

The challenge of adding useful geospatial context to our building information models

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J.M. (Jothijs) van Gaalen M.Sc., Head Structural Modelling /BIM department, BAM Infra

Personal introduction



Jothijs van Gaalen

- Head Structural Modelling / BIM department BAM Infra
- M.Sc Hydraulic and Geotechnical Engineering,
Delft University of Technology
- E-mail: j.van.gaaLEN@bam.nl

We shape the world we live in

Roads



Tunnels



Stadiums



Breakwaters



Residential buildings



Non-residential buildings



Container terminals



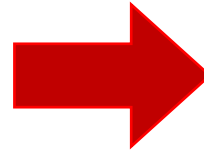
Energy infrastructure



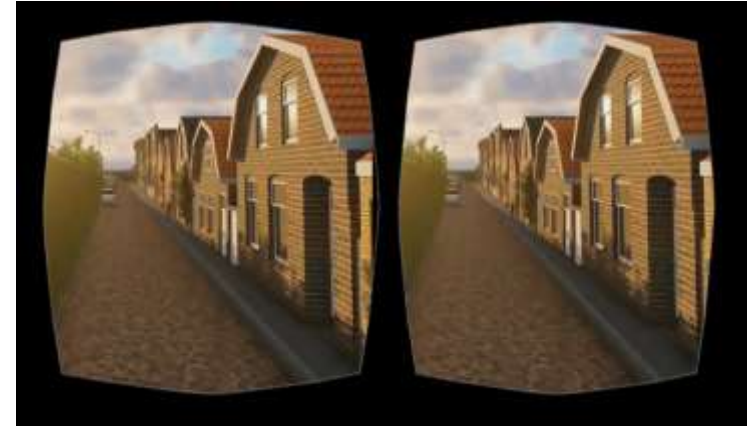
Topics

- Vision BAM
- BIM @ BAM
- Adding geospatial context

Pointcloud → 3D Model

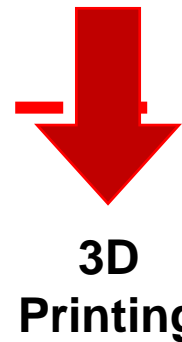


Virtual Design



Virtual world

Physical world

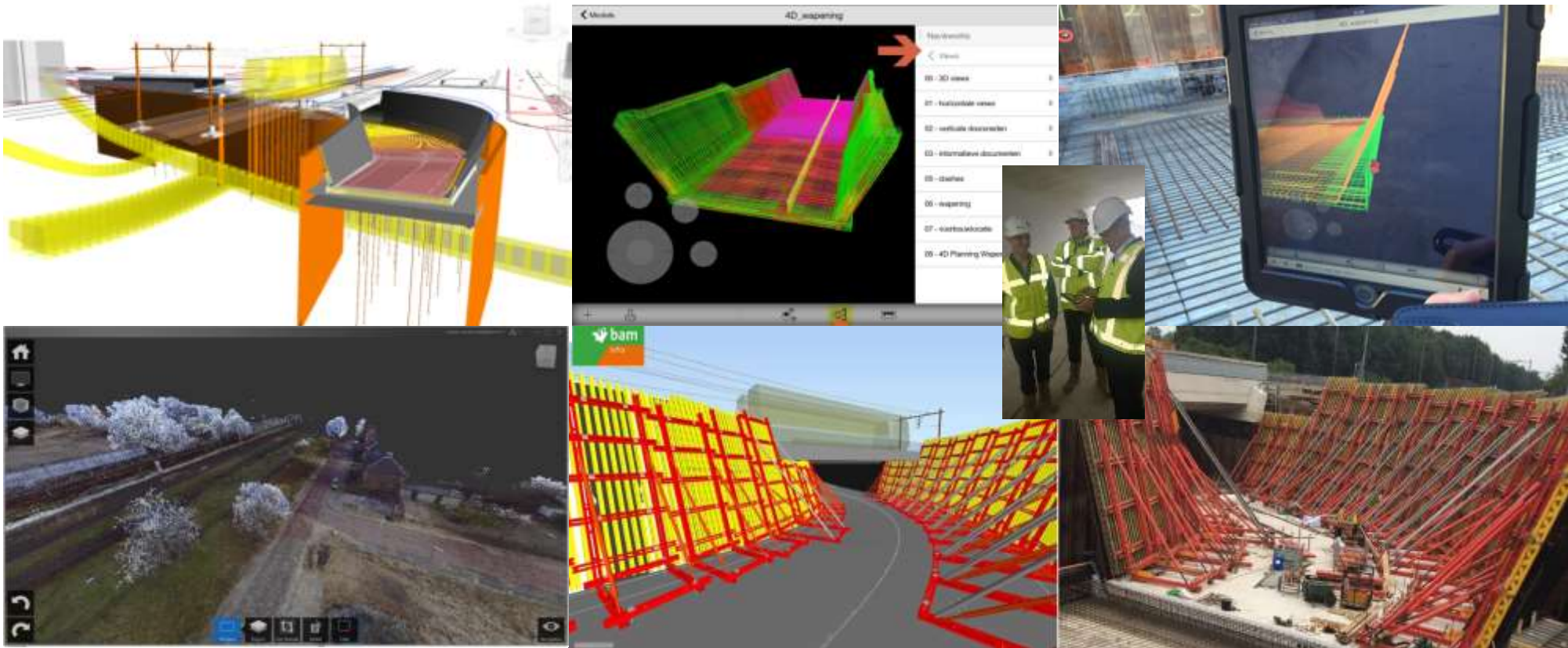


Assembly
on site



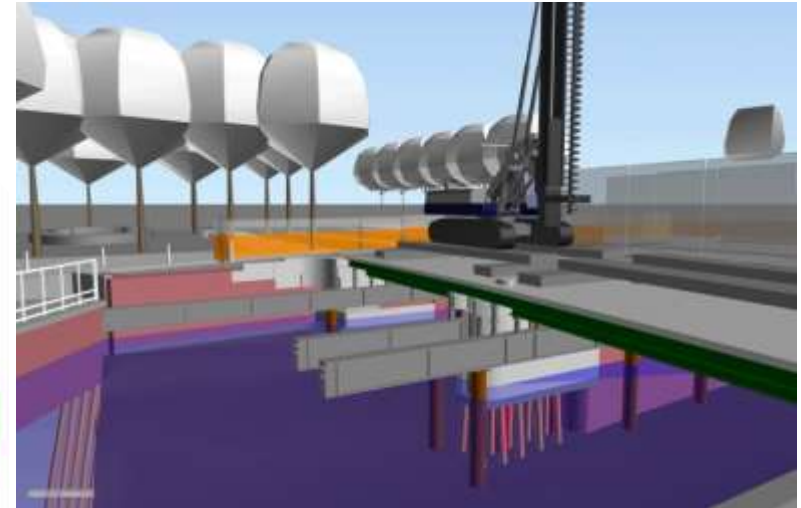
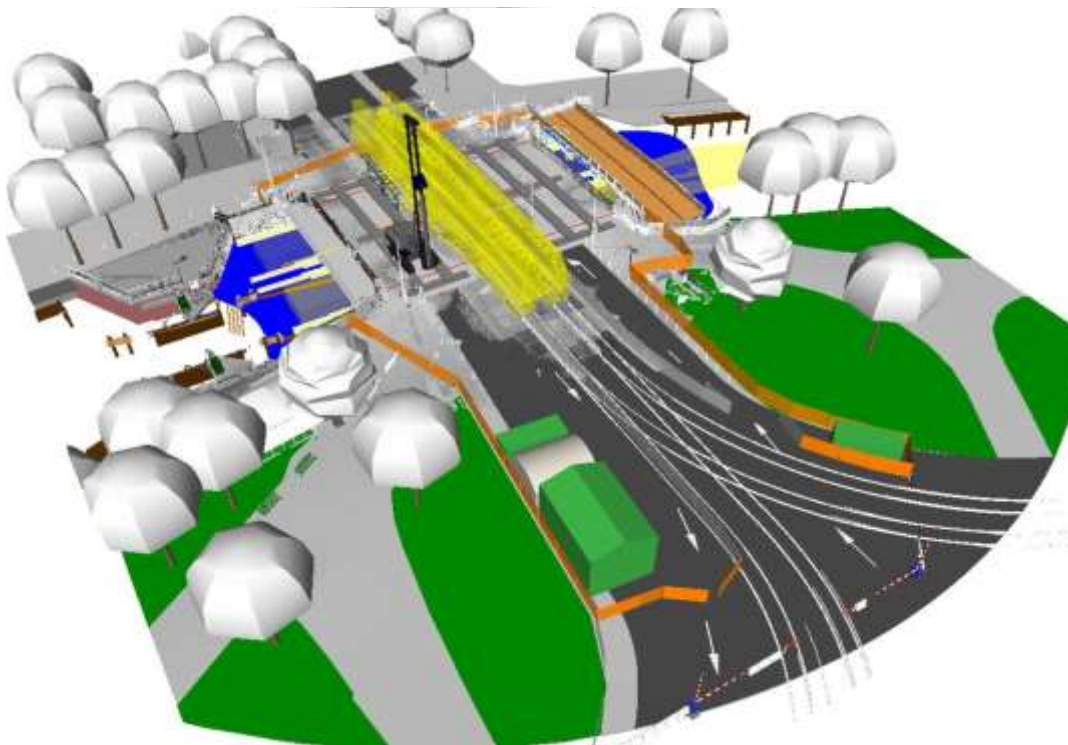
BIM @ BAM

