3D model of TUDelft

Our experience

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TUDelft

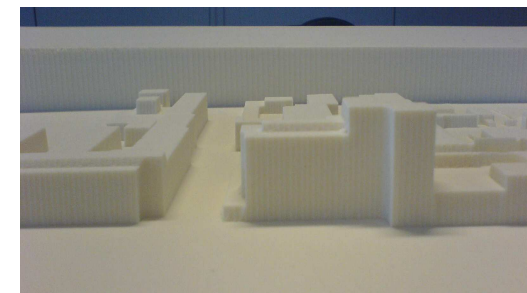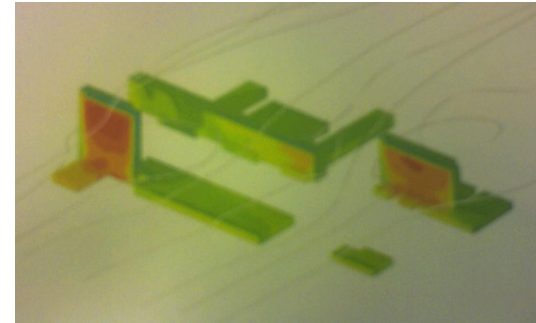**Delft University of Technology**

The 3D TUDelft model

Create 3D test data set be used for research and education

- Experience different methods for 3D reconstruction
- Experience the concept of Levels-of-Detail
- Analyze how to assign semantic information
- Investigate approaches to import the models in a database model
- Experience with the data model (building of topology, conversion to other models, analysis, etc.)
- Create CityGML export
- Web services

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History

- 2005 MSc student from Structural Design Lab, (Rinocerous, CFD for wind simulations)

- LR students (Delft, The new Church in Google Earth)
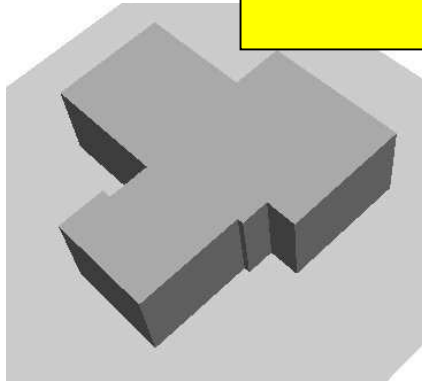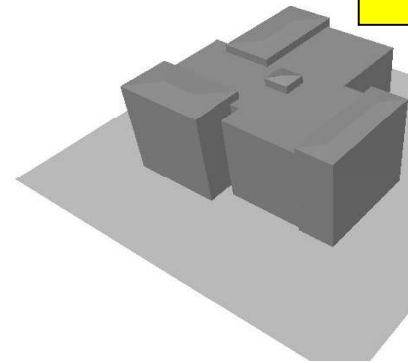
- Architecture students (physical model)

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Other than this

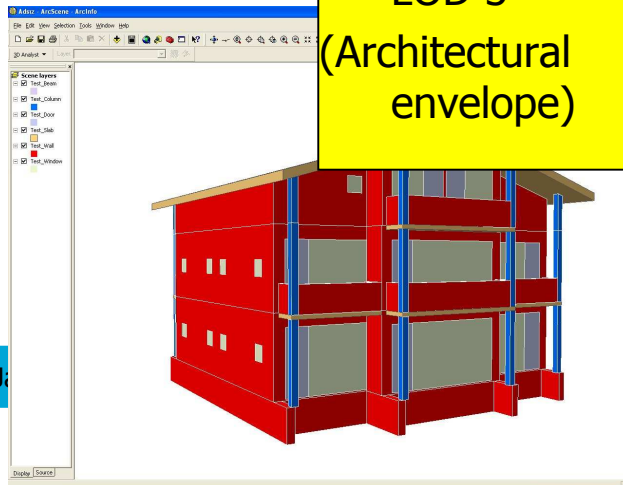**TU**Delft

Important concept: Levels of Detail

LOD 1 (Block-roof)

