Interventions on the transportation system often deal with decisions taken by public institutions (State, Regions, Provinces, Municipalities) and/or they concern with the collectivity at different levels.

Planning and designing a transportation system means managing a public decision-making process.

Public decisions make up a more critical question due to the complexity of the legal procedures and the fragmentation of the decision-makers system and the interests involved.
Tav, nodo Torino

Ecco le criticità della linea che inerocia case, industrie e tungoziali

150 milioni al chilometro

Fino a quando non si verra a capo del peso del traffico, la ferrovia non qualifica lo spazio urbano.

5 anni di lavoro

La ferrovia riequilibra lo spazio urbano.

18-FEB-2008

la Repubblica

Oltre il giardino

Il Ponte sullo Stretto e il mausoleo del Cavaliere

13/07/2012
Alitalia, Bossi in piazza
«Malpensa non si tocca»

Manifestazione 1 senatori al governatore: «Urla Padania libera»

Bossi e Formigoni insieme: «Malpensa non si tocca»
Migliaia all’aeroporto. La Lega: anti alla Sea

Il contraddittorio si aggrava, i danni alle imprese sono considerati seri. Germania: «Non possiamo continuare così»

Decreto situazione emergenza del 13/07/2012

Tav, una grande opportunità
Ora tocca ai sindaci

«Manifestazione di massa alla Sea. La Lega: anti alla Sea»

Il Tav è il banco di prova della tenacia della comunità. «Non ha nessun dubbio autonomia e poi non c’è la Sea»
Tav, la paura e la rabbia dei sindaci

«Bene a tutto tranne interpellati. Ma il tracciato "naso" non serve alle spiagge e ha un effetto impazzitivo sul l’immediato»

La Tav tedesca fa il pieno in tv

Record di spettatori per l’arbitrato sul controverso progetto di Stoccaggio Bracciano.
The decision is conceived in the course of a process. It can be better interpreted making reference to the process, more than to the final action which is often only the result of partial choices.

The decision-making process is not only a technical exercise, but it is a POLITICAL PROCESS.

It happens that the quality of the choice made depends on decision-making process! A bad one implies not to take a decision, to do nothing.

OUTLINE

- The decision-making process
  - The components
  - The models
- Public Engagement
  - Definition and levels
  - PE and decision-making
- The role of transportation systems engineering
### The decision-making process

- **Decision-makers** – Those formally in charge of the choice
- **Decision-making process coordination** – People and procedures used to plan and govern each stage of the process
- **Stakeholders** - Those who hold a stake in a particular issue, even though they do not have a formal role in the decision-making process
- **Opportunities/problems to be solved** – They stimulerage the decision-making process and impact choices and behaviors
- **Objectives** – Targets pursued by decision makers and stakeholders through the interventions
- **Proposals/plans and projects** – A project is the definition of a set of physical and operational interventions. A plan is a rational set of projects
- **Contextual barriers** – They describe anything restricting or causing the delay or cancellation of a project. They set constraints, such as institutional, legal and financial restrictions;
- **Process barriers** – see later
- **Coalitions** – Groups of actors whose objectives converge to one solution
- **Implementation** – Development of the project or part of it

### STAKEHOLDERS

<table>
<thead>
<tr>
<th>Institutions/Autorities</th>
<th>Social parties and enterprise</th>
<th>Transport operators</th>
<th>Local communities</th>
<th>Financial institutions</th>
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</thead>
<tbody>
<tr>
<td>European Union</td>
<td>National and local enterprise associations</td>
<td>Transport companies</td>
<td>Environmental associations</td>
<td>Banks</td>
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<td>National government</td>
<td>National and local trade unions</td>
<td>Consultants</td>
<td>Transport users associations</td>
<td>Fund</td>
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<tr>
<td>Ministry of Transport</td>
<td>National and local crafts unions</td>
<td>Transport company associations</td>
<td>Media (TV, newspapers, etc.)</td>
<td>Insurance</td>
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<td>Other Ministries</td>
<td>Building firms and production enterprises of vehicles and technologies</td>
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<td>Local interest groups (e.g., through associations)</td>
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<td>Parliament and parliament commissions</td>
<td>Retailers associations</td>
<td>Citizens</td>
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<td>Regional government</td>
<td>National and local builders associations</td>
<td>Visitors</td>
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<td>Regional transport authority regionale</td>
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<td>Regional council and council commisions</td>
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<td>Local authorities (Province and Municipality)</td>
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<td>Local transport authority</td>
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<td>Town council and council commisions</td>
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<td>Other bodies and local transport agencies</td>
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<td>Political parties and single members</td>
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<td>Project staff</td>
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<td>The decision-making process</td>
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**PROCESS BARRIERS**

They arise in the course of the project and they can be classified into:

**Management**: problems due to limited resources and skills, or unexpected delays experienced on a daily basis.

**Communication**: problems associated with achieving acceptance by stakeholders, and with communication issues/challenges.

