre-conditional requirements**
- functional requirements supporting Lifestyle, Strategic, Tactical and Operational decisions by pedestrians: **a checklist**.

3. Defining the desirable and expedient system

- How to merge requirements into desirable opportunities for walking and sojourning?
- Grouping and ranking of quality requirements
- Check on satisfaction of (major) needs
- Shaping a best match (comprehensive, integrated and coherent system) into a presentable image (Vision)



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3 *Evaluation Actual State of the System*

4. Evaluation of what is offered

- How can compliance of the pedestrians' environment be evaluated?
- What needs attention?
 - Preconditions set at (inter-) National level
 - Conditional requirements (Lifestyle level – long term)
 - Structuring requirements (Strategic level – travel/sojourning)
 - Facilities and services (Tactical and operational level)
- Tacking stock through requirements checklists (cf. task 2)
 - Sources are scarce and incomplete: (Country) Reports, statistics, reporting is sketchy.



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3 Evaluation of actual state of the system (continued)

5. Evaluation of pedestrian performance and satisfaction

- How can performance and satisfaction be assessed?
- What needs attention?
 - Identify events at successive decision (from lifestyle to operational)
 - **Real numbers: use multiple data sources**
- PQN work findings:
 - Quality of Life, disabilities and handicaps:
 - 50% of population not 'normal'; > 6% mob handicap; 70% of 80+
 - Because of ageing of population numbers will increase
 - Mobility:
 - 50% is multi modal (1,800 trips) ; action radius 1 km; 100 hrs/year
 - Share of multi-modal will increase because of car-dependency
 - Sojourning in public space
 - unknown concept; wide range; 300 hrs/year
 - Safety and security
 - Safety definition improper; >320 severe p.m.i.; >250 p.m.i. = falls!
 - Security = fear = increasing because of open communication
 - (Perception and) Satisfaction:
 - scarce information

Less pedestrians killed!



....simply better trained
[Volkskrant 25-4-1980]



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4 *Exploration of improvements*

6. Identification of causal factors and mechanisms

- How can chains of events and 'causal' process be identified?
 - Analysis of 'causal' factors
 - Distinction: people with and without options re. alternative travel modes
- What needs attention?
 - Awareness of deficits (problems) in the pedestrian's conditions
 - Compliance and satisfaction belong together
 - Researchers, designers/developers, providers, decision makers, affected persons
 - Selection of processes within the change actors' span of control
 - Short-term, mid-term and longer term
 - The (potential) pedestrian's choice factors: *rewards & sacrifices*
 - The (potential) change actor's choice factors: *rewards & sacrifices*





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4 *Exploration of improvements* (continued)

7. Identification of promising interventions

- How can promising interventions be identified?
 - Insight in deficits, problems and contributing processes (cf. Task 6)
 - Ranking of deficits & processes to be dealt with (cf. Task 3)
 - Identification of adequate interventions
- What needs attention?
 - Scope of approach (cf. Span of Control, level, 'elements & relations')
 - Evaluation of solutions (i.e. effectiveness, efficiency, feasibility, affordability....)
 - Structuring of solutions: Cascade principle (see next slide)
 - Overview of promising interventions and 'operators'
 - Setting in wider context: external impacts and restraints (cf. Task 8)
- What can be done?
 - General planning (Policy Programming, Investment planning, Land Use ...)
 - Create optimal preconditions (insight, awareness, competences, organisation)
 - (potential) walker's education
 - Communication other road users
 - Societal/structural measures
 - Infrastructure and public space measures
 - Vehicle and mode related measures