LOD 2 (Block+roof)

LOD 3 (Architectural envelope)

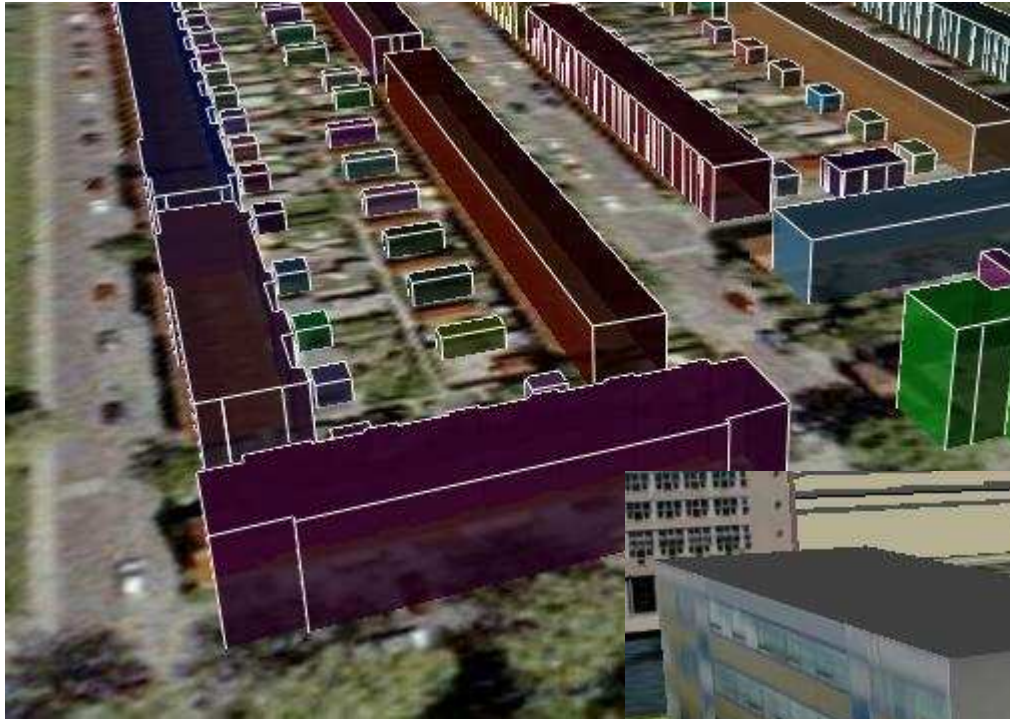LOD 4 (Walkable)

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Current status

- LOD1 (extrusion model complete)
- LOD2 (few buildings)
- LOD3 (few buildings) also in CityGML
- LOD4 (not yet, at the end of December)