Railway underpasses Ede: multidisciplinary modelling + field management, BIM360Field → efficiency ↑ 30%



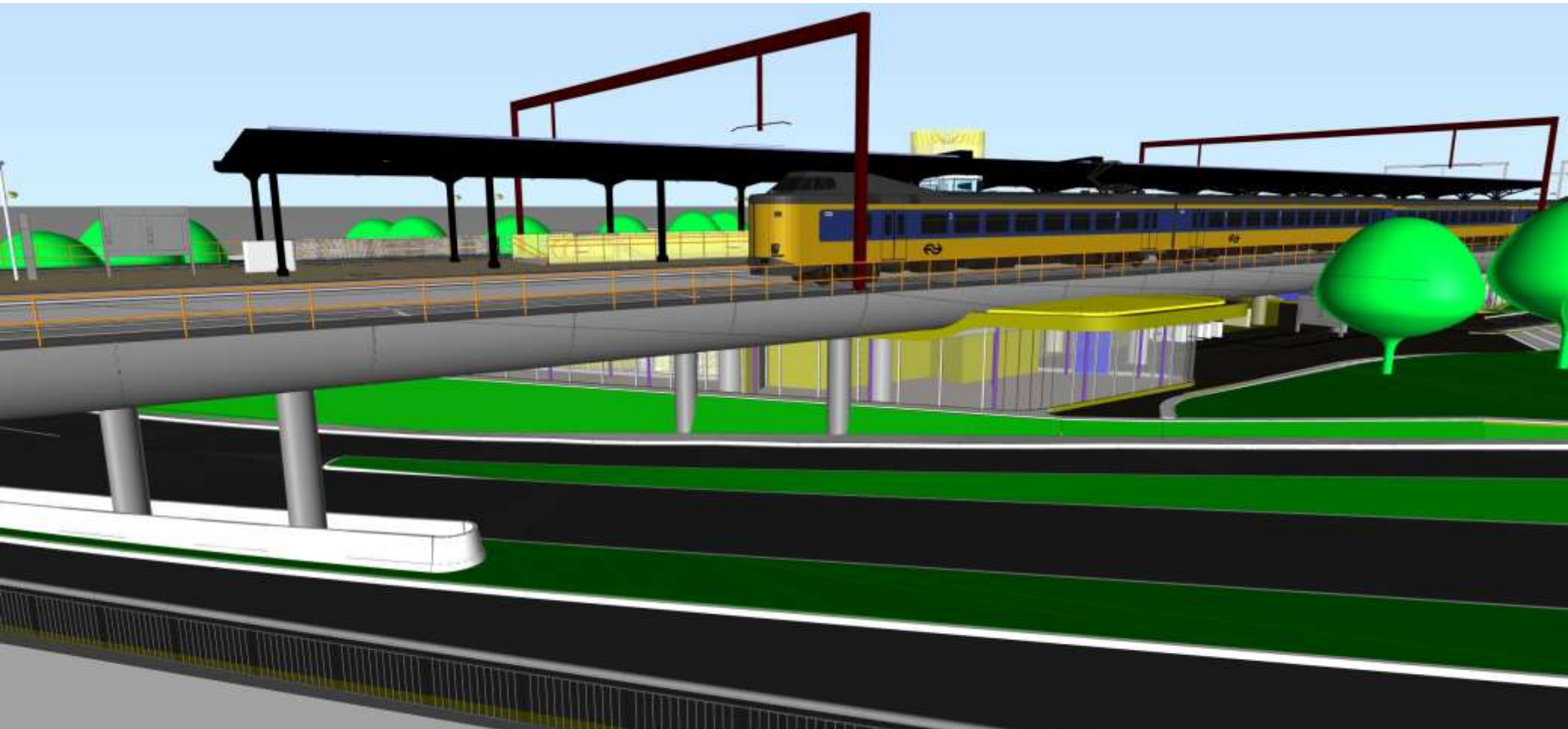
BIM @ BAM

Leidse Brug Amsterdam: point clouds, modelling, 4D, stakeholder involvement → flawless execution



BIM @ BAM

Train station Driebergen-Zeist: modelling/construction sequence optimisation → contract award



