Akkodis
Whitepaper

Key Considerations in a Smart Data Strategy

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At Akkodis, we've found that a smart Enterprise Data Strategy takes an iterative and repeatable approach. We'd even go so far as to say that this is the only approach that works. Enterprise Data Strategy success can only be built on a bedrock of rapid, agile initiatives using data to address critical business initiatives, underpinned by strong enterprise governance and data classification. And for most organizations, this involves a substantial cultural shift.

Every organization needs a data strategy to navigate the process of using data to get ahead. After people, data is fast becoming the most valuable business asset, often referred to as the 'new oil'. Successful and forward-looking enterprises are now harnessing their data asset to make strategic business decisions and leave their competition behind.

But what does this involve?

First, let's recap on what a good Enterprise Data Strategy does for your organization.

Enterprise Data Strategy defines how data can be best used to support organizational business strategy. It provides the highest level of data guidance available within the enterprise. Enterprise Data Strategy also involves the ongoing balancing of learnings from earlier iterations with new ideas to produce reliable data assets.

The six key components of an Enterprise Data Strategy are:

1

Data Identification

Accurate and trusted data sources are the key output from any data initiative. These may be supported with easy-to-read business glossaries, data catalogues, and easy to follow governance policies that provide concise information about what data sources are available and what can be used.

2

Reliable, scalable data platform

The use of cloud-based data warehouses, data lakes, or data repositories allow for scalable, reliable, and secure environments to technically manage the data asset. When using cloud services, you only pay for what you use so project costs can be easily identified.

3

Provisioning

Data can be provisioned by multiple technical 'software as a service' (SaaS) products creating data mesh, data fabric and semantic layers. These provide the best interface to enable users across the organisation to make use of the data.

4

Process

Using best of breed Extraction Transformation and Load (ETL) platforms to process the data from disparate and often geographically separated data sources into a location that can be easily consumed by the business.

5

Enterprise Governance

Policies, procedures, and guidance on how the data may be accessed and used by a business unit. These may be supported by Machine Learning and Artificial Intelligence platforms to ensure a quality and reliable data set.

6

Education

Informing the whole enterprise from the Executive through to end users about becoming a data-driven business and what data-related processes should be adopted and used.

Beyond these, we find that there are several key pragmatic considerations in progressing your Enterprise Data Strategy:

Firstly, Enterprise Data Strategies frequently involve cultural change throughout the organisation – and this takes time.

Becoming a data-led organization is quickly emerging as a top priority at board level and is critical to driving sustainable growth. It enables the business to become rapidly responsive, with an innovative culture and processes that reinvent the organisation based on increased awareness of its data. To do this, the Enterprise Data Strategy should encourage a philosophy of 'good data beats opinions', with the premise that any data asset can be continually improved, thereby adding to its utility in decision-making.

However, adopting a data-centric philosophy and treating data as a strategic asset requires a significant cultural change in both IT systems and the wider business. It is imperative to put in place organisation-wide change management strategies as part of the Enterprise Data Strategy implementation, otherwise you may risk loss of executive level sponsorship, a slowdown in organizational momentum, or deviation from the vision.

Implementing a successful Enterprise Data Strategy requires patience, persistence, and endurance. It can take several years to become a proficient data-driven organization. Attempting to implement a grand Enterprise Data Strategy with 'big design up front' is far more likely to fail than an incremental approach, with the organisation becoming well-versed in delivering smaller, incremental initiatives that combine to support the business's data requirements. The learnings gleaned from each smaller iteration can be applied to future initiatives and other business units wishing to start similar initiatives. After each successful iteration has been completed under the guidance of the enterprise strategy, learnings should be published to inform the next project and increase the company's overall data proficiency.

Establishing realistic expectations across the enterprise about what is involved in becoming a data-centric organisation is key. Understand that both a cultural and technical shift takes time and effort, but the end results will speak for themselves.

The second is to choose the right enterprise data platform to support your data-driven processes.

The platform's future direction needs to be in line with your own, as the ever-increasing volume of Platform as a Service (PaaS) data services feeds into strategic decisions. What may seem suitable today may not meet the needs of the Enterprise Data Strategy in the future. It needs to match the skills profile of your workforce. Balancing the adoption of best of breed technology with staff capability is an ongoing battle for many organizations.

The third is to develop shared data assets independently.

To move forward with the implementation of an Enterprise Data Strategy, shared data assets must be developed separately from other initiatives. With finite resources to provision consumable data sets, a shared data set needs to be given the appropriate attention, priority, and support by all departments who will use it. Existing projects can then be migrated to use the shared data set once it has been successfully implemented. For example: to create a primary address list from multiple separate address lists in each department and business, technical resources need to be allocated to create and populate the main list, along with all the governance and data processes to test, support, and provision a list that will be useful for all departments. Being mindful of any updates and changes to this main list will require agreement from all who use it.

Lastly, recognize the need to continually adjust your Enterprise Data Strategy to cater for upcoming technological advancements.

Whether they be in the short, medium, or long term, they can drastically influence your approach. These are some examples