



salzburg**research**

Data Governance als Enabler nachhaltiger Digitalisierung

Wolfgang Kremser, Researcher



Do we have a Data Culture?

@ iDSC19

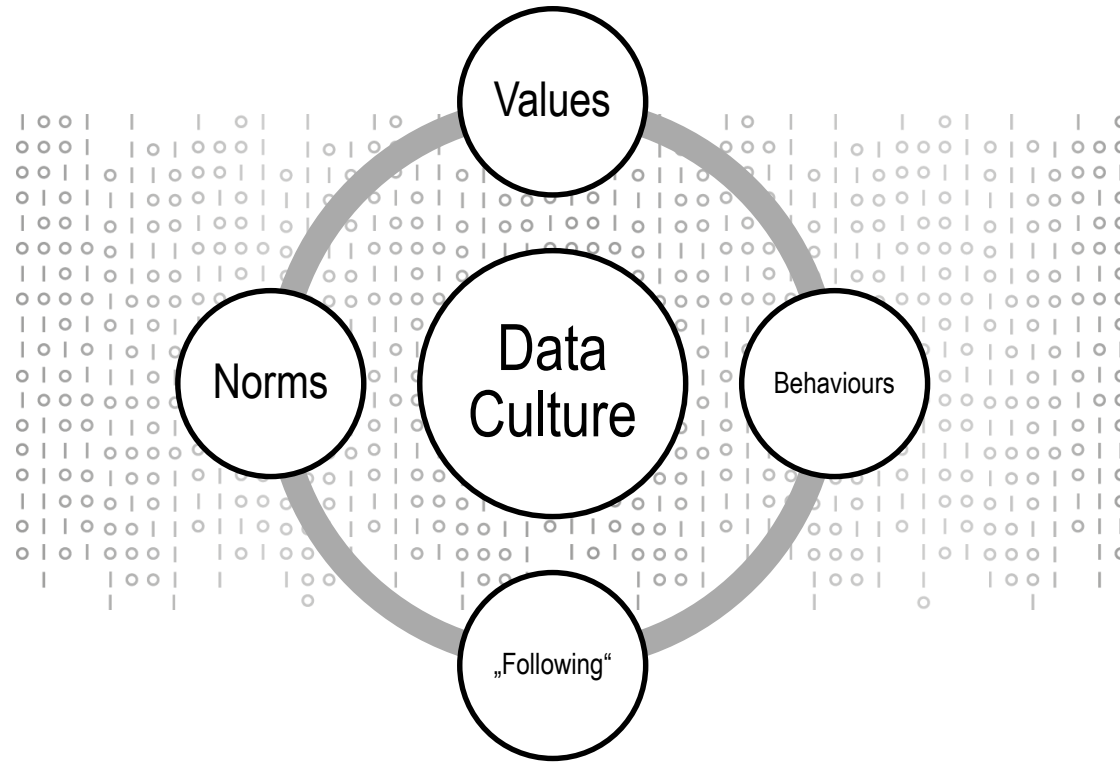
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Abstract—Nowadays, adopting a “data culture” or operating “data driven” are desired goals for a number of managers. However, what does it mean when an organization claims to have a data culture? A clear definition is not available. This paper aims to open the understanding of data culture in organizations by analyzing recent usages of the term. It shows that data culture is

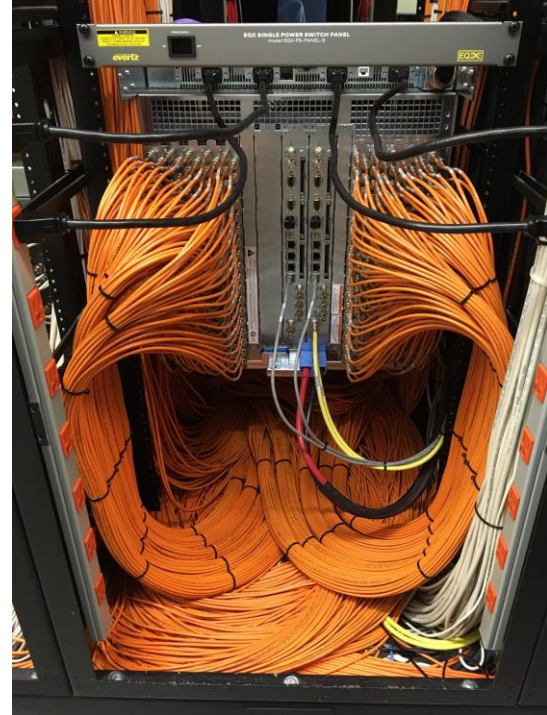
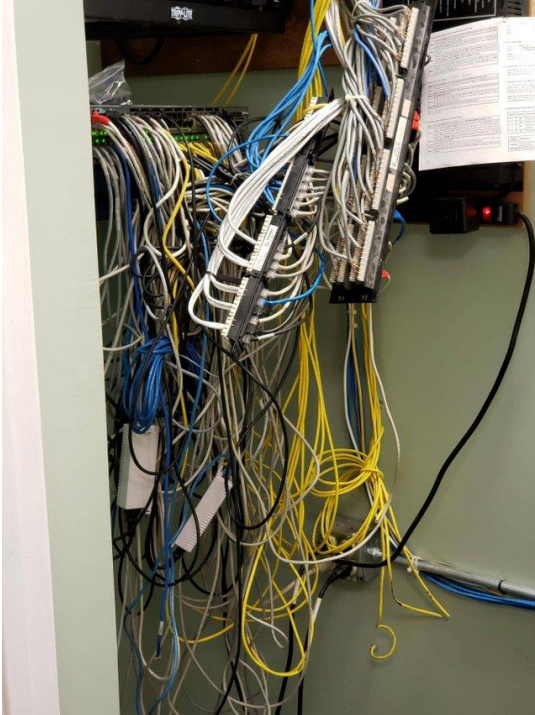
examples have been selected because they emphasize different aspects and will serve as a guide towards a comprehensive definition:

For Microsoft, a good data culture is one in which “every team and every individual is empowered to do great things because of the data at their fingertips” [4, page 6]. This

Yes; in fact, everybody does!



But not every Data Culture is equally healthy



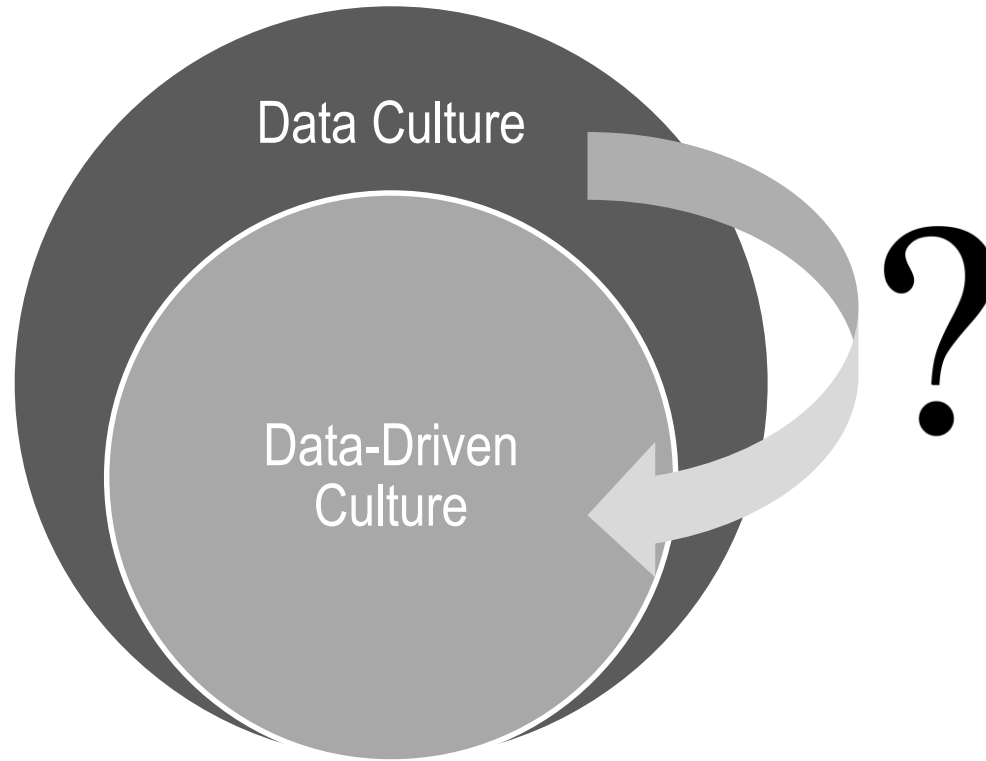
We mean Data Culture of a Certain Quality



