KLIC

The Dutch one call system

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Content

- Introduction and brief history KLIC
- Classical KLIC-process 1967 – 2010
- WION legislation since 2008
- Facts and figures
- KLIC-online – area information
- KLIC2020
- INSPIRE

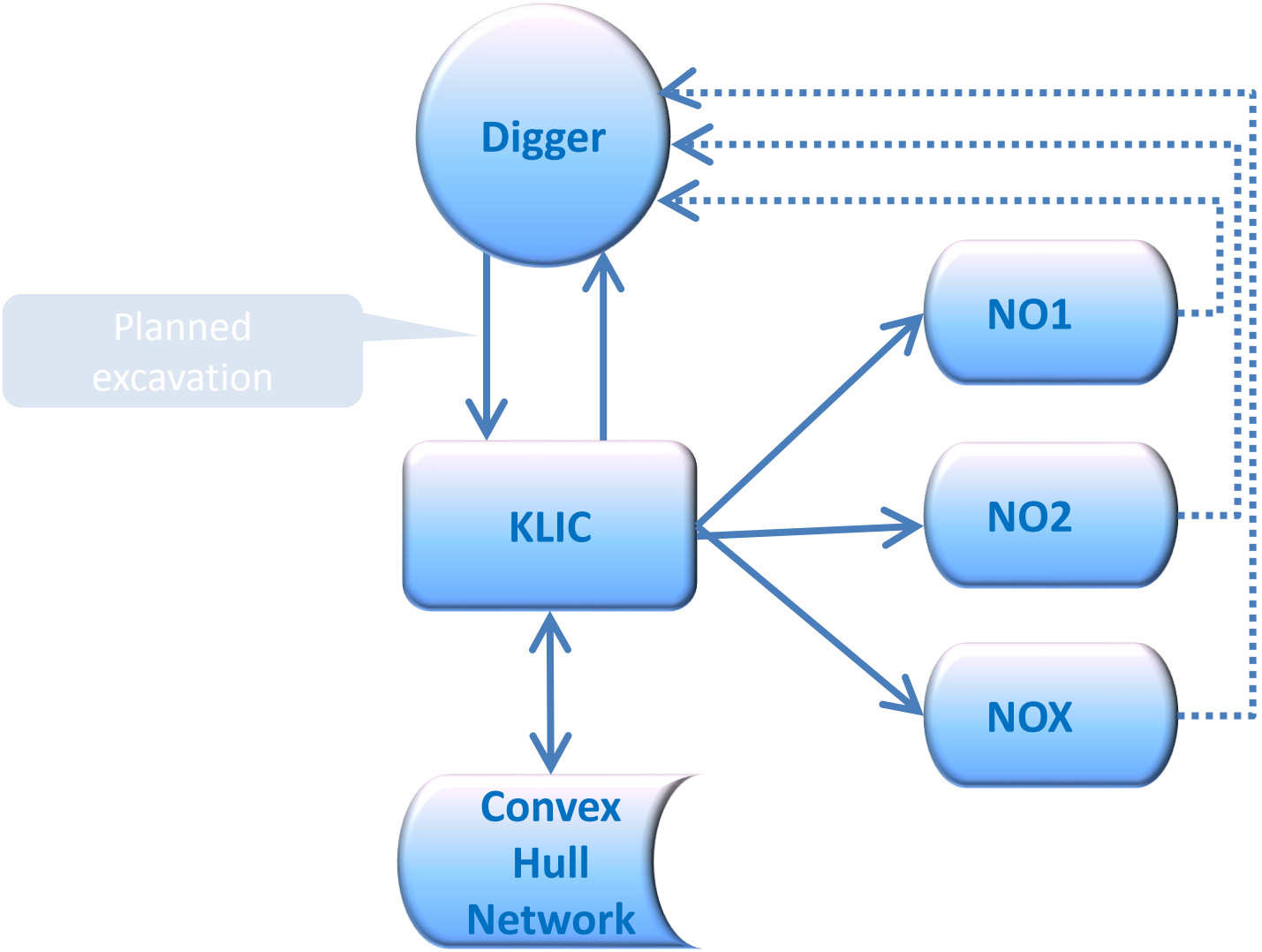
Introduction

- Underground networks are essential for our society and economy
- Damage caused by excavation affects the security of supply of data, electricity, natural gas, oil or water. This means economic loss.
- High direct costs (repair of damage)

