Geodan

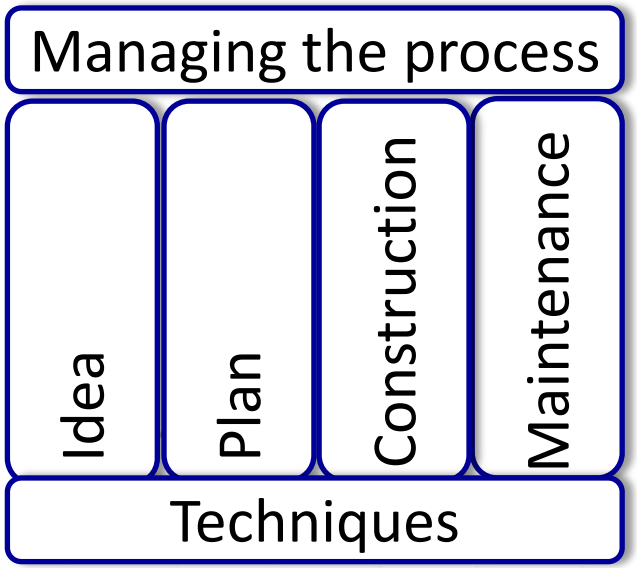
www.geodan.com

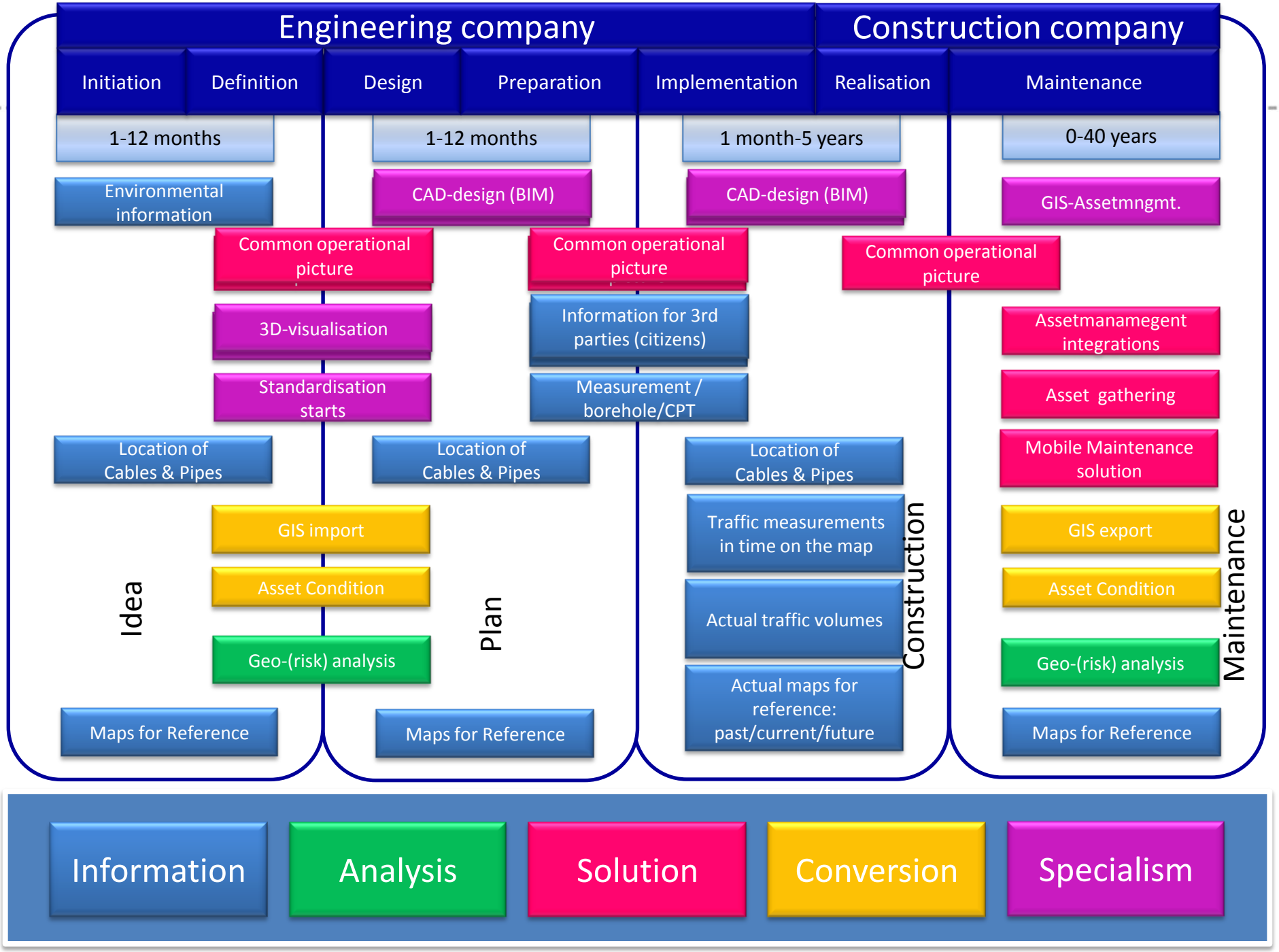
Making use of spatial information in BUILDING INFORMATION MODELING (BIM)

Fred van der Weijde

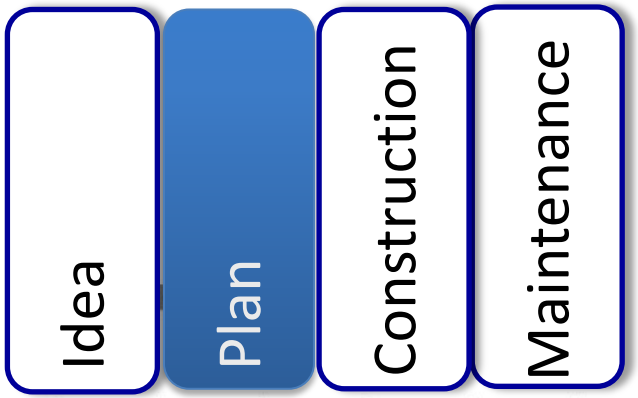
General Manager Geodan Van den Berg
Business Development Manager Geodan

- BIM stages and its needs
  - Idea & Planning stage
  - Construction & Maintenance stage
- Managing the process
- Techniques & Technologies
- Conclusions



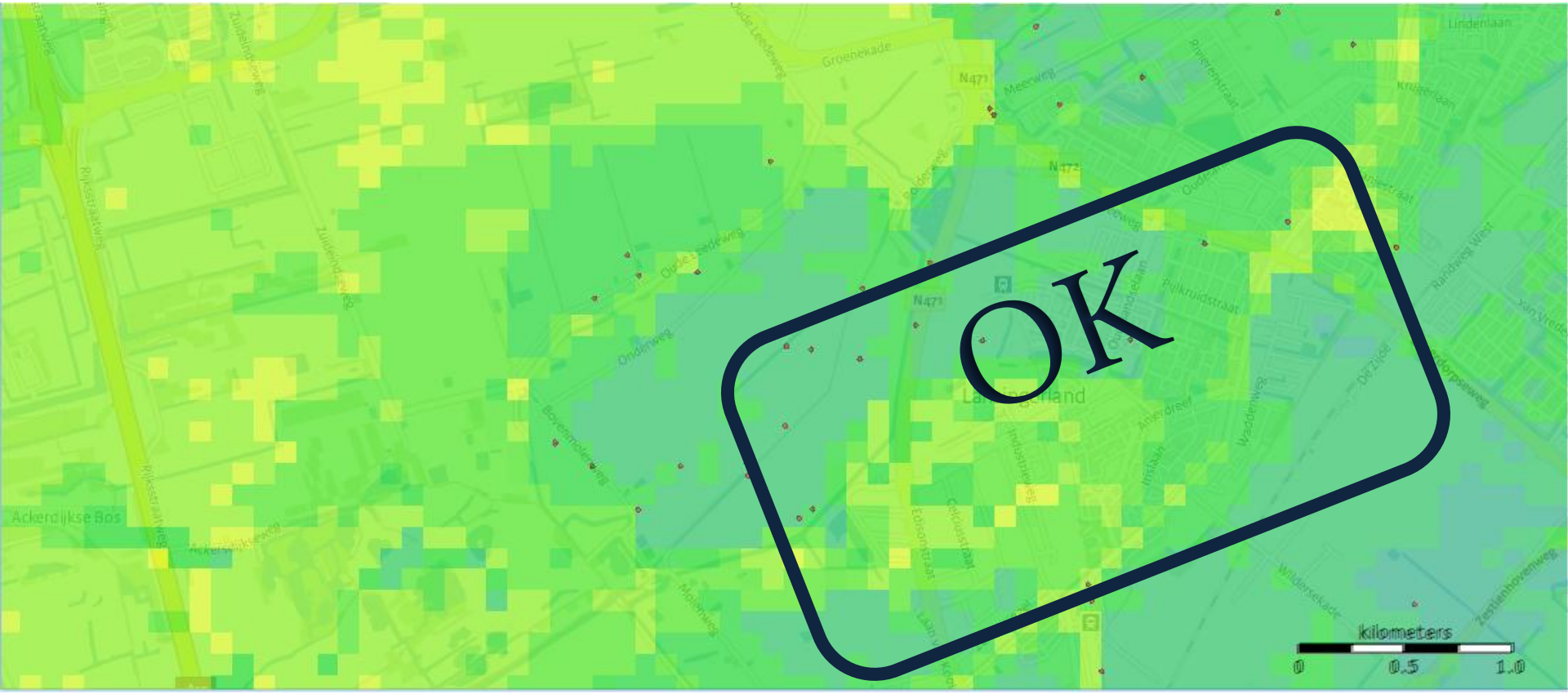

Engineering company
Construction company
Initiation
Definition
Design
Preparation
Implementation
Realisation
Maintenance
1-12 months
1-12 months
1 month-5 years
0-40 years
Environmental information
CAD-design (BIM)
CAD-design (BIM)
GIS-Assetmngmt.
Common operational picture
Common operational picture
Common operational picture
3D-visualisation
Information for 3rd parties (citizens)
Assetmanamegent integrations
Standardisation starts
Measurement / borehole/CPT
Asset gathering
Location of Cables & Pipes
Location of Cables & Pipes
Location of Cables & Pipes
Mobile Maintenance solution
GIS import
Traffic measurements in time on the map
GIS export
Asset Condition
Actual traffic volumes
Asset Condition
Geo-(risk) analysis
Actual maps for reference: past/current/future
Geo-(risk) analysis
Maps for Reference
Maps for Reference
Maps for Reference
Idea
Plan
Construction
Maintenance
Information
Analysis
Solution
Conversion
Specialism

- Quality and type of the soil
- Groundwater levels
- Permits
- Urban spatial planning
- Traffic volumes
- Location of archaeological objects
- Location of ammunition
- Location of cables and pipes



