Toolbox for urban interchange development
- initial results of the NODES project

Caroline Hoogendoorn (UITP)
Why NODES?

The efficient urban trip is intermodal. An integrated urban transport system enables efficient movements of persons and goods.

- Reduced impact on the environment
- Greater accessibility
- Efficient transport system
- Less congestion
NODES objectives

• Build a Toolbox to support European cities, transport authorities and operators, in the design and operation of new or upgraded public transport interchanges

• Enhance services and satisfaction for travellers, users and societal/economic actors depending on the efficiency of the interchange
The NODES project

- FP7 Collaborative project
- Total budget: **4.2 million €** (EC cont.: 2.8 million €)
- Project duration: **3 years** (start date: 1 October 2012)
- Coordinated by
- **17 partners**

**Local Government Administrations:**
Madrid, Birmingham, Toulouse, Reading, Budapest, Thessaloniki

**Public Transport Operators:**
Rome, Osnabrück, NS, Cityway

**Research centre and consultants:**
TU Delft, Berends, DTV, FIT

**3 European associations:**
UITP, Polis, EPF

[www.polisnetwork.eu/2014conference](http://www.polisnetwork.eu/2014conference)  #polis14
NODES approach

The NODES Approach

- Land use & infrastructure
- Design
- Intermodality & ICT
- Business models
- Energy & Environment

State of the Art
User needs and system requirements

Performance Criteria and Indicators → Key performance Indicators

NODES TOOLBOX

Validation in application sites → Evaluation → Transfer

www.polisnetwork.eu/2014conference  #polis14
NODES tools

- Land use & infrastructure (11 tools)
- Design (14 tools)
- Intermodality and ICT (24 tools)
- Business models (26 tools)
- Energy and Environment (14 tools)

www.polisnetwork.eu/2014conference #polis14
NODES tools: examples

Interchange Typology Diagrammatic Representation
NODES tools: examples

- Information and guidance on how the concept was developed
- Proven successful system
- Concept illustrated in the ‘Interconnect’ book with Birmingham being the first example of its implementation
- Could be adapted for other interchanges and cities
NODES tools: examples

- Developed by the NS
- Emphasis on user; focus on station ambience and not just functionality
- Tested in the NL, Birmingham, Rome, Thessaloniki, Reading and Madrid
Application sites

www.polisnetwork.eu/2014conference  #polis14
Application sites

- Integrated planning
- Design
- Intermodality
- Business models
- Energy & Environment

- Budapest
- Birmingham
- Toulouse
- Rome
- Rouen
- Netherlands
- Thessaloniki
- Reading
- Osnabrück

www.polisnetwork.eu/2014conference  #polis14
Application sites

Feedback from test sites on tools: star rating based on:

- Tool relevance to the interchange
- Resource Cost
- Ease of use
- Learning curve
- Time taken
NODES Toolbox

Access via NODES website [www.nodes-interchanges.eu](http://www.nodes-interchanges.eu):
NODES Toolbox

Web based (& printed in limited number of copies)

Search

Enter keywords

Filter

Nature of the tool
- Physical (14)
- Organisational (12)
- Economic financial (9)
- Energy and Environment (7)
- Societal/ Cultural (6)

Tool type
- Method (21)
- Technique (11)
- Law/ Regulation (6)
- Software (6)
- Model (5)
- Material (4)

Interchange type
(Mouseover type for specifications)
- Large size (25)
- Intermodal area (24)
- Long distance (23)
- Shared travel (20)
- Small city (17)
- Connection point (15)

Objective
- Liveability (19)
- Comfort and Experience (16)
- Speed/ ease of transfer (14)
- Local Economics (12)
- Safety and security (11)
- Social Responsibility (9)
- Finance (8)
- Climat (2)

Lifecycle stage
- Large upgrade (25)
- Newly build (24)
- Refurbishment (24)
- Management change (12)

Main beneficiary
- Infrastructure manager (20)
- Public authority (17)
- Public transport operator (15)
- Traveler (7)
More information?

Project coordinator:
Caroline Hoogendoorn (UITP),
caroline.hoogendoorn@uitp.org

Online:
www.nodes-interchanges.eu

Like us on www.facebook.com/Nodestransport
Follow us on Twitter @transportnodes
Join our LinkedIn group: www.linkedin.com/groups/Transport-Nodes-4961661