

GEO|Design+BIM



LINKING 3D GIS DATA TO 3D IFC MODELS

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Sweco

- Europe's leading architecture and engineering consultancy
- Organised in seven geographically based business areas
- Approx. 14,500 employees in 15 countries



Henri Veldhuis



WE PLAN AND DESIGN
THE COMMUNITIES AND CITIES
OF THE FUTURE



Autodesk and Esri Partnering to Advance Infrastructure Planning and Design

...The world is expected to add 2.5 billion more people in the next 30 years, 70 percent whom will reside in urban areas, putting extraordinary pressure on already strained infrastructure resources and requiring an infrastructure spend of US\$3.3 trillion per year. To meet these challenges, the public and private sectors must find ways to streamline the entire transportation and infrastructure building lifecycle...

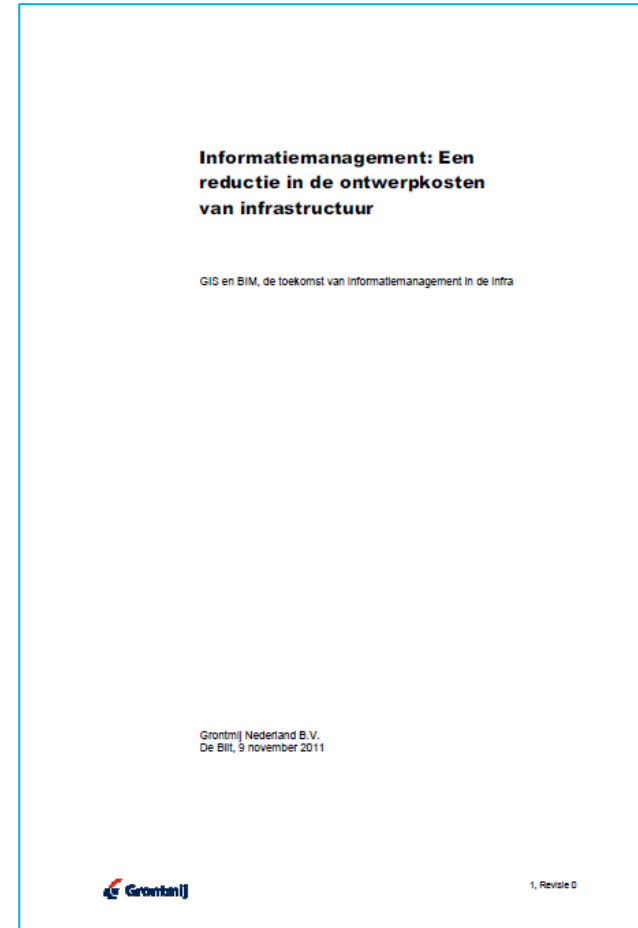


Research Project (2012)