Geodan → Quality and type of soil

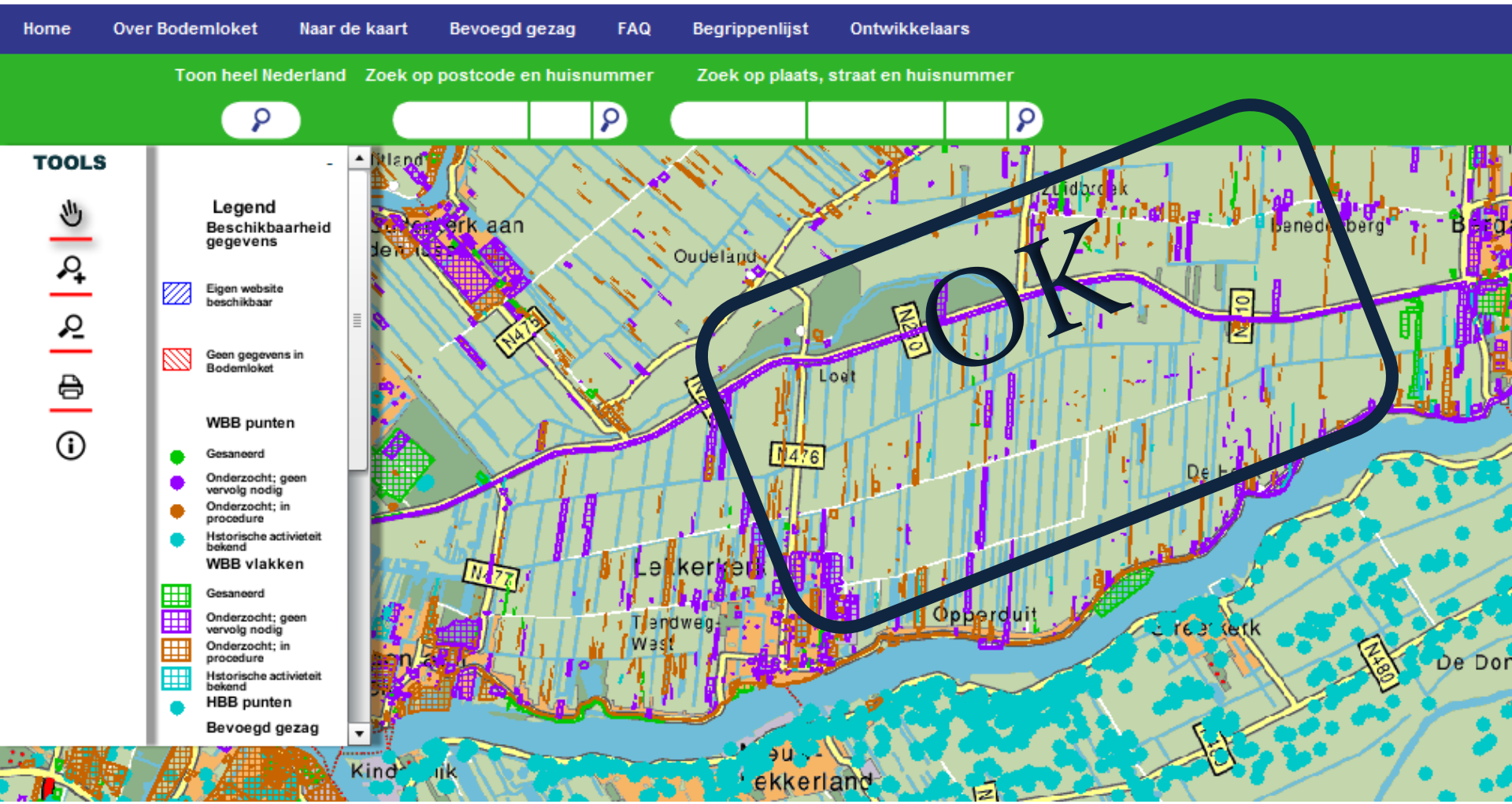
www.geodan.com



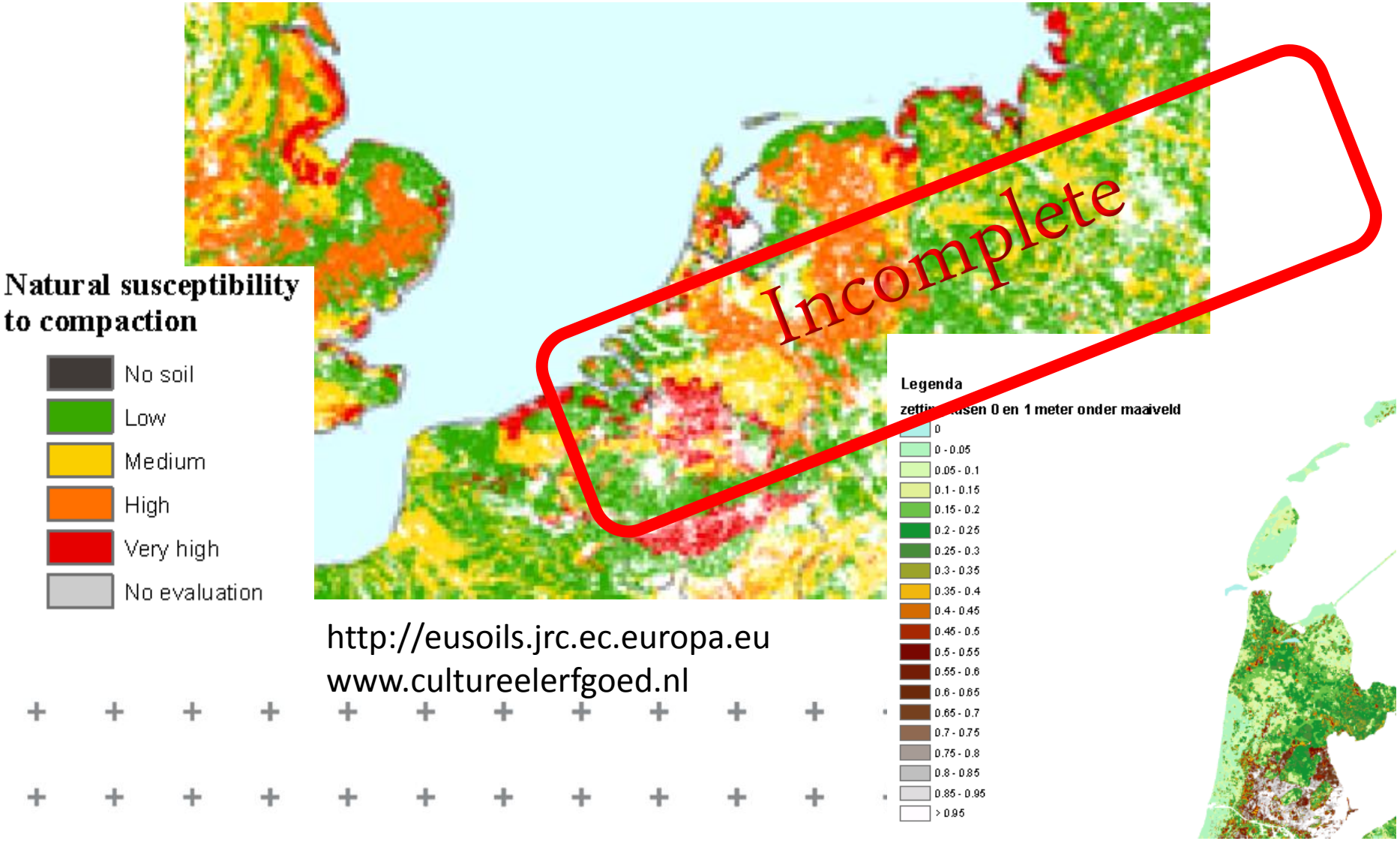
www.nationaalgeoregister.nl

Geodan → Soil contamination

www.geodan.com



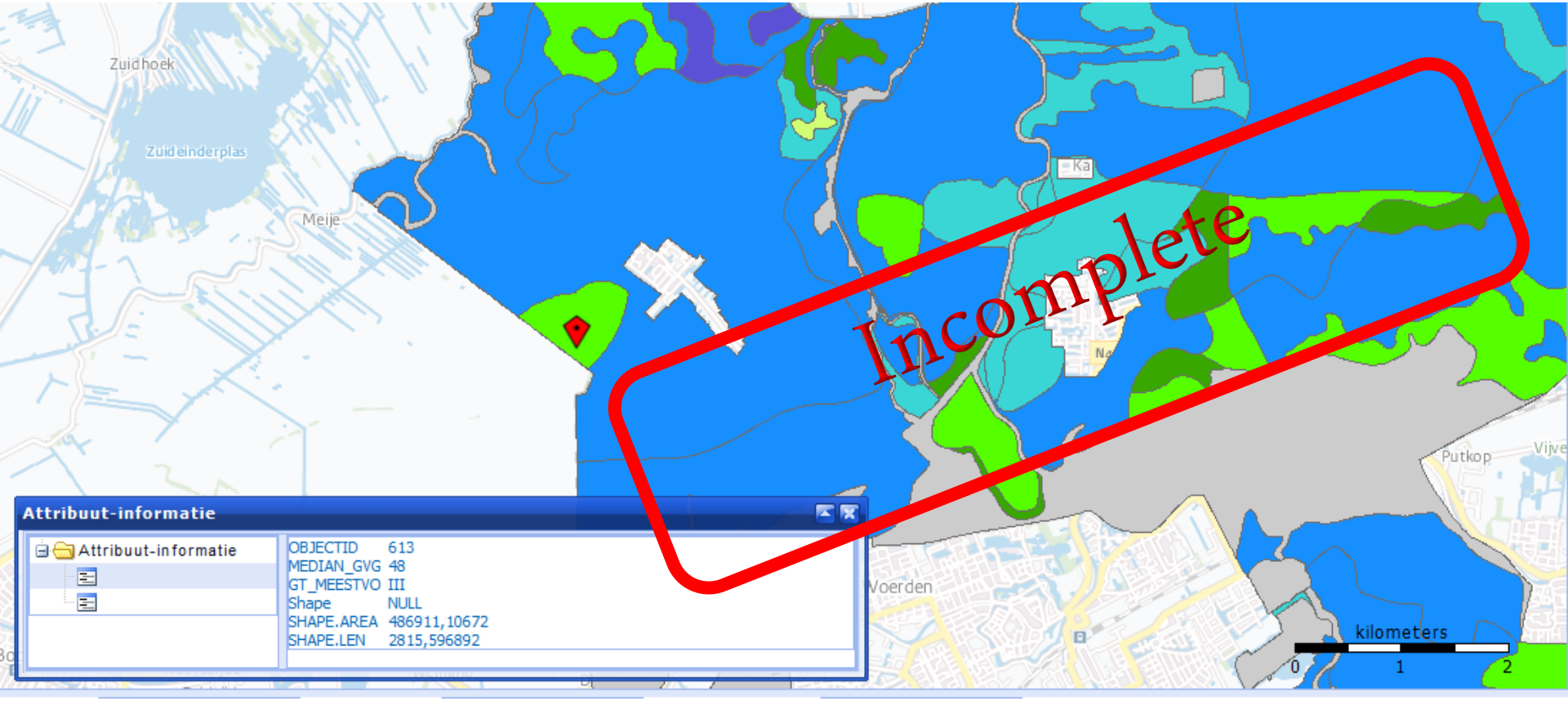
www.bodemloket.nl



http://eusoils.jrc.ec.europa.eu
www.cultureelerfgoed.nl

Geodan → Groundwater levels

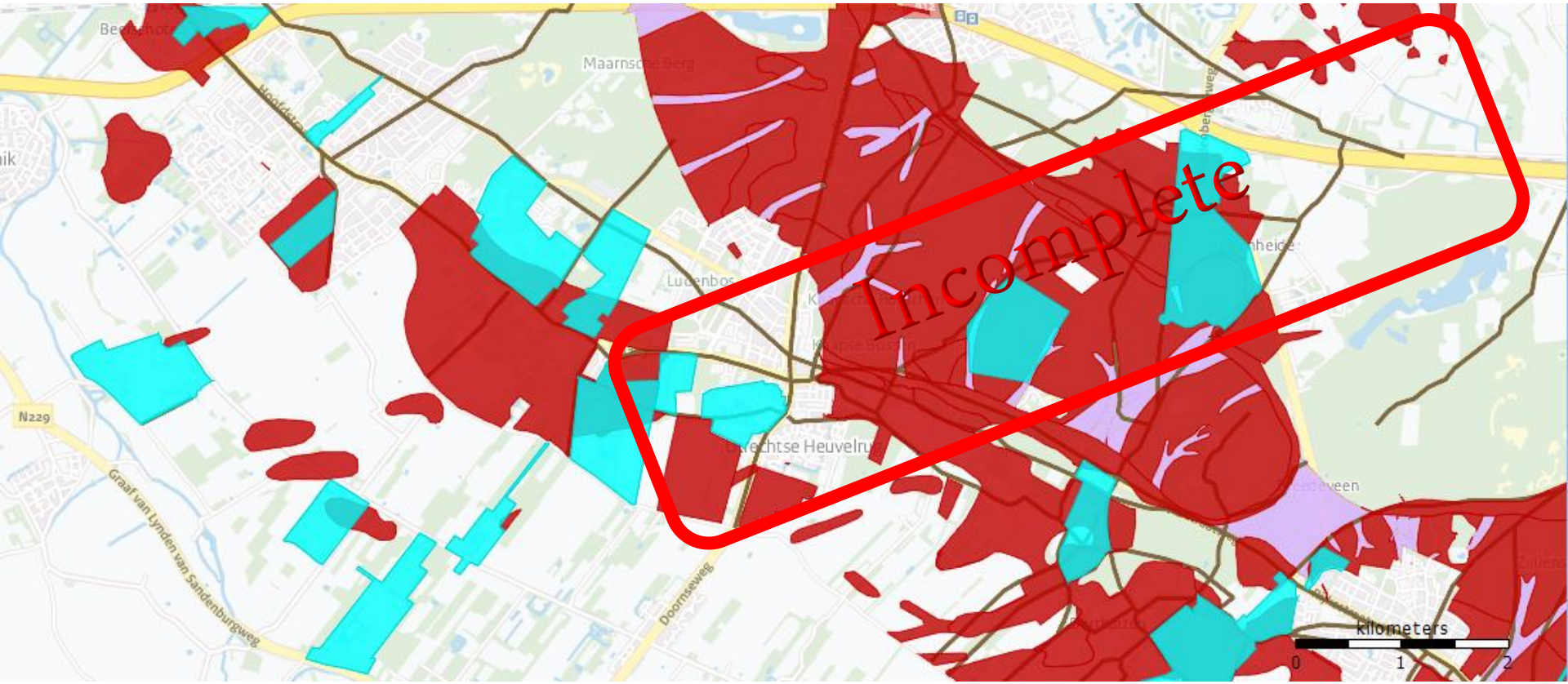
www.geodan.com



www.nationaalgeoregister.nl

Geodan → Archaeological sites

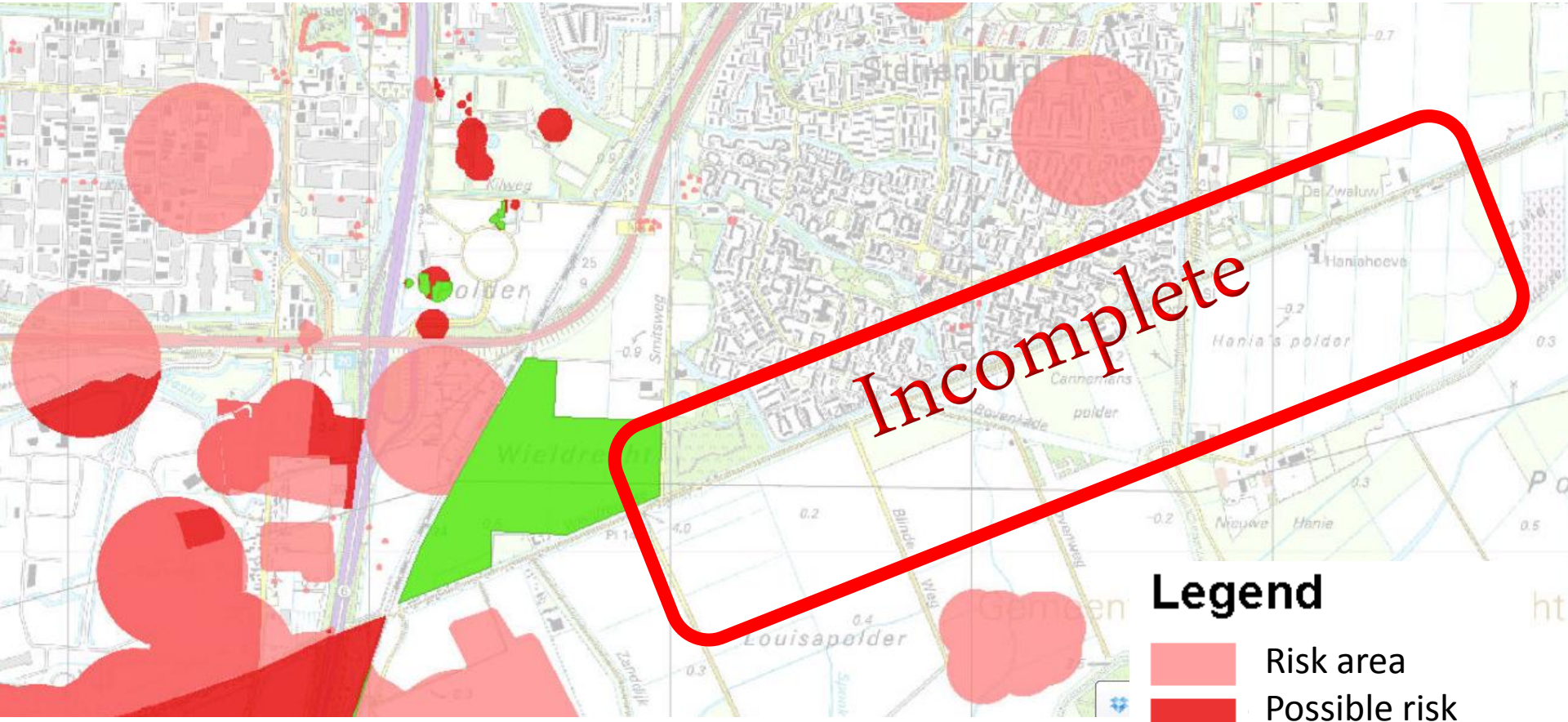
www.geodan.com



www.nationaalgeoregister.nl

Geodan → Explosives

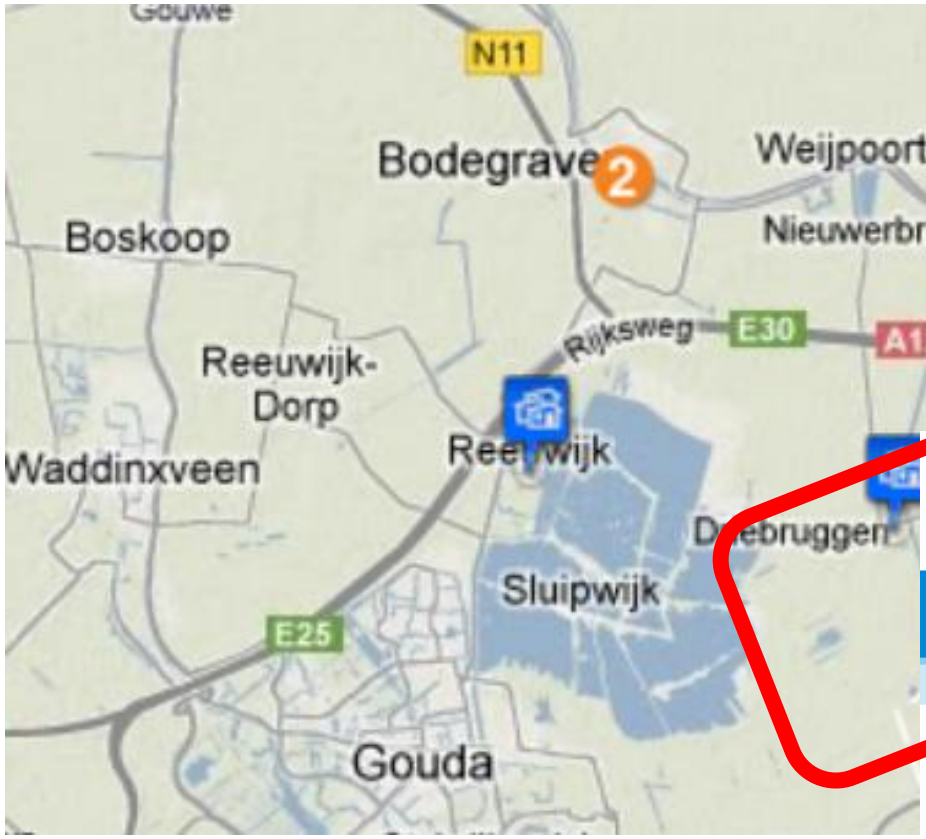
