The Value of Urban Data

Petr Suska, Fraunhofer IAO, 30th OCT, 2017
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Profile of the Fraunhofer Society

- **Founded:** 1949
- **about 24,000** staff
- **66 institutes and research units**
- **Fraunhofer worldwide**
  - **Europe:** Brussels (Belgium), Budapest (Hungary), Porto (Portugal), Gothenburg (Sweden), Bolzano (Italy), et al.
  - **USA:** Boston, Brookline, Cambridge, East Lansing, Maryland, Newark, Plymouth, San José, Storrs
  - **North/South America:** London (Canada), Santiago (Chile), Salvador and Sao Paulo (Brazil)
  - **Asia:** Ampang (Malaysia), Beijing (China), Jakarta (Indonesia), Koramangala Bangalore (India), Seoul (South Korea), Singapore, Tokyo and Sendai (Japan)
  - **Africa/Middle East:** Dubai (United Arab Emirates), Cairo (Egypt), Stellenbosch and Pretoria (South Africa)
Profile of the Fraunhofer Society

- **Annual research budget**: more than 2 billion euros*
- Non profit organisation
- Over 70% of this sum is *generated* through
  - projects commissioned by industry and
  - publicly funded research projects
- Roughly 30% is provided by the **German state and federal governments** for advanced research (looking at issues that will be of concern to the economy and society in five or ten years time).

* Figures for 2016
What is the **urban** Value that lies within data?

Who benefits from the Smart City?

How can we maximize the collective urban value?
Morgenstadt Research Initiative
Value of Urban Data
“Data is the new oil”

- Everybody
“The Price of everything and the value of nothing...”

- Oscar Wilde
NEW FORMS OF DATA AND WHERE THEY TAKE US
CITY DATA MARKETS... OR EXCHANGES
Defining the Value of Urban Data with leading Smart Cities & companies in Europe!

Envisaged partners
Cumulative Data Value Framework

**Benefits**
- More efficient city services
- Better use of infrastructure and resources
- Less pollution, better air, healthier people
- Lower costs through risk prediction ...
- New income opportunities
- Jobs

**Costs**
- Costs for single data-sets
- Recurring investments in data management, operation & maintenance
- Recurring investments in digital infrastructure

**Data analytics & provision of digital services**
- Data Platforms and operation systems
- Data generating assets
- Connectivity Backbone

Social, environmental and economic returns on investment over time.
Basic data value model

Value expressed in monetary units derived through all types of impacts from a single use case. Impacts can be positive or negative.
Understanding the impact of use cases through systems modelling

Behind each impact factor for each use case there will be a value tag and a defined or approximated monetary expression that is based on data from the particular city.
Understanding the value of data through calculating the net urban value of smart city use cases

- Reduction of negative externalities
- Generation of social, environmental & economic value
- Generation of financial ROI

VoUD = POSITIVE IMPACT - NEGATIVE IMPACT - COSTS FOR DATA

Allocate value of single data sets (if possible) by defining the ratio of importance & the availability of proxies for each dataset

Data sets

Primary costs + secondary costs
Join our research!
Thank you!

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