- Management in DBMS (developing data model)
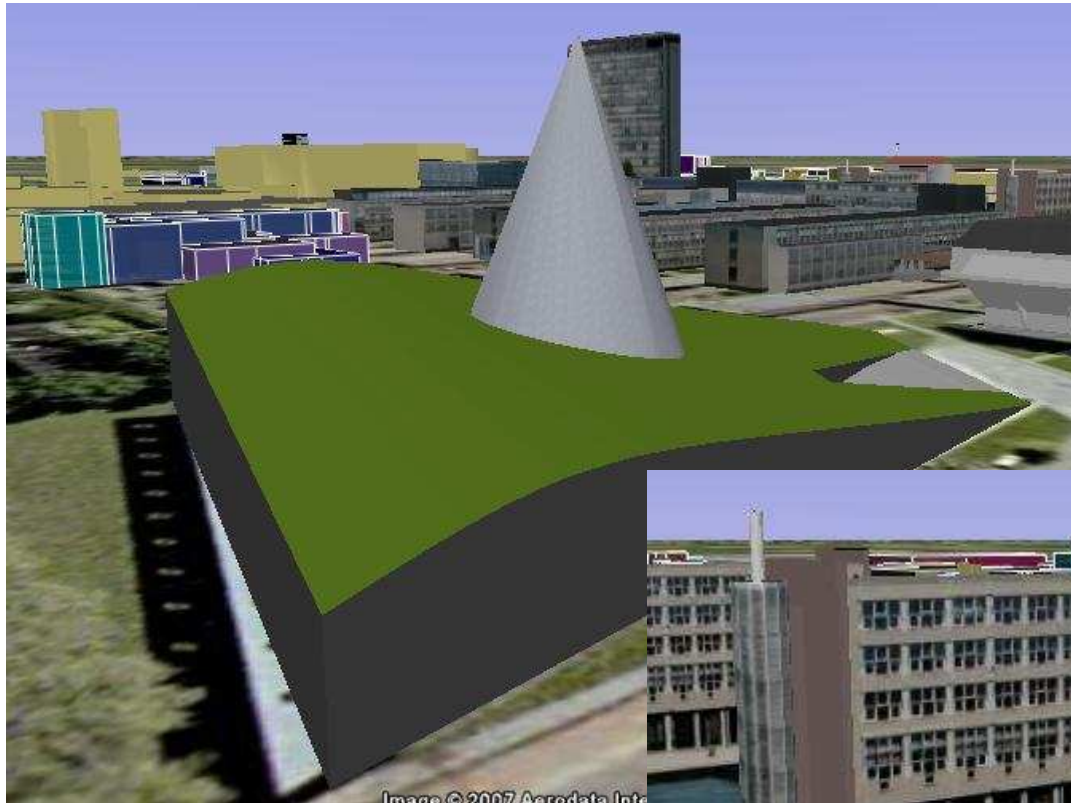