www.geodan.com



www.dordrecht.nl

Geodan → Permits

www.geodan.com



www.vergunningen.nl
www.bodegraven-reeuwijk.nl

Omgevingsvergunning kappen houtopstand

Omgevingsvergunningen

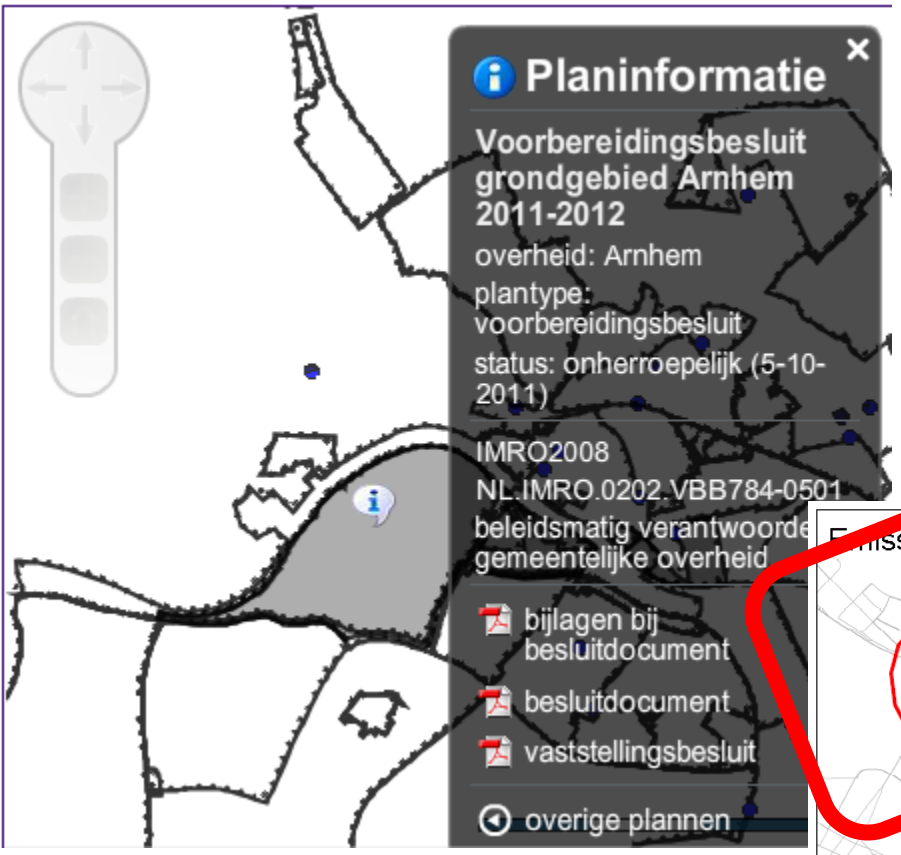
Publicatiedatum	19-03-2012
Soort bekendmaking	Omgevingsvergunning verleend
Bekendmaking heeft betrekking op	2811, 2411, 2415, 3465, 3466

Burgemeester en wethouders van Bodegraven-Reeuwijk hebben de volgende omgevingsvergunningen verleend op grond van artikel 4.12, van de Algemene Plaatselijke Verordening. Voor vragen kunt u contact opnemen met de afdeling Realisatie en beheer, tel. 0172 - 522 522.