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The 3 Values of Data-Driven Culture

Value 1 – data-driven **decision making**

Value 2 – **seamless** data access and **data provisioning** between business units

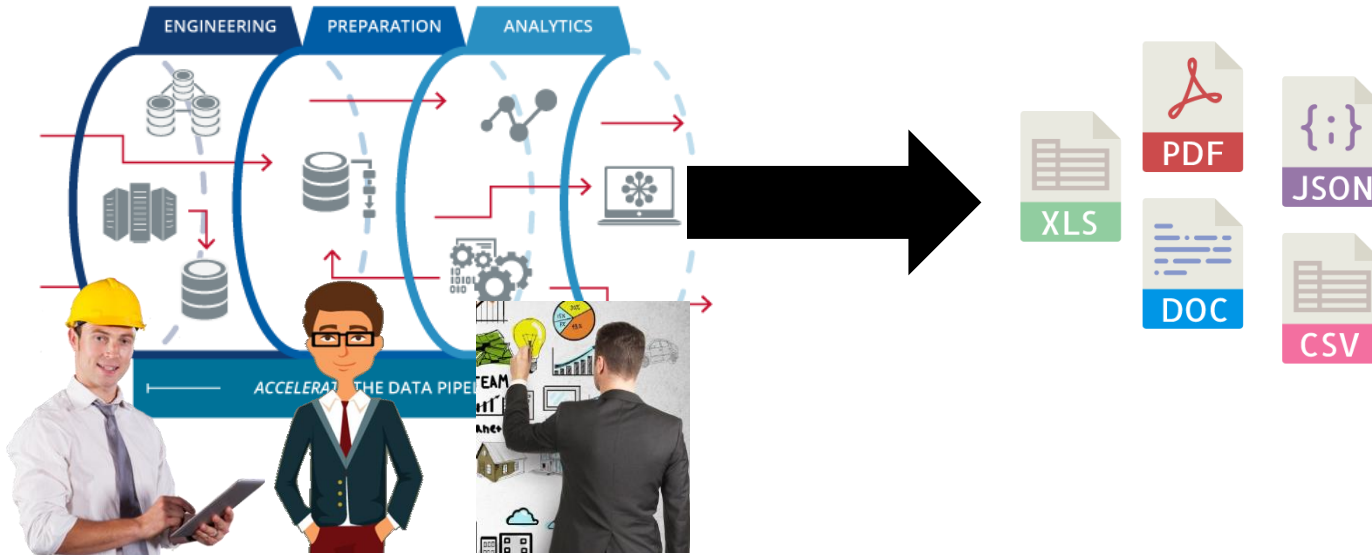
Value 3 – discussing and **distributing knowledge** about data processing is valuable

What Data-Driven Culture is not

“We process data, therefore we have data-driven culture.”