<table>
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<tr>
<th>The decision-making process</th>
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**E.g. NIMBY (Not In My Back Yard) SYNDROME**
The decision-making process

OTHER SYNDROMS

- **NIABY** - Not In Anyone's Backyard
- **NAMBI** - Not Against My Business or Industry
- **BANANA** - Build Absolutely Nothing Anywhere Near Anything (or Anyone)

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### MODELS

1. RATIONAL MODELS

2. A-RATIONAL MODELS

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### The decision-making process

#### RATIONAL MODELS

Rationality means:

- **consistency** (internally among the projects and externally with other planning choices)
- **feasibility** (feasible proposals and/or subsequent feasibility evaluation)
- **awareness** (impacts evaluation)
- **comparability** (comparison among possible alternatives)
- **dynamic** (taking into account that choices may change if inputs change)
RATIONAL MODELS

STRONG RATIONALITY

homo oeconomicus is a utility maximizer relative to his/her choices.

COGNITIVE OR BOUNDED RATIONALITY

The decision-maker has limited time, capacity and budget resources and therefore he/she chooses an alternative which is satisfying, learning from previous choices (Jones, 1999; Smith, 1999).

The decision-making process

The strongly rational approach

1. Present Situation
2. Generation or Alternative Projects
3. Possible Alternative Projects Identification
4. Objectives, Constraints and Interventions Identification
5. Impact Simulation and Projects Technical Evaluation
6. Comparison of Alternative Projects
7. Choice
8. Implementation (Partial/Total)
9. Interventions Monitoring
10. Monitoring and Evaluation

IMPLEMENTATION (PARTIAL/TOTAL)
SOMMARIO
The decision-making process

A-RATIONAL MODEL
The garbage can (Coehren et al., 1972)

The variables
- Actors/participants (A)
- Problems (P)
- Solutions (S)
- decision Opportunities (O)

O are the cans in which A throw P and S. The decision depends on the random coupling of P and S.
The decision-making process

The garbage can model

In transport it is not rare to find cases where choice made is the one that the different actors is the solution to a given problem.

P: Congestion on an existing road
S: Proposal of a new road infrastructure
O: New European funds to be allocated; new administration
Public Engagement

- Public Engagement (PE) is the process of identifying and incorporating stakeholder concerns, needs and values in the transport decision-making process.

- It is a two-way communication process that provides a mechanism for exchanging information and promoting stakeholder interaction with the formal decision-makers and the transport project team.

- The overall goal of engagement is to achieve a transparent decision-making process with greater input from stakeholders and their support of the decisions that are taken.
The decision-making process

THE LACK OF PE MAY INDUCE THE DAD (DECIDE ANNOUNCE DEFEND) SYNDROME

LIMITS OF THE DAD:
- It fosters barriers
- It increases costs
- It increases times

Public Engagement

The 5 PE levels

- Stakeholders Identification
- Listening
- Information Giving
- Consultation
- Participation
Public Engagement

SOMMARIO

Interactive engagement

Information events
- Exhibition
- Public meeting

Engaging selected stakeholder groups
- Study tours
- Focus groups
- Workshop
- Citizen jury
- Technical working party

Engaging large groups
- Stakeholder conference
- Weekend event
- Open space event

Information giving and gathering

Printed public information materials
- A letter
- Posters
- Brochure
- Newsletter
- Technical report

Telephone and media
- Telephone
- Local radio and TV shows

Internet
- Internet
- Web based forum

Surveying individuals
- Questionnaire
- Surveys
- Key person interviews

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- The role of transportation systems engineering
The transportation planning process and the role of PE (highlighted in grey)

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The role of transportation systems engineering

- PE and traditional transportation planning approaches, models and tools have interacted very little.

- Almost all scientific contributions on transportation planning recognise the difficulty of the corresponding public decision-making process and the multiple conflicting interests involved (Manheim, 1979; Meyer and Miller, 2000; Ortuzar and Willumsen, 2001; Cascetta, 2009).

- Little effort has been made to include PE in the planning conceptual model and extend the role of traditional planning tools, such as mathematical models and DSS, to be used in PE activities.

The role of transportation systems engineering

Traditional role in design of evaluation

- Present situation analysis
- Definition of alternative scenarios (plans and projects)
- Simulation and scenarios comparison

The risk of DAD (Decide Announce Defend) syndrome

*Engineers do it better!*
The role of transportation systems engineering

The technical activities in transportation systems engineering
Stages and professional skills involved in transportation planning and design

Requirements to systems engineering

- Results for non-specialists (post-processing)
- Comparison with similar projects / policies elsewhere
- Impacts on different stakeholders (losers/winners)
- Ease in the formulation of new alternatives