- Op 1 maart 2012: Doortocht en de Oud Bodegraafseweg te Bodegraven: 12 esdoorns, berken en 6 populieren langs het slachthuisterrein Bodegraven. De bomen worden

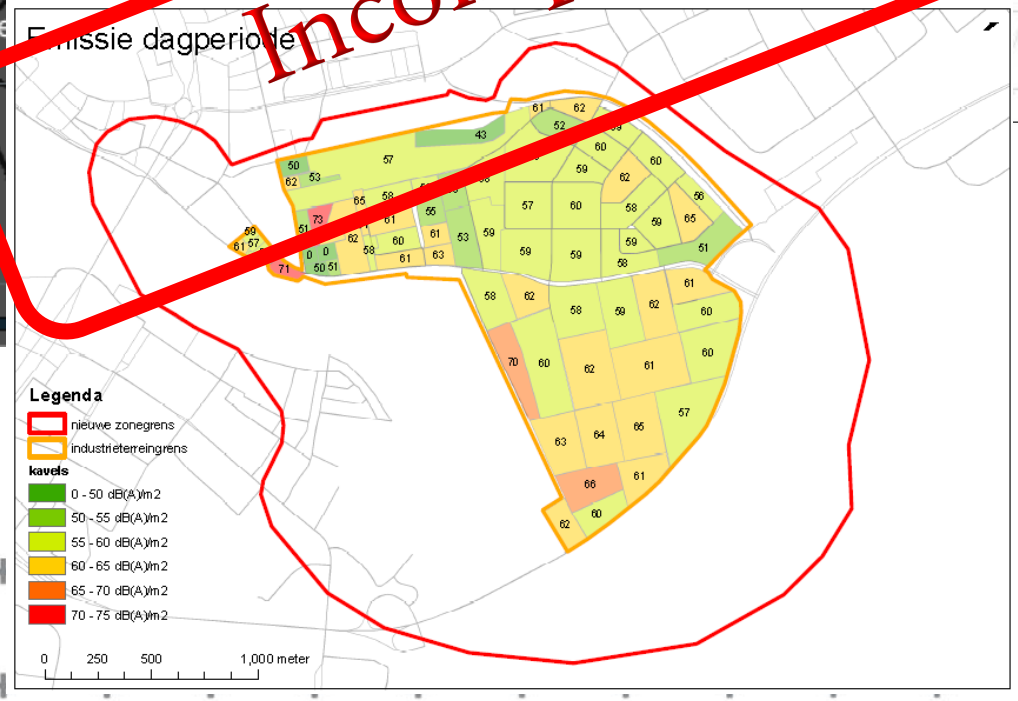
Geodan → Urban spatial planning

www.geodan.com



Verkavelingsplan gezoneerd industrieterrein Arnhem Noord

Incomplete



www.arnhem.nl

Geodan → Traffic volumes

www.geodan.com

GISViewer Limburg

provincie limburg

› Viewer › Home

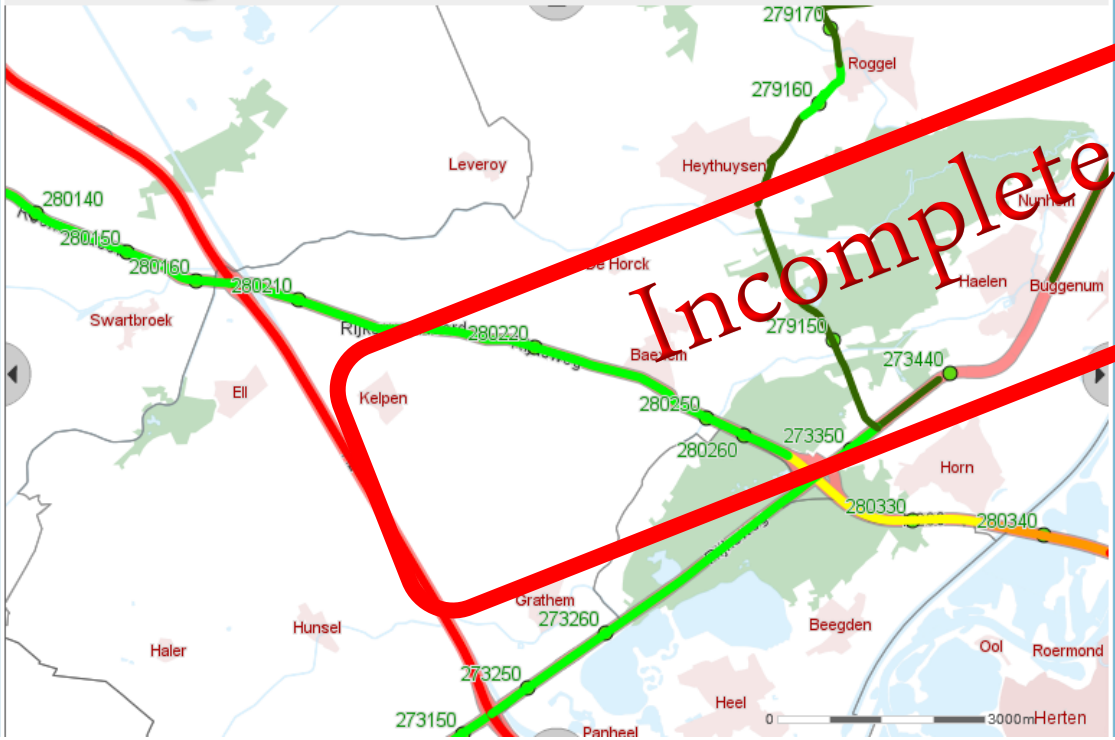
ATLAS LIMBURG

Ingelogd als verkeersmonitor (verkeersmonitor) | Uitloggen

Wegvakinfo | Meetgegevens | Overzichten

Grathemerweg - Komgrens Baexem
280220

Naam wegvak:	Grathemerweg - Komgrens Baexem
Wegnaam:	N280 / WEERT - ROERMOND
Hectometrering wegvak:	5,986 - 10,382
Plaats meetpunt:	10,3
Soort meetpunt:	Periodiek
Maximum snelheid:	80
Ligging:	Buiten de bebouwde kom
Beheerder:	Provincie
Meest recente gegevens:	2010
Referentiewegvak:	280250



Kaarten | Zoeken

Verkeersinte[illegible]eit recent
- Minder dan 10.000 motorvoertuigen
- 10.000 tot 20.000 motorvoertuigen
- 20.000 tot 30.000 motorvoertuigen
- 30.000 tot 40.000 motorvoertuigen
- Meer dan 40.000 motorvoertuigen

