


TNO innovation for life

Data and the City

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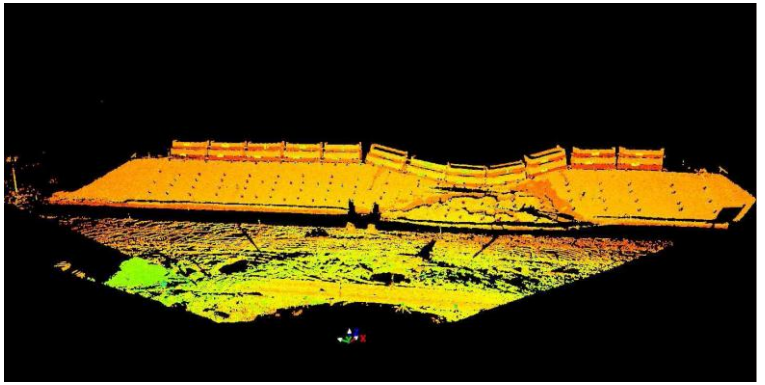
IJkdijk (the ‘smart levee’) and Urban Flood

FloodControl IJkdijk is *the* innovative dike monitoring organisation for inspection and testing based on sensor systems.

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Data and the City

From large scale crisis management to complex societal challenges on a local level: “Liveability”

Liveability (“quality of life”) comprises various aspects, i.e.:

- Safety, public space, social cohesion
- Both public and private actors (companies, citizens)

- An explorative study on the data landscape of “liveability” in Rotterdam
- Part of the OECD “KBC2 : Data” project

OECD
BETTER POLICIES FOR BETTER LIVES

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties

Ministerie van Economische Zaken

A tragic story…

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Elderly woman lay dead in Rotterdam home for 10 years (update)

Friday 22 November 2013

The neighbours of a Rotterdam woman who lay dead in her home for 10 years have told Nos television they noticed nothing wrong.

A spokesperson of one of the largest energy providers in the Netherlands stated that these kinds of incidents could be detected – or even prevented – by analysing data on energy consumption collected via smart meters.

This story illustrates two important developments:

- More and new types of data are being collected about cities, their infrastructures and citizens, that could be valuable in the context of liveability
- The advent of an Internet of Things (i.e. smart meters and smart grids)


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Data-driven innovation and liveability

What is happening?

- Urban population in OECD member countries approaches 1 billion
- Ongoing digitisation of soft and hard city infrastructures
- Becoming “smart” is a widely shared ambition of bigger cities

EC Work Programme: “Inclusive digital societies”

- Risks: discrimination (profiling), autonomy, consumer protection

The objective of the study was to explore and map:

- Data-driven innovation in the context of liveability in the city of Rotterdam
- The emergence of a new data ecosystem of liveability
- The impacts of data-driven innovation on (the organisation of) liveability


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The emerging data ecosystem

- **A shift in control of (and access to) “city data”:**
  - Traditionally: governmental services and semi-public organisations
  - Now: many city- and citizen-oriented services and citizens, i.e.:
    - Google: interests (search) and movements (maps)
    - Facebook and Twitter: social interactions and sentiment
    - Iens: restaurants and bars
    - Funda: housing
    - Marktplaats (eBay): shopping

- **Global players battle for city platforms and IoT-infrastructures**
  - While “liveability” is very local…
  - Horizontally oriented services (GIS-tools, analytics, authentication)
  - New interfaces (cars, wearables, smart meters, smart grids, TVs, …)


Impacts on (the organisation) of liveability

Government retains control, impact of DDI is limited – for now

- Little use of advanced analytics and no automated decision-making
- Only limited data spill-over from commercial players
  - Via ‘traditional’ information brokers (i.e. GfK)
- The safety-domain is an exception
  - Social media data, internet data, citizen data (special apps)
  - Pilots: prediction and profiling of neighbourhoods to allocate resources

The impact of DDI via commercial actors is limited – for now

- Current business models determine focus – no mechanisms for sharing
- Business models do not directly touch elements of liveability, but…
  - Start-ups and VCs enter a trillion dollar “Smart City” market
  - “When you scale, you automatically become a data company”


Policy implications

- Restructuring effects: ‘datafication’ is not a neutral, “natural” phenomenon.
- The balance between “public” and “private” may shift when business models collide with elements of liveability (Uber and AirBnB as signs of things to come).
- When data integration (public/private) becomes increasingly important to gain actionable insights, it remains to be seen whether liveability will retain its largely public character or that new commercial services will take over (parts of) interfaces, platforms, public tasks and functions.