Information management

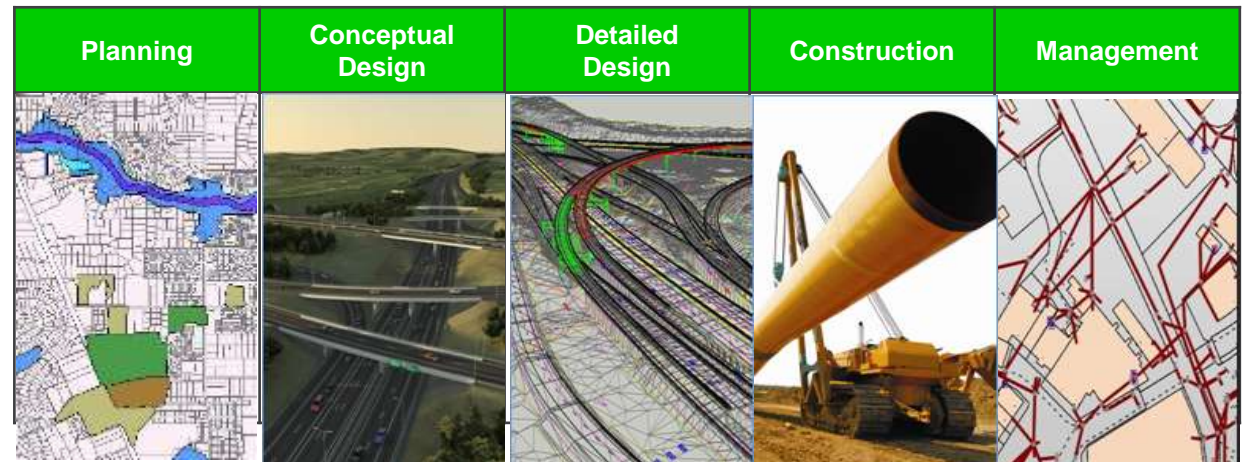
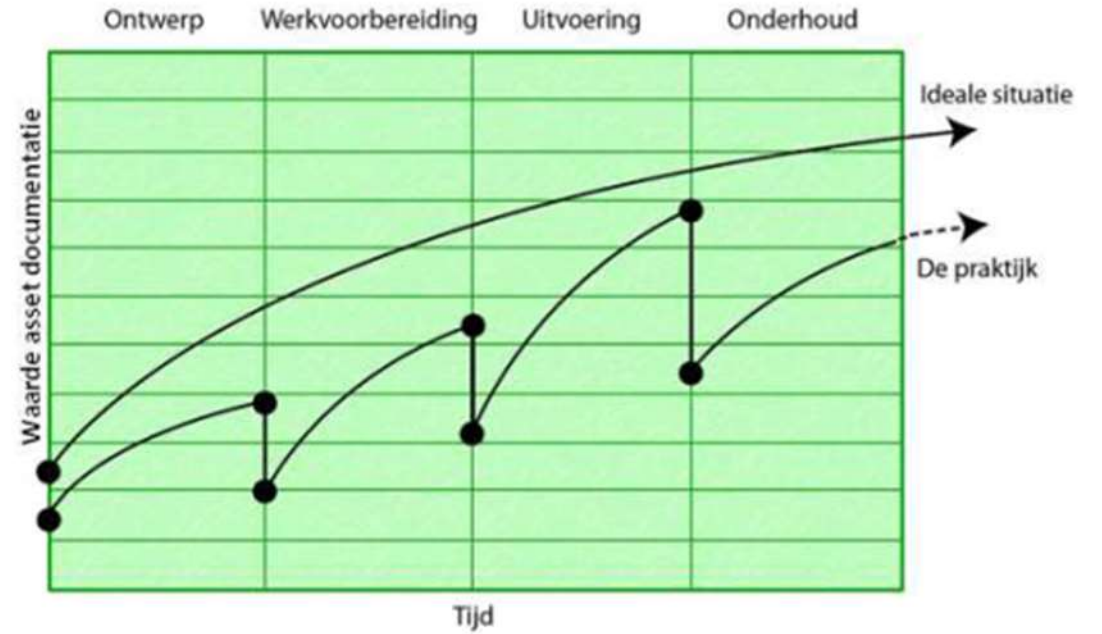
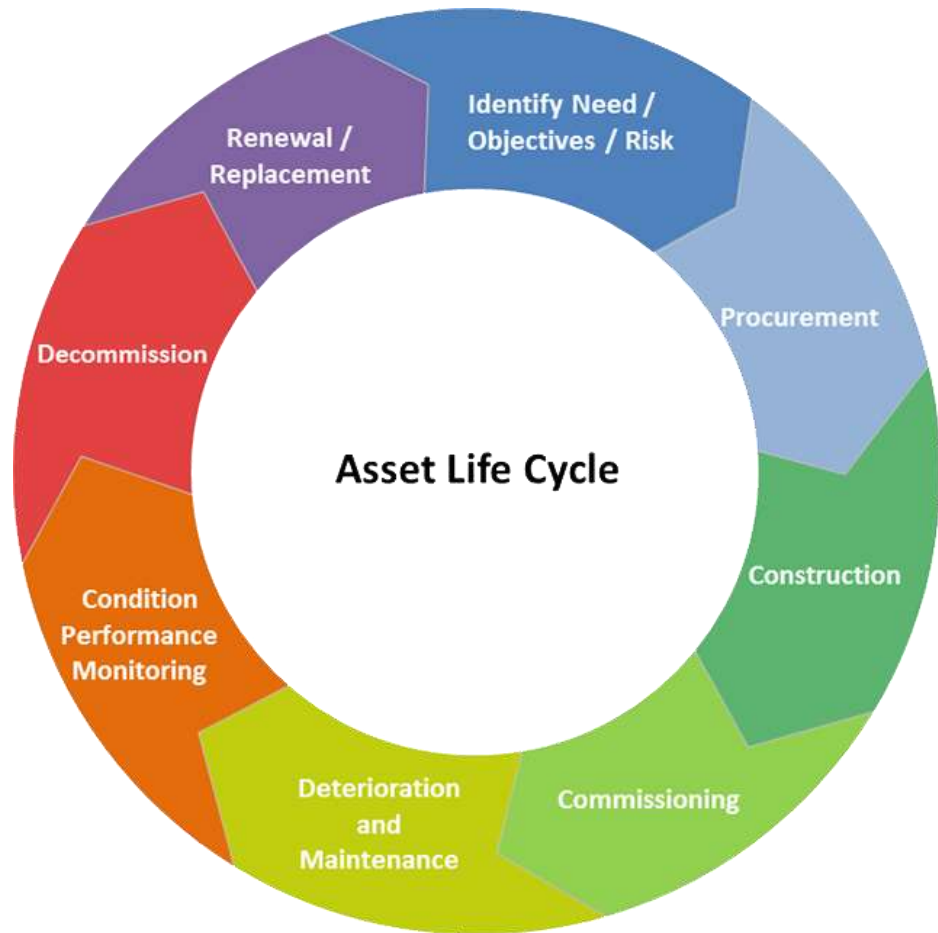
A reduction in the failure costs in the design phase of asset management