Provinciale meetpunten
- Telpunten

Rijks- en provinciale meetwegvakken
- Verkeerstelvakken

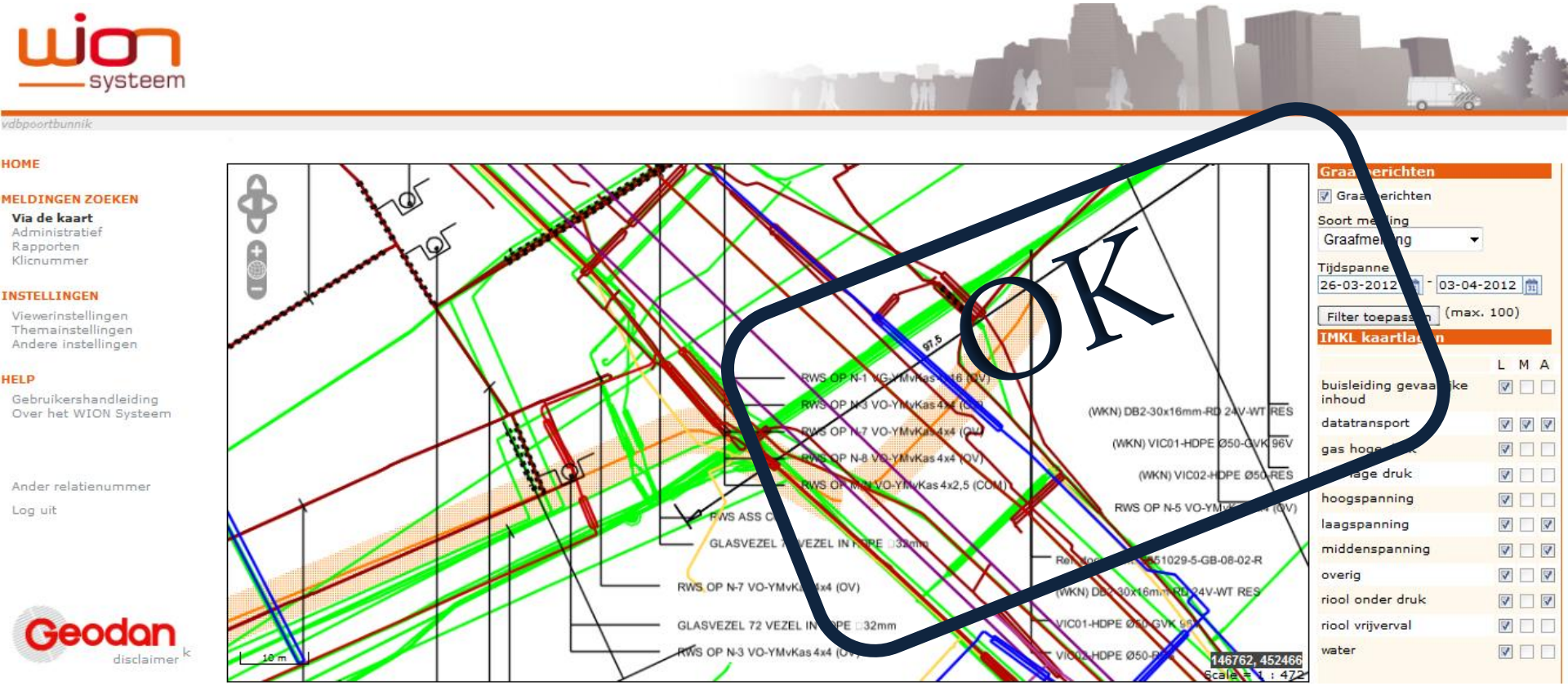
Ondergrond

Incomplete

http://portal.prvlimburg.nl

Geodan → Location of cables & pipes

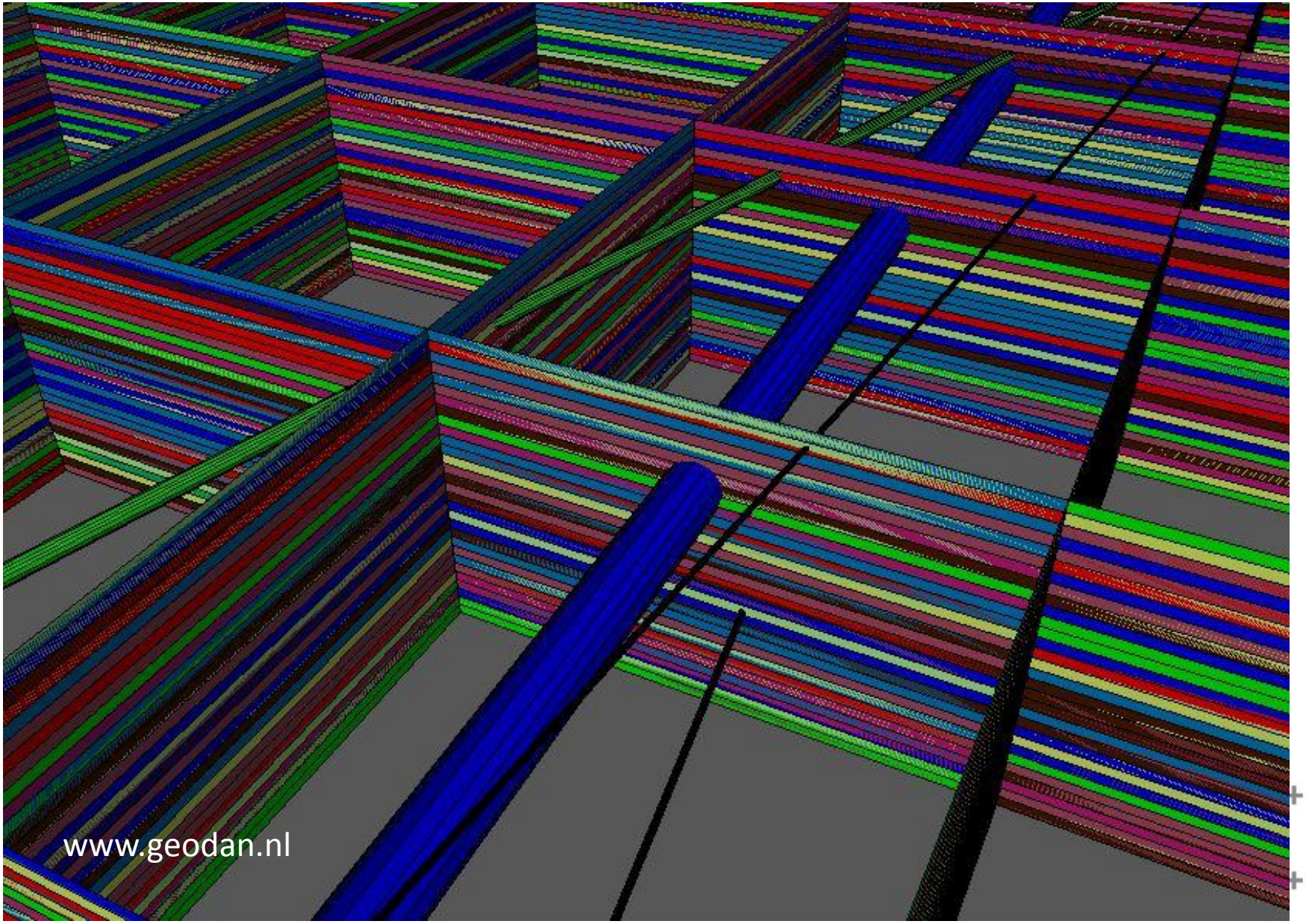
www.geodan.com



www.geodan.nl

Geodan → 3D approach according to Geodan

