

Smart Cities

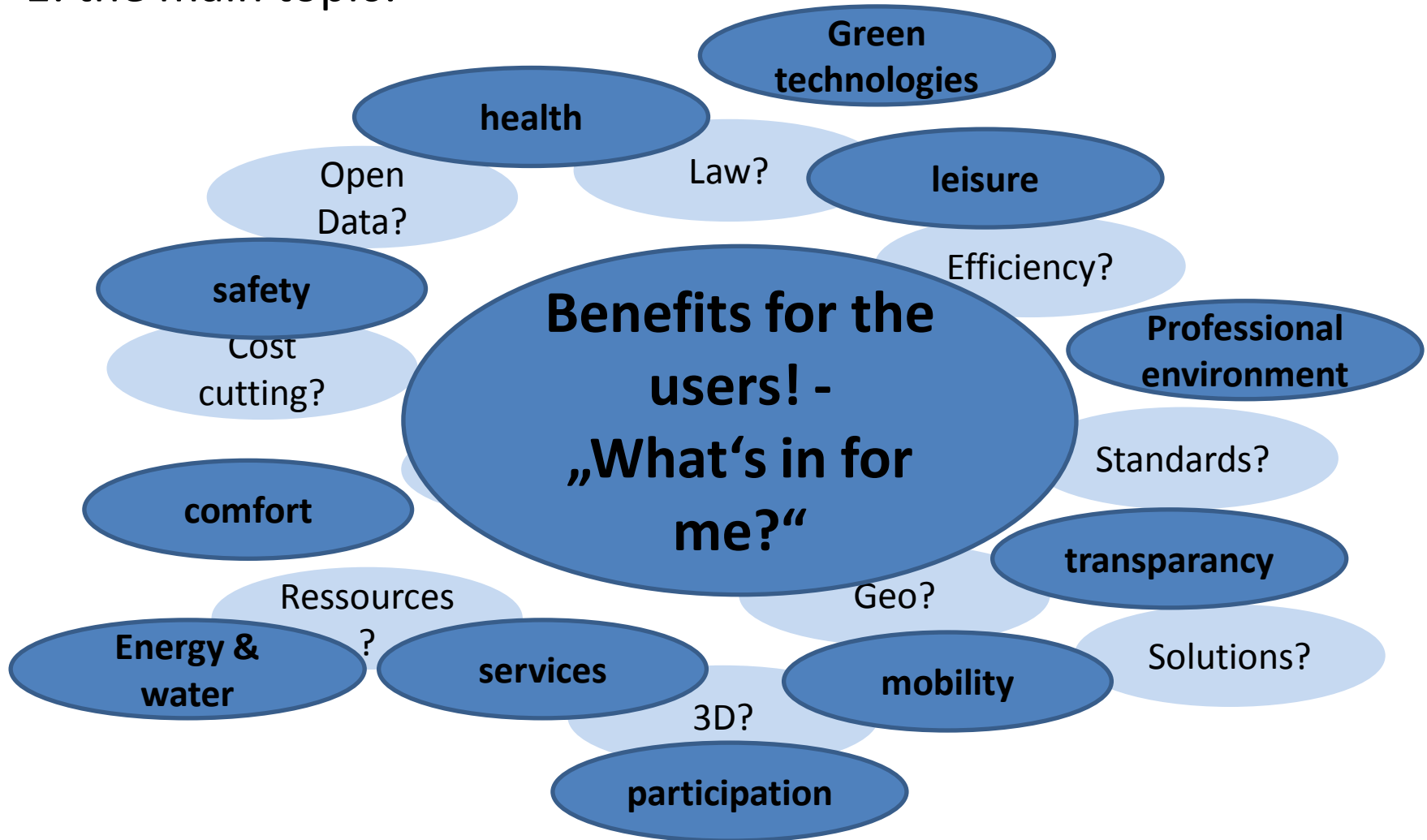
Chances for smart dimensions in the cross border context?

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Berlin, 8th october 2014

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1: the main topic!

