Veiligheidsregio IJsselland

Veiligheid: voor elkaar
Safety for all

Geo-information & Geo-Text-Integration for emergency response and disaster management

Jaap H. Smit
GIS coordinator
Safety Region IJsselland
The Netherlands
J.Smit@veiligheidsregio-ijsselland.nl

Introduction

Fire service: local & regional

Safety Region task

-fire departments
- medical aid
- police organisations
- municipalities

"To protect inhabitants against the risks of fire, crises and disasters"

Safety Regions
In red: Safety Region IJsselland

Geo-information for optimal support

1. Demand
2. Organising
3. Preparing
4. Maintaining
5. Distributing
6. Using
7. Knowledge
8. Capacity
9. Education & communication
10. Development

1. Data in general – types of disaster

Disasters related to traffic and transport
1. Aviation accident
2. Accident on water
3. Traffic accident on land

Disasters with dangerous goods
4. Accident with flammable or explosive substance
5. Accident with toxic substance
6. Nuclear accident

Disasters with relation to public health
7. Public health threat
8. Disease outbreak

Disasters related to infrastructure
9. Accident in tunnel
10. Fire in large building
11. Collapse of building
12. Jamming public utilities

Disasters related to population
13. Panic in crowds
14. Large-scale order jams

Natural disasters
15. Floods
16. Nature fires
17. Extreme circumstances
18. Disasters on distance

Work processes for crisis and disaster management

A. Source and effect suppression *(fire services)*
Suppression of fire and emission
Saving casualties and technical aid
Decontamination humans and animals
Decontamination equipment and infrastructure
Monitoring and measuring
Warning the population
Accessibility and clearing

B. Legal order and traffic *(police force)*
Clearing and evacuating
Area close and safeguard
Maintaining public order
Identifying victims
Guidance
Criminal research

C. Medical aid *(Medical Aid)*
Medical assistance somatic
Preventive public health care
Medical assistance psychosocial

D. Population care *(municipality)*
Information and communication
Shelter and care
Funeral care
Registration of victims
Provision of primary life needs
Registration of damage and settlement
Environment care
Readjustment

1. Data in general – summary

1. Location
1.1 Place incident *(Coordinate, Point, Object and Area)*
1.2 Accessibility
1.3 Route

2. Meteorology
2.1 Situation
2.2 Expectation

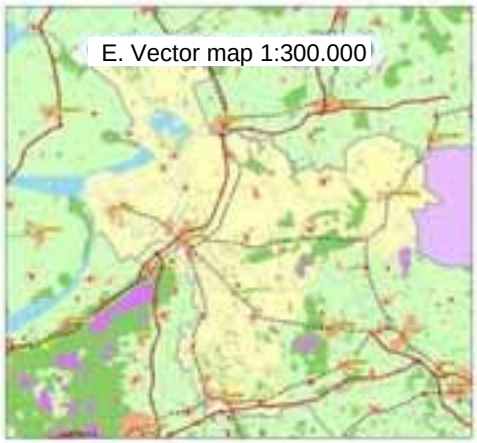
3. Composition
3.1 Object
3.2 Area
3.3 Infrastructure
3.4 Hazardous materials
3.5 Nature of occurs - scenarios
3.6 Extension possibilities

4. Operational
4.1 Action
4.2 Advice
4.3 General information
4.4 Decisions
4.5 Attack
4.6 Medical supplies
4.7 Clearance

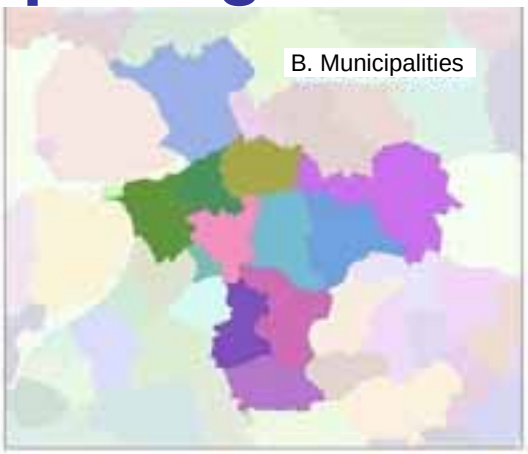
5. Resources
5.1 Units
5.2 Company
5.3 Command and control teams
5.4 Fire services
5.5 Polices force
5.6 GHOR *(medical assistance)*
5.7 Municipality
5.8 Other services

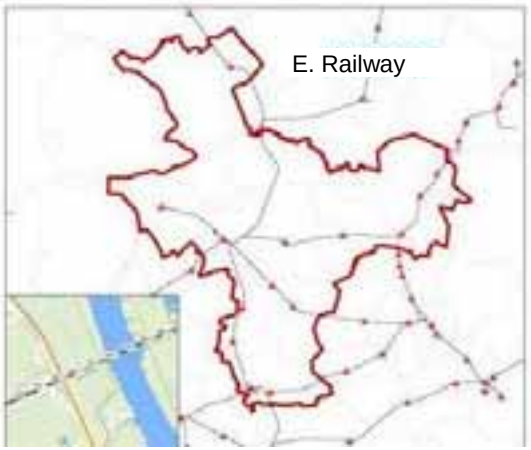
1. Data in general – information needs

1.a Basic maps

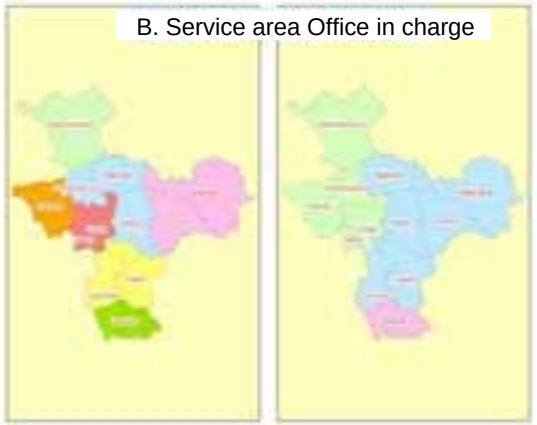


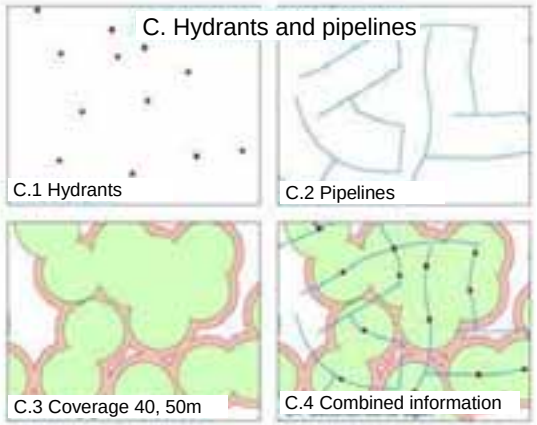
1.b Thematic maps in general

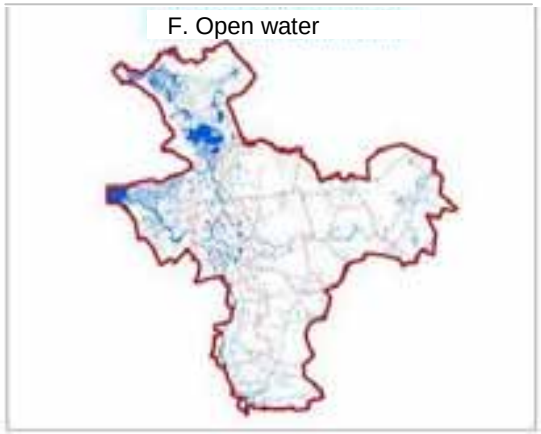




1.c Fire services thematic maps







1.d Multidisciplinary thematic maps

A. Routes hazardous materials

B. Risk locations

C. Vulnerable objects

C.1 Livings

C.2 Hotels

C.3 Education

C.4 Public buildings

D. Boat entrance locations

E. Sirens

F. Guiding locations

1. Data needs – Lessons learned

- Actual list of information needs and available sources
- Most desired datasets are available in the Netherlands
- Cooperation is important for successful gathering of geo-information