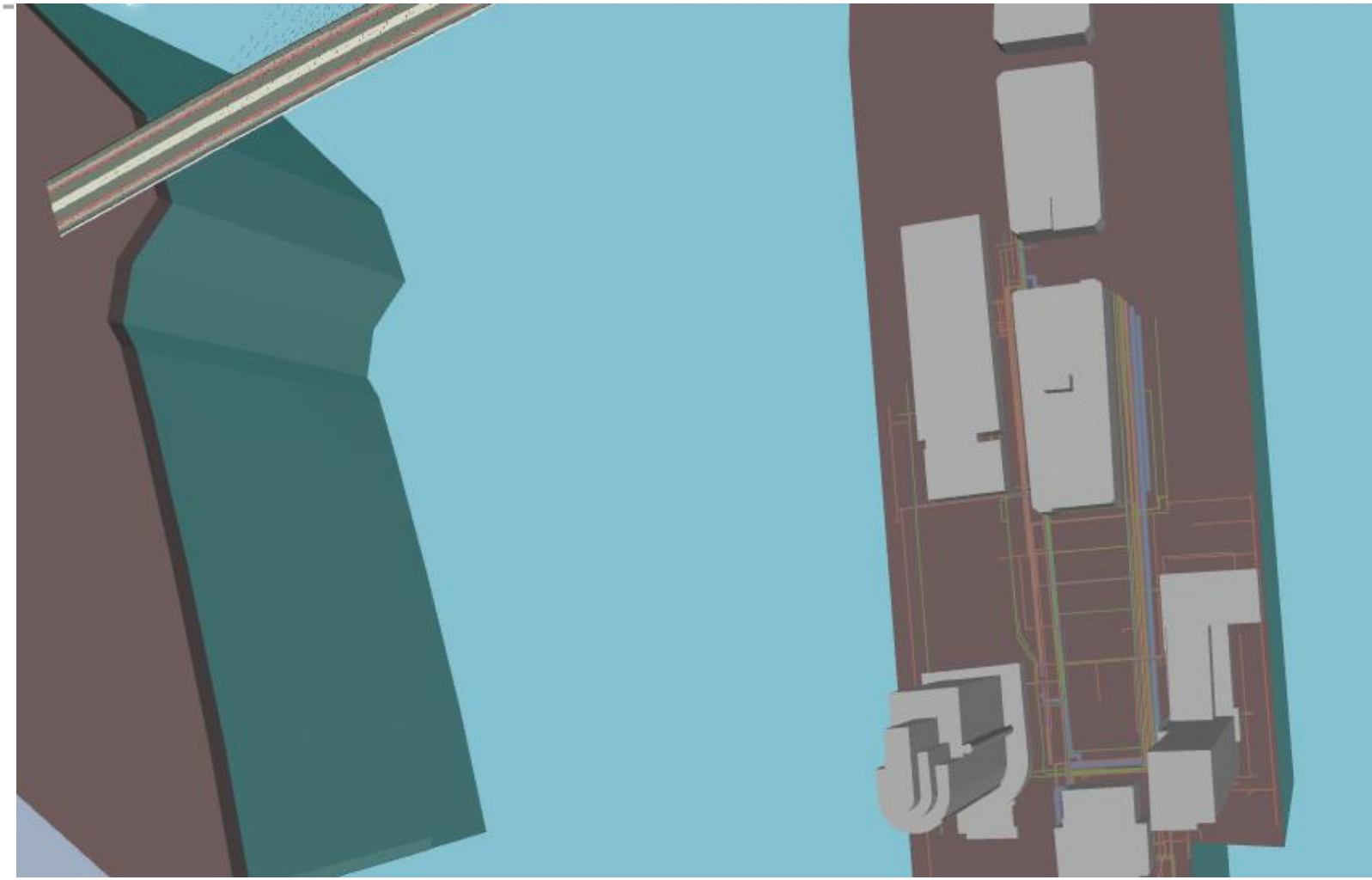
www.geodan.com



Geodan → 3D approach

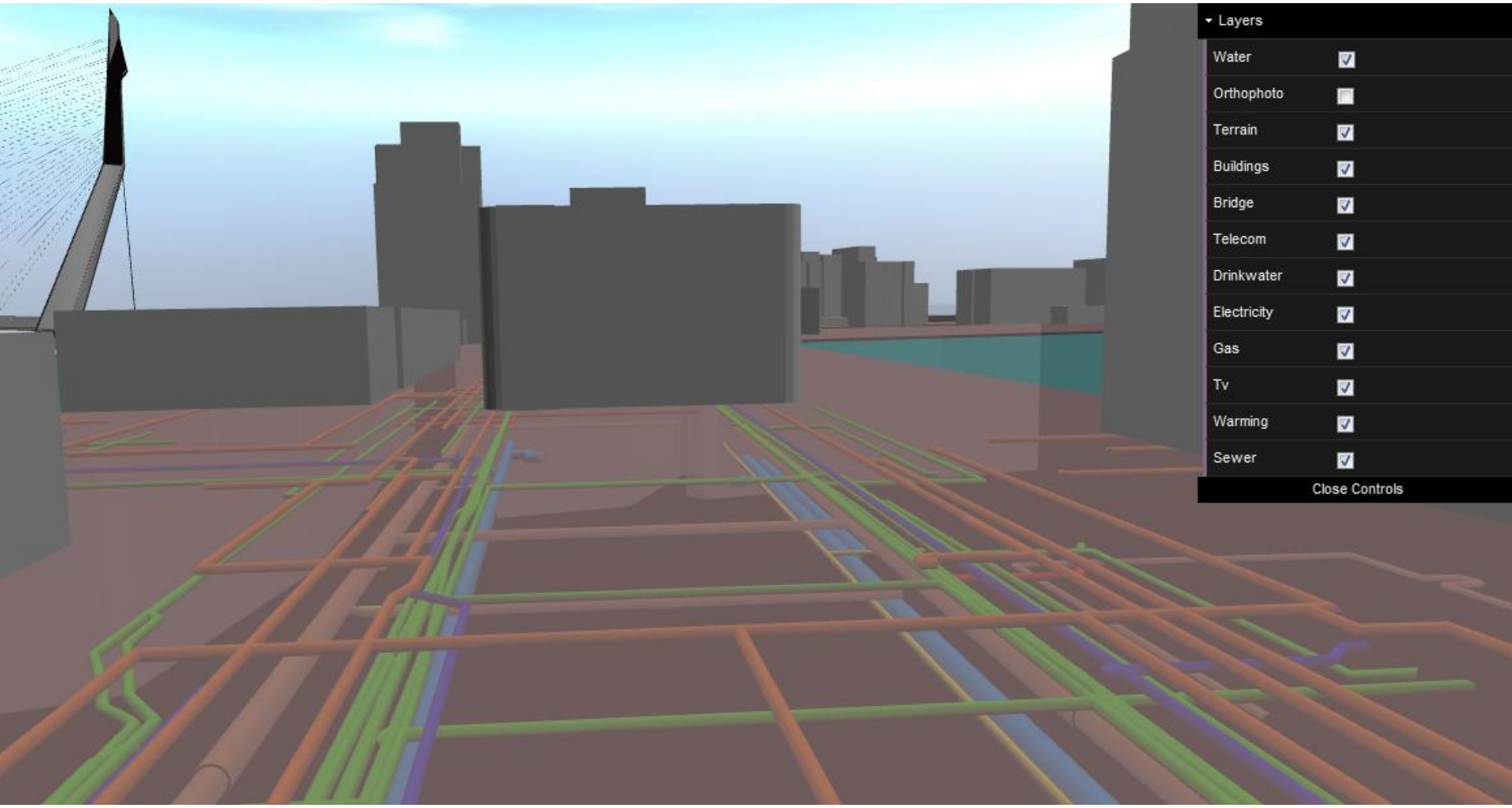
Geodan → From 2D to 3D

www.geodan.com



Geodan → 3D approach

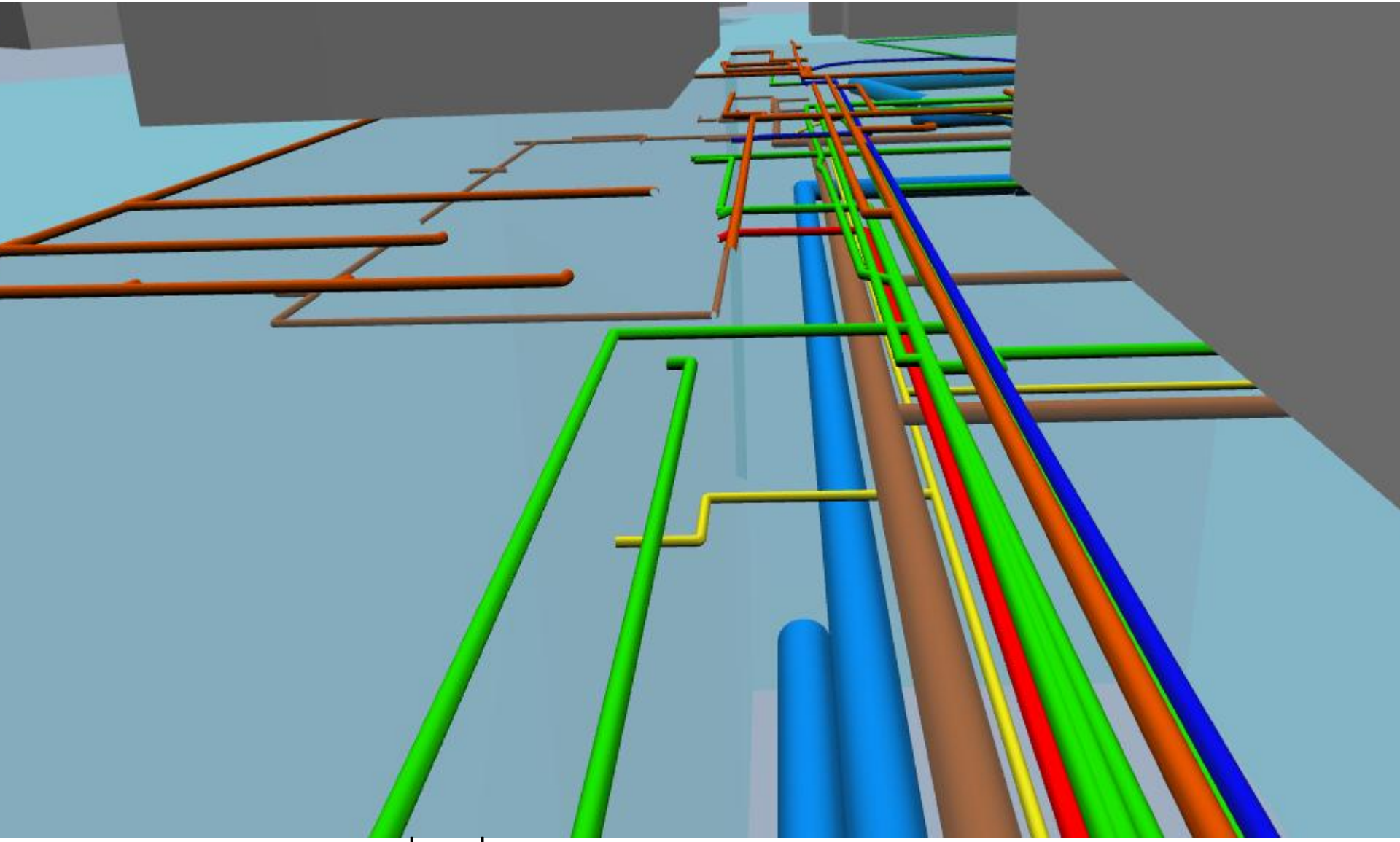
www.geodan.com



www.geodan.nl

Geodan → 3D approach

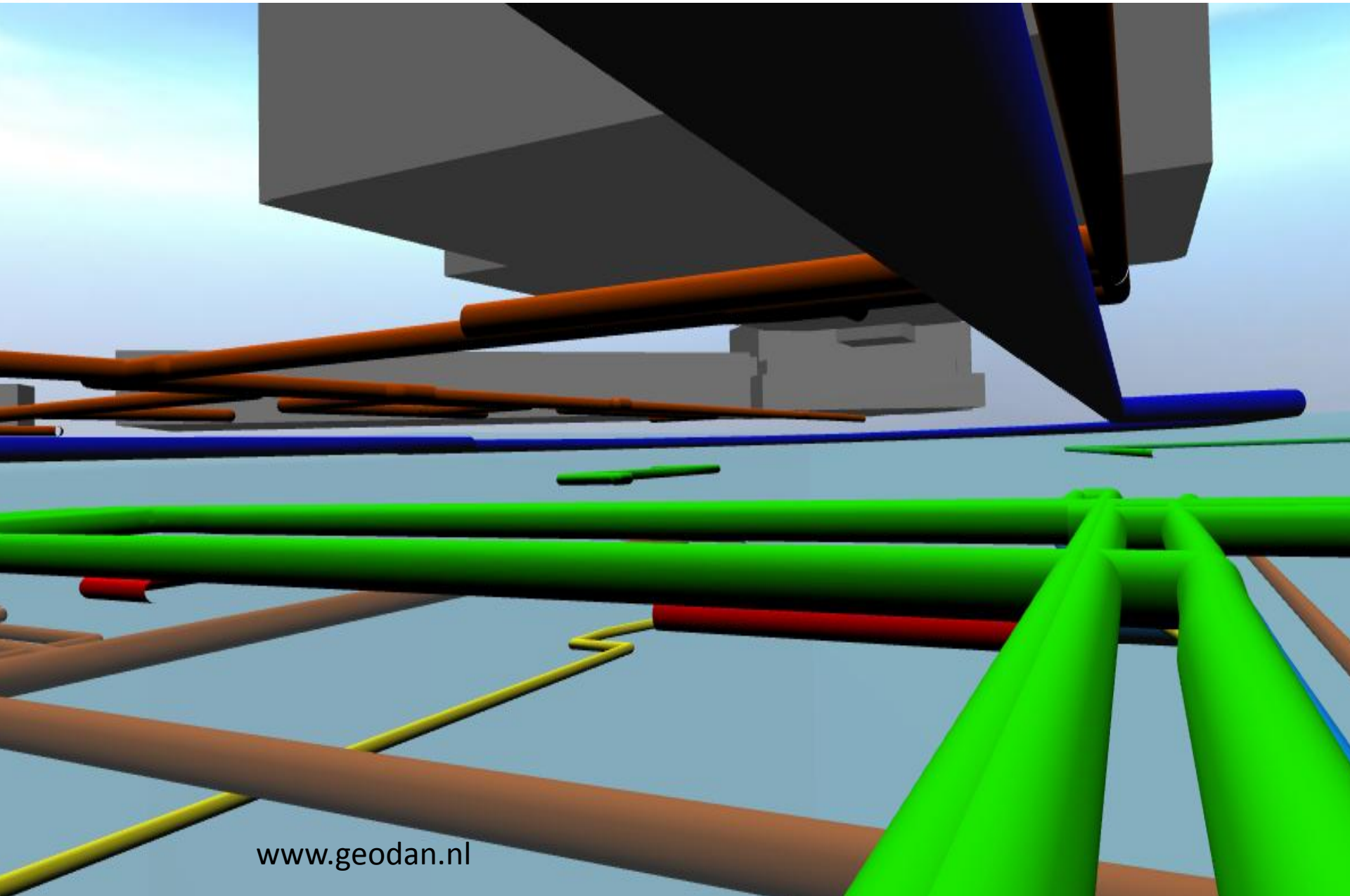
www.geodan.com



www.geodan.nl

