

## Enlightened Underground

International Congress

**Interaction between design and urban surrounding:**

**The multiple complexity of the North South Metro line of Amsterdam.**

PTA Amsterdam  
Prof. Ir. Johan W. Bosch  
February 12, 2008

Chair of underground space technology



## Content

- The Project
- Multiple complexity
- Planning
- Building
- Communication



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## The project

Key figures:

- 200.000 passengers / day
- 9 km long new infrastructure
- 6 km subsurface
- 4 complex deep stations
- 2x3 km single track twin bored tunnels
- in operation: 2013



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## The project

Future system  
(incl. North South metro line)

Building from surface

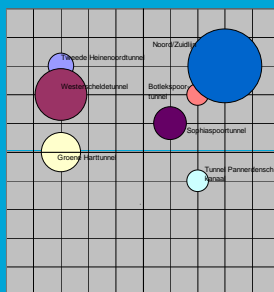


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## Multiple complexity



Horizontal axis: **Complexity of surrounding**  
Range: -3 up to +3

Vertical axis: **Project complexity**  
Range: -3 up to +3

**Projects:**  
2nd Heineoordtunnel  
Westerscheldetunnel  
Groene Harttunnel  
Tunnel Panmerdensch Kanaal  
Scphiatunnel  
Botlektunnel  
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## Planning: balance

Balance between:

- Quality of the transport system
- Risks during construction
- Hindrance of city life during construction
- Costs

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## Planning: number of stations

Inner city Alternative locations



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## Planning: horizontal alignment



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## Building

Preparation:

- Foundation inspection & renewal
- Rerouting of cables & ducts
- Road & rail diversions
- Relocation of shops
- Construction of platforms



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## Building



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## Communication

Communication strategy:

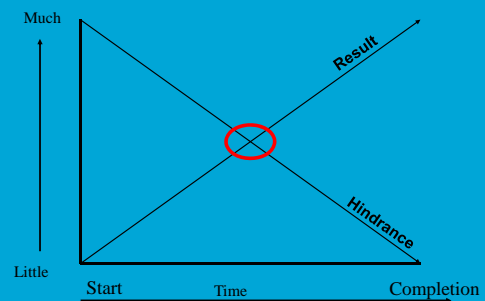
- 1st level: **focussed on affected people**
  - Reliable
  - Actual
  - Topical
- 2nd level: **general public**
  - corporate information

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## Communication



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Questions ?

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