5-6% of the design costs can be reduced by using BIM, GIS and DMS



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Life Cycle Asset Management

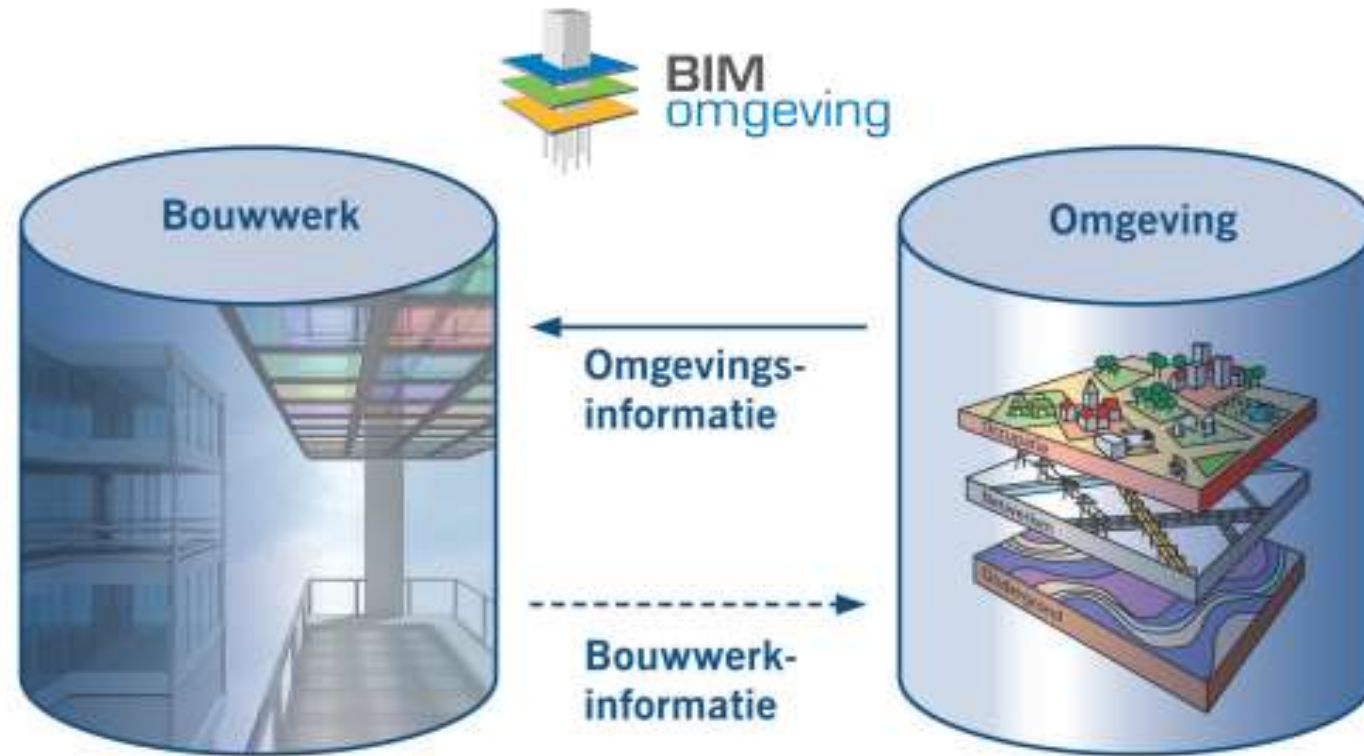


Use of information in Asset Management












- Information is often difficult to obtain