Brief history of KLIC

- 1967 first regional KLIC founded
- Model: one-call-system
- Non-profit foundation
- 1989 nation wide
- 2005 one organization

Classical process 1967 – 2010



WION legislation since 2008

- Mandatory participation for network operators
- Standardized digital information
- Mandatory request for scheduled excavations
- Obligated use of the information provided
- Kadaster built the system KLIC-online

WION legislation since 2008

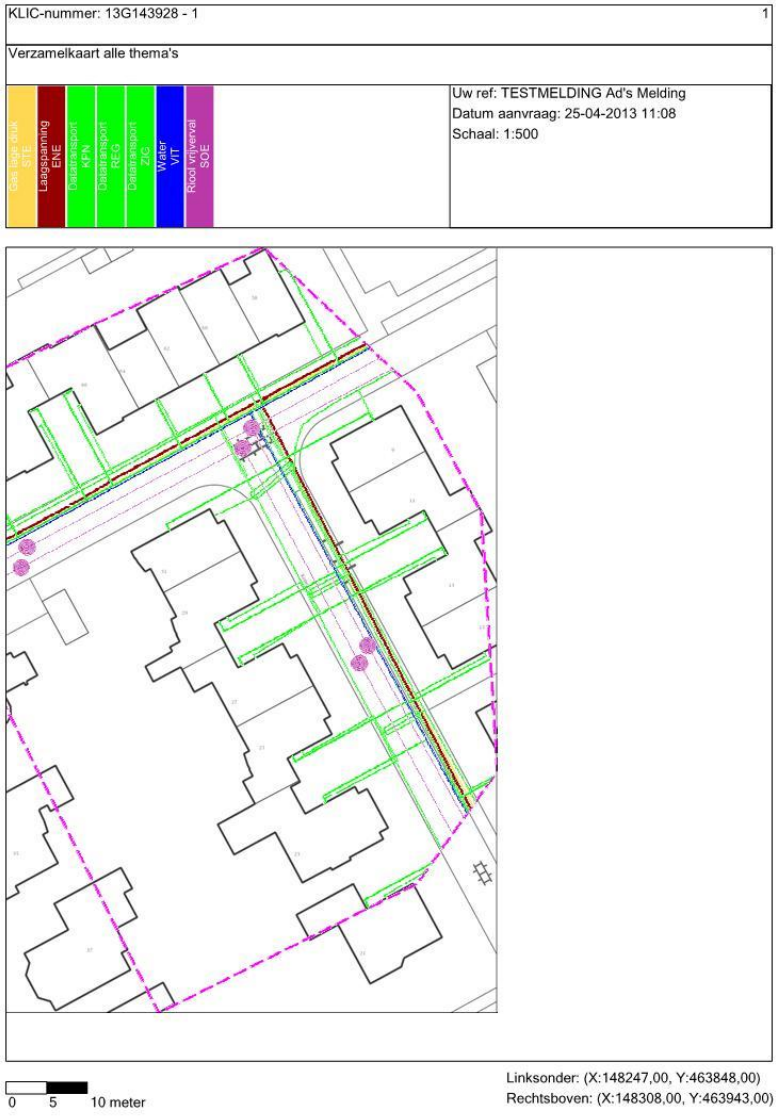
- Agentschap Telecom is the regulator and enforcer
- Penalty for violation, maximum fines:
  - Network operator €450.000
  - Digger €100.000
- Rate financed (2013: €21,50 / request)

Facts and figures

Description	Amount
Underground cables and pipelines [km]	1.750.000
Network operators/managers	1.100
Annual notifications (request for info)	4.300.000
Annual excavation work	175.000
Annual excavation damage	35.000
Direct costs from damage [€]	40.000.000
Indirect costs [€]	??