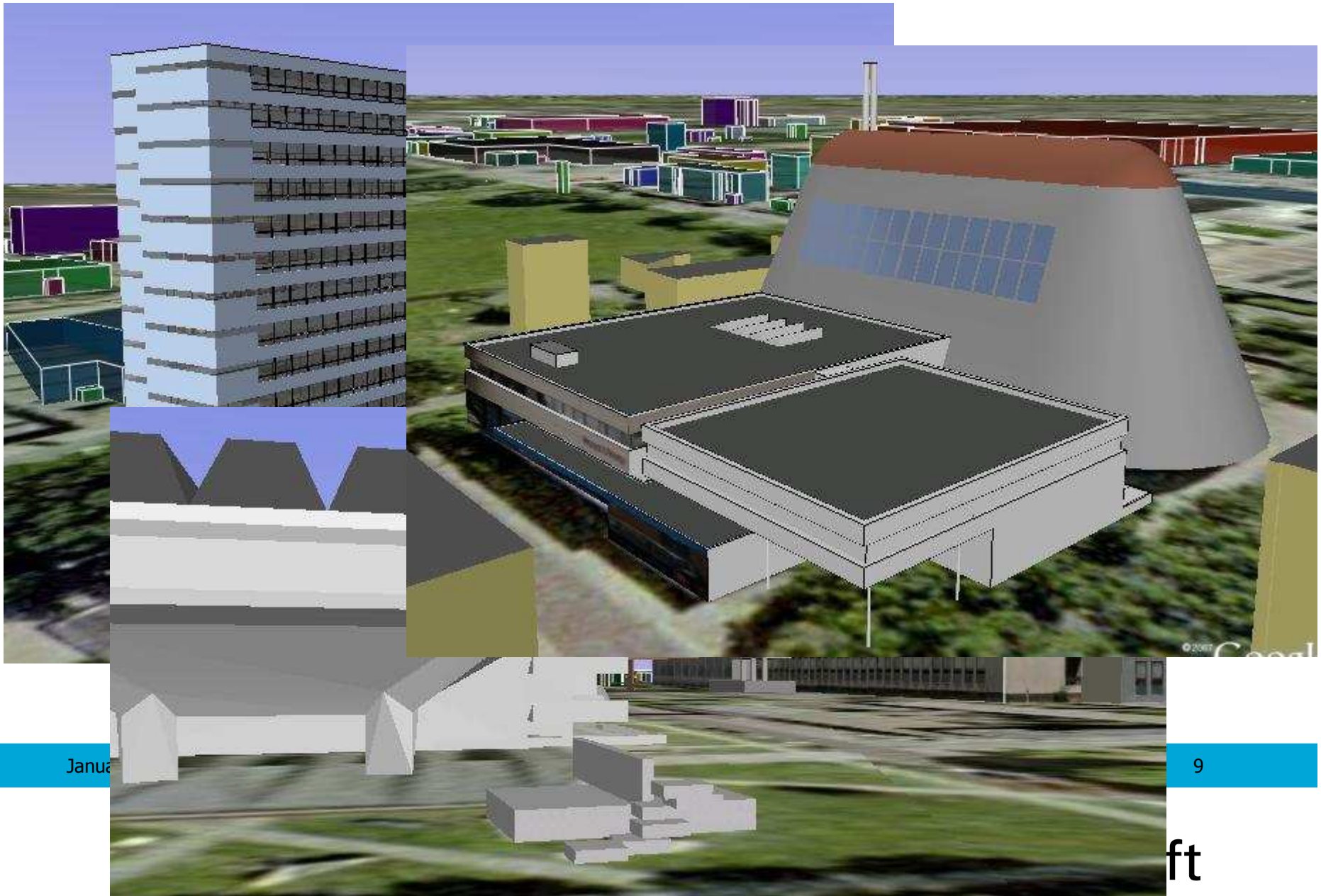
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LOD1 - block