- Information is not available in an appropriate format
- Information is not up to date or lost
- Issues are detected too late














Data challenge



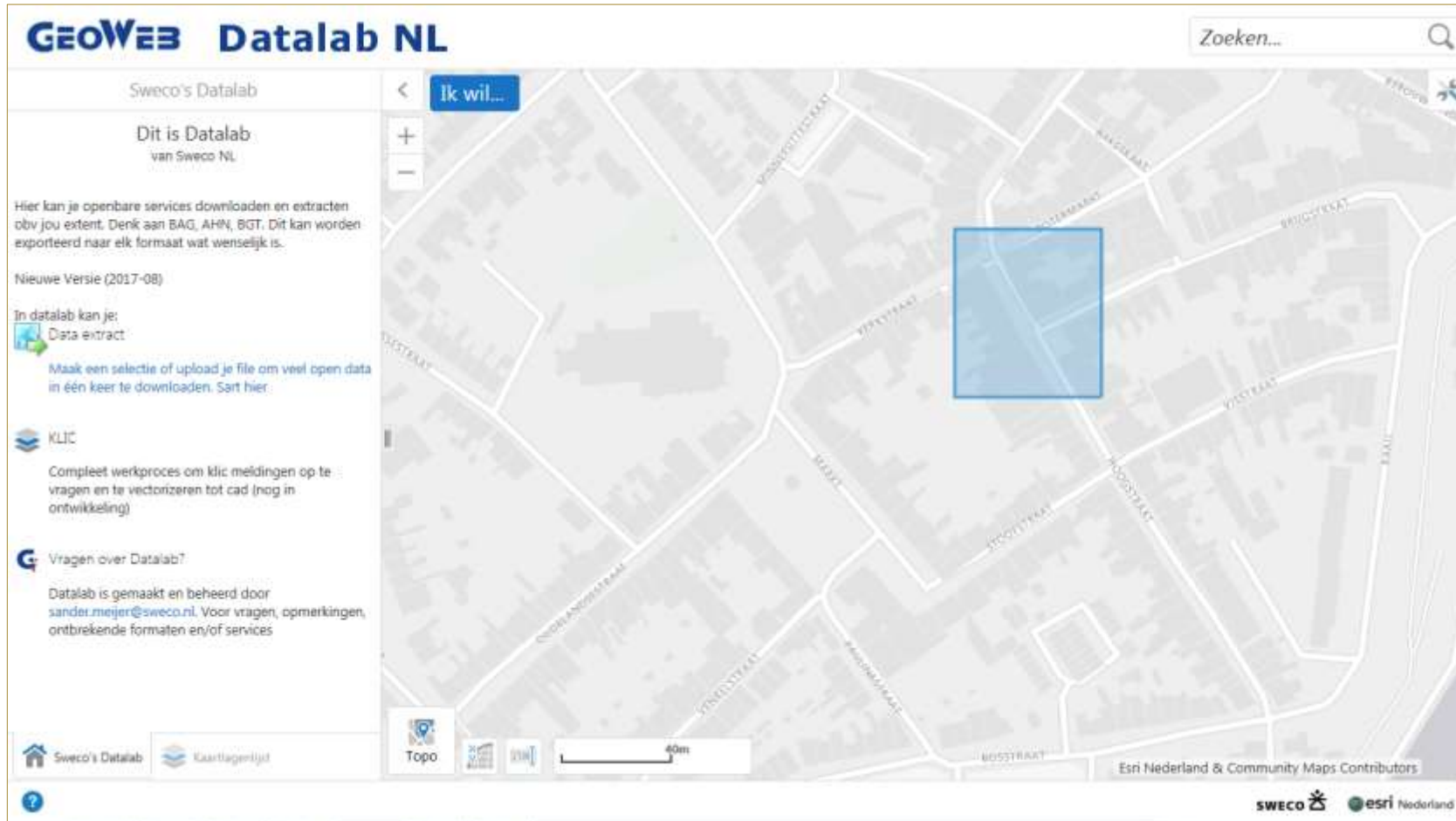
Reading / writing of most important 3D (BIM) formats