BAM's vision

BIM Now

Geospatial context

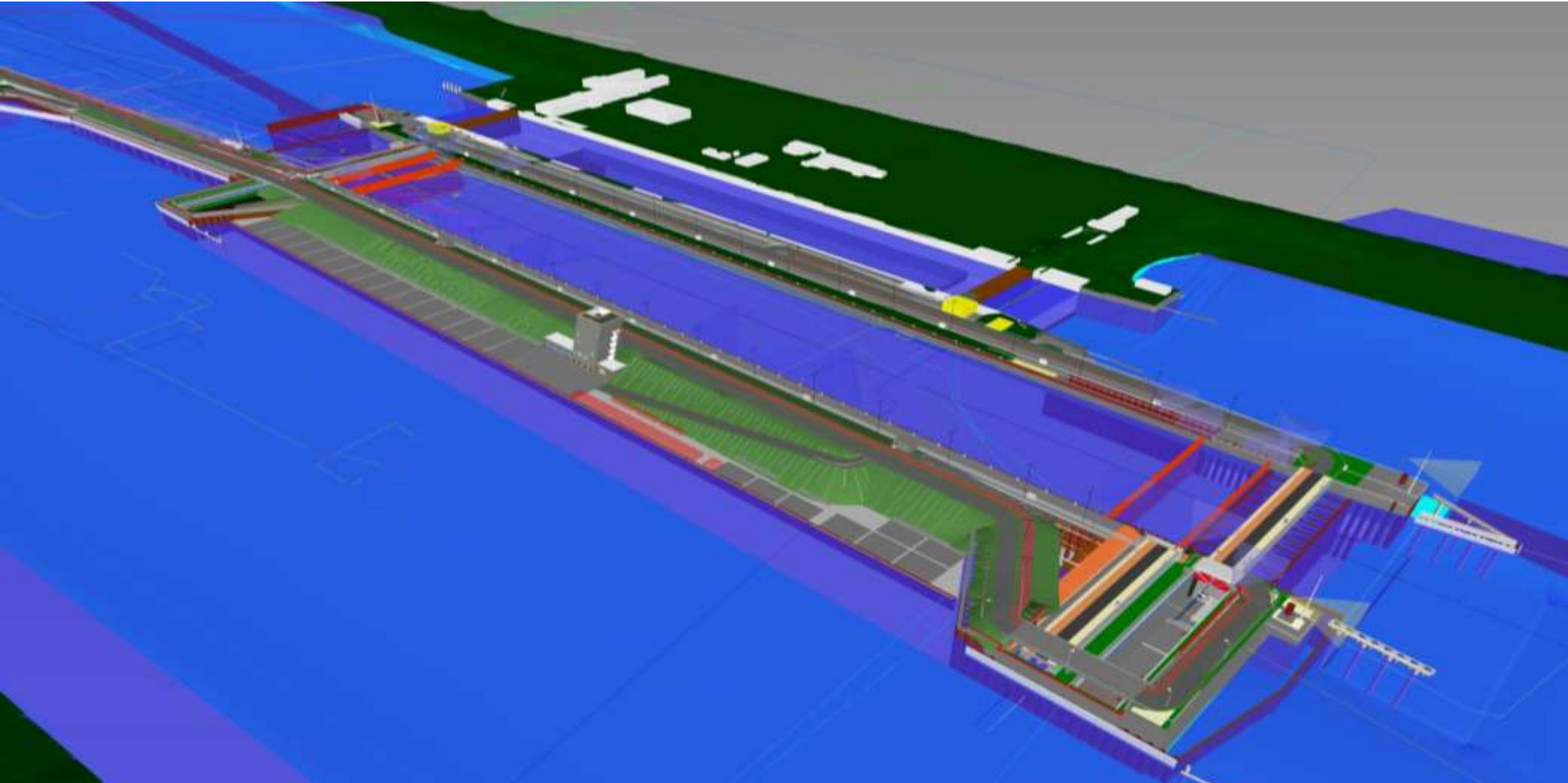
BIM @ BAM

Train station Driebergen-Zeist: 'full GeoBIM'