Source: Pauwels & Wieleman (2004)

KLIC-online – area information



Ministerie van Economische Zaken, Landbouw en Innovatie
GPKL.nl
VELIN
netbeheer nederland
energie in beweging
Agentschap Telecom
Ministerie van Economische Zaken, Landbouw en Innovatie
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For quality of life
RRP
Rotterdam-Rijn Pijpleiding

KLIC2020 Future business

Excavators, network operators and managers of public spaces need:

- Further decline of excavation damage
- Improve efficiency
- Use of network information in other domains e.g.
  - Planning and zoning
  - Public order and security
- A rate financed information system

KLIC2020 User requirements

- High quality demands: ubiquitous
- Continuously available (24/7)
- Without waiting (near real time)
- Multiple maps (planned topography, soil type, ground water cadastral boundaries)
- A controlled process for registering digging applications

KLIC2020 User requirements

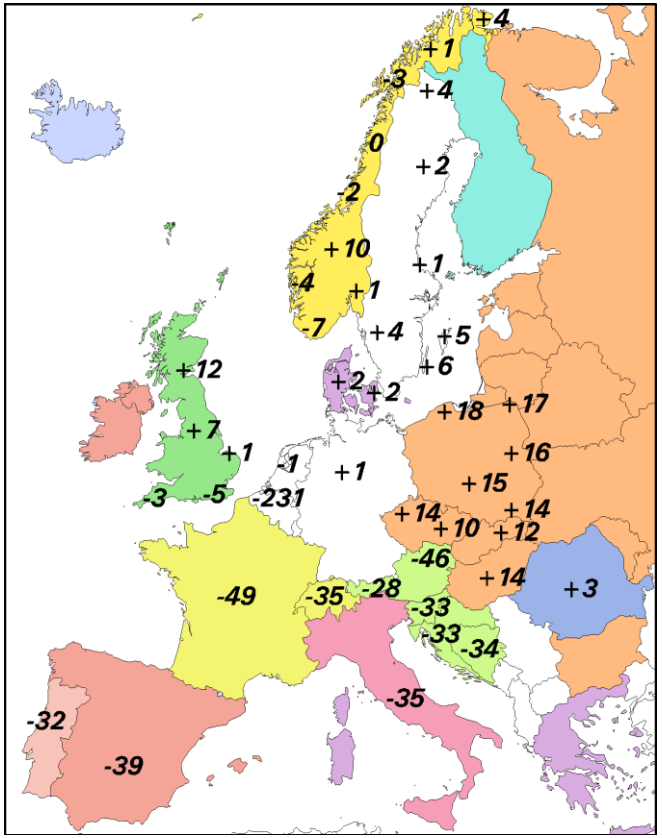
- Authenticated applicants and documenting their digging purposes
- Authorization based on applicant's profile and intended use
- Web service
  - View service (WMS)
  - Download service (WFS)

What about INSPIRE?

INfrastructure for **SP**atial **I**nfo**R**mation in the **E**urope Community

- Find ability
- Availability
- Interchangeability

  Content in line within the EC



INSPIRE – themes

Annex I

1 Coordinate reference systems
2 Geographical grid systems
3 Geographical names
4 Administrative units
5 Addresses
6 Cadastral parcels
7 Transport networks
8 Hydrography
9 Protected sites

Annex II

1 Elevation
2 Land cover
3 Orthoimagery
4 Geology

Annex III

1 Statistical units
2 Buildings
3 Soil
4 Land use
5 Human health and safety
6 Utility and governmental services
7 Environmental monitoring Facilities
8 Production and industrial facilities
9 Agricultural and aquaculture facilities
10 Population distribution and demography
11 Area management / restriction / regulation zones & reporting units
12 Natural risk zones
13 Atmospheric conditions
14 Meteorological geographical features
15 Oceanographic geographical features
16 Sea regions
17 Bio-geographical regions
18 Habitats and biotopes
19 Species distribution
20 Energy Resources
21 Mineral Resources