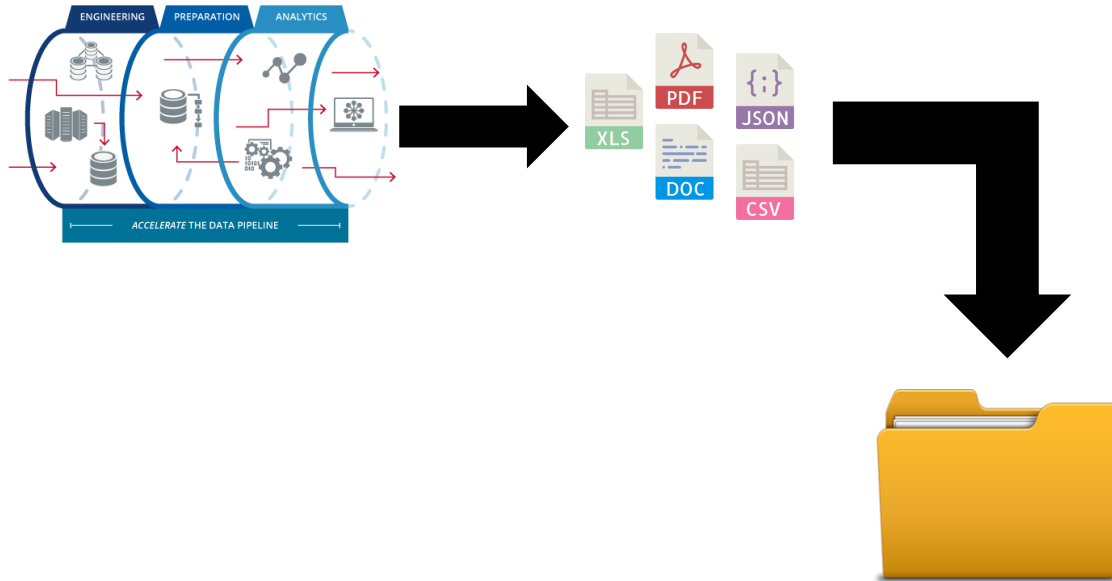
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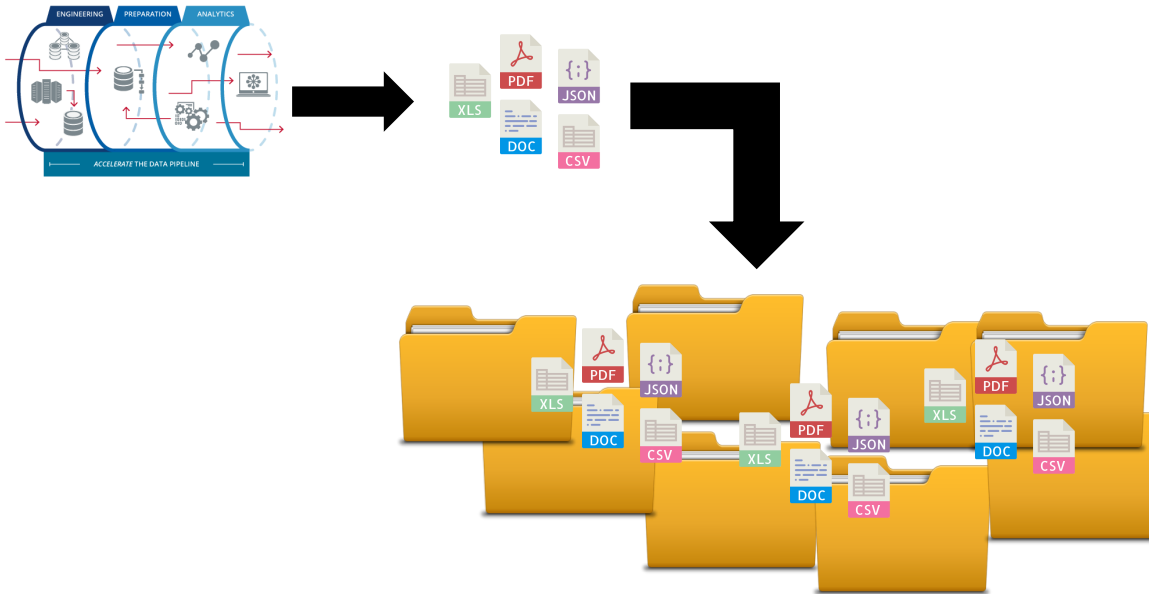
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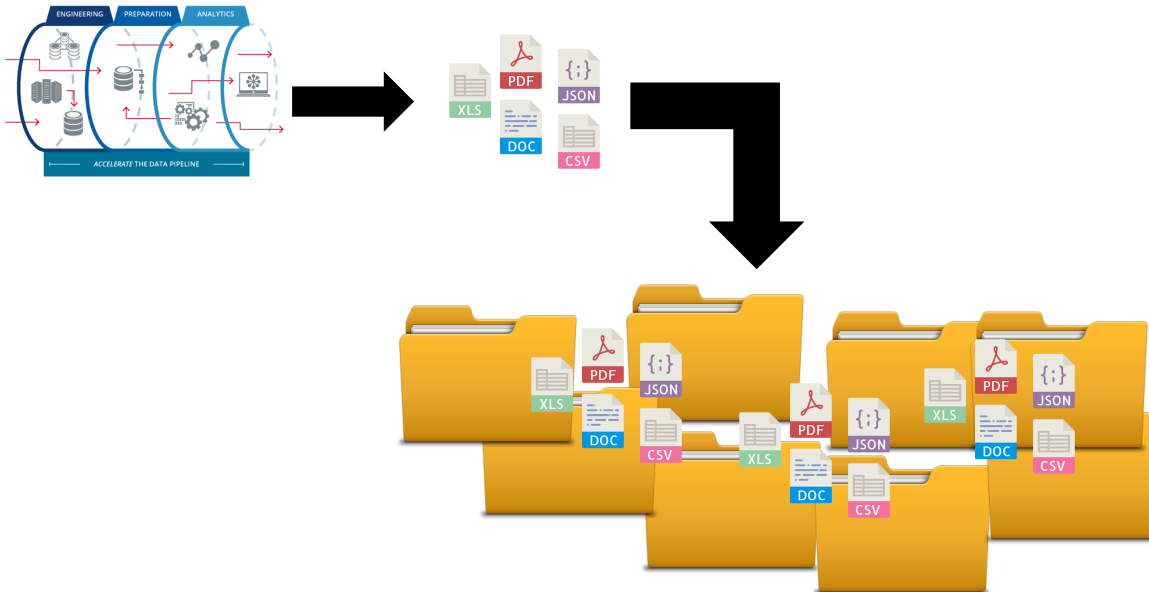
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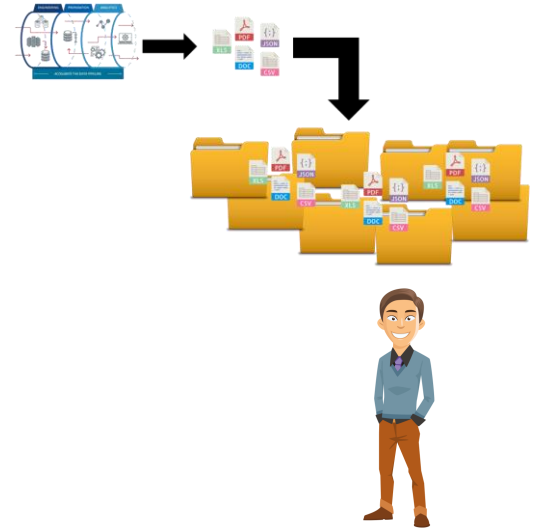
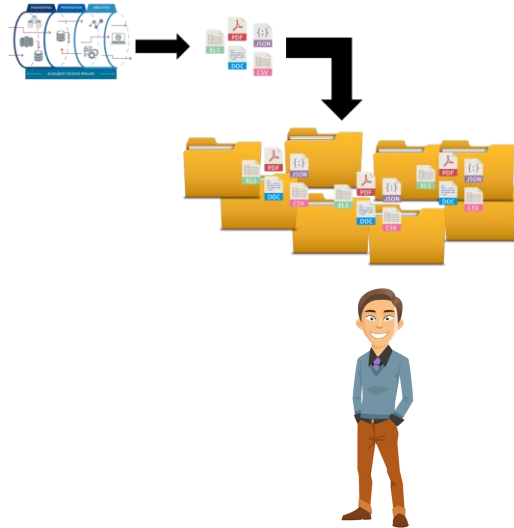