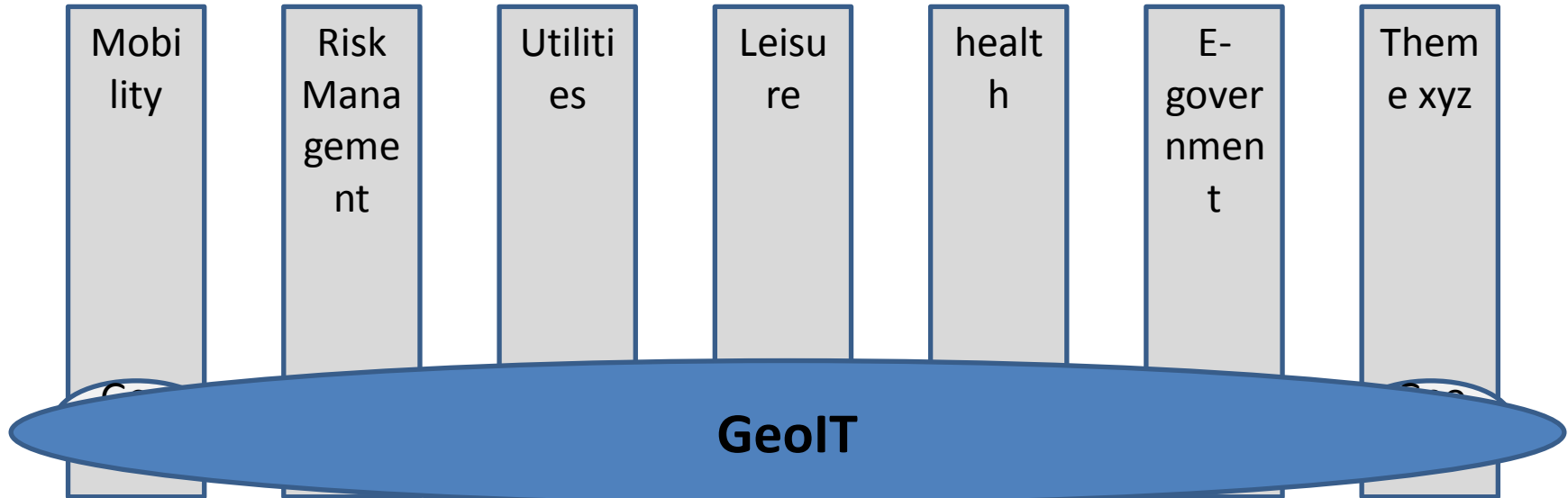


2: Smart Solutions for Cities and Citizens

- Disciplines focus on their individual main issues, differences in motivation
- Role of GeoIT often not recognised, but nevertheless crucial at the „drop-out from virtual to real“ → where?

Smart Themes	motivation
Mobility	Traffic management, telematics, efficiency, traffic safety, parking garages, car-sharing models, ...
Energy & Utilities	Asset Management, efficiency netload, smart metering, monitoring infrastructures, efficiency, automisation/sensors, €
Disaster management, public safety, health	Monitoring, safety, efficiency, management crisis, critical infrastructures, evacuation, ...
E-government	E-participation citizens, efficiency processes, transparency,
Industry 4.0, CPS	Automisation, sensors, efficiency, monitoring, ...

