One Size Does Not Fit All: Best Practices for Data Governance

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Minneapolis, MN, September 26, 2011

University of St. Gallen, Institute of Information Management
Tuck School of Business at Dartmouth College
Agenda

1. Business Rationale for Data Governance
2. Data Governance Design Options
3. Best Practice Cases
4. Competence Center Corporate Data Quality
1. Business Rationale for Data Governance

2. Data Governance Design Options

3. Best Practice Cases

4. Competence Center Corporate Data Quality
Data Governance is necessary in order to meet several strategic business requirements

- Compliance with regulations and contractual obligations
- Integrated customer management ("360 degree view")
- Company-wide reporting needs ("Single Source of the Truth")
- Business integration
- Global business process harmonization
The typical evolution of data quality over time in companies shows a strong need for action.

Legend: Data quality pitfalls
(e.g. Migrations, Process Touch Points, Poor Management Reporting Data.)

- No risk management possible
- Impedes planning and controlling of budgets and resources
- No targets for data quality
- Purely reactive - when too late
- No sustainability, high repetitive project costs (change requests, external consulting etc.)
Data Governance and Data Quality Management are closely interrelated.

Legend:  
- Goal
- Function
- Data
Data Governance is also about cost trade-off's

Costs

Total Costs

ΔC

DQM Costs

 Costs of Poor Data Quality

ΔDQ

Data Quality

 Minneapolis, MN, 09/26/11, B. Otto / 7
Without Data Governance companies are missing direction with regard to their data assets

Source: Strassmann, 1995.
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As Data Governance is an organizational task, design decisions must be made in five organizational areas:

- **Organizational Goals**
  - Formal Goals
  - Functional Goals
- **Locus of Control**
- **Organizational Structure**
  - Organizational Form
  - Roles & Committees

Six cases from global companies are used to illustrate the different design options.

<table>
<thead>
<tr>
<th>Case</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Chemicals</td>
<td>Automotive</td>
<td>Mfg.</td>
<td>Telecom</td>
<td>Chemicals</td>
<td>Automotive</td>
</tr>
<tr>
<td>Headquarter</td>
<td>Germany</td>
<td>Germany</td>
<td>USA</td>
<td>Germany</td>
<td>Switzerland</td>
<td>Germany</td>
</tr>
<tr>
<td>Revenue 2009 [million €]</td>
<td>6,510</td>
<td>38,174</td>
<td>4,100</td>
<td>64,600</td>
<td>8,354</td>
<td>9,400</td>
</tr>
<tr>
<td>Staff 2009 [1,000]</td>
<td>18,700</td>
<td>275,000</td>
<td>23,500</td>
<td>260,000</td>
<td>25,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Role of main contact person for the case study</td>
<td>Head of Enterprise MDM</td>
<td>Program Manager MDM</td>
<td>Head of Data Governance</td>
<td>Head of Data Governance</td>
<td>Head of MDM SSC</td>
<td>Project Manager MDM</td>
</tr>
</tbody>
</table>

Key: MDM - Master Data Management, Mfg. - Manufacturing; SSC - Shared Service Center.

NB: All case study companies are research partner companies in the Competence Center Corporate Data Quality (CC CDQ).
Data Governance design options can be broken down into 28 individual items

Data Governance Organization

Data Governance Goals

Formal Goals

Business Goals
- Ensure compliance
- Enable decision-making
- Improve customer satisfaction
- Increase operational efficiency
- Support business integration

IS/IT-related Goals
- Increase data quality
- Support IS integration (e.g. migrations)

Functional Goals
- Create data strategy and policies
- Establish data quality controlling
- Establish data stewardship
- Implement data standards and metadata management
- Establish data life-cycle management
- Establish data architecture management

Data Governance Structure

Locus of Control

Functional Positioning
- Business department
- IS/IT department

Hierarchical Positioning
- Executive management
- Middle management

Organizational Form
- Centralized
- Decentralized/local
- Project organization
- Virtual organization
- Shared service

Roles and Committees
- Sponsor
- Data governance council
- Data owner
- Lead data steward
- Business data steward
- Technical data steward
For example, the design area “Roles & Committees” comprises six individual roles.

Legend: 
- Disciplinary reporting line ("solid"); 
- Functional reporting line ("dotted"); 
- is part of.

- Business
- IT
- Data Team.

- Single role
- Composite role.
The cases show a variety of different Data Governance designs