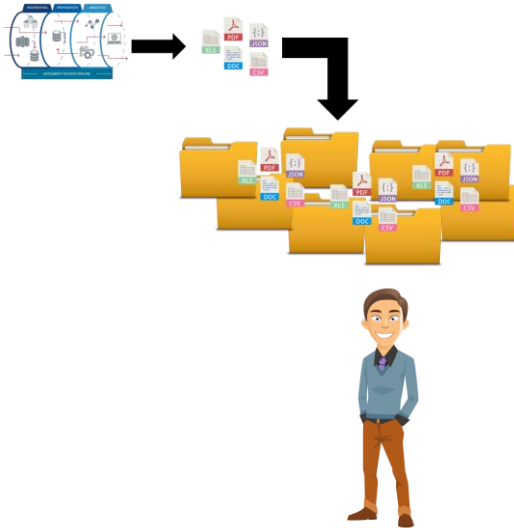
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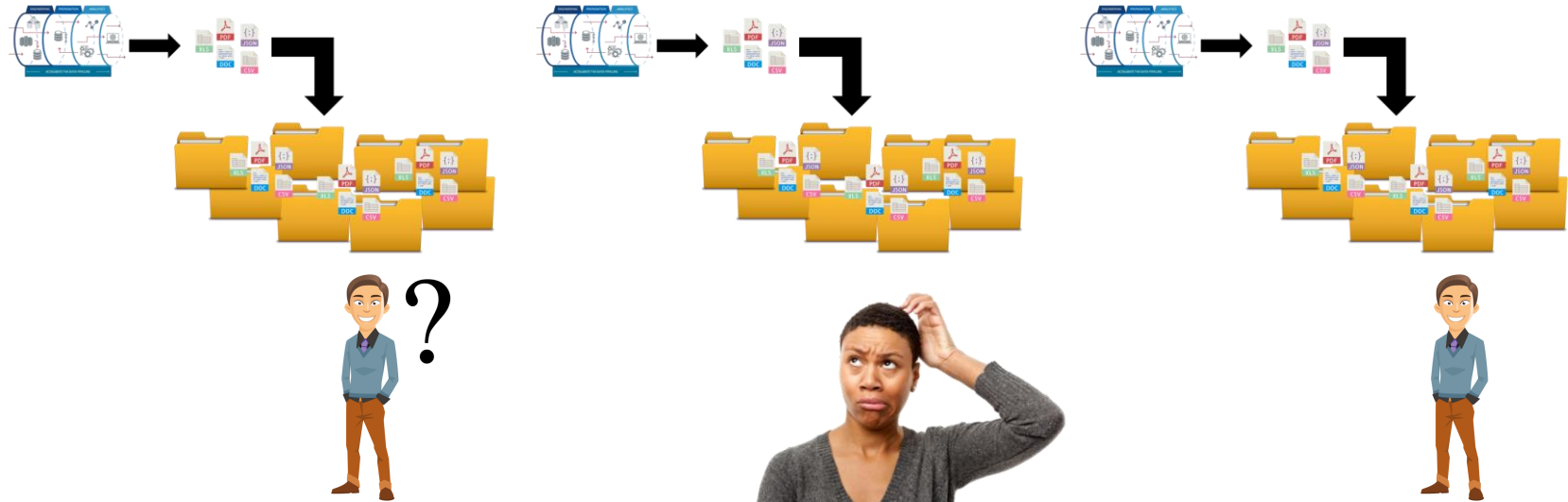
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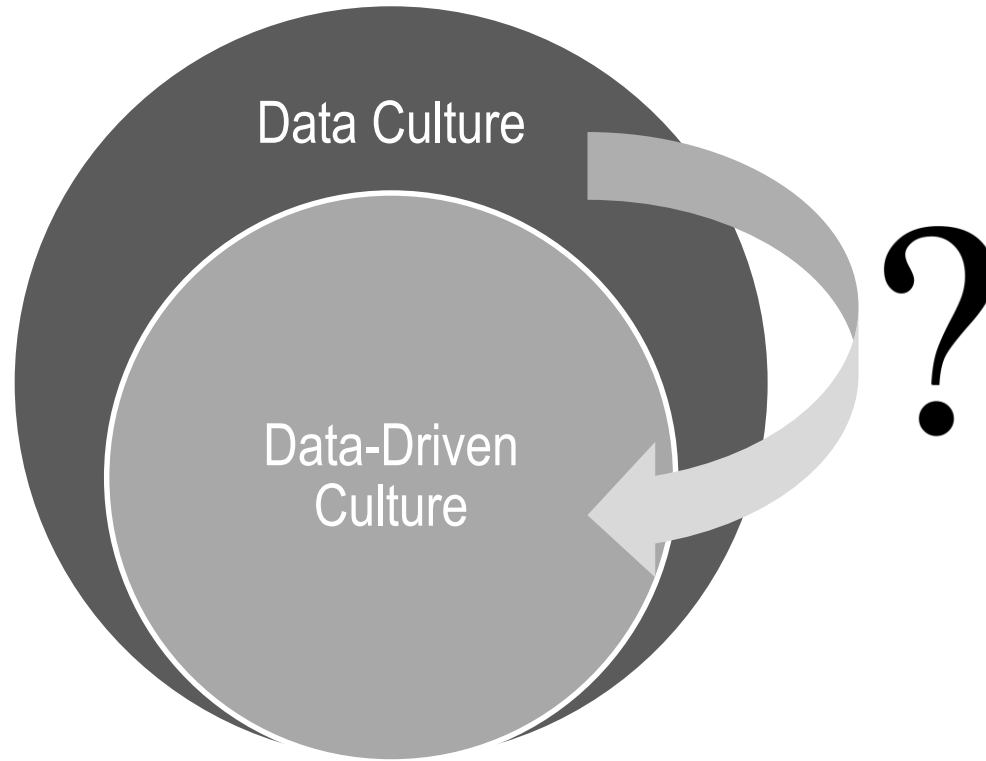
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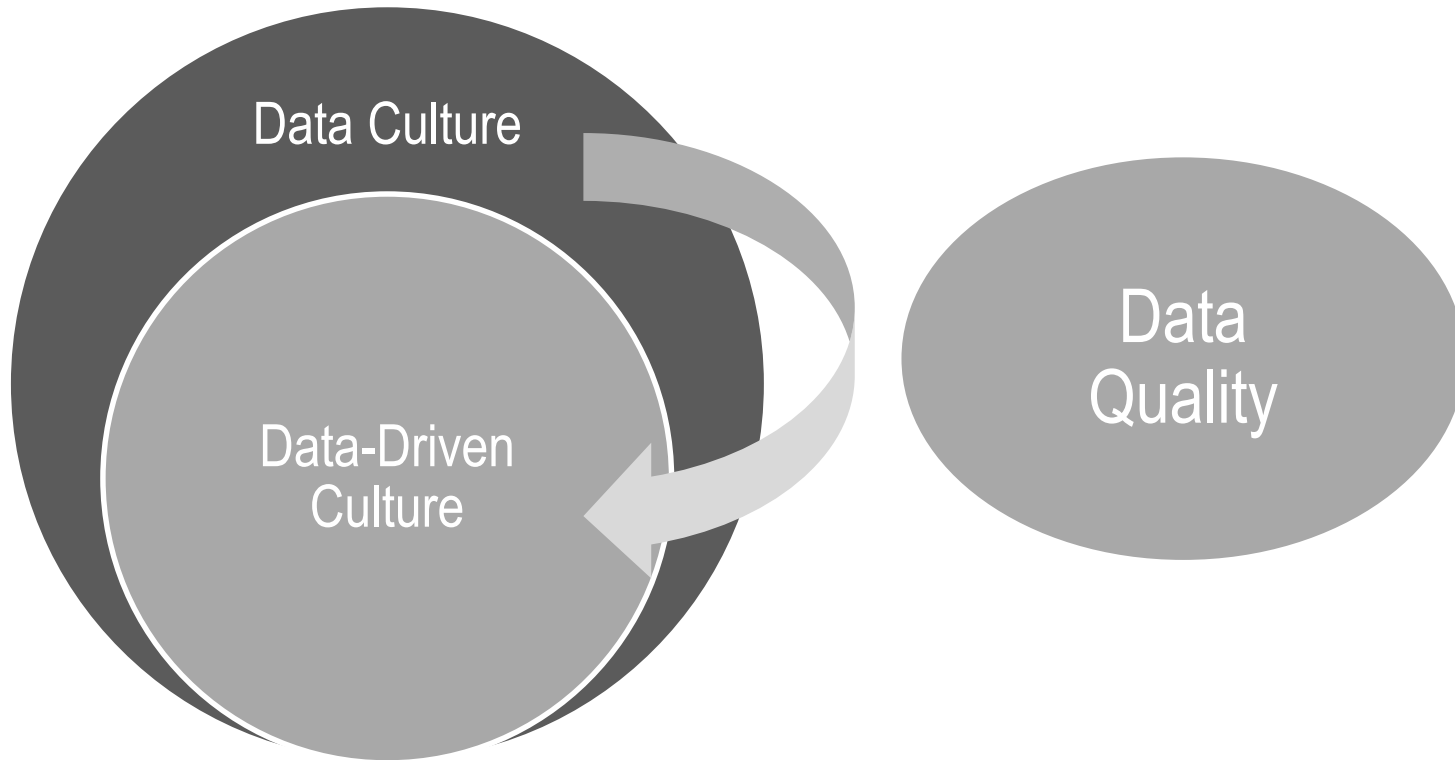
The 3 Values of Data-Driven Culture