2: Smart Solutions for Cities and Citizens

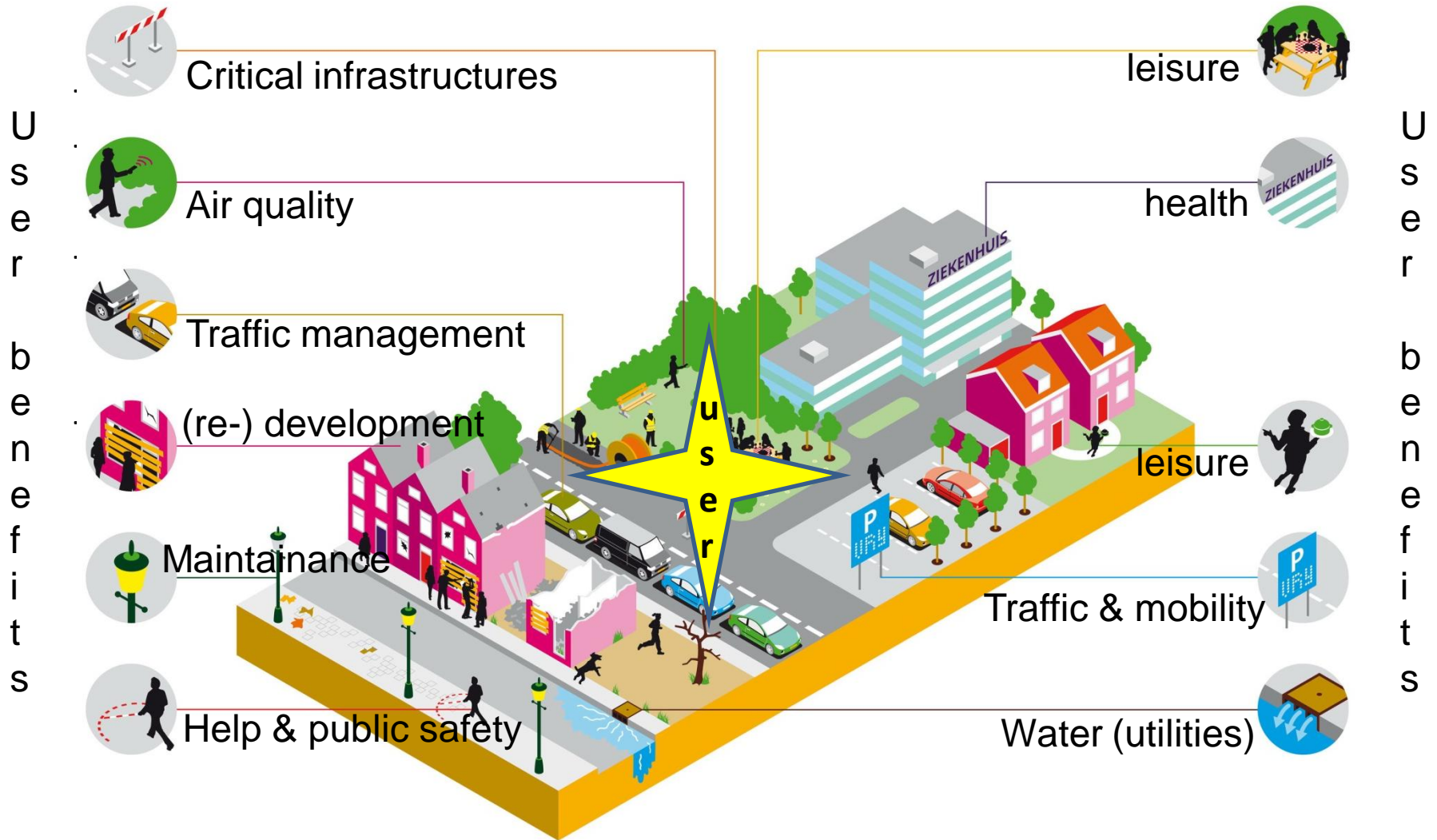


- Smart and intelligent solutions are available, quite some best practices
- But themes and solutions are based on different motivations
- GeoIT often form part of solution, but also often in a „cowboy-manner“ = quick and dirty
- Hardly Geo-experts involved
- Interdisciplinary links between fields of application?
- Interoperability between smart solutions, smart cities?

3: necessity for linking Smart Solutions

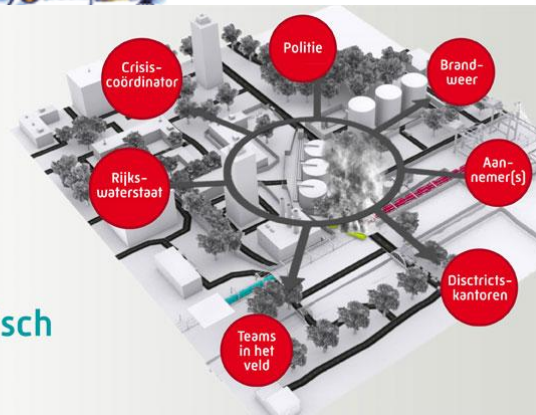
- Smart applications offer a broad benefit: societal, economical, ecological
- Increasing impact of cyber physical systems and industry 4.0-trends
- Trends and developments are mainly driven by virtual processes, but benefits has to be realised in physical reality
- What happens when process „drops out“ of the virtual into the real world?
- Or even better: Where does that happen?
- Geo and GeoIT make solutions visuable and touchable (3D, VR, AR, ...)
→ use power and experiences of Geo to link activities

4: really! Smart Solutions based on interdisciplinary integration



4: really! Smart Solutions based on interdisciplinary integration

- Example for linked disciplines and improved processes:
Philosophy of netcentric collaboration implemented in NL-crisis management



netcentrisch
werken

5: cities are smart – and then?

