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\Orchestrating a brighter world

Data Lifecycle Management

and the Data-driven Culture

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NEC connects people through reliable communication infrastructure while also helping to keep communities safe and secure with intelligent surveillance systems and the world's leading biometrics identification technologies.

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Over the next decade data will continue to exponentially reproduce more data. We expect ongoing growth as deep learning gains greater adoption and fuels the data-driven culture.

Introduction

A data-driven culture can unlock ways of helping organisations plan for and proactively respond to challenges and changes in the business environment.

Adopting a data-driven culture means that data should be treated as a resource that must be identified, owned and managed throughout its useful lifecycle. Data Lifecycle Management (DLM) underpins Knowledge Management and Information as a Service.

Gartner views Data Lifecycle Management (DLM) as "[the] process of managing business information throughout its lifecycle, from requirements through retirement. The lifecycle for data crosses different application systems, databases and storage media.

The cycle is made up of phases of activity including create, use, share, update, archive, store and dispose. Data management best practices indicate a need for each phase to be governed by a framework that provides for the most effective enterprise business decisions."

Issues with data

At the beginning of the last decade, IDC estimated that 1.2 zettabytes (1.2 trillion gigabytes) of new data were created in 2010, up from 0.8 zettabytes the year before. The amount of the newly created data in 2020 was predicted to grow 44X to reach 35 zettabytes (35 trillion gigabytes). Two years ago, we were already at 33 zettabytes, leading IDC to predict that in 2025, 175 zettabytes (175 trillion gigabytes) of new data will be created around the world.

Exponential data growth presents organisations with challenges that can include:

Spiralling storage costs	Compromised data integrity	Non-compliance with regulatory requirements

A data-driven culture demands confidence in the data assets that are propelling decision making

Historically the inherent cost to understand and manage data has been an inhibitor to organisations investing in data curation and management. Alternatively, start-up organisations such as Uber, Populus and the UK's Black Swan are born data-driven. Real-time metrics and machine learning are part of the organisation's DNA. Start-ups do not have the legacy of decades of data that needs to be understood and organised before being able to move forward with innovative data-driven business practices.

The investment into understanding an organisation's data can be off-set by:

• Low levels of accessibility and trust in an organisation's data

• The missed opportunity cost incurred due to an organisation's inability to adopt a data-driven culture

• The time spent by employees to source data for their day-to-day work activities.

According to a McKinsey report , employees spend 1.8 hours every day searching and gathering information. On average, that's 9.3 hours per week.

Preparing for a data-driven culture

A data-driven culture demands confidence in the data assets that are propelling decision making. An organisation can gain confidence by employing a data lifecycle management framework to understand the organisation's data, how it is managed and consumed.

A well-established DLM framework enables:

1 Data collection with rigour and process

2 The reuse and repurposing of data

3 Long term preservation

4 The design of cost-effective storage and back-up solutions

5 Understanding the dimensions of data sets: depth and breadth of data

6 Identification of unverified and outdated data – manages the data chaos

7 The definition of digital assets' privacy and security classification.

Key components of a robust DLM framework

Understanding how data is created and consumed is instrumental in navigating legal (data-privacy compliance) and ethical obligations in using data responsibly, as well as managing risks relating to data management. For an organisation to understand and manage its data, there are seven recognised steps of a DLM construct to follow.

1. Creation of Data

The methods of data creation and capture needs to be identified and analysed. Custodians and consumers, along with sensitive data classification, are identified during this initial phase.

2. Data Storage Practices and Technology

Define the current data storage processes, technology(s) and locations.

3. Understand the Usage Patterns of Data

User personas (Creators and Consumers) provide insight into how data is used and what decisions and insights are derived from the data assets.

4. Data Collaboration

Ascertains the collaboration and repurposing of data which includes all internal users and external stakeholders. Data collaboration includes open data and comprises of the rules and standardised formats in which the data is exchanged and used.

5. Data Management and Maintenance

Define the data upkeep and quality assurance processes with associated privacy and legal compliance considerations. Furthermore, an output of this phase is the definition of how management and maintenance are incorporated into the organisation's digital governance framework.

6. Data Archiving and Retention

Identifies the archiving process(es) and compliance requirements for critical artefacts and data sets.

7. Data Destruction

Verifies the data destruction policies methods for each of the critical artefacts and data sets.
In some instances, the storage medium destruction process for sensitive data will be incorporated into this phase.

Conclusion

There is a groundswell sees organisations attempting to transform to a data-driven culture through the adoption of real-time metrics, artificial intelligence and deep learning (i.e. machine learning). Many initiatives encounter hurdles due to the quality of data and/or the lack of understanding of the data.

Most organisational assets are well understood and have a management structure associated with each asset class. Historically digital assets have not been treated like other business assets in that data has not had an intrinsic value and therefore has not been curated resulting in data being allowed to grow in abundance.

The value of DLM investment is truly realised with the future adoption of innovative data-driven decisions and solutions

The time has arrived where organisations need to invest in Data Lifecycle Management so they can move forward, transforming to a data-driven culture and be able to adopt new technologies whilst having confidence and trust in data. A DLM framework allows organisations to leverage Big Data as an asset rather than simply as a by-product of business processes.

Data Lifecycle Management must be seen as Value on Investment (VOI). The value of the investment is truly realised with the future adoption of innovative data-driven decisions and solutions, which builds increased business resilience.

For further information or an obligation free consultation, contact our Consultancy and Advisor team at nec.com.au