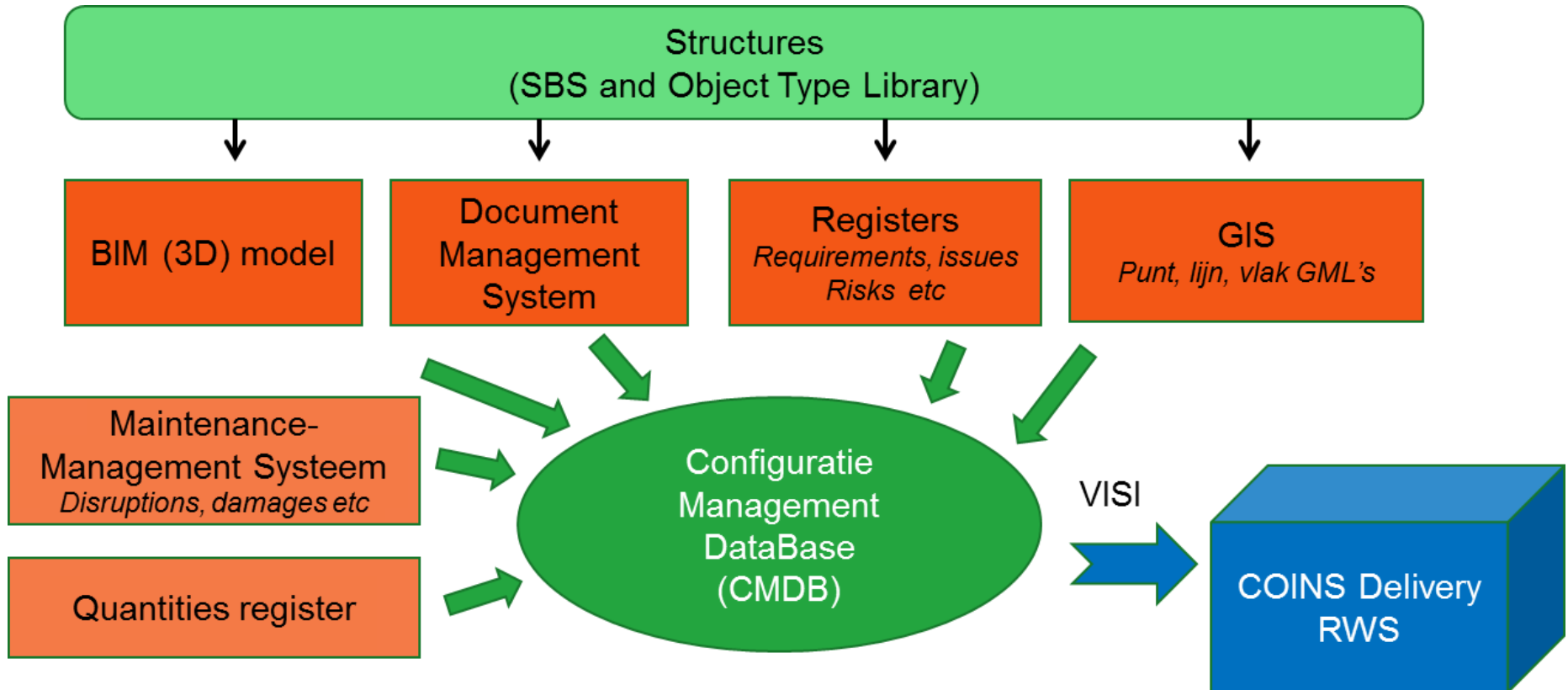
BIM @ BAM

Lock IJmuiden: modelling/construction sequence optimisation + geodata



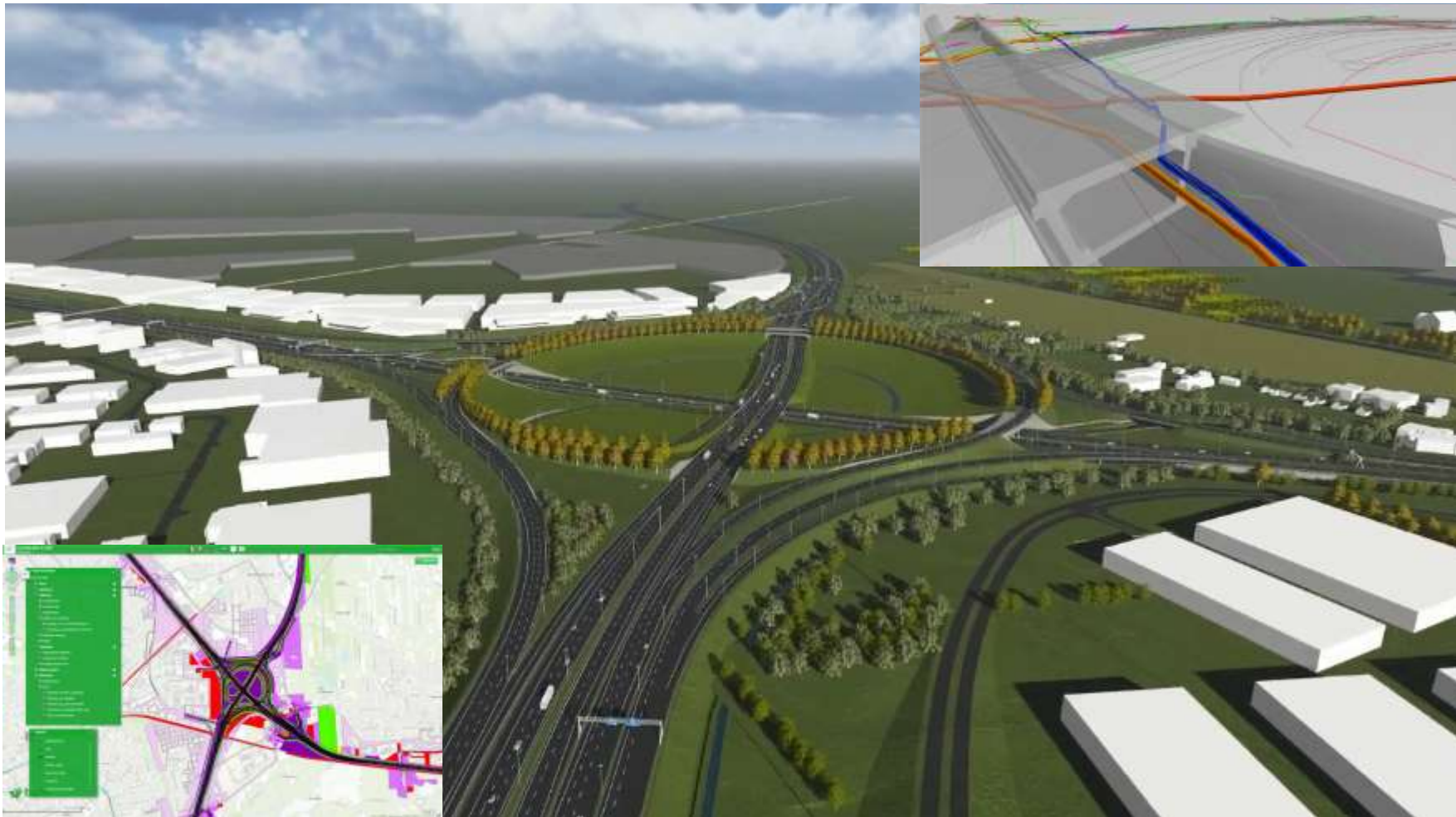
