INTELLIGENCE · BUSINESS INTELLIGENCE

Data Governance Frameworks for Trustworthy Intelligence

Intelligence built on data can be trusted only if someone is responsible for that data. This article explains what data governance is, the main frameworks for organising it, and practical steps for making it work without burying the organisation in bureaucracy.

ModQu research article · 982 words · 10 references (APA 7th edition)

Business intelligence depends on data that people trust. Trust, in turn, depends on someone being responsible for that data: deciding what it means, how good it must be, who may use it and how long it is kept. **Data governance** is the system of decision rights and accountabilities that provides that responsibility. Without it, departments define the same measures differently, quality problems go unfixed, sensitive data are exposed and reports contradict one another. This article explains what data governance involves and how to organise it.

What data governance is

Khatri and Brown (2010) define data governance as deciding who has decision rights and accountability for an organisation's decisions about its data. It is distinct from **data management**, which carries out those decisions day to day. Governance sets the rules; management applies them. The distinction mirrors Weill and Ross's (2004) work on information technology governance, which found that organisations designing decision rights deliberately obtained more value from their technology.

Alhassan et al. (2016), analysing the research literature, found that governance activities fall into three groups: defining policies, standards and roles; implementing them; and monitoring whether they are followed.

Five decision domains

Khatri and Brown (2010) identify five domains in which governance decisions are needed, shown in Figure 1.

Five decision domains of data governance

Governance means deciding who decides each of these questions

Domain	Example decision	Typical decider
Data principles	Is customer data a company-wide asset?	Executive sponsor
Data quality	What error rate is acceptable in prices?	Data owner
Metadata	What is the official definition of 'active customer'?	Data owner and steward
Data access	Who may see salary or health data?	Owner, privacy officer
Data lifecycle	How long are call recordings kept?	Owner, legal, records

Domains from Khatri and Brown (2010); example decisions by ModQu

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Figure 1. Five decision domains of data governance. For each, the organisation must decide who decides. Domains from Khatri and Brown (2010); example decisions by ModQu.

Data principles establish how data are regarded, for example as a shared corporate asset rather than the property of the department that collects them. **Data quality** decisions set standards for accuracy, completeness and timeliness. **Metadata** decisions define what data mean, so that "revenue" or "active customer" is understood the same way everywhere. **Data access** decisions determine who may see and use which data. **Data lifecycle** decisions govern how data are created, stored, archived and deleted.

Roles

Governance assigns these decisions to people. Otto (2011), studying large telecommunications companies, found common roles. An **executive sponsor** provides authority and resolves conflicts. A **governance council** of senior business and technology representatives sets policies and priorities. **Data owners**, usually business managers, are accountable for particular data domains, such as customer or product data. **Data stewards** maintain quality and definitions day to day. A central **data office** supports them with tools, standards and coordination.

DAMA International (2017) presents a comparable structure in its body of knowledge for data management, placing governance at the centre of all other data management functions.

No single model fits all

Weber et al. (2009) argue that governance must fit the organisation's structure, culture and strategy. A centralised company may run governance through a single council; a diversified group may let each business unit govern its own data and coordinate only shared entities. Abraham et al. (2019), reviewing the research, describe governance as a combination of structural mechanisms (roles and committees), procedural mechanisms (policies, standards and processes) and relational mechanisms (communication, training and collaboration). All three are needed; formal structures without relationships produce rules that nobody follows.

Risk, value and law

Tallon (2013) argues that governance must balance the value of data against its risks and costs. More data and wider access create opportunities for analysis, but also risks of breaches, misuse and regulatory penalties, and the costs of storing and protecting data grow with volume. Governance decides where that balance lies.

Law sets minimum standards. In Canada, the Personal Information Protection and Electronic Documents Act (2000) requires organisations to obtain consent for collecting personal information, use it only for identified purposes, keep it accurate and protect it. Similar laws exist in many countries. Governance translates such obligations into specific rules for each dataset.

Principles developed for research data offer a useful model. Wilkinson et al. (2016) proposed that data should be **findable, accessible, interoperable and reusable**. Applied inside an organisation, these principles mean that data should be catalogued, available to those entitled to use them, described in standard ways and documented well enough to be used by people who did not collect them.

Making governance work

Governance often fails by becoming bureaucracy: long policy documents, slow committees and forms that people avoid. Practical approaches include:

1. **Start with problems people feel.** Begin with the data whose inconsistency causes the most visible pain, such as customer counts that differ between reports.
2. **Assign owners in the business.** Data owners should be the managers who depend on the data, not technical staff.
3. **Agree definitions publicly.** Publish a glossary of key terms and measures, and use it in every report.
4. **Build governance into tools.** Mark certified datasets, enforce access rules automatically and check quality continuously.
5. **Measure results.** Track quality measures, disputes over figures and access incidents to show whether governance is working.
6. **Keep it proportionate.** Apply strict controls to critical and sensitive data and lighter rules elsewhere.

An example

A credit union found that its board received three different figures for the number of members each quarter, from marketing, finance and member services. Each department counted joint accounts, dormant accounts and deceased members differently. The credit union appointed the head of member services as owner of member data, agreed a single definition with the other departments and published it. A steward checked the count each month against the agreed rules. Within two quarters the board received one figure, with a note explaining how it was calculated, and discussions moved from arguing about the number to deciding what to do about it.

Conclusion

Data governance gives business intelligence its foundation of trust. It answers the question of who decides what data mean, how good they must be, who may use them and how long they are kept. The research shows that no single structure suits every organisation, but every successful approach assigns clear ownership, agrees definitions, protects sensitive data and monitors results. Done in proportion to the risks and value involved, governance makes intelligence trustworthy without making it slow.

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