

Best practices for Implementing A Data Governance

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Abstract

Data Governance is the foundation upon which data architecture, security, and quality are built. The goal of data governance implementation is to improve data quality while reducing data-related risk and cost. However, if this programme is opposed or does not receive the full cooperation of stakeholders and the entire organisation, it may be less effective. It is a program that involve major changes and long-term commitment by the whole company. As a result, they practice several strategies to avoid conflict that might affect the effectiveness of this movement. Because each organisation has different purposes and goals in implementing data governance, they use different strategies to ensure that the data governance plan is effective based on their needs and goals. We aims to explores and learn the best practices for implementing an effective Data Governance plan by review previous research throughout this study. We will list several practises that have been used in the Data Governance programme and propose several practises that may be considered in ensuring the program's effectiveness.

Keywords: Data Governance, Data Quality, Information Management, Literature Review

1. Introduction

Data Governance is not a one-time event, but rather a long-term commitment to maintaining a stable data warehouse with secure and high-quality data. It can be a big challenge for the organization to maintain a stable data warehouse if rules and policies not being apply to data management, system resource usage, metadata changes and configuration of integration specification. With the continuous increase of data in the organization, it eventually increases the size of data warehouse and the organization expect it to bring more value to them. However, these benefits can only be achieved by spending cost and time to keep maintaining the application and running the data warehouse efficiently and securely [1]. By technically ensure that the data working accurately in the integrated server, the data management requires a good policies and guidelines to guarantee data privacy and quality. As a result, the organization implemented a data governance plan to bring

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control and discipline in the form of policies for management staff and data engineers to follow, with the goal of ensuring the data warehouse can have better management and produce better business insight to the corporate.

Most modern business need a data governance to continuously enhance their data security and quality. Data Governance not only crucial in ensure the security and quality of the company's data, but it's also an approach to have a complete control over your IT operation. There are both good and bad ways to implement a data governance strategy, and most businesses prefer to use the method that ensures the program's effectiveness. Since data governance is a continuous programme, the organisation gradually learned from experience what strategy works and which practises do not in the process of implementing data governance. Despite the growing importance of data governance, the current state of knowledge on the subject is fragmented. Publications either address data governance with a focus on specific decision domains such as data quality, data security, and data lifecycle, or they address data governance with a focus on data quality, data security, and data lifecycle. We focus our literature reviews on the strategy or practises used to carry out the data governance plan.

The remainder of this paper is structured as follows. First, we will explain our literature search and review method. Several strategies that are recommended or mentioned in the literature review will be listed in this section. Second, we will describe and propose best practices for successfully implementing a data governance plan. Third, we identify gaps in existing data governance practices and propose a research strategy that includes insightful questions for future research, and then conclude it with a summary.

2. Overview/Existing Works

The implementation of data governance within an organization is sometimes does not give the desired results. There are several major obstacles that could jeopardize the program's outcome and success. Cultural, political, and organizational resistance, for example, opposes efforts to give a transformation to the organization. Here are some steps that can be taken to address the issues that have been raised in relation to the successful implementation of data governance framework.

2.1 Begin with a small step and build out in step

Data governance is an iterative process and usually required a major transformation. But a sudden big changing in organization's policy and process can create a chaos and confusion to the data user. Therefore, it's advisable to begin the program one small step at a time. Building the framework in this approach can give the steward a chance in testing that new policies and processes before practice it to the whole organization. It may be start with people, politics, and culture before moving on to data governance and stewardship processes and technology [2]. Subsequently, it can continue with the maturity scale which will require a series of steps until reach the goals.

2.2 Acquire the senior management support

Data Governance requires a transformation to a work culture within the organization. And that change also requires funds and technological tools. Without moral and financial support from superiors or stakeholders, the change would not have been possible. So, data stewards should analyze the shareholders and convince them to get involved in this transformation. Involvement and support from stakeholders is very important because they have strong power and influence in setting decisions in the direction of the company. With their support, the implementation of data governance can accelerate a higher likelihood of success.

2.3 Clearly defined the responsibility and roles

Data governance necessarily involves the collaboration of all parties and is not a responsibility that can be carried out solely by an individual [3]. Roles, responsibilities, and ownership should be clearly defined so that everyone is aware of the tasks and work that must be completed by them. The main goal of data governance is to improve data quality and privacy within the organisation. As a result, it requires input and data ownership from all stakeholders within the organisation. According to the circumstances and requirements of the following organisations, each organisation has a different data governance organisation structure, but there are several key players that can be used in the relevant framework:

- **Chief Data Officer (CDO):** Responsible to lead business intelligence or data analytic team. Supervise the data-related function and lead the
- **Data Steward:** Accountable for the management of data resources and create the rules or policy to keep the quality of the data.
- **Data Owner:** The senior people in that organization who be held responsibility in defining the quality of the data quality
- **Data Producers:** everyone who create or capture the data and they must understand that they must do so in accordance with the Data Consumers' requirements.
- **Data users:** Organizational staff or consumer who manage or have the access over the data.