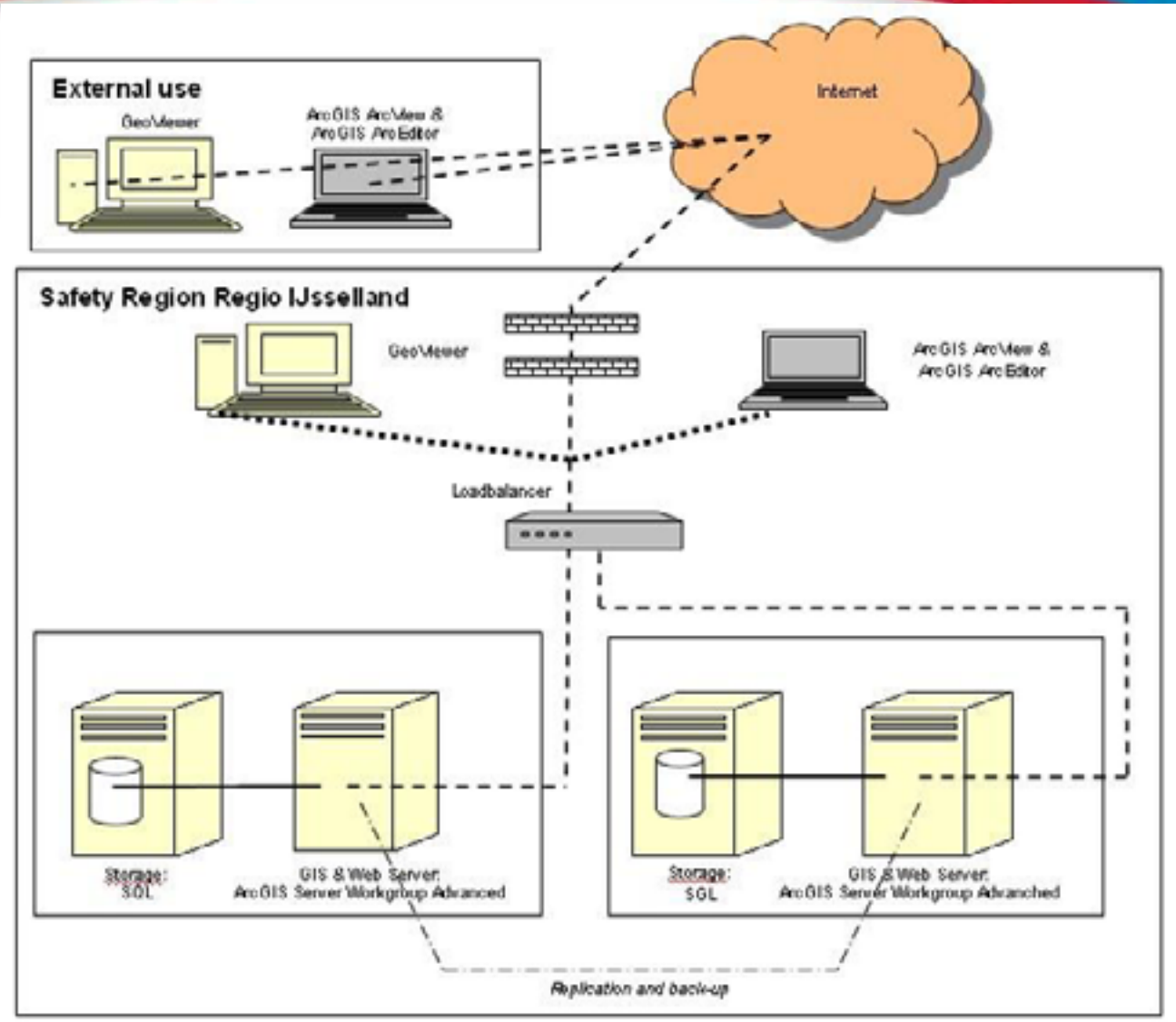
Data preparation

3. Data preparation – Lessons learned

- Share data: www.nationaalgeoregister.nl
- Share your lay-out
- Record data preparation, *so you can reuse & share it*
- Serving data = serving metadata