- x Value 1 – data-driven decision making
- x Value 2 – seamless data access and data provisioning between business units
- x Value 3 – discussing and distributing knowledge about data processing is valuable

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We mean Data Culture of a certain quality



“The most significant benefit of quality data is the willingness of managers to trust the data and to act on the information.”

**ISO 8000 Quality Data
Principles**

An ECCMA White Paper
Written by Peter R. Benson
19 January 2019
© 2019 ECCMA

Data Quality Dimensions – Strong-Wang Framework (1996)

- Intrinsic DQ
 - Accuracy
 - Objectivity
 - Believability
 - Reputation
- Contextual DQ
 - Value-added
 - Relevancy
 - Timeliness
 - Completeness
 - Appropriate amount of data
 - Representational consistency
- Representational DQ
 - Interpretability
 - Ease of understanding
 - Concise representation
- Accessibility DQ
 - Accessibility
 - Access security

Data Quality Metrics – ISO 8000

1. Portability

Usage Across applications and computer systems

2. Meets Requirements

Meets expectations of the agent responsible for processing the data (e.g. Data Scientist)

3. Provenance

Knowing where the data come from

4. Accuracy

Data represent facts

5. Completeness

All parts of the data are present

**ISO 8000 Quality Data
Principles**

Relationship to Data-Driven Culture's Values

1. Portability => Seamless data access

Usage Across applications and computer systems

2. Meets Requirements => Organizational learning

Meets expectations of the agent responsible for processing the data (e.g. Data Scientist)

3. Provenance => Data-driven decision making

Knowing where the data come from

4. Accuracy => Data-driven decision making

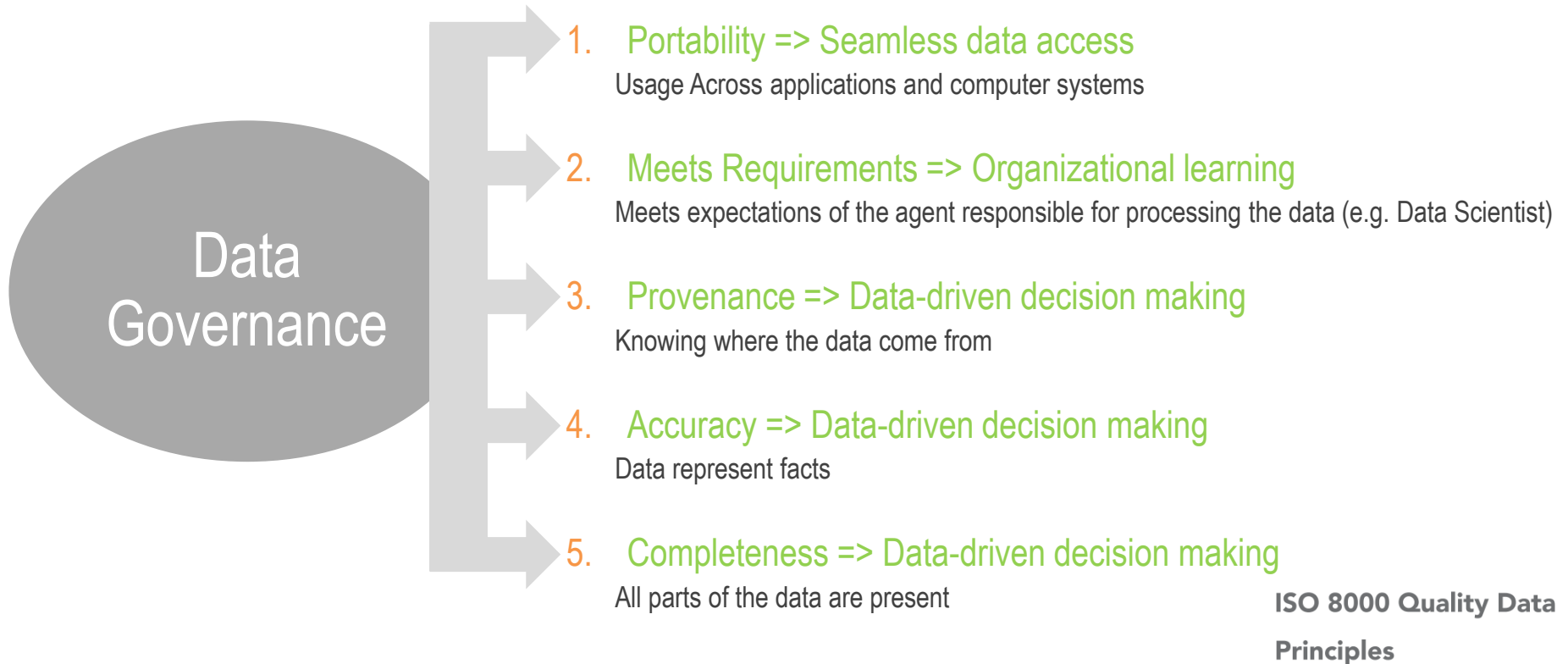
Data represent facts

5. Completeness => Data-driven decision making

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**ISO 8000 Quality Data
Principles**

Introducing Data Governance



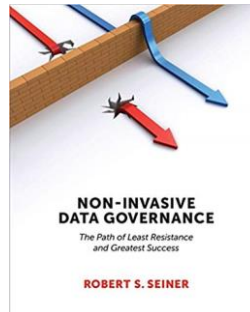
The Role of Data Governance

“A Data Quality program is more effective when part of a data governance program.”