BIM @ BAM

Lock IJmuiden: data delivery



BIM @ BAM

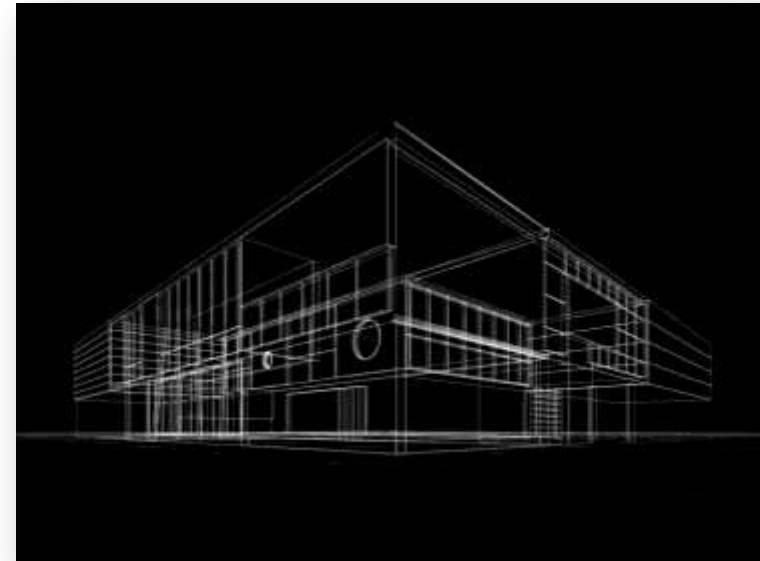
A1|28: BIM models + geodata



Why geospatial context?