5. Data distribution

GEO
Architecture
IJsselland



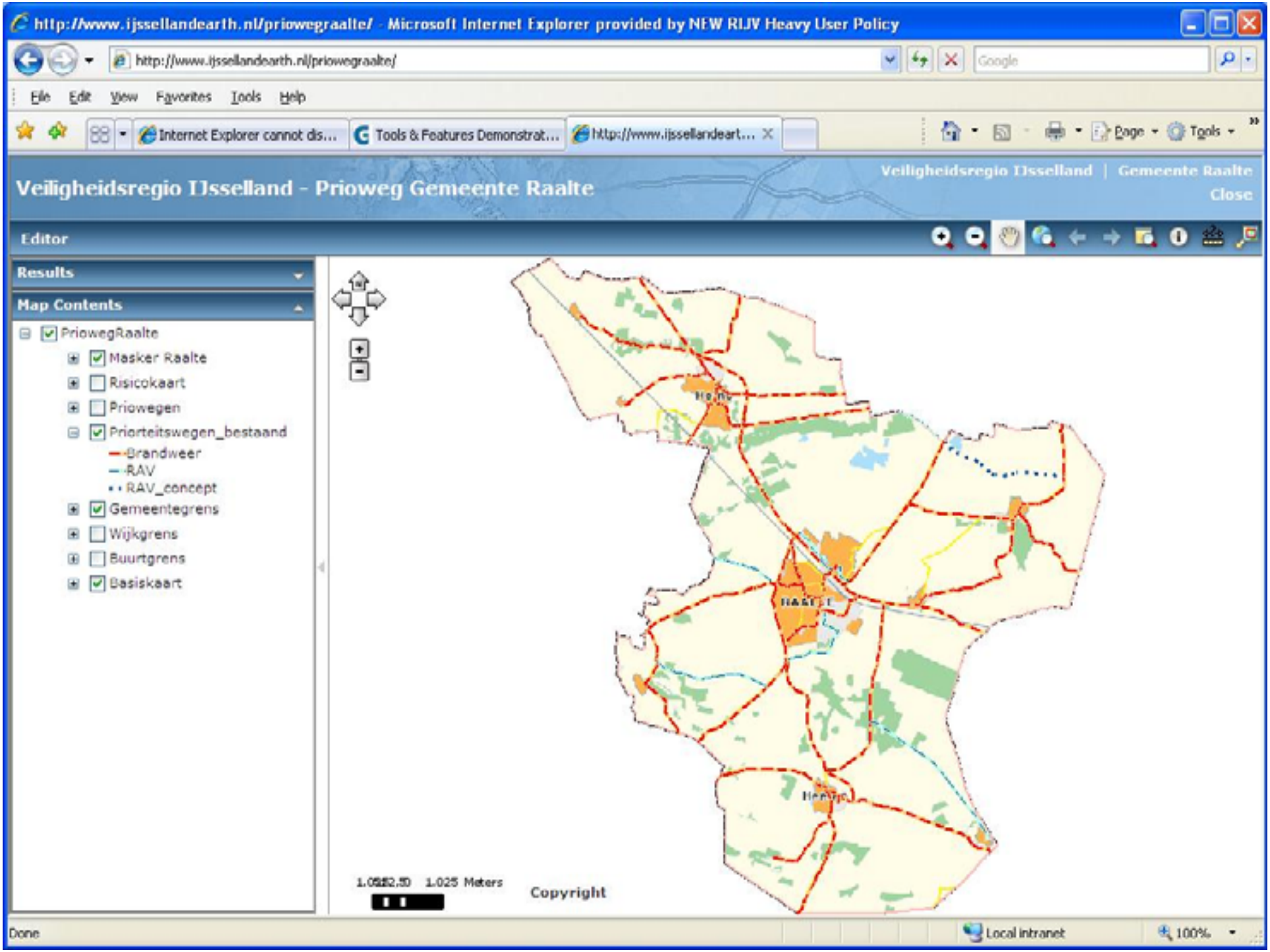
6. Data use *(selection)*

- GIS services, viewers and applications
  - www.IJssellandEarth.nl *(as fast as but better)*
- Operational information
- Functionality / processing
- Producing maps
- ….

Operational information

- Dynamic information

  Advices, plans, decisions and orders for
  - Explore, attack, organization, services, communications
  - Incident and scenario development
- Resources
  - Units & equipment
  - Required, available, omission
- Result of actions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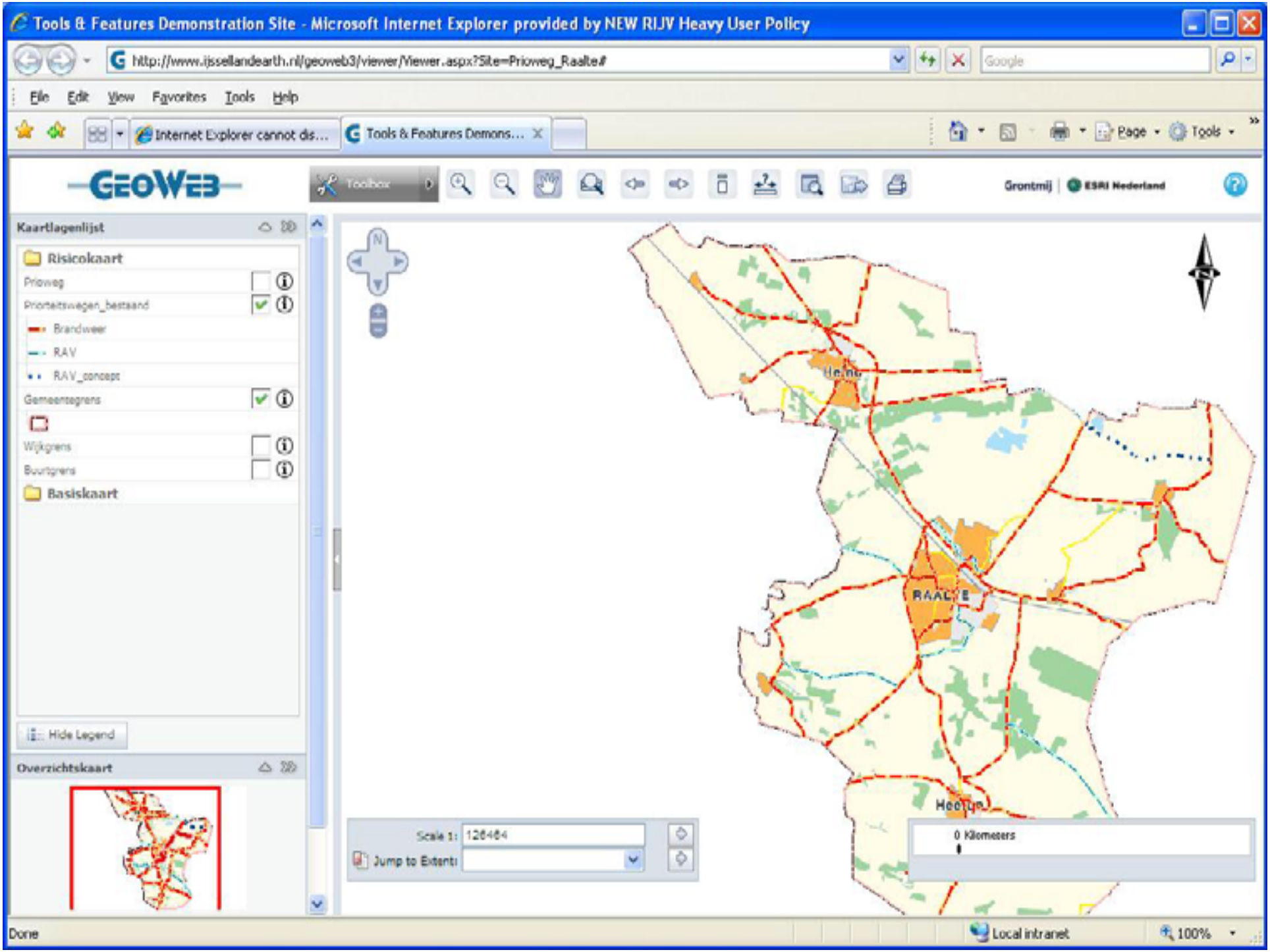
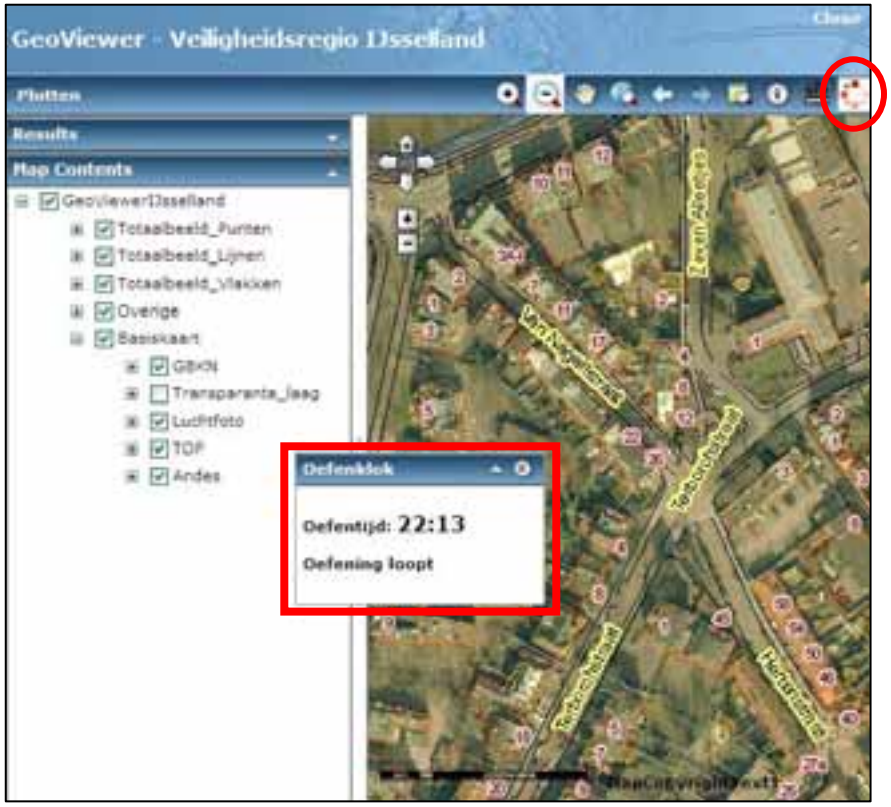
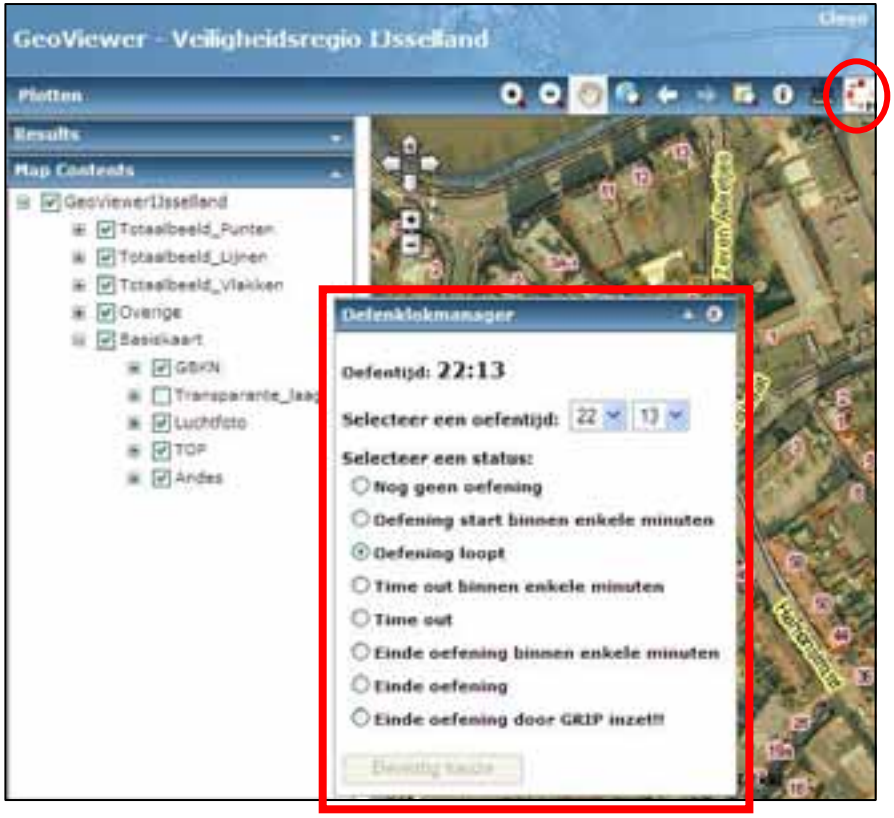