- Currently focus on making cities smart with different focus depending on involved parties and themes
- Developments in rural regions such as Münsterland, Achterhoek, etc. not yet taken into account
- Enabling smart solutions which can flexibly be combined in smart networks at all spacial levels from municipal to global
 - requires interoperability and reliable standards
 - requires co-ordination and transparency
 - requires to look outside the box!

6: cross-border requirements for successful Smart Solutions

- Cross-border activities require special attention and effort due to
 - Differences in culture and language
 - Different organisations, processes, aims

- Therefore by definition
 - Need to define common goals and processes
 - Rely on standards and specifications and an interdisciplinary approach
 - Close co-operation of public and private bodies

7: cross-border study NL-DE: impact of INSPIRE on smart cities

- Central questions
 - Use of GeoIT and INSPIRE datasets and services
 - Comparison NL and DE, focus on border region Northrhine-Westphalia
 - Best practices and mutual opportunities
- Results so far
 - Different approaches in NL and DE
 - NL set up strategic activity involving Ministries Infrastructure & Environment, Economical Affairs and Geonovum
 - DE more focussed on municipality level, smart cities not explicitly strategic issue in ministries
 - But: industry standardisation gremia makes great effort (DIN, VDE)
 - But again: GeoIT / INSPIRE not involved in standardisation activities or even yet recognised als crucial issue

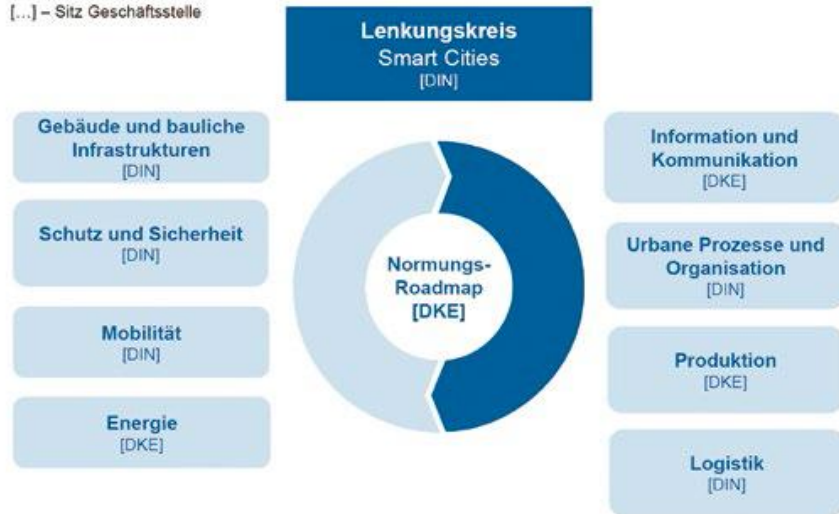
7: cross-border study NL-DE: standardisation activities DE

- Smart Cities Road Map



Konzept

[...] – Sitz Geschäftsstelle



Normung	allgemein	Elektrotechnik	Telekommunikation	Regulierung
international				 International
regional (Europa)				 europäisch
national (Deutschland)				 nationale Gesetzgebung

7: cross-border study NL-DE: Smart Cities approaches DE

- Berlin
 - PPP broad approach
 - Charta Smart City Berlin: energy, CO2-neutrality, mobility, urban safety and resilience, demographic change
 - http://www.berlin-partner.de/fileadmin/user_upload/01_chefredaktion/02_pdf/02_navi/21/Charta_Netzwerk_Smart_City_Berlin.pdf
- Cologne
 - PPP, focus on energy, e-mobility
 - <http://www.smartcity-cologne.de/>
- Innovation City Ruhr
 - PPP, focus on energy, climate, e-mobility
 - www.icruhr.de
- Hamburg
 - PPP co-op municipality – Cisco, focus mobility
 - <http://www.hamburg.de/smart-city/>

8: recommendations

- Geo and GeoIT are essential parts of Smart Solutions!
- GeoIT has to actively take part in standardisation gremia and processes, exchange know-how and experiences
- Geo and GeoIT have to actively contribute to interoperable and interdisciplinary smart solutions
- Don't create new borders, take care for interoperability
- Don't try to convince the geoexperts of the added values of geo – they know!
- Tell the rest of the world, put the user into focus - THEY don't know yet!