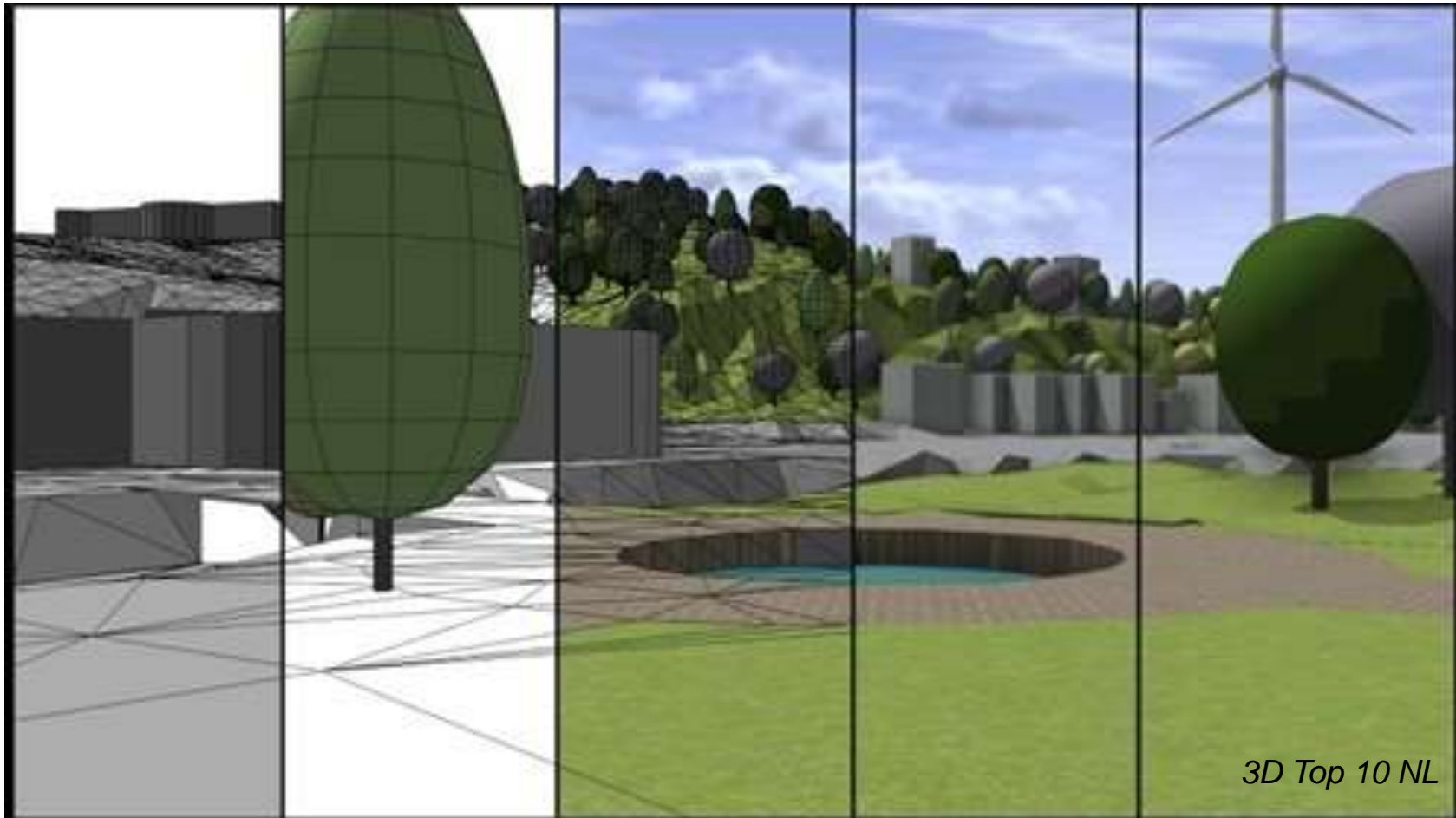
Urbanisation → more interfaces between our projects and the surroundings



Context makes communication more easy

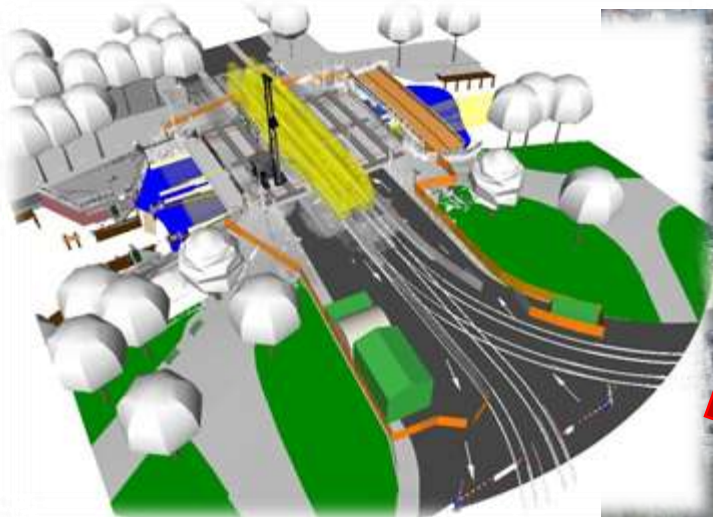
How do we get geospatial context?

3D Basemap of the Netherlands : 3D TopNL (*not yet updated regularly*)



How do we get geospatial context?

3D imagery (not yet available everywhere, low resolution)



Design model Leidsebrug, Amsterdam



Google Earth 3D imagery Leidsebrug, Amsterdam

Challenges when adding Geospatial context

Major steps forward:

- Pointclouds are getting manageable
- 3D web viewers take off

Challenges:

- Bridging the gap between 3D
- Data accuracy and reliability (point cloud scans are helpful)
- 3D Basemap not yet available everywhere
- Multiple Data exchange formats

Questions?