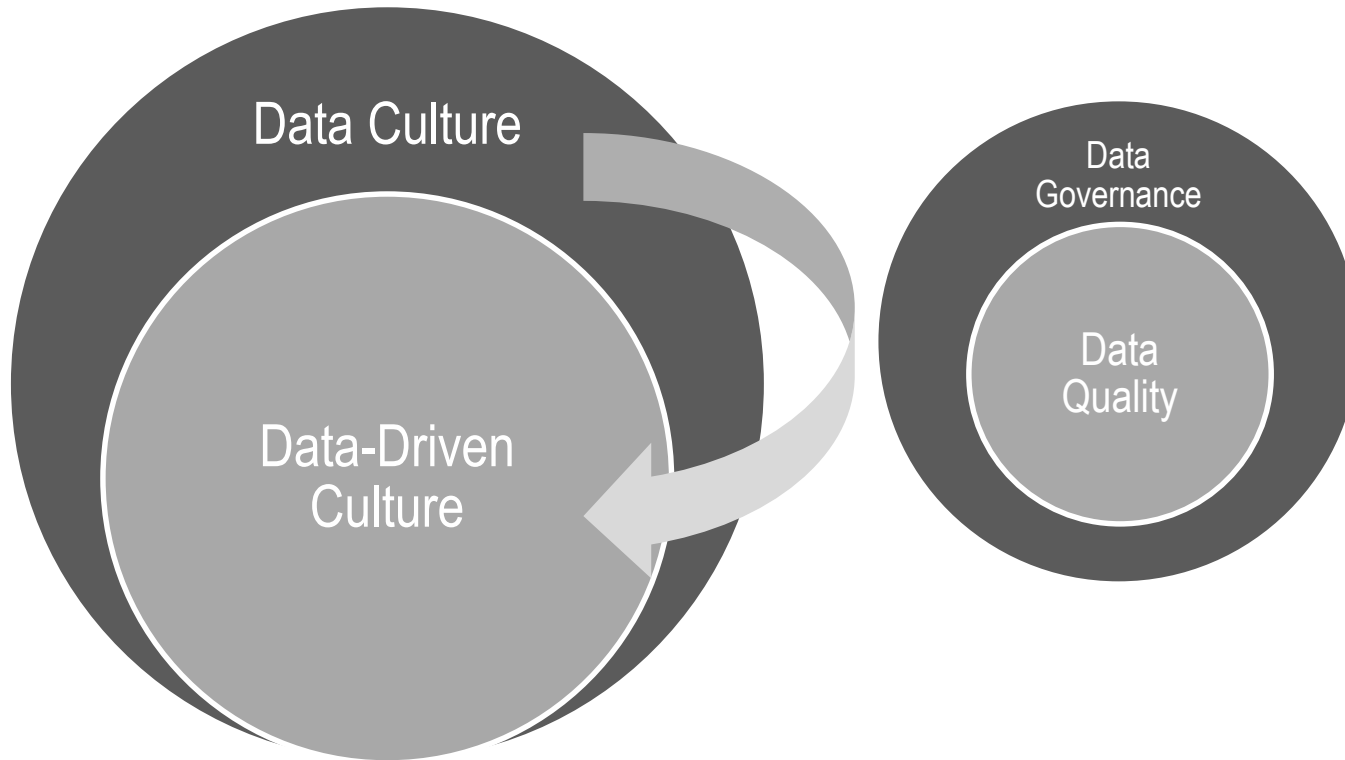
DAMA-DMBOK

DATA MANAGEMENT BODY OF KNOWLEDGE
SECOND EDITION

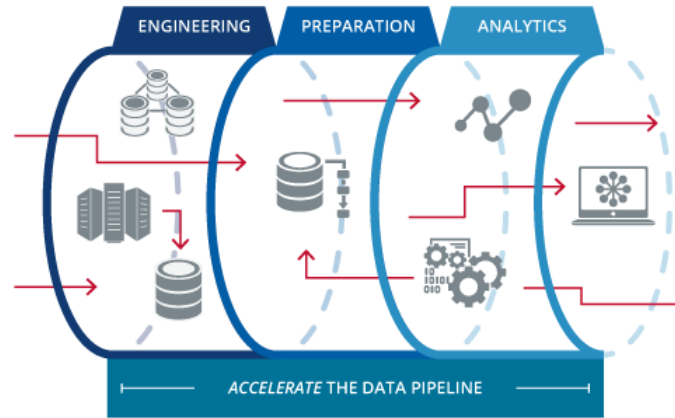
“Data Governance is the formal execution and enforcement of authority over the management of data and data-related assets”.



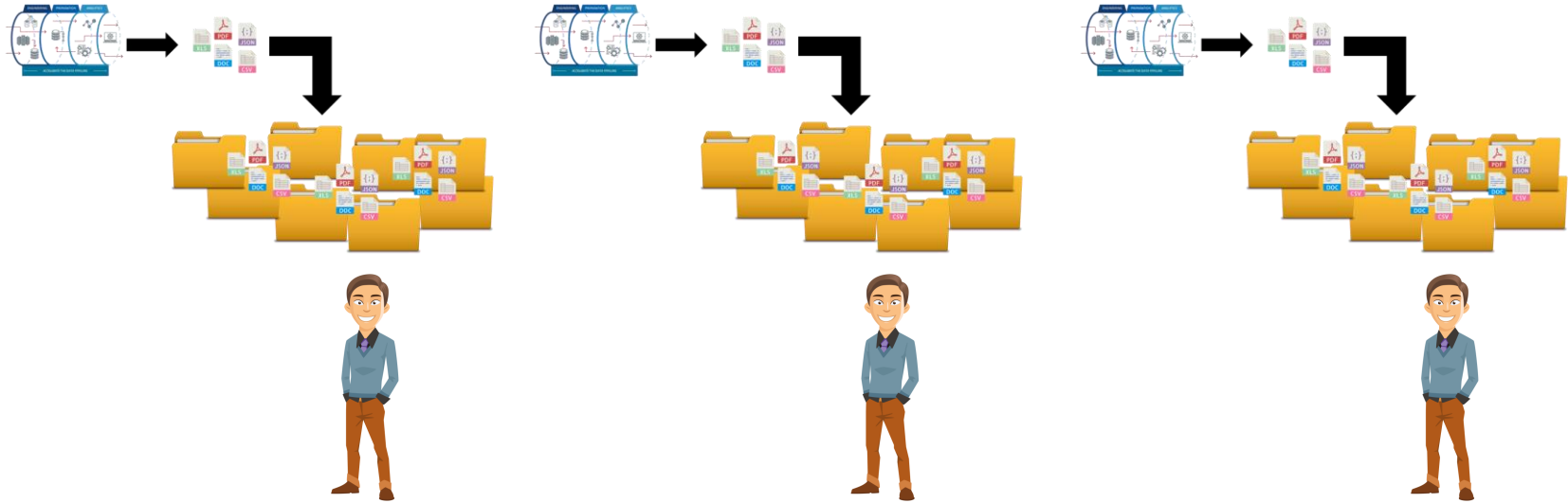
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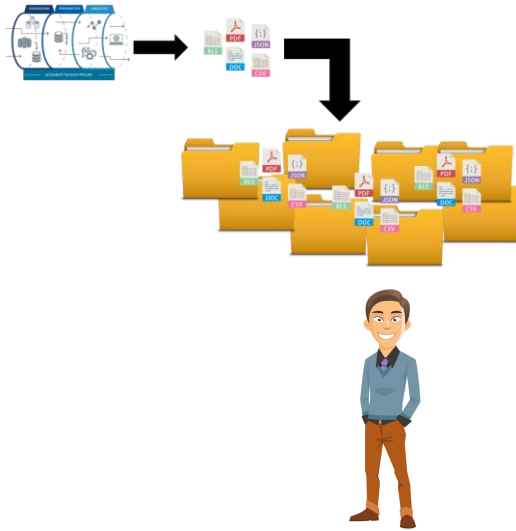
Who is responsible for Data Quality?



