Rotterdam 3D

The next level
Presentation contents

- Brief history (Rotterdam 3D v1.0)
- The next level (Rotterdam 3D v2.0)
- (Inter)national cooperation
Rotterdam 3D “the next level”

Huidig model – Kenmerken
Rotterdam 3D – Conclusions usage R3D v1.0

- Rotterdam 3D v1.0 is successfully used on project base

- Every project theme data is added to the model
  - Trees
  - Objects in the subsurface
  - Lampposts
  - Etc.

- Current 3D model has not been maintained
  - Out dated
The evolution continues, also in 3D developments
Now is the momentum for “the next level”:

Specific and advanced 3D requests from other departments, like:

- Management of public areas
- 3D information of the objects in the subsurface
- 3D environmental visualisations
- BIM

But what is the next level?
Rotterdam requires a new 3D city model which:

- is reliable and maintained (keep it up-to-date)
- is accessible and usable
- is interdisciplinary
  - one model for all kind of usage, same base for different projects
- centralizes the users demands
  - What do they want; which information do they need?
- is based on open standards and software independent
- is object oriented, intelligent and semantic rich.
- contains more 3D objects not only building models
Rotterdam 3D – the next level
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- is reliable and maintained (keep it up-to-date)
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- is based on open standards and software independent
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3D is the not the future, but it is here and **now**.

In the next 5 years 3D information will become **mainstream** and an **integral part** of our working processes.

3D information will be **collected** and **maintained** in a central standard storage.

The 3D city model will be **easily accessible** and used for linking applications from various fields of work.
Rotterdam 3D v2.0 – strategy = thematic approach

1. The 3D city model is developed theme by theme and step by step

2. Based on the scrum method

3. Sprints of four months

4. A user-centric approach per theme, connects the chain partners.
Rotterdam 3D v2.0 – Citywide development
Rotterdam 3D v2.0 – a base for:

- Flood simulation
- Urban planning
- Road design
- Analysis
- Subsurface
- City marketing

Rotterdam 3D "the next level"
- European project: **Espresso**
  - European Smart City project
  - Create a Smart City framework of open standards
- Collaboration with The Hague
Rotterdam 3D v2.0 – (Inter)national cooperation

- 5CC (=5 City Connect)
  - Rotterdam / Hamburg / Vienna / Singapore / Helsinki
  - Central: development of an open 3D infrastructure
  - Discuss common challenges (maintenance, BIM and usage)
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Rotterdam 3D versie 2.0 – Links

Proof of Concept Rotterdam 3D v2.0, Nesselande

https://www.youtube.com/watch?v=1MNbwWuHMo

3D energy planner in action

https://www.youtube.com/watch?v=vBTIAoFryDA

Some articles (in Dutch)

https://drive.google.com/file/d/0B_96AxZ6qfZ0VTN0N1RZQ0VuZzA/view (geo-info, 2015-03)

https://www.geo-info.nl/system/files/documents/Geo%20Info%20201-2016%20LR_0.pdf (p.24, geo-info, 2016-01)


Espresso website

http://espresso.ru.uni-kl.de/
Welkom in Rotterdam! – Some facts

- Rotterdam is the 2nd largest city in the Netherlands
- Founded in 1270 & granted city rights in 1340
- Rotterdam is the largest port of Europe, 10th worldwide

Population (January 2015): 623,652
Surface area: 32,416 hectares
Water: 11,529 hectares
Nationalities: approx. 170
Rotterdam 3D v2.0 – approach

2014
- Inspiration session & organisation scan
- Strategy and ambition
- Proof Of Concept

2015
- Test different options
- Create commitment

2016
- Citywide development
Rotterdam 3D v2.0 – Proof of concept

virtualcityMAP

Legend
- Terrain
- Rotterdam Buildings
- Tree layer
- Buildings
- GenericCityObjects

Viewpoints
- Startview
- New Viewpoint
Rotterdam 3D v2.0 – project set-up

- In 2014/15 the project fundament was formed

  - Organisation → create commitment
    create a project team

  - Infrastructure → A new standard viewer

  - Cooperation → (Inter)national

- Thematic approach in practice

  - Buildings (Rfl) / Terrain / Subsurface / BIM

  - First developments / tests done in Q3/Q4 2015

  - User centric approach (collaboration)