Data-driven organisation

VISION OF A DATA-DRIVEN ORGANISATION MODEL AS THE BASIS FOR A SMART LOCAL AUTHORITY

Local authorities possess huge amounts of public data. The municipality of Groningen makes functional use of all this data to perform its responsibilities, but it is also increasingly adopting data-driven organisation methods. In the municipal context, data-driven organisation methods focus on using existing data to deal with societal issues. In the current situation, however, the various local government departments each have their own collections of data which they do not share with each other, while combining these datasets could actually open up even more information. In order to facilitate these collectivized datasets, the Municipality of Groningen has developed a vision on a data-driven organisation model.

About LIKE!
Local governments, citizens, universities and SMEs come together to co-create smarter, more efficient and more innovative services through 9 transnational pilots that cover 3 core themes:

Innovation Culture Approach

Smart Services

Digital Dashboards

Relations to Workpackages
This use-case paper demonstrates how a data-driven organisation model can be established for the entire municipal organization by collectivizing datasets, so that societal issues can be more efficiently targeted, prevented and resolved.

Local partners

Municipality of Groningen
www.gemeente.groningen.nl

This case study is produced by Evite van Winkoop

Various data-driven organisation methods

Local authorities have launched all manner of initiatives to make their data the keystone of their policy-making processes. They intend to improve their services to the public by implementing smarter, more efficient and more proactive applications based on existing information and databases. The municipality of Groningen has implemented a number of data-driven processes, such as:

- Data-driven enforcement: enforcement agencies detect and record the incorrect disposal of waste next to waste containers within a dataset. Garbage trucks can then be redirected to respond to and prevent waste nuisance.
- Data-driven fraud prevention: Characteristics of social welfare fraudsters are recorded by means of profiling. These profiles enable more targeted and preventive tracking of fraudsters.
- Data-driven traffic management: The municipality enters traffic counts in datasets which it can use to develop targeted traffic policies, relieve congested intersections and so improve traffic flows.

There is a common thread in these three use-cases:

Raw data first has to be converted into visually interpretable information for it to be useful. Municipal employees with expertise and experience can collect raw data and interpret it so that it becomes new knowledge on which a carefully considered decision can be based, also called the 'wisdom of data'.

However, these initiatives are currently separated. Because dataset managers do not share their data with other departments, the local authority does not have access to all the available information. This could lead to alternative 'wisdoms' based on how civil servants experience their own policy area, which in turn can result in employees of the same local authority implementing different measures for the same problem.

Vision of a data-driven organisation model

The envisioned data-driven organisation model will bring about change by breaking open the current silo-based organization of datasets. This vision is based on extensive bottom-up research into the many different use cases involving data-driven processes within the municipality of Groningen, so that the result is representative of the municipal government as a whole. The goal of this vision is to foster awareness within the municipal departments, but also among municipal partners, so that employees are encouraged to adopt the data-driven organisation model. Four pillars have been designated as instruments to encourage and achieve the vision of data-driven organisation:

1. Data governance & data control
2. Legal & ethical framework
3. Organizational change
4. Data management organization

A new common thread

The vision of a data-driven organisation model will change the relationships between aspects of the above-mentioned common thread. The raw data will now become collective data and hence accessible to everyone. Information will be visualized using a generic method so that everyone can interpret the data. This will ensure that knowledge is no longer dependent on the experiences of a given domain, but that it is instead founded on a reliable data source. The development of a collective and generic data-driven model increases the wisdom held by the organization, resulting in a smarter organization. This in turn results in a huge data 'shopping mall' with 'stores' that make their data freely available to all. This will make the municipality of Groningen smarter and more efficient at dealing with societal issues.

'Instead of putting our data in separate stores, we should keep it all in a data shopping mall."

– Janet Feenstra, coordinator of the vision of a data-driven organisation –

What is a data-driven organisation?

Data-driven organising is a way for a complete institute to make decisions based on data and information rather than on experiences, feelings or traditions. This results in a smarter organization that makes informed decisions based on reliable data. The preconditions for this are the collectivization of all available data, interdisciplinary cooperation between the departments and a reliable data infrastructure.

Four pillars

1. Data governance & data control
    Accountability for and reliability of data
2. Legal & ethical framework
    Applicable legal and ethical rules and frameworks
3. Organizational change
    Generic data-driven organisation model applied throughout the organization
4. Data management organization
    Reliable and safe working method, effectively organized data processing system

What are the requirements?

A number of conditions have to be met for an entire municipal authority to be transformed into a data-driven organization:

*   Data protection
    Collective data must be extremely carefully protected, whereby data fraud is made impossible.
*   Transparency
    To remove uncertainty and to increase confidence, the public must be kept informed of which data concerning them is used by the local authority.
*   The people behind the data
    A vast amount of data can lead to the stigmatization of individuals. The individual citizens and their unique stories must not be lost in the sea of data.
*   Effective data architecture
    Reliable data architecture is not only the responsibility of the IT department, but of the entire organization. Effective cooperation between the departments requires interdisciplinary approaches in cooperation with other authorities.