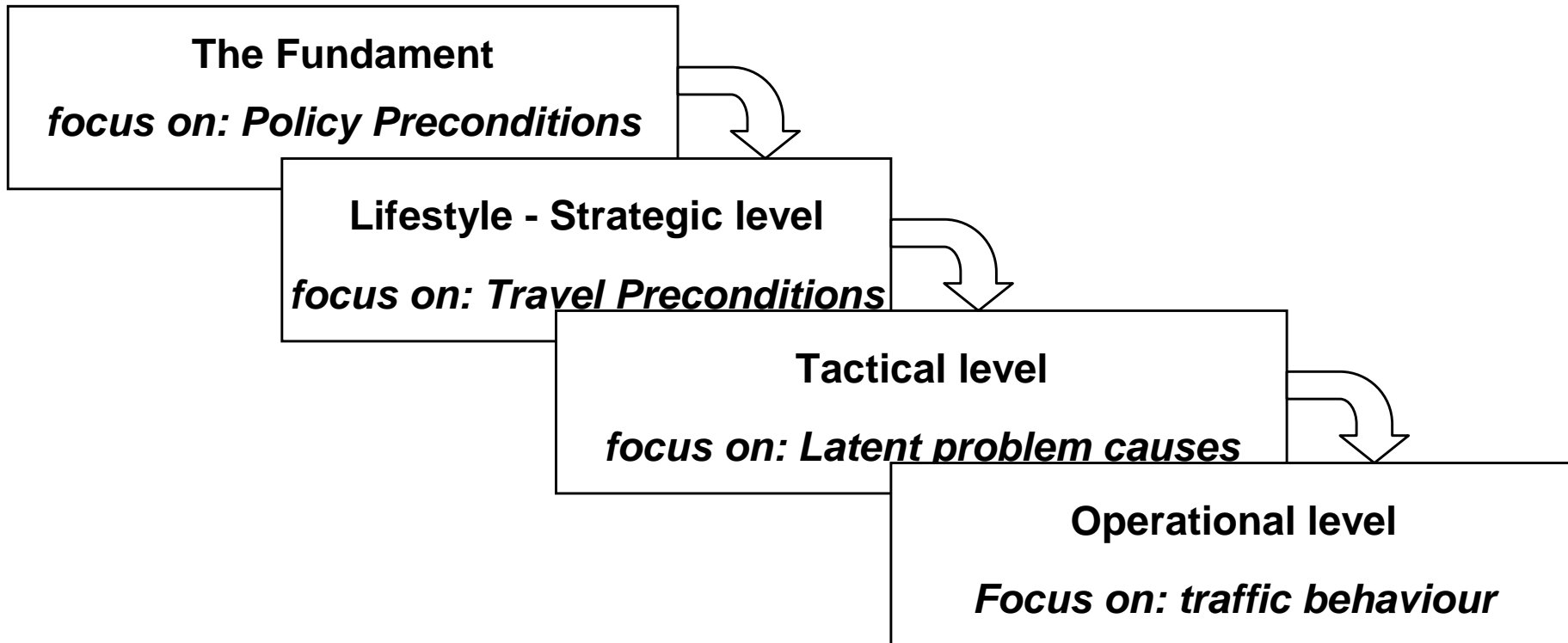




Cascade principle

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5 *Decisions on interventions*

8. Assessment of pedestrian system output

- How can external effects of interventions be assessed?
- What needs attention?
 - Pedestrian system output re. pedestrian needs (cf. task 3)
 - Survival, self-healing or correcting power in wider context?
 - Support for 'higher goals'
 - Support stakeholders' goals (rewards, penalties, sacrifices)

9. Formulation of recommendations

10. Formulation of action plan



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The PQN Final report

Part A – Conceptual Framework

1. Introduction
2. Conceptual Framework
3. The added value of a systems approach to pedestrian quality

Part B – Resources

1. Current situation in PQN countries
2. Functional needs mechanisms
3. Perceived needs and mechanisms
4. Needs, abilities and opportunities in a dynamic perspective
5. Measuring Walking
6. Policy process
7. Gaps in knowledge
8. Good practises

Part C – Policy Process Guidance

- Management Summary
- Glossary



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Some preliminary conclusions

- Data availability is a problem
- Insight is generally somewhat biased
- It is a complex issue
- Success =
 academic work + co-operation + open mind
- A systems approach will have added value,
 but it still needs a lot of work
- For more:
 - see www.walkeurope.org
 - WALK21/ICTCT Conference 'Getting Communities Back on their Feet' in The Hague 17 - 19 November 2010.



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