2.4 Measure the goals with metrics

We must measure the baseline before making the next decision to ensure that there are positive changes in implementing the data governance model. Since data governance is an ongoing process, measurements should be assessed in stages rather than at the end of the programme to ensure that every step taken throughout the data governance implementation is consistent and practical. The implementation progress can be measured in a variety of ways. The more metrics you have, the better. Some key metrics for data governance include the amount of sensitive data created, the amount of outdated data stored, and the number of folders provided by the data owner [4].

2.5 Communicate early and often

Communication is critical regardless of where you and your organisation are in the data governance programme and processes. Consistent and effective communication is critical for demonstrating the program's impact, celebrating victories, and candidly admitting setbacks. The communication not only should be established within your team but also with the stakeholder and everyone who access the data in that organization. It included to give them a clear guidelines and information about the change in the policies and process. This is to ensure that everyone in the organization can understand and well understand the data governance framework while avoiding surprises and socializing progress.

An effective programme is the implementation of data governance, which enables the organisation to understand where the data comes from and who owns it [5]. It also involves a clear process that can be followed whenever the data structure changes. Executives in charge of data governance should spend time with their teams discussing the values and responsibilities of the people they choose to manage processes and operate technology. These individuals will work together to provide management with data on which they can rely, use to make strategic decisions, and propel their organisation forward.

3. Synthesis of findings

According to the researchers, there are five best practices in data governance identified which can improve the plan at development, implementation, and review stages. The authors agree that data governance needs to be carried out by stages, it will always start with evaluating the current state and maturity, then followed by planning, implementation, and review. A good data governance programme must be taken step by step and not in rush by skipping steps. Everyone in the organization needs to realize that data governance programme is not a project, but it is a continuous effort along a stretch of period.

There is a consensus that data governance programme performs best by involving the whole organization, covering from c-level executive to junior executives, whoever uses data shall be part of the programme which roles and responsibilities are well defined. A clear escalation hierarchy and sponsorships from the top management can boost the morale and adherence from all the staff within the organization. Clear responsibilities assigned to each member are proven to increase the buy-in and involvement from all functions and departments, so the data governance programme will not miss out any of the functions in the organization. Starting early is commonly recommended, in defining the roles and responsibilities, communication and change management. Data governance programme often brings changes into the current process and procedure. Hence it is important to minimize the disruption on the business. By getting things started early, everyone in the organisation can be more prepared. Hence, more preparation work could be done to ensure a smoother transition from one phase to another.

4. Proposed Works

Most of the existing practices in data governance implementation was based on previous experience that the organization learnt from their mistakes or while recovering from the challenge. The practices can be useful for some business but might not be practical for some of them. And this practice can be changes depends on the business need. Other than the existing work that have been mention above, we also discover several strategy or practices that might be useful to be implement in making the data governance plan effective. Our proposed practices are:

4.1 Encourage participation by giving incentives.

Data Governance plan required active participation by the whole organization. This it can be quite challenging for the company to encourage the staff to give their cooperation and time in making it work. This program required them to give continuous commitment and they might get tired or unmotivated to do it or think that it is not their job to work on it. So, organization can offer any incentives or reward when the staff show a good commitment contributing to the data governance implementation. The incentives not necessarily to be material rewards but also can be the internal reward that might be benefit for their career growth.

4.2 Periodic reminder about the policies

Going out from their routine and making changes in their work can be quite uncomfortable and they might naturally doing work in the way they used to do without following the new policies that being implement in the data governance plan. Data Steward can make initiatives by giving regular reminder about the new policies during early implementation of the new guidelines. And the staff also should be advised on the importance of this data governance plan and the benefit behind it.

5. Conclusion and Future Work

Data governance is becoming increasingly important to most organisations due to the digitalisation of processes and businesses. However, the concepts of data governance are still new to certain organisation and it might get a lot of frictions moving forward. A good practice in data governance programme can help an organisation to avoid conflicts and increase the chance of success in implementing the programme. There are five main practices highlighted in the paper, starts with small steps, acquires support from senior management, clear roles and responsibilities, measure goals with metrics, and communication early. These practices can be seen as stages of data governance programme implementation, where the data governance practitioner could follow for a smoother path to achieve the end goal.

In future, there should be more emphasis on the discussion of specialised data governance practices in different industries, such as healthcare, education, manufacturing, etc. Therefore, there are better references to each industry since digital transformation will eventually affect all industries.

6. References

- [1] R. C. Rickards, "Data Governannce Challenges facing controllers," *International Journal of business,accounting and finance*, vol. 6, no. 1, p. 25, 2020.
- [2] C. Bruck, "Challenges and opportunities of Data Governance in private and public organizations," Department of Information Systems and Operations, Vienna University of Economics and Business, Vienna,Austria, 2017.
- [3] J. Petters, "Data Governance Framework Best Practices, Definitions and Examples," Varonis, 29 March 2020. [Online]. Available: <https://www.varonis.com/blog/data-governance/>. [Accessed 29 June 2021].
- [4] H. Sun, "Enteprise Information Management : Best Practice in Data Governance," Oracle, 2011.
- [5] V. C. Lai Kuan Cheong, "The need for Data Governance : A Case Study," *18th Australasian Conference on Information System*, vol. 18, p. 999, 2007.