TOWARDS AN INTEGRATED PROJECT INFORMATION MANAGEMENT PLATFORM FOR INFRASTRUCTURE PROJECTS

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Outlook

- What is an integrated Project Information Management Platform?
- Examples
- Conditions and challenges
BIM projects (infrastructure) around the Globe
BIM projects (infrastructure) around the Globe

- 3D design
- Design coordination
- Generating drawings and quantities
- Virtual Reality
- 4D modelling (3D + time)
Integrated project information management platform

- 3D data
- Schedule, costs
- GIS data
- Documents
- Internal and external libraries (OTL, etc.)
- Requirements data
- Open data, real-time data
- KPIs, Dashboard, Data Analytics
Some questions about the BIM philosophy…

• Do you always (want to) have 3D-BIM information?
• Is a 3D object a stable information carrier?
• Is all information stored as properties connected to 3D objects?
• Do you want to do data analytics based on a collection of data (from several projects)?
From 3D objects to an information model...

- Stakeholder
  - Has an
  - Risk
    - is threatened by
    - Object
      - Needs to comply to
      - Function
        - Needs to comply to
      - Needs to comply to
    - Requirement
      - Needs to comply to
    - 3D representation
      - Is designed as
      - Object
        - Is located on
        - Location
          - GIS
            - CAD
              - From 3D objects to an information model…
... and information standards (libraries)
PIM: important for Arcadis and Arcadis’ clients

Examples Arcadis PIM projects

Examples of PIM Consultancy for clients
Example design project TenneT: energy station

- 3D representation
- Requirement
- Needs to comply to
- Is designed as

Object

TenneT: energy station

Example design project

3D representation

Needs to comply to

Is designed as

Object

Requirement
Example design project TenneT: energy station

Library: 3D objects and modules

3D representation

Object: Support Frame

Library: Object Types and Generic Requirements

Need to comply to

Is designed as

Property: 2500 mm

Requirement

Minimum height Support Frame: 2500 mm free space

Tender Specification Document

Object: Support Frame

Requirements:

- Minimum height of support frame: 2500 mm free space

Library: 3D objects and modules
Example design project Schiphol Airport

Risk

Restricted line of sight

Requirement

Minimal distance of 0,5 m between columns - Road

Verification

Rule based check

Object

Is threatened by

Needs to comply to

Is verified by

Object data

3D representation

3D objects + properties (distance columns - road)

Has as subject

Is designed as

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Dashboards: within and among projects

Project A

Requirement changes

Project B
Conditions and challenges

- Standardisation across projects, disciplines (and companies)
  - ✓ Process
  - ✓ Information model and information standards; common language (also across the sector; CB-NL)
  - ✓ Application landscape

- Project implementation in line with the developed standards
  - ✓ New role of ‘project information manager’
  - ✓ Changes in ‘common’ project roles (e.g., documents instead of data, work according to standards)

- (Project) management support
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