Tools & Features Demonstration Site - Microsoft Internet Explorer provided by NEW RIJV Heavy User Policy
http://www.ijsselandearth.nl/geoweb3/viewer/Viewer.aspx?Site=Prioweg_Raalte#
File Edit View Favorites Tools Help
Internet Explorer cannot dis...
Tools & Features Demons...
Page
Tools
GeoWeb
Toolbox
Grontmij
ESRI Nederland
Kaartlagenlijst
Risicokaart
Prioweg
Prioriteitswegen_bestaand
Brandweer
RAV
RAV_concept
Gemeentegrens
Wijkgrens
Buurtgrens
Basiskaart
Hide Legend
Overzichtskaart
Scale 1:
126464
Jump to Extent:
0 Kilometers
Done
Local intranet
100%

5. Training and coordination facilities

Time users



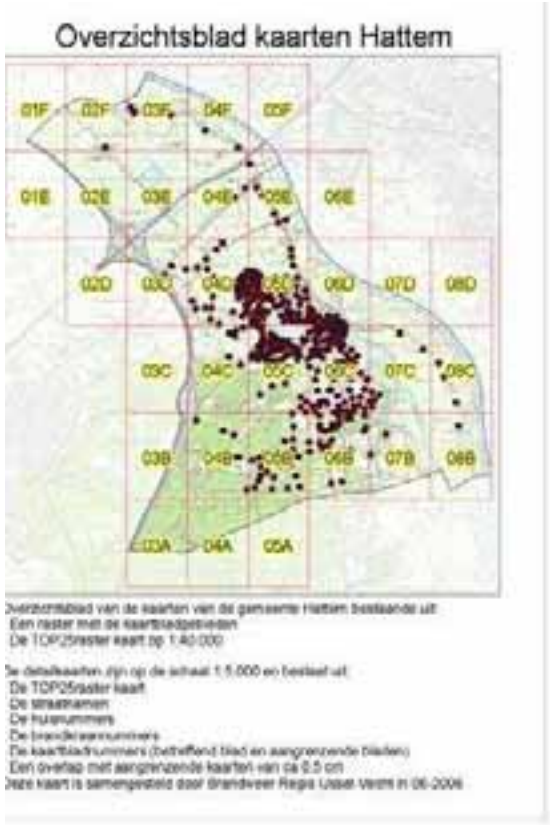
Training time manager




Coördinatieregeling SIM
Bijlagen
Scenario voorbeelden
Snelweg Incident Management Regio IJssel-Vecht

5. Prepared paper maps / PDF

5. Prepared paper maps / PDF (2)



7. Knowledge

- When you use external advice
  Prevent brain drain
  Register activities / settings with print screens

- Share ‘Support’ & ‘How to’ knowledge

- GI & GIS knowledge meetings are very important!