Geodan → 3D approach

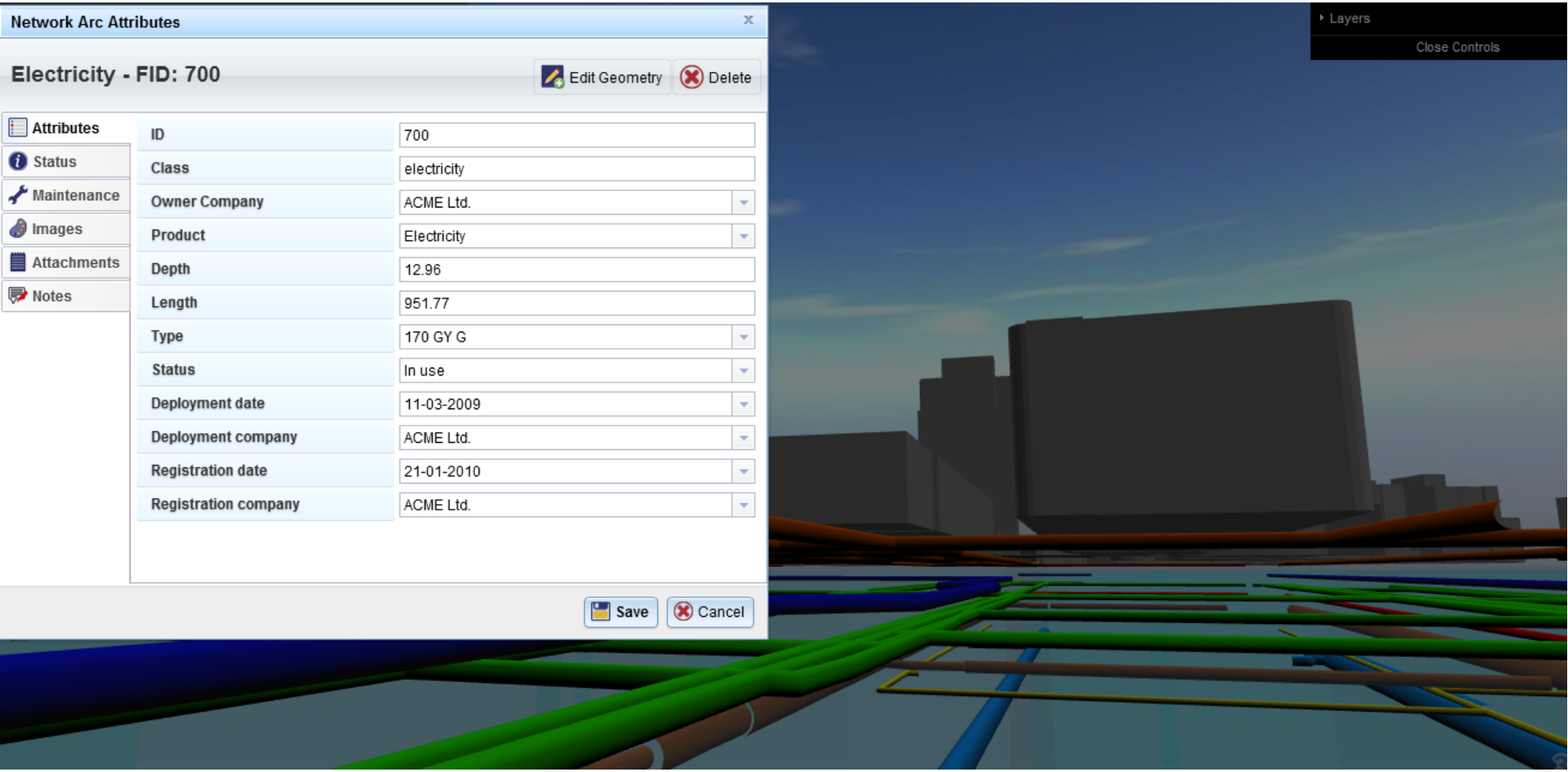
www.geodan.com



www.geodan.nl

Geodan → 3D approach

www.geodan.com

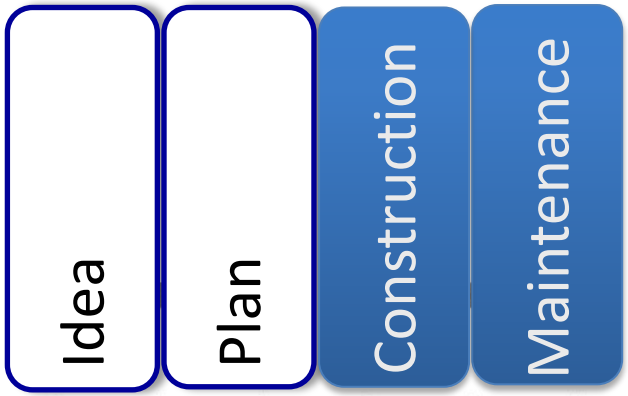


Geodan → 3D approach

www.geodan.com

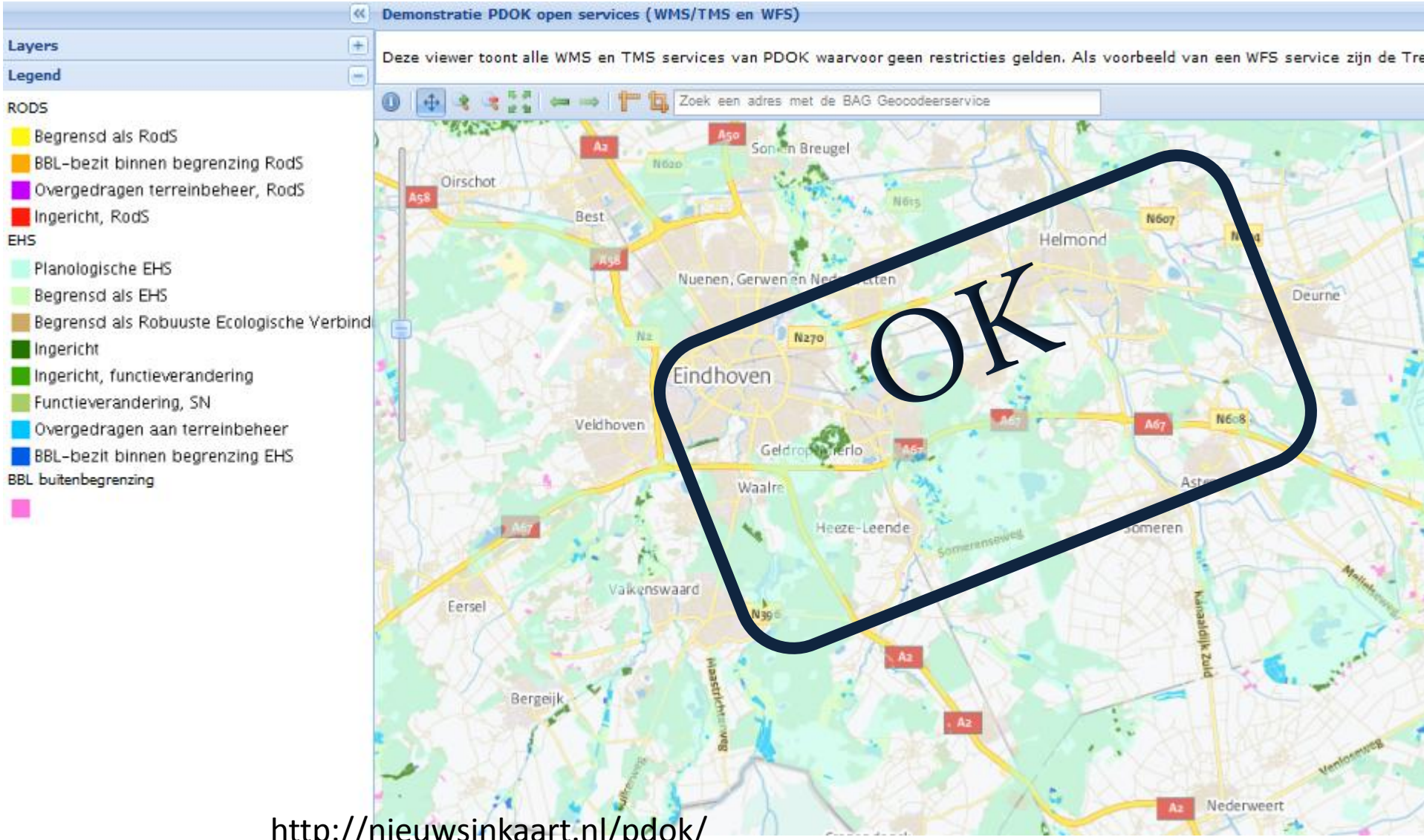
www.geodan.nl

- Ecological maps
- Laser scans
- Location of machinery/objects
- Location of colleagues



