Local delivery of world-class solutions
OPEN TRACK for design support

- Verification of feasible solutions -

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21 January 2010
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DHV Group

- Active worldwide
- 5,500 employees
- Connected through a shared mission, values, and projects
- Established in 1917
Expertise areas

- Airports
- Buildings
- Environmental Management
- Highways, Bridges, and Tunnels
- Intelligent Transport Systems
- **Mass Transit and Rail**
- Marine, Ports, and Waterways
- Urban and Regional Planning
- Water Management
- Water Treatment
Project: Den Bosch station

- Junction of two major lines: 
  Amsterdam – Maastricht
  Zwolle – Roosendaal

- Two customers: 
  Infrastructure manager (ProRail)
  Train operating company (NS)

- Challenge: 
  A feasible infra solution for future train services and disturbances
Current situation

- North side: level crossing, current track lay-out
- South side: 3 tracks

Amsterdam – Maastricht
Zwolle – Roosendaal

Conflict point
Desired situation

- North side: flyover
  new track lay-out

- South side: no change, in future
  3 infra solutions

- Amsterdam – Maastricht
- Zwolle – Roosendaal
- conflict point
The track lay-out has to facilitate:

- 3 alternatives for platform occupation * 2 line services + 6 re-routing scenario’s = 12
- 2 timetables * 3 infra solutions (south) = 6
- 12 * 6 = 72 scenario’s in total
- Simulation of 12 selected scenario’s (demo)
Results

Added value of the simulation

- Visualisations (animation) of basic hourly pattern
  - To support the understanding of the solution
  - For technicians and non-technicians
- Mathematical analysis to support the advice

Results study

- Concensus about the track design
- Approval for further development
Added value OpenTrack

- **Confidence**
  (in OpenTrack) that simulation represents the (future) reality correctly.

- **Understanding and confidence**
  in the results by technicians and non-technicians. OpenTrack improved the discussion and the decision process.
Questions?

Thank you for your attention!