9. Education & Communication

- Organise a ‘Map Gallery’ based on your work processes
- Relate exercises in GIS courses to your work
- Organise your own press
- Support your colleagues and use them as ambassadors


Postertentoonstelling gaat de vraag 'GIS - wat is dat?' diepgaand te lijf

10. Development: Geo–Text–Integration, GTI

Textual editing Map

&

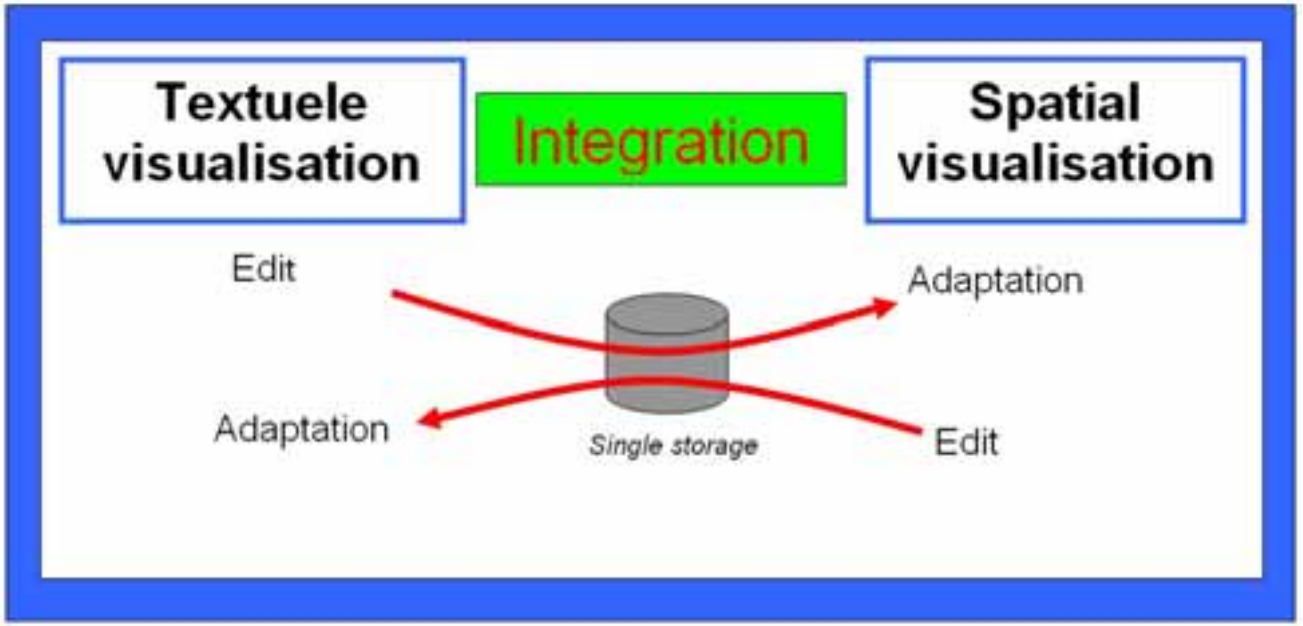
Spatial editing Text

Geo-information: > 80% of all data!

But almost only used as text and not on a map …..

GTI: Geographic & textual use of the same information

Presenting, editing and analysing



Demo version GTI: Innovation

The same functionality as ArcGIS ... but …

- Textual editing of a map & spatial editing of a text
- Textual navigation of the map
- User friendly editing
- Different routes in text *(subject, selection, search)*
- Single storage
- Text changed into information *(as attribute of geo-object)*

Demo version GTI (2)

Elements

- Map module *(basic with buttons)*
- Text module *(with submenus for overview / selections /editing)*
- Log module *(logging of edits, filtering of information)*

Technical

- ArcGIS Server 9.3.1
- Microsoft Silverlight
- Text as attribute of a geo-object

Demo version GTI – Proof of Concept for:

- Text module *view or hide subpages*
- “Shelter locations” *change of status, zoom to selection*
- Log module *filtering on value*
- “Wind velocity” *select value and show related values*
- “Vicinity analysis” *which vulnerable objects within 500m?*
- Search *of ‘Wind velocity’*

Advantages of integration Text & Map

- Specific disadvantages disappear *(of text/map editing)*
- Simple textual maintaining of geo-information
- Freedom of choice for input / editing
  Example: text for address selection, spatial for area selection
- Single storage
- Information is textual & spatial
- Text is information *(and not only data)*

- **GTI** creates added value: **1 + 1 = 3!**

Advantages for GTI users

- No double input, *no delay, differences or mistakes*
- Optimal sharing of actual information
- Everyone has the same information
- Simple to use

Veiligheidsregio IJsselland

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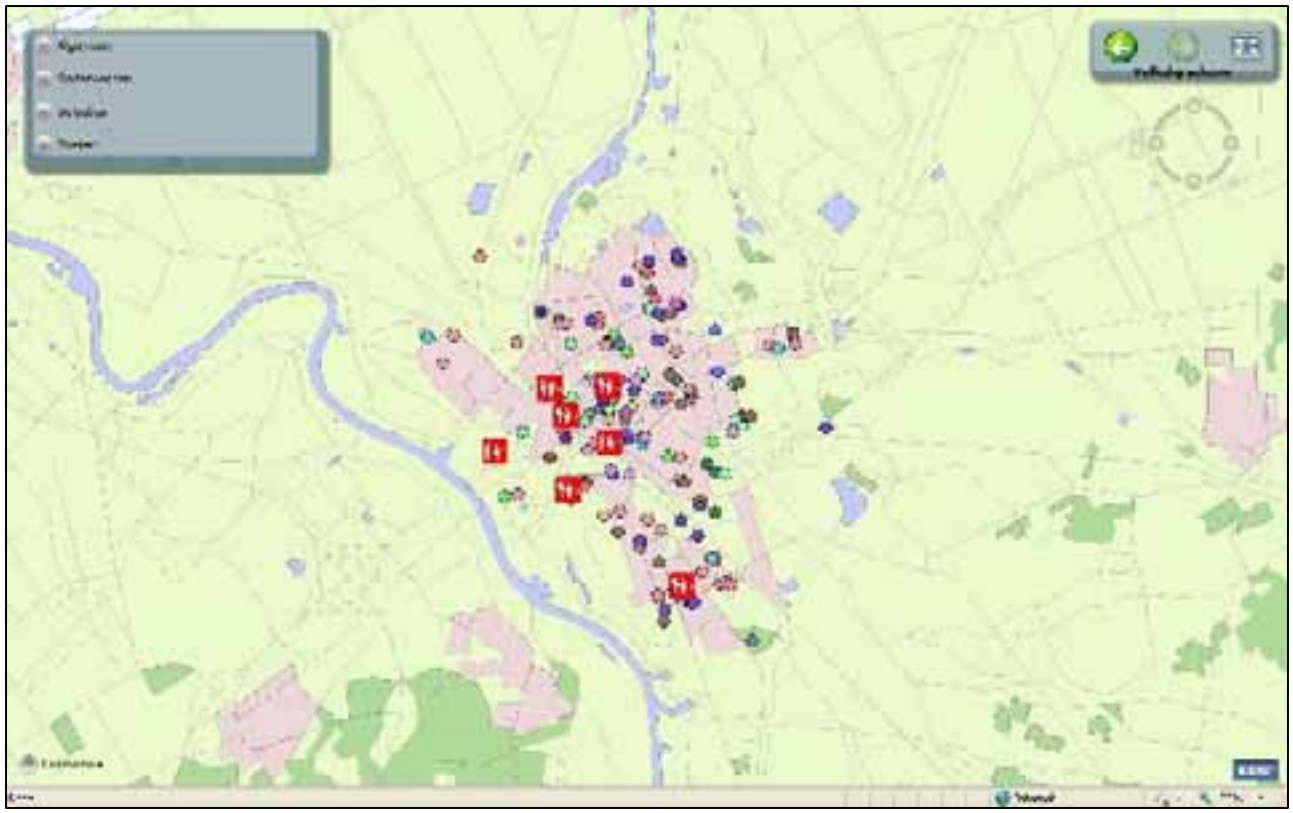
Safety for all