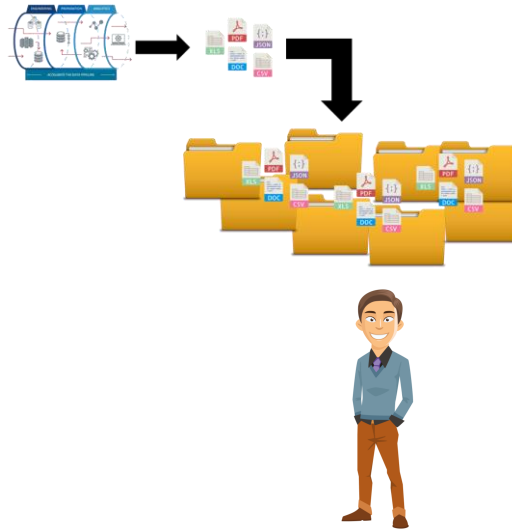
Introducing the Data Steward



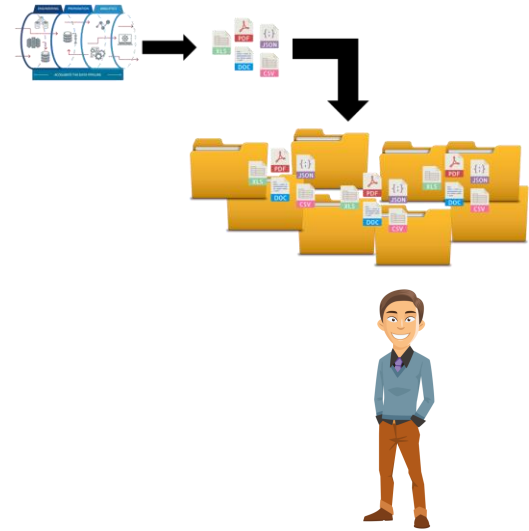
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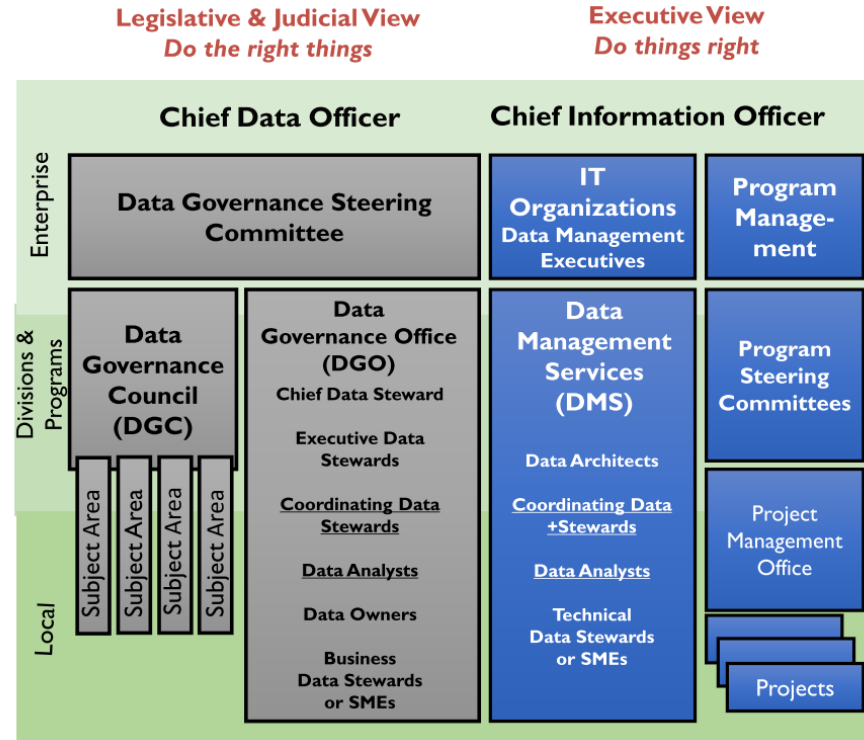
Meet the Data Steward



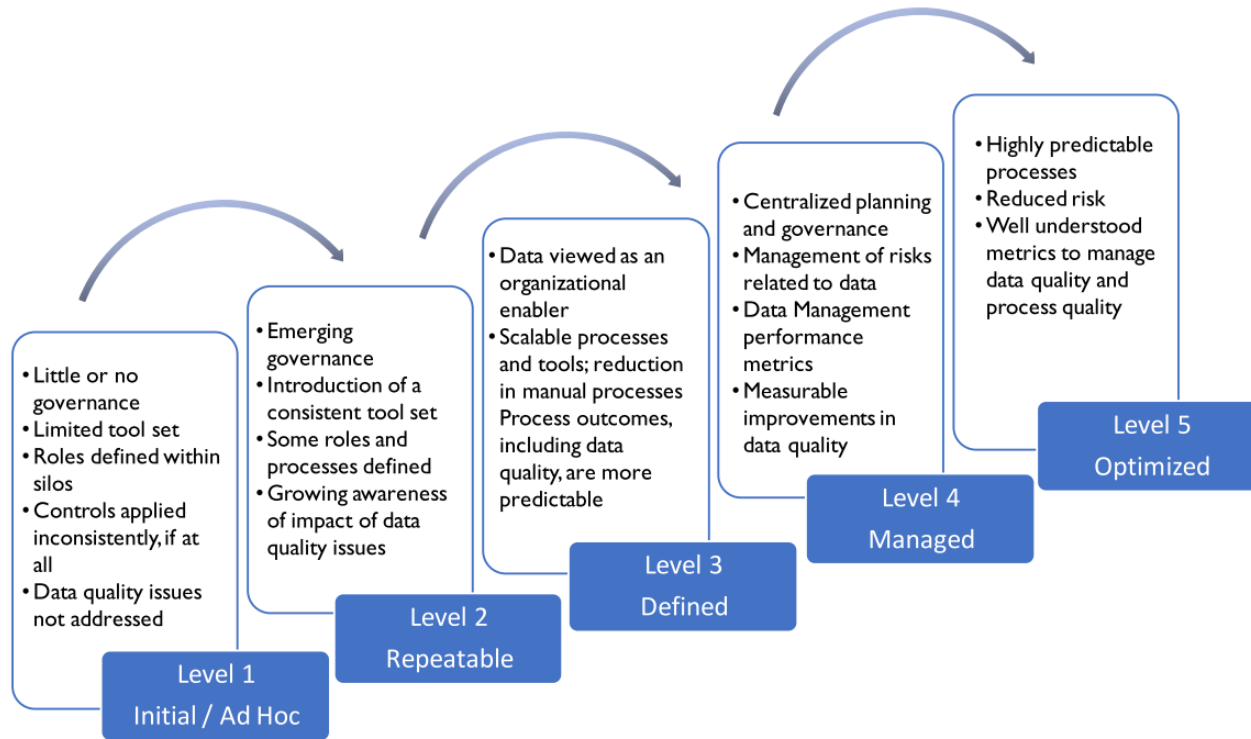
Responsibilities [DAMA]

- Creating and managing core Metadata
- Documenting rules and standards
- Managing data quality issues
- Executing operational data governance activities

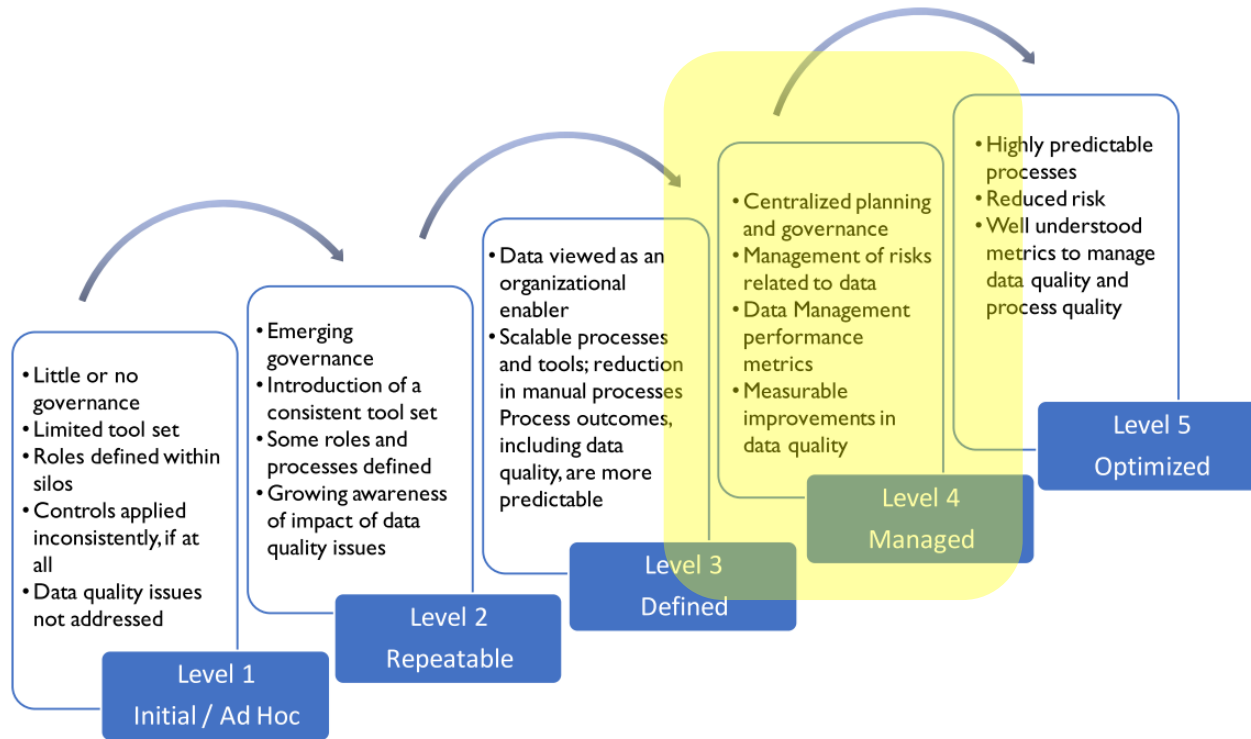
Data Governance as Organizational Effort [DAMA]