Geodan → Ecological **maps**

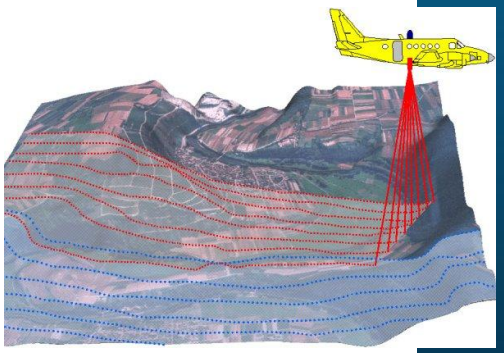
www.geodan.com

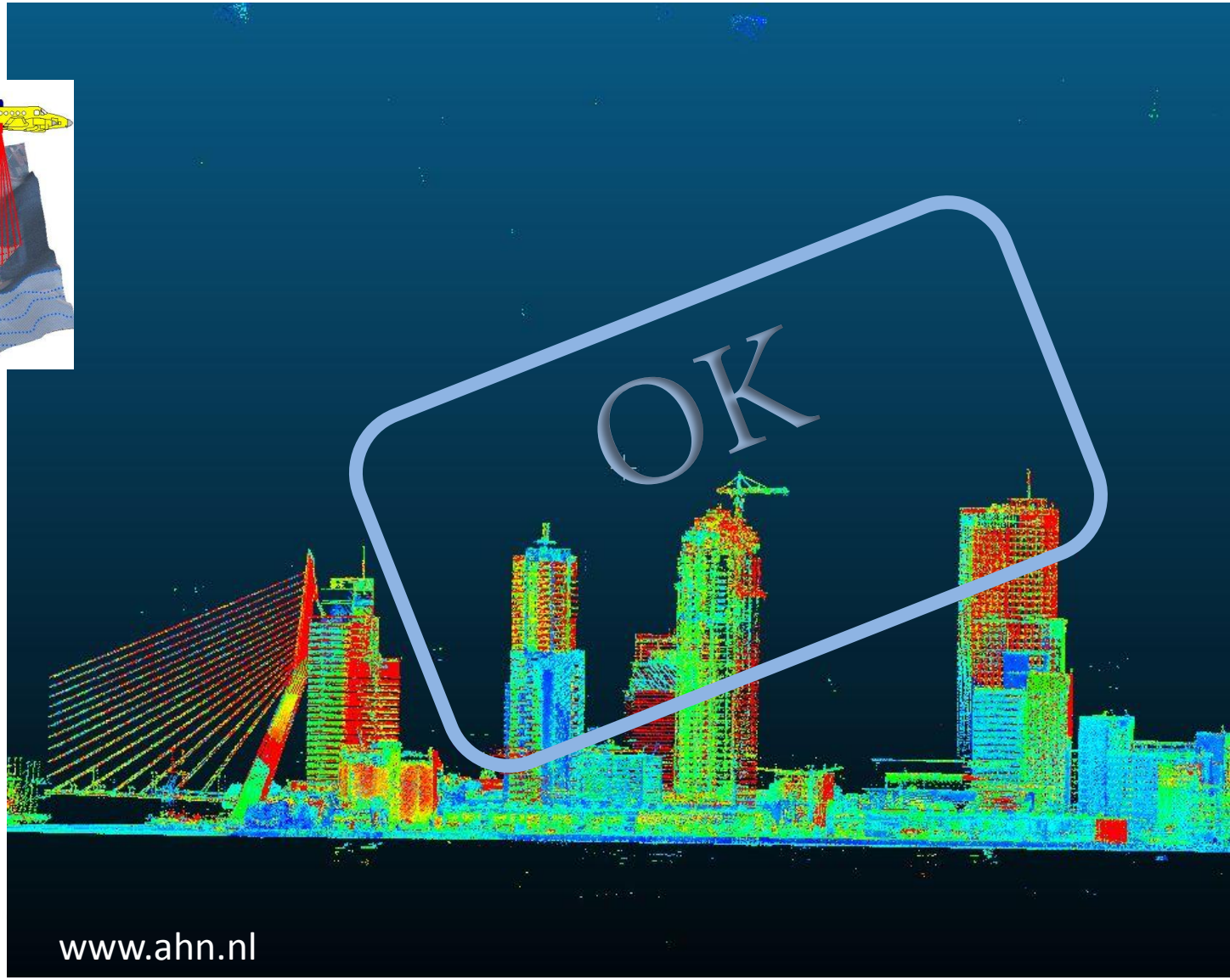


http://nieuwsinkaart.nl/pdok/

Geodan → Laser scan resulting in 3d point cloud

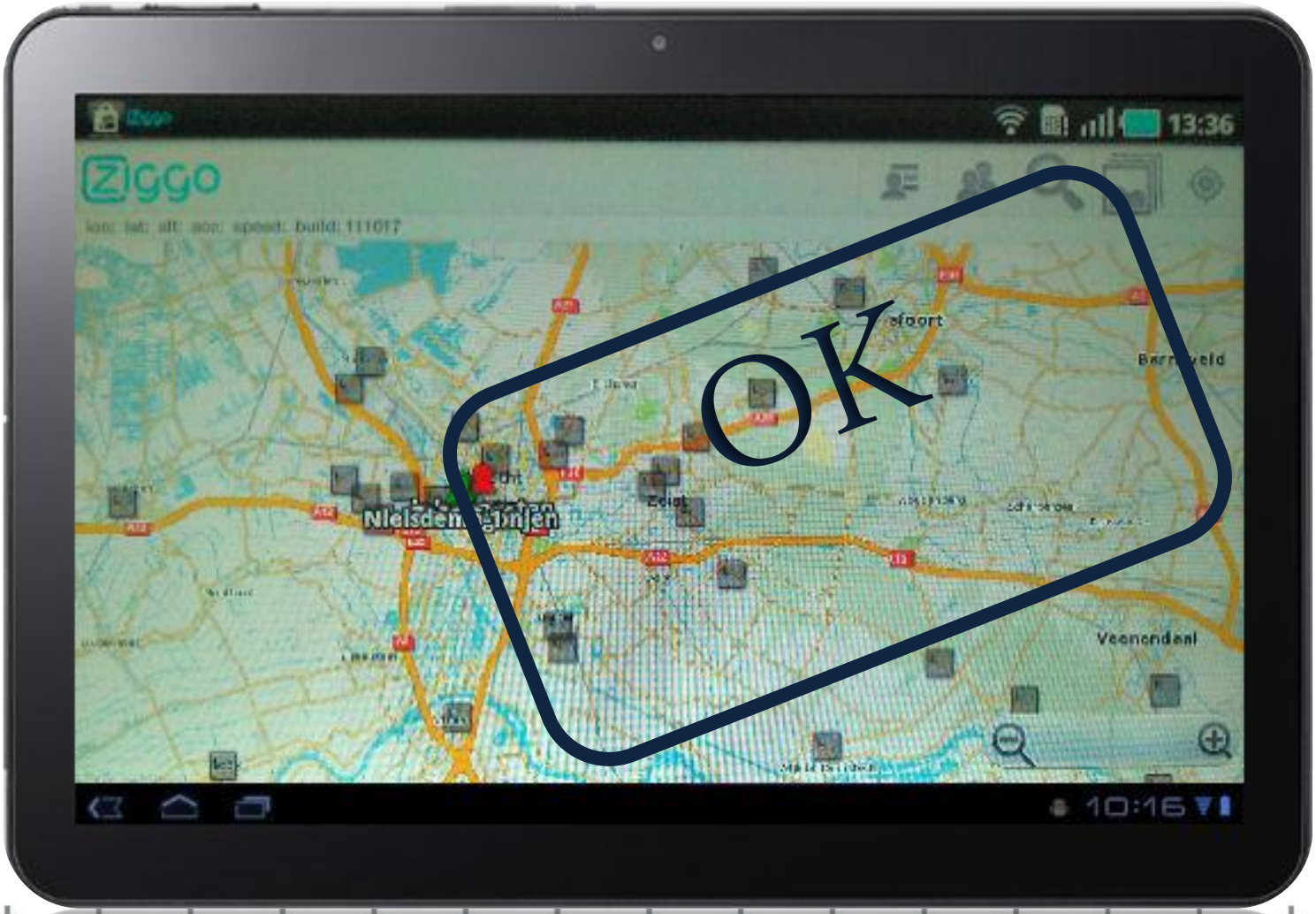
www.geodan.com





Geodan → Location of objects and colleagues

www.geodan.com

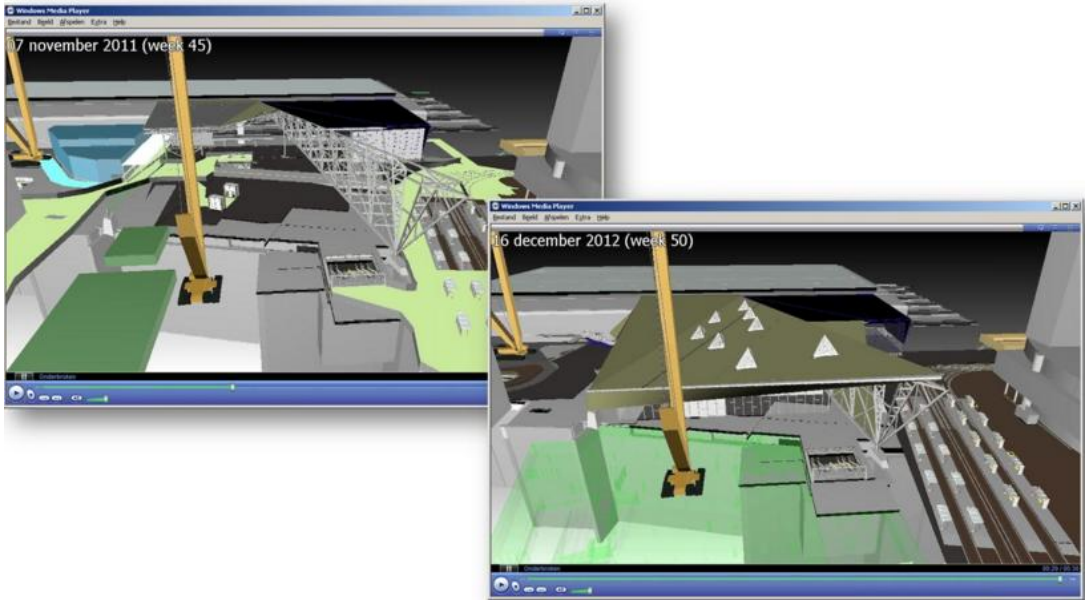


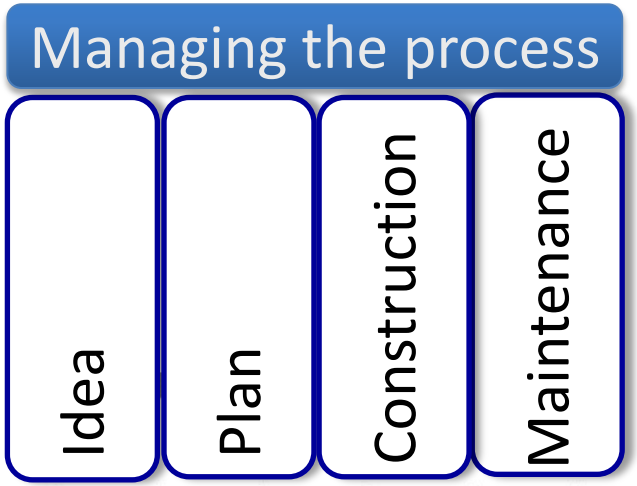
www.geodan.nl

Geodan → Managing the process

www.geodan.com

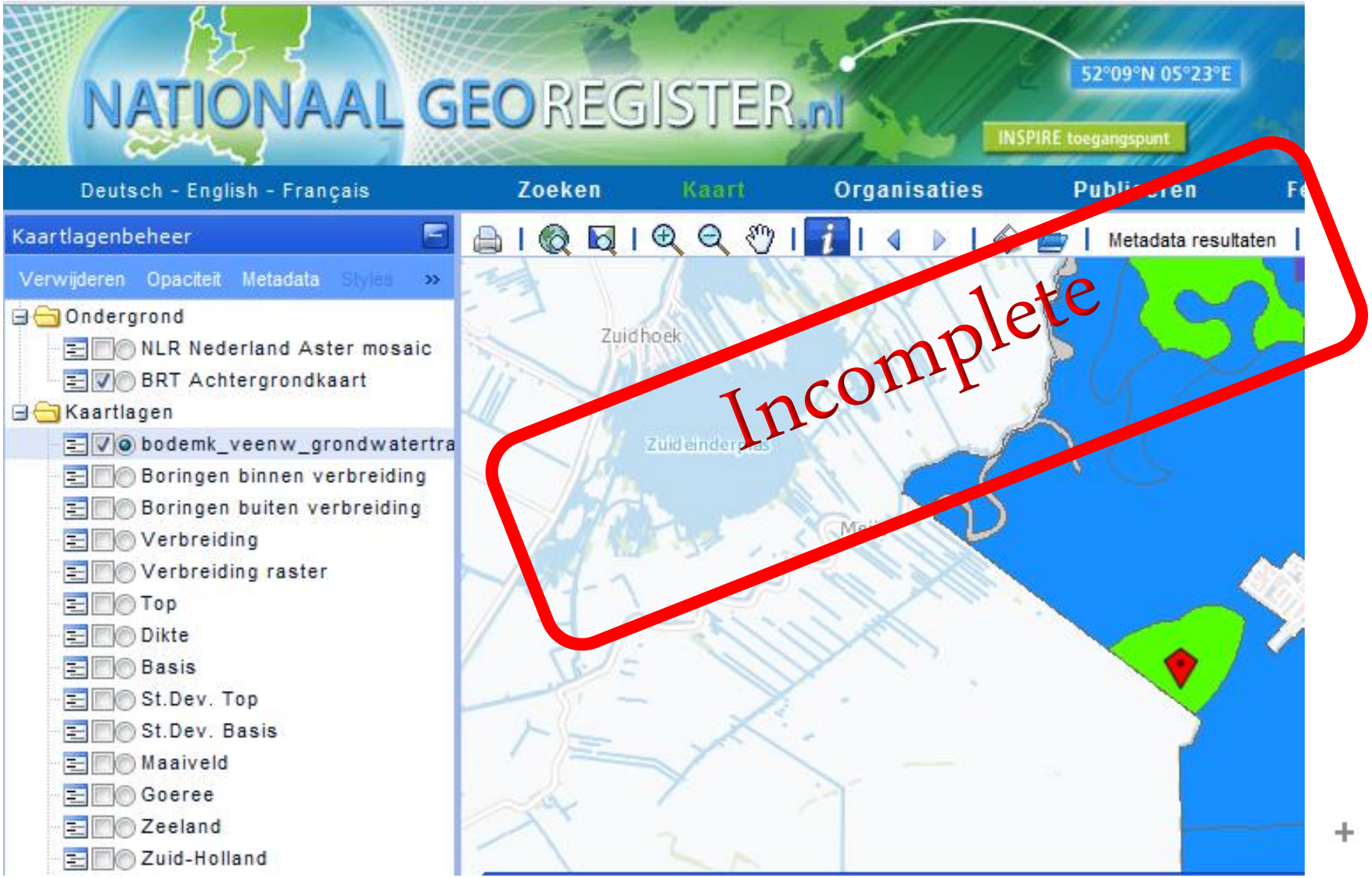
- Budget
- Planning





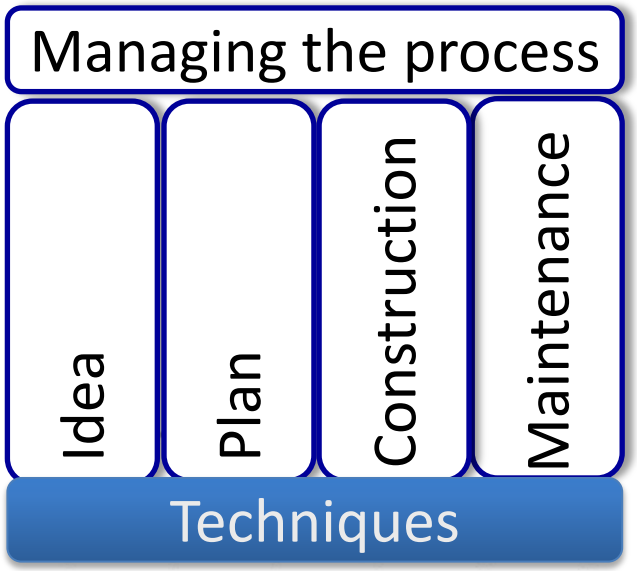
Geodan → Managing & Accessing information

www.geodan.com



- Nationaalgeoregister.nl
- Nieuwsinkaart.nl/pdok/
- Bodemloket.nl
- Vergunningen.nl
- Public authorities with their own portals

- Mapping Services
- Mobile computers/devices
- Creating derivates
- Cloud computing

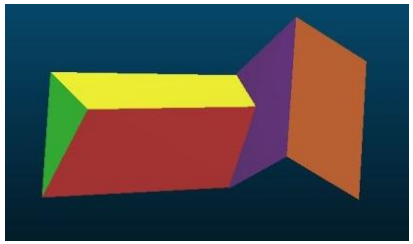


Geodan → Creating derivates

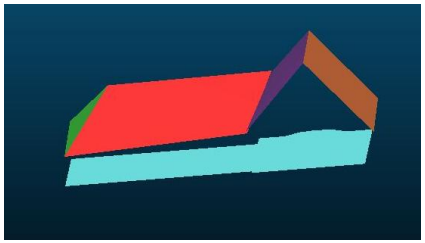
www.geodan.com

Laserscan of heights (XYZ points)

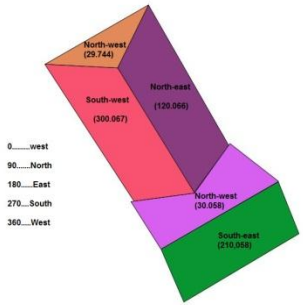
Overlay with aerial picture for further analysis



Calculate roof surfaces from point cloud



Create extraction of points using (BAG) layer with outline of buildings



Determine suitable surface for solar energy

- Data scattered available
- Need for completion of data coverage
- Need for extended standards (BIM Omgeving)
- Let the available information work for you
- Think in combinations of 2 & 3 D
- Make use of experts in the Geo-field (like Geodan)

We offer for more than 25 years:

- Consultancy and project management
- Application development
- GIS software
- Global data products
- LBS products
- Geo-services for the internet
- Training

- Documentation available for the audience at the end of this session
- Presentation available on: www.geodan.nl/construction

Geodan

President Kennedylaan 1
1079 MB Amsterdam (NL)
Tel: +31 (0)20 – 5711 311
Fax: +31 (0)20 – 5711 333
E-mail: info@geodan.nl
Web: www.geodan.nl

Copyright © Geodan 2012

This document is provided for information purposes only and the information herein is subject to change without notice. Geodan does not provide any warranties covering and specifically disclaiming any liability in connection with this document. Geodan is a registered trademark. All other company and product names mentioned are used for identification only and may be trademarks of their respective owners. All pictures and illustrations are provided for information only and do not necessarily represent a realistic visualization of the services described in this document.