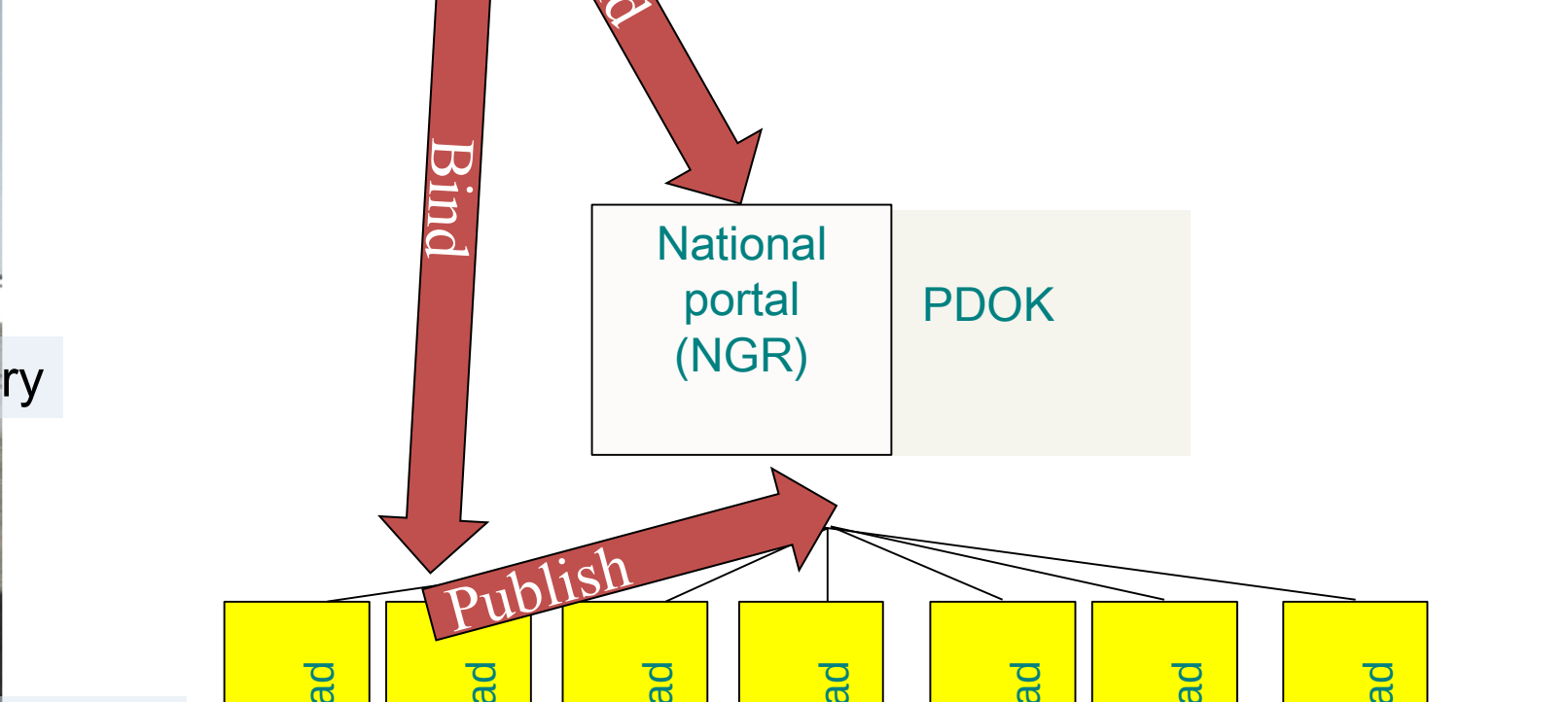
Dedicated portalen

User

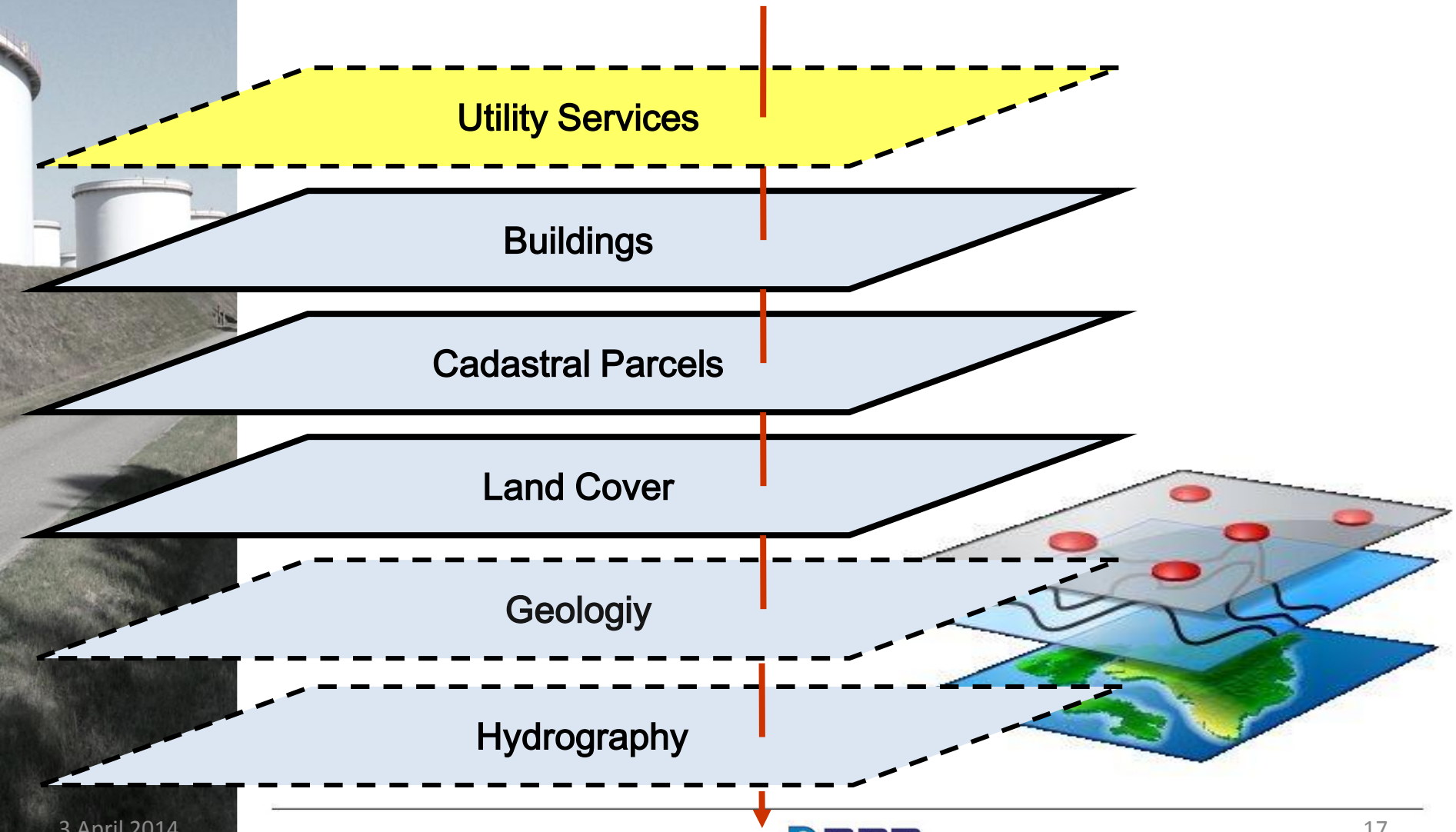
Central library

Services standards

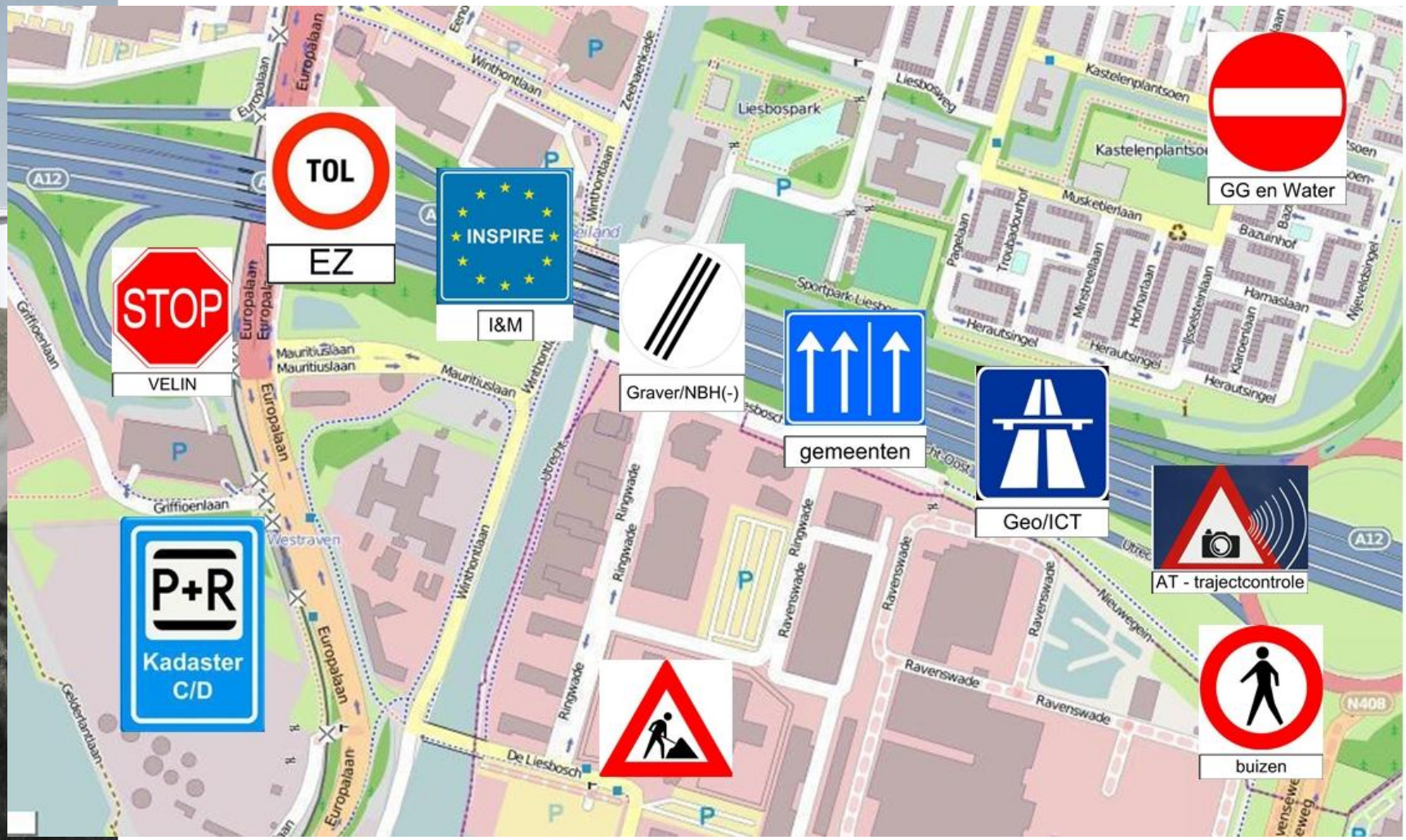
Data remains at the source



INSPIRE – area information



Rich picture: points of view



KLIC2020 in line with INSPIRE US

- Unlock information of cables and pipelines
- Ubiquitous
- Web services WMS/WFS
- 100% of the network operators
- Preventing damage of Dutch networks
- Build on existing system

KLIC2020 in line with INSPIRE US

- We need to fit in:
- KLIC-service is a controlled process with authenticated authorized users
- Restrictions in case of excavations:
  - Point out the excavation area,
  - Reasonable time for precautionary measures
- Financing the service: rate per request

Questions?

Source: Ad van Houtum Kadaster