<table>
<thead>
<tr>
<th>Case</th>
<th>Formal goals</th>
<th>Functional goals</th>
<th>Locus of control</th>
<th>Org. form</th>
<th>Roles, committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No formal quantified goals; DQ index and data lifecycle time measured</td>
<td>DQ, data lifecycle, data arch., software tools, training</td>
<td>Business (IM and SCM), 3rd level</td>
<td>Central MDM dept., virtual global organisation</td>
<td>MDM council, data owners, lead steward, technical steward</td>
</tr>
<tr>
<td>B</td>
<td>No formal quantified goals</td>
<td>Business: Data definitions, ownership, data lifecycle, data arch.; IS/IT: Data models, IT arch., projects, DQ</td>
<td>Business (corporate accounting), 3rd level</td>
<td>Central project organisation, virtual organisation</td>
<td>Steering committee, master data owner, master data officer</td>
</tr>
<tr>
<td>C</td>
<td>No formal quantified goals, data lifecycle time measured, SLAs with internal customers planned</td>
<td>Data ownership, data lifecycle, DQ, service level management, project support</td>
<td>Business (shared service centre), 4th level</td>
<td>Central data management org.; virtual global organisation</td>
<td>DG manager, DQ manager, data owner, data stewardship manager, data steward; no committee</td>
</tr>
<tr>
<td>D</td>
<td>Alignment with business strategic goals, no quantification</td>
<td>DQ standards and rules, data quality measuring, ownership, data models and arch., audits</td>
<td>Hybrid (both central IT and business), 3rd and 4th level</td>
<td>Central organization, supported by projects</td>
<td>“Data responsible”, data architect, data manager, DQ manager, no committee</td>
</tr>
<tr>
<td>E</td>
<td>Alignment with business drivers, formalisation through SLAs</td>
<td>Data strategy, rules and standards, ownership, DQ assurance, data &amp; system arch.</td>
<td>Business (shared service centre), 4th level</td>
<td>Shared service</td>
<td>Head of MDM, data owners, lead stewards (per domain), regional MDM heads, data architect; no committee</td>
</tr>
<tr>
<td>F</td>
<td>No formal quantified goals</td>
<td>MDM strategy, monitoring, organisation, processes, and data arch., system arch., application dev.</td>
<td>IS/IT, 3rd level</td>
<td>Central organisation, supported by projects</td>
<td>Head of MDM, data owners, DG council, data architect</td>
</tr>
</tbody>
</table>

Key: DG - Data governance; Org. - Organisational; DQ - Data quality; arch. - architecture; IM - Information Management; SCM - Supply Chain Management; MDM - Master Data Management, dept. - department; IS - Information Systems; IT - Information Technology; SLA - Service Level Agreement.
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In Case A data quality is measured on a continuous basis.

Overall data quality indices per region and per country are published on the corporate intranet. Regions and countries can monitor their own progress (as well as the progress of best-in-class countries).

Measurement and data quality indices are made transparent to everybody. Calculation of indices can be track down to the individual record level.

Chemical Industry
Data Governance in Case B is well-balanced between IT and business functions as well as between corporate and business units.
Case D is an example of a formalized Data Governance organization with hybrid location of responsibilities.

Deutsche Telekom AG

T-Home

T-Mobile

T-Systems

MQM
Marketing and Quality Mgmt.

MQM2
Quality Management

MQM27
Data Quality Management

Line of Business CIO

IT1
IT Strategy and Quality

IT2
Enterprise IT Architecture

ZIT7
Information Processing

ZIT72
MDM

ZIT73/74
Data Management

ZIT721
Data Governance

ZIT722
DQ Measurement and Assurance

Telecom Industry
In Case E Master Data Management is organized as a shared service and operated as a “data factory”.

Ensures that the quality of data objects supports the dependent business processes.

Chemical Industry
Case F is an example for locating the Data Management Organization within the IS/IT function.
Some key success factors become apparent when analyzing the cases.

- Demonstrate staying power! Data Governance is a change issue and requires involvement of all stakeholders.

- No bureaucracy! Use existing board structures and processes.

- No ivory tower, no silver bullet! Use “real-life” examples to get buy in from local business units.
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The Competence Center Corporate Data Quality comprises 20 partner companies¹

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<th>AstraZeneca</th>
<th>Bayer</th>
<th>Beiersdorf AG</th>
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<td>AO FOUNDATION</td>
<td>ASTRAZENECA PLC</td>
<td>BAYER AG</td>
<td>BEIERSDORF AG</td>
</tr>
<tr>
<td>CORNING</td>
<td>Daimler</td>
<td>DB</td>
<td>E.ON AG</td>
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<tr>
<td>CORNING CABLE SYSTEMS GMBH</td>
<td>DAIMLER AG</td>
<td>DB NETZ AG</td>
<td>E.ON AG</td>
</tr>
<tr>
<td>ETA SA</td>
<td>Festo AG &amp; CO. KG</td>
<td>HEWLETT-PACKARD GMBH</td>
<td>IBM DEUTSCHLAND GMBH</td>
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<tr>
<td>MIGROS</td>
<td>Nestlé</td>
<td>Novartis</td>
<td>Robert Bosch GMBH</td>
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<tr>
<td>MIGROS-GENOSSENSCHAFTS-BUND</td>
<td>NESTLÉ SA</td>
<td>NOVARTIS PHARMA AG</td>
<td>ROBERT BOSCH GMBH</td>
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<tr>
<td>Siemens</td>
<td>Syngenta</td>
<td>TELEKOM DEUTSCHLAND GMBH</td>
<td>ZF Friedrichshafen AG</td>
</tr>
<tr>
<td>SIEMENS ENTERPRISE COMMUNICATIONS GMBH &amp; CO. KG</td>
<td>SYNGENTA AG</td>
<td>TELEKOM DEUTSCHLAND GMBH</td>
<td>ZF FRIEDRICHSHAFEN AG</td>
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¹) Current and former partners as of March 2011.
The Competence Center Corporate Data Quality channels the knowledge and experience of a large network of practitioners and researchers:

| Contacts in the overall CC CDQ community | 650+ |
| Members in the XING Community | 155+ |
| Bilateral Project Workshops | 150+ |
| Best Practice Presentations | 55 |
| Consortium Workshops | 25 |
| Partner Companies | 20 |
| Scientific Researchers/PhD Students | 12 |
| Competence Center | 1 |

Life is good with Data Governance…

Source: Strassmann, 1995.

Regional Livestock Operations and Analysis Manager

Livestock Directional Consultant

Regional Grassland Engineer

Source: Strassmann, 1995.
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