-  Adobe 3D PDF
-  Autodesk 3DS
-  AutoCAD Civil 3D
-  AutoCAD DWG/DXF/RealDWG
-  Bentley Microstation
-  CityGML
-  COLLADA/KML
-  DirectX
-  Esri Geodatabase/Shape
-  Free File Geodatabase API
-  Trimble SketchUP

-  MINECRAFT
-  LandXML
-  LAS/LAZ
-  Oracle Spatial Object/Point Cloud
-  Point Cloud
-  Revit
-  Three.js
-  VRML
-  Wavefront OBJ
-  XML/GML
-  X3D



Datalab | Sweco NL



Input:

- PDOK Services
- Upload region (shapefile)

Output:

- CAD (or GIS) file

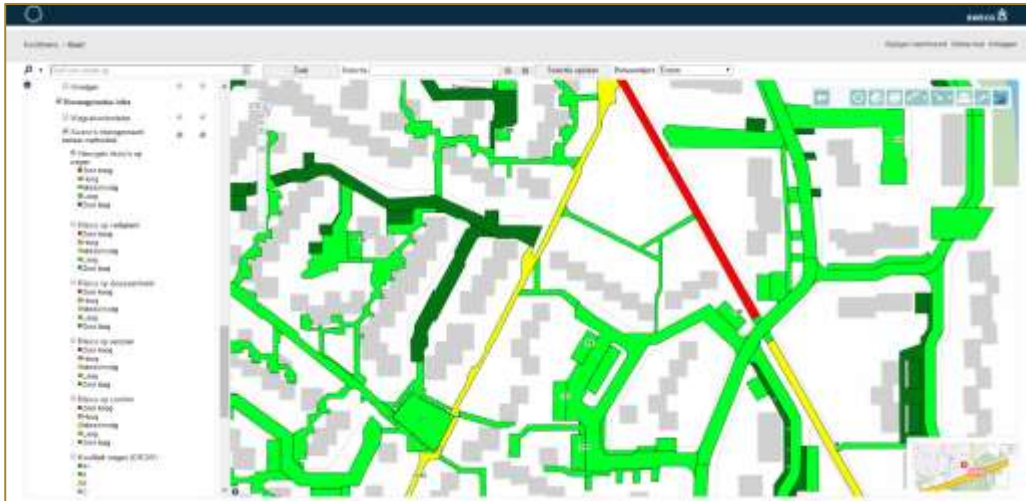
Software

- ArcGIS Server
- FME Server

Master Thesis Project



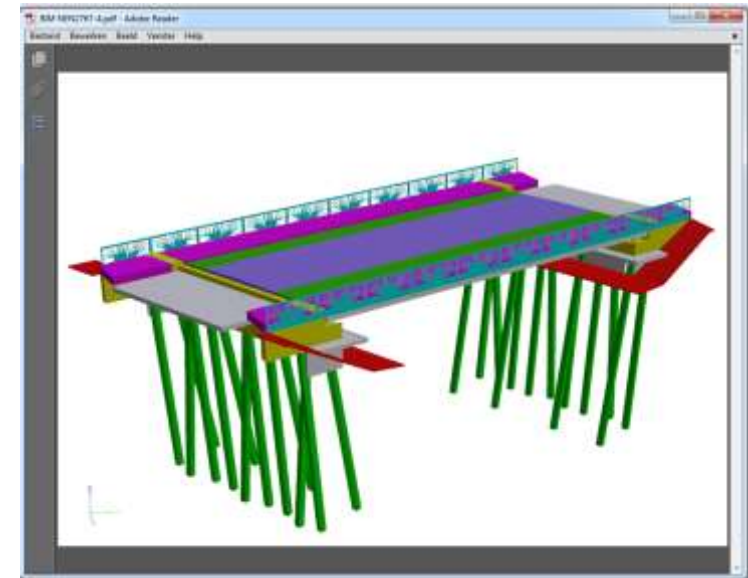
CityGML



GIS



BIM



BIM



SWECO 