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LOD2 – block +roof

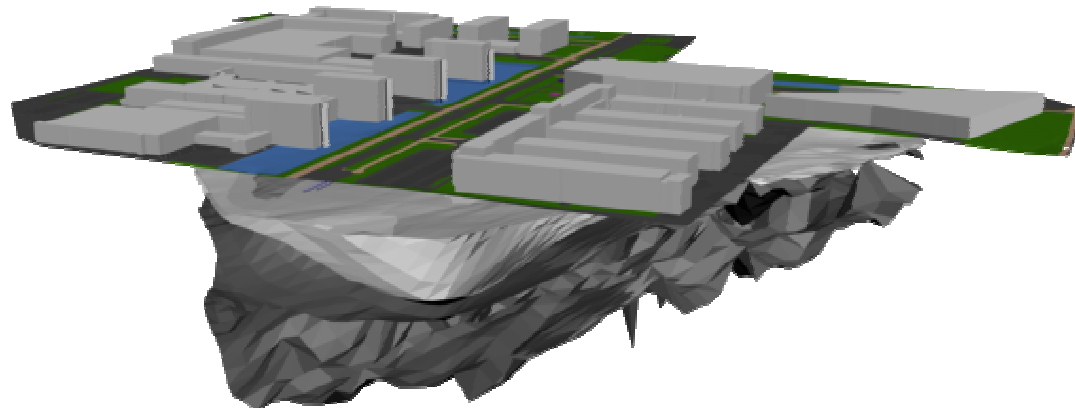Image © 2007 Aerodata Inte...
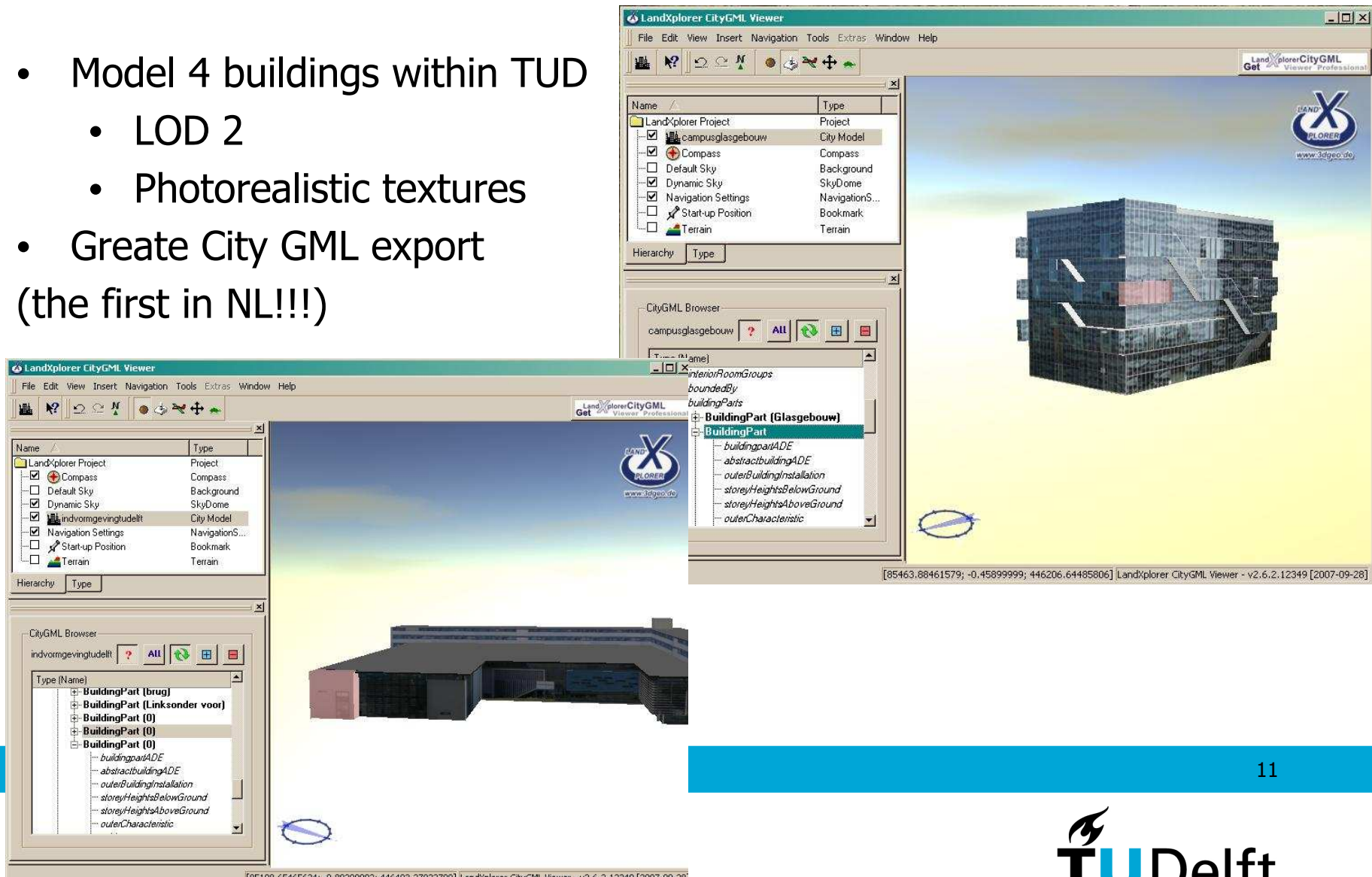
LOD3 –architectural envelope

Work of Ludvig 3DIM (also Wiebke)

- Extension of the concept of CityGML
  - Above, bellow, on the terrain
  - subsurface features
  - intersection rules
  - Adjust objects according to NEN3610 and other international
- Create data set
- 2 implementations in Oracle Spatial

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Toposcopie - CityGML

- Model 4 buildings within TUD
  - LOD 2
  - Photorealistic textures
- Greate City GML export

(the first in NL!!!)

People

- Peter Kadlek (Java, extrusion model for KML)
- Dave Houben (AutoCAD)
- Ludvig Emgard (FME)
- Shuman Kibria (ArcGIS)
- Toposcopie (http://www.toposcopie.nl/)
- Students at OLRS (PhotoModeller, Sketchup)

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