Demo GTI

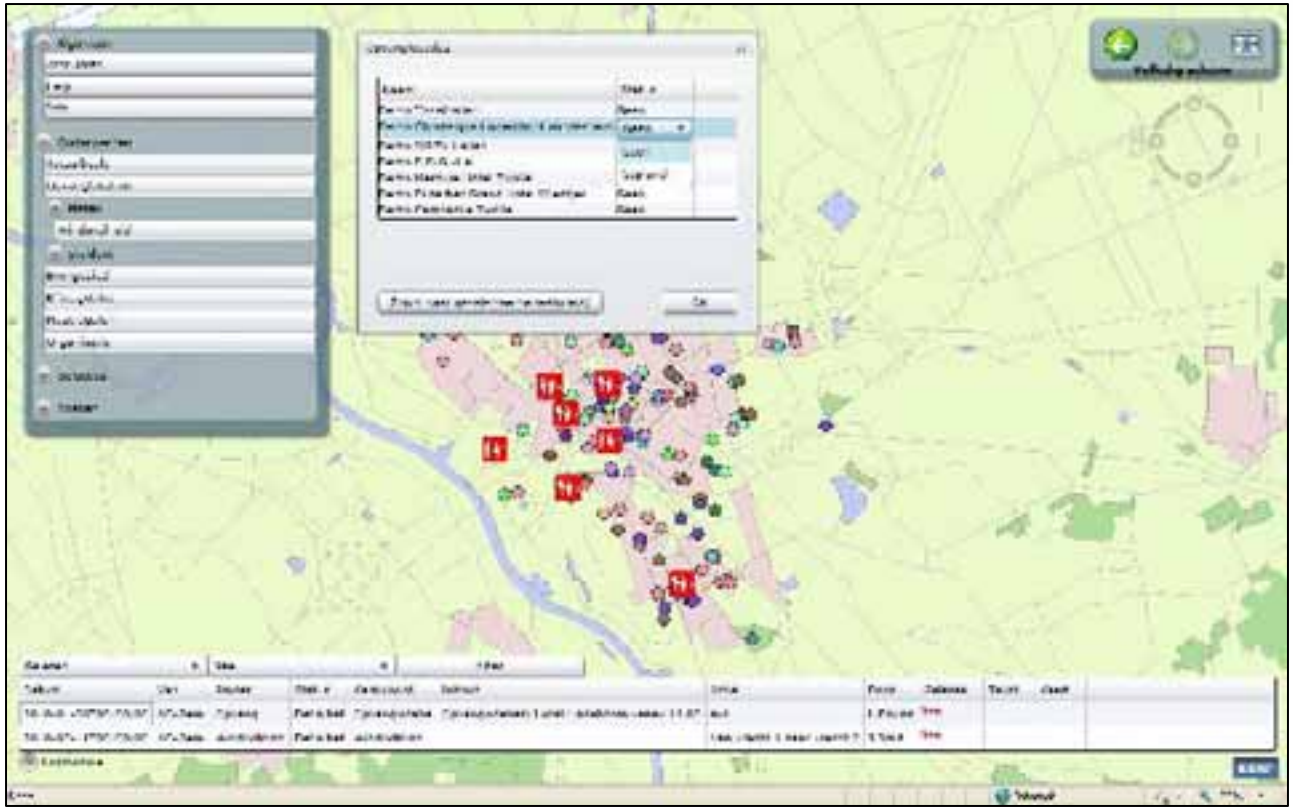
In the following sheets
a PowerPoint demo of
the Proof of Concept
with notes



Note

Start screen, with buttons and navigation tool *(top right),*
collapsed text- *(top left)* and log module *(bottom left)*.

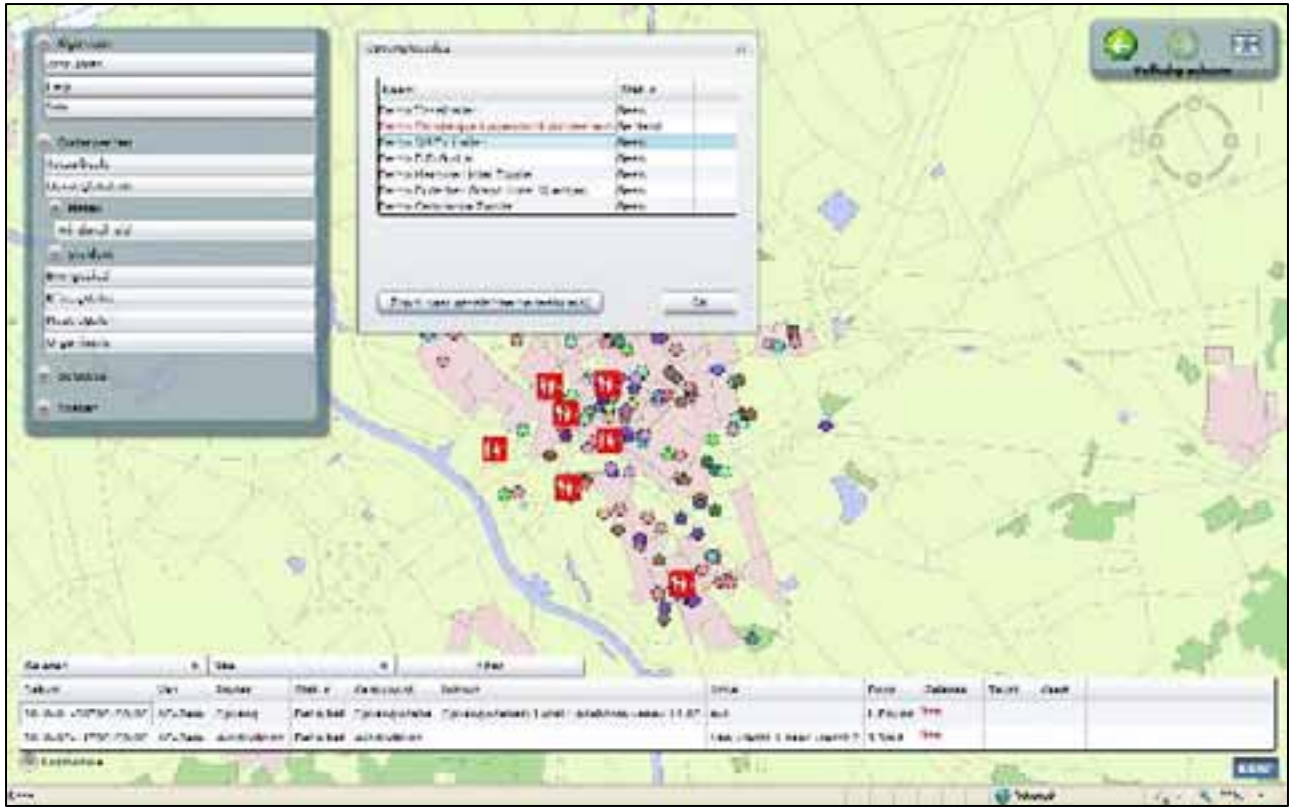
On the map: vulnerable objects *(circles)* and shelter locations *(red symbols).*



Note

Expand text module with ’Shelter locations’ of ‘Onderwerpen’: a list with prepared shelters, generated of its geo file.