Data Governance Maturity Model [DAMA]



Data Governance Maturity Model [DAMA]

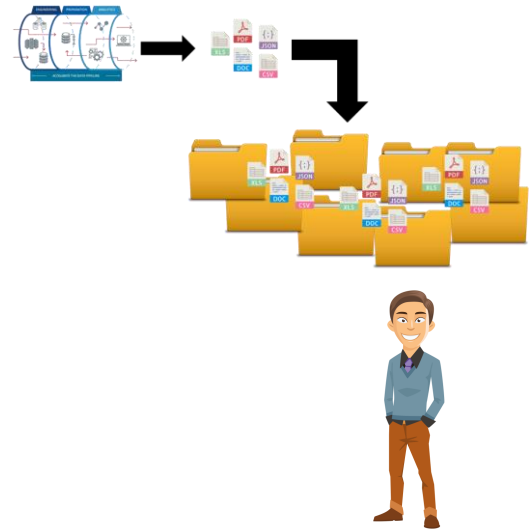
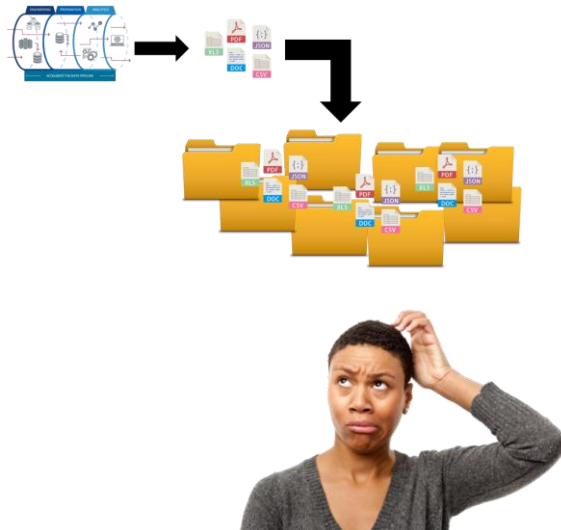
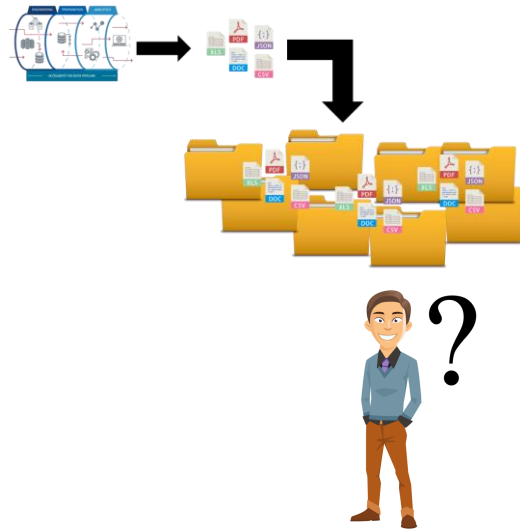


Definition Data-Driven Culture [Kremser, Brunauer, 2019]

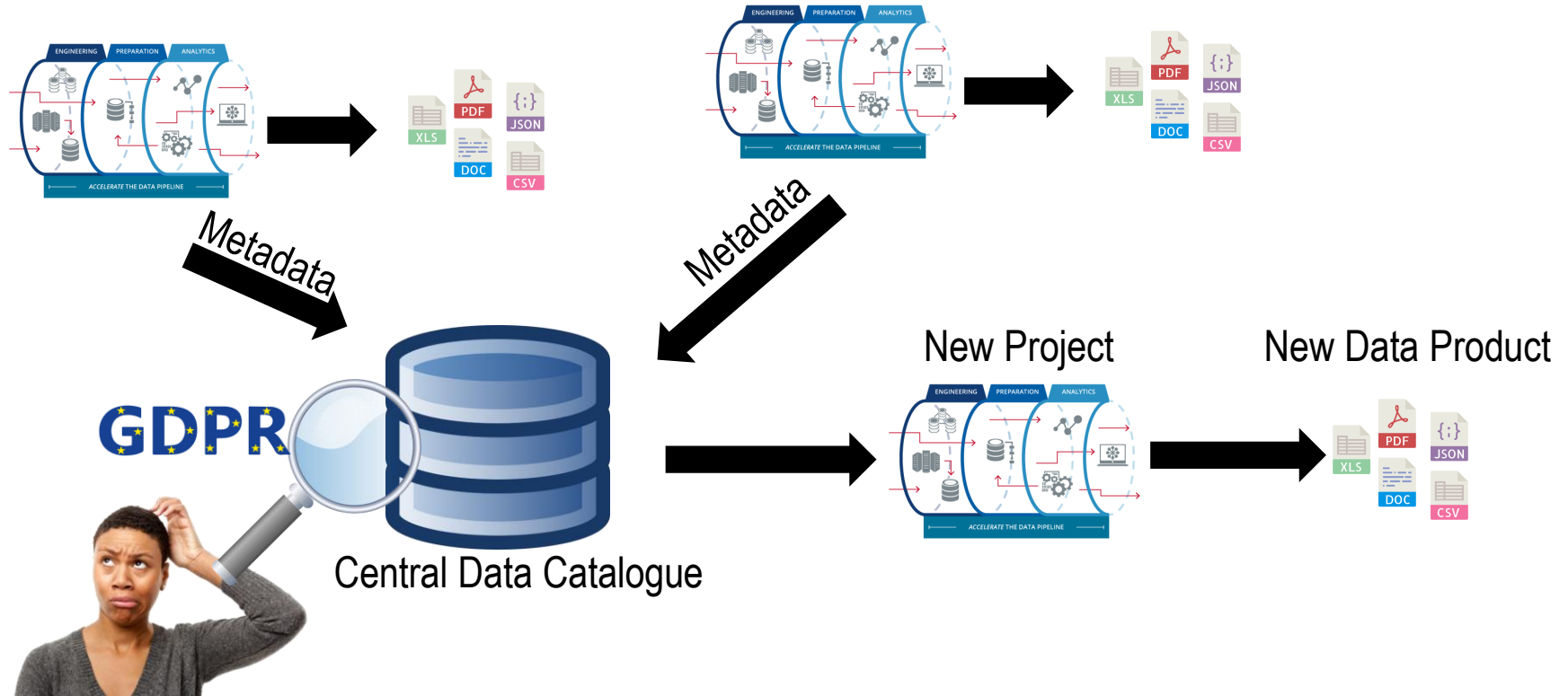
“A data-driven culture is a specific form of organizational culture in which

- (1) decisions on all organizational levels are made preferably on the basis of insights extracted from well-governed data;
- (2) all members encourage organization-wide, seamless access and provision of well-governed data, and
- (3) they take part in continuous distribution of knowledge and skills about data processing.”

How it could look like...



How it could look like...





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Thank you!



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