Data Governance as an Enabler for the Data Economy

Barbara Engels
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Data governance rules on...

... who is a... purpose...

... how data
unauthorized... case of...

...
Data governance sets standards and rules on

... how data is **collected** and by whom
... how data is **identified**
... how data is **labeled**
... how data is **processed**
...
Data governance sets standards and rules on

... how data is **processed** and by whom
... how data **moves** within the organization
... which data is **needed**
... how the quality of data can be **improved**
... how data is **combined**
... who has **access** to data
...
Data governance sets standards and rules on

... who is allowed to use data and for what purpose
... how data can be protected from unauthorized access and what happens in case of unauthorized access
...

Data governance sets standards and rules on

... **which** data can be used for what **purpose**
... how **legal** requirements are met
... how data management can be **designed** such that the business goals are reached
...
Data governance is the **framework** that forms the basis for dealing with and managing data for all internal and external **stakeholders** of an organization.
Dimensions of DG

- **Compliance**: How is the compliance with internal/external requirements and regulations for data management and data protection ensured?

- **Assets**: How are data and their economic value defined and identified? Are there common company-wide standards for data assessment? How are data quality standards ensured?

- **Security**: Which internal and external data security standards apply? Who can access which data? What happens if data gets stolen?

- **Roles, Tasks & Responsibilities**: Which internal roles exist for data execution and management? Who is responsible for which data and data processes? Which company-wide roles exist in the data ecosystem?

- **Architecture & Tools**: How can software solutions support data governance? What standards apply to the technical implementation and selection of the tools used?

- **Processes**: How does data move within the company? What internal and external data processes exist? How is data shared and used? How is it decided how to manage and use data?

Source: DEMAND (2019)
An organization's data ecosystem

Source: DEMAND (2019)
Data requirements

- User data requirements
- General data quality requirements
- Core governance requirements: definition of data landscape, ownership of data quality controls

Key: having data vs. having data available
Data quality dimensions

- **Timeliness**: Degree to which the data is available at the time it is needed.
- **Completeness**: Degree to which necessary data is available for use.
- **Accuracy**: Degree to which the data represents the reality.
- **Uniqueness**: Degree to which data is unique and cannot be mistaken for other entries.
- **Consistency**: Degree to which the data is equal within and between datasets.
- **Validity**: Degree to which the data is within defined requirements like format, type and range.

Source: Lean Data (2019)
Umbrella or silo

"Which data environments are affected by your DG?"

n=348

- BI / data warehouse environment: 76%
- Classic centralized operational applications: 47%
- Analytical silos driven by lines of business: 42%
- All data environments are affected: 29%
- Sandboxes for exploration / data labs: 26%
- Decentralized real-time applications: 23%
- Other: 1%

Source: Bloemen / Grosser (2019)
Benefits achieved by implementing measures to develop data governance

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Enhanced decision-making support through better, more effective use of data</td>
<td>53%</td>
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<tr>
<td>Unified understanding of data</td>
<td>53%</td>
</tr>
<tr>
<td>Creating conditions for data-driven work / becoming a digital company</td>
<td>47%</td>
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<tr>
<td>Creating a harmonized view of all relevant data</td>
<td>45%</td>
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<tr>
<td>Reducing effort with more efficient processes</td>
<td>42%</td>
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<tr>
<td>Building common objectives, benefit concepts and mindsets when dealing with data</td>
<td>40%</td>
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</tbody>
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Source: Bloemen/Grosser (2018)
Challenges regarding data usage

- inadequate data quality
- ineffective organization
- insufficient cooperation
- lack of information on data
- unsynchronized data silos
Status quo

Source: ARD (2019)
Implementation of DG

- No DG (yet): 27%
- Data governance established: 24%
- Planning to establish DG: 18%
- DG currently being established:

Source: Bloemen/Grosser (2018)
n=364, international sample
Definition and implementation of DG

“How would you describe the data governance system of your company?” in percent; n=794

- The rights of access, use and ownership are clearly regulated: 89%
- There are clear rules for the maintenance, consolidation and further processing of the data: 81%
- The rules are stored in the IT systems: 56%
- There are processes that guarantee compliance with the rules and sanction violations: 38%
- The IT systems report violations of the rules: 22%

Source: DEMAND (2019a)
Motivation for DG

"What is driving the application of DG in your company?" n=351

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Compliance with legal requirements</td>
<td>56%</td>
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<tr>
<td>Handling data more efficiently</td>
<td>51%</td>
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<td>Increasing number of analytics use cases</td>
<td>50%</td>
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<td>Growing amount of business-relevant internal/external data</td>
<td>50%</td>
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<tr>
<td>Need for functional harmonization of data used</td>
<td>44%</td>
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<td>Higher expectations within lines of business</td>
<td>43%</td>
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<tr>
<td>Gaining an overview of /information on data available</td>
<td>38%</td>
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<tr>
<td>Transformation towards a digital business</td>
<td>32%</td>
</tr>
<tr>
<td>The increasing amount of data-processing technology needs to be managed more effectively to prevent uncontrolled growth</td>
<td>30%</td>
</tr>
<tr>
<td>The need to remain competitive</td>
<td>28%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>No drivers</td>
<td>2%</td>
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Source: Bloemen/Grosser (2018)
Challenges

- lack of resources
- convincing stakeholders: making the added value of data governance visible
- building up knowledge
- management support
How to incentivize DG (more or less decent suggestions)

- regulatory requirements: disclose information on data assets
- tools to measure and monitor effects of data governance
- financial rewards
- research