One status is changed in ‘Gepland’ *(Planned).* Log module is opened.



Note

A planned shelter is selected.

Next step: *(textual command)* zoom to selection.

Note

After the ‘zoom to selection’ command, the map is zoomed to the selected objects.

A

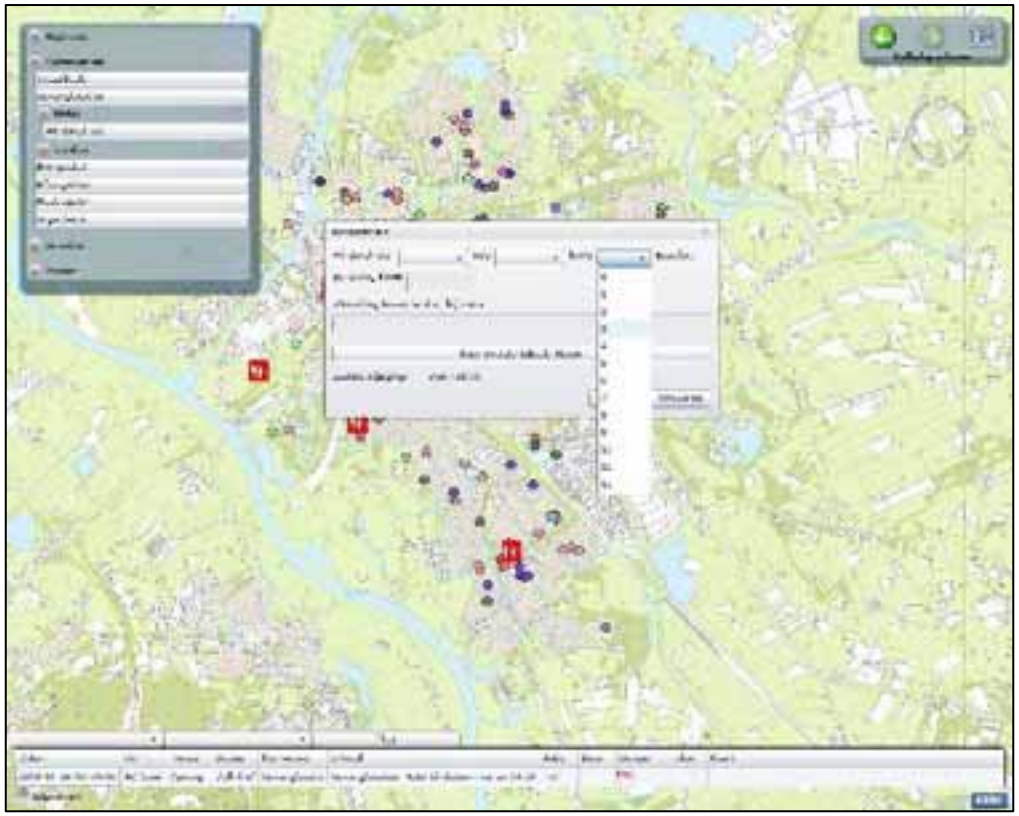
B

C

D

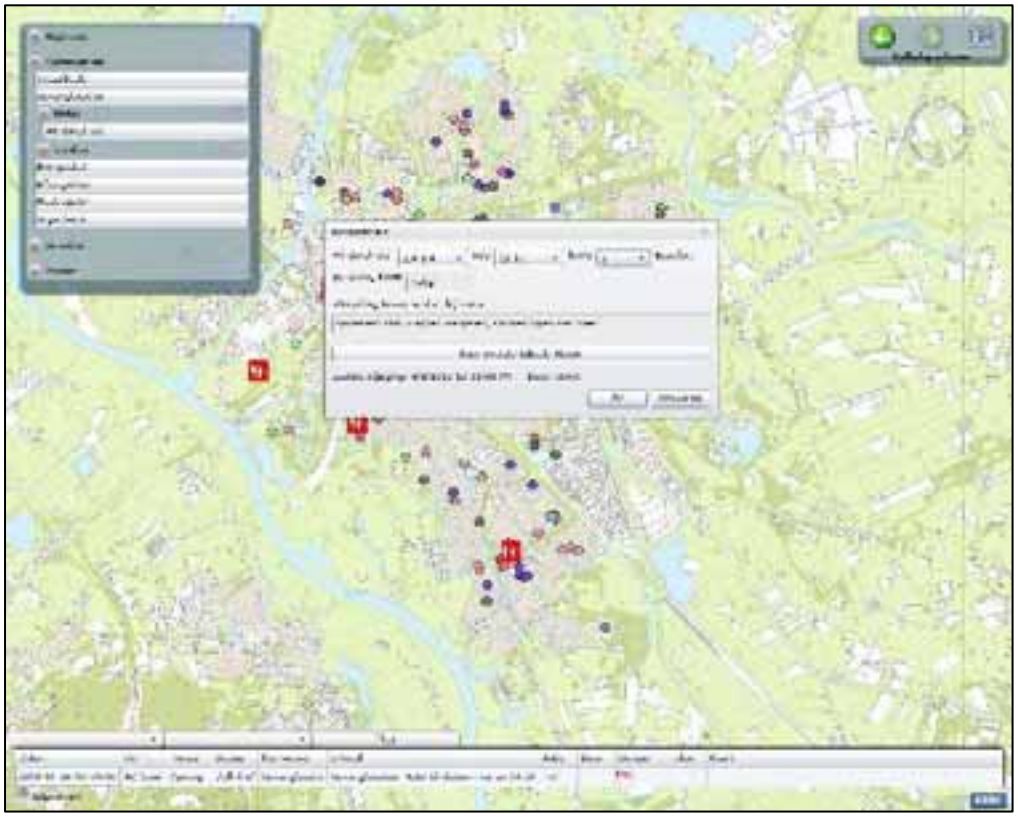
Note

A: Standard view log module. B: Column selection for filtering *(‘Door’ / ‘By”)*.
C: Value selection *(Silverlight App).* D: Result filtering.
Status ‘Gelezen’ *(= ‘Read’)* can be changed.



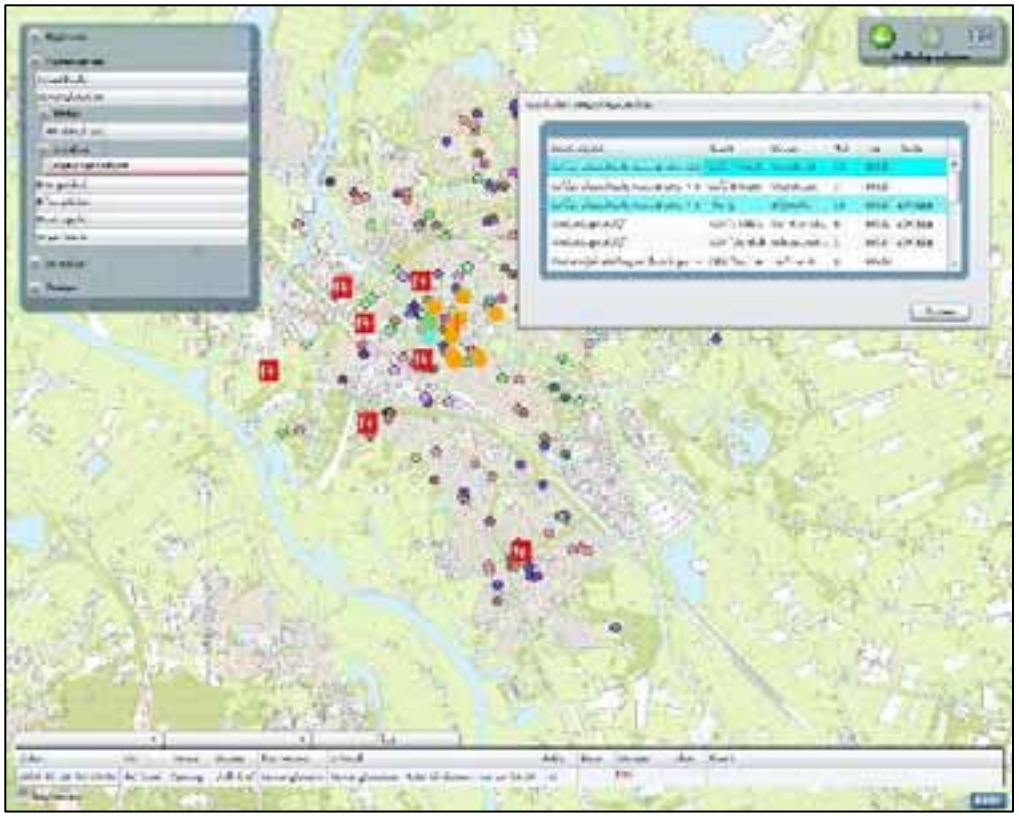
Note

Set ‘Windsnelheid’ *(= Wind velocity)* of ‘Meteo’, by selecting ‘Windkracht’ *(= Wind force)* in Beaufort.



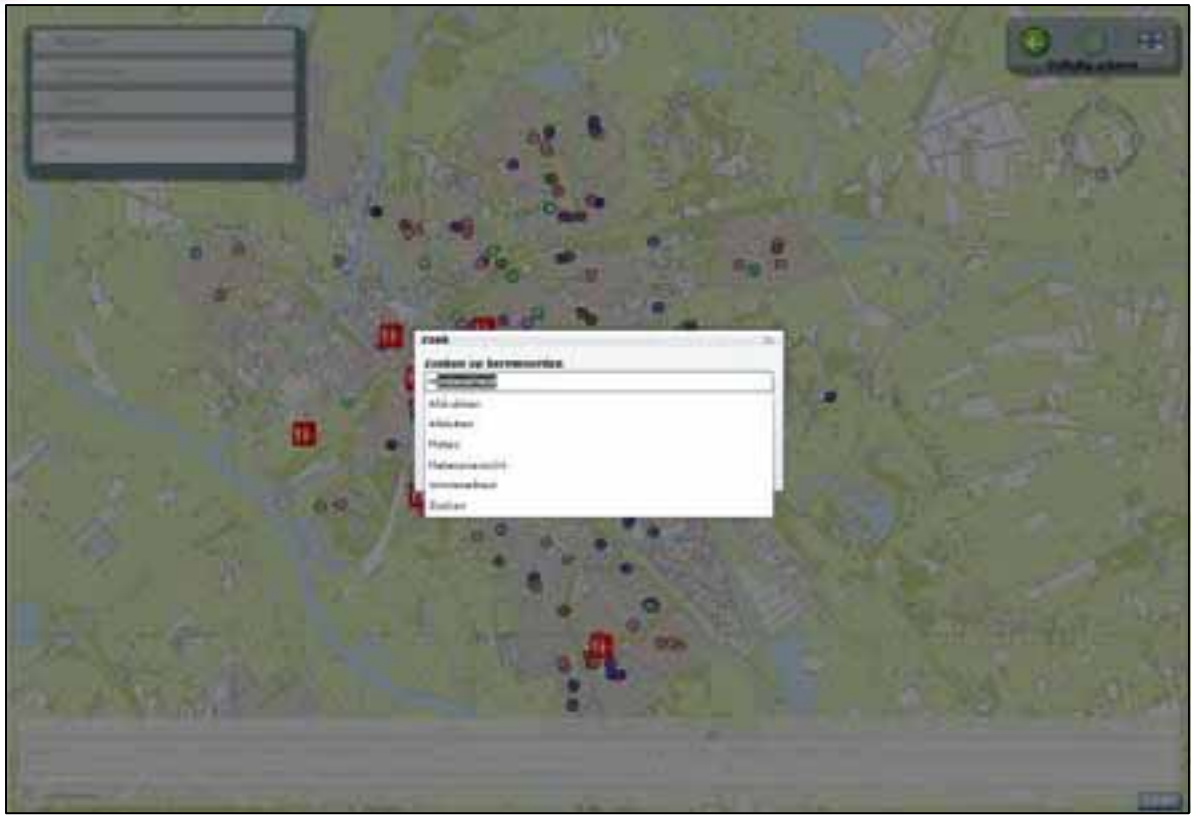
Note

After setting ‘Windsnelheid’ in Beaufort, the related values of m/s, km/u en the texts items are automatically updated.



Note

‘Omgevinganalyse’ *(= Vicinity analysis)* of ‘Incident’:
clicking the map opens a screen with a list of Vulnerable (kwetsbare) objects within 500m of that location.



Note

Search on ‘Windsnelheid’, with a list of possible keywords.

The result is the screen with the wind velocity.

1st version of GTI

Self ‘configurable’ application

1. Facilitating specific work processes
2. Fine tuning of modules
    1. Own format and layout of sub screens
    2. Default and domain values
    3. Own data models
    4. Own interaction with data model
    5. Log module as option

So, configuring in stead of building

Use of GTI applications

- Emergency response & disaster management
- Input module for spatial information
  - Registration malfunction of streetlights
  - Maintaining infrastructure, buildings, etc.
- Management reports about spatial activities /projects
- Integration of GIS in work processes

Thanks for your attention

Any questions?

Jaap Smit

GIS coordinator
Safety Region IJsselland
E-mail: J.Smit@veiligheidsregio-ijsselland.nl
Website: www.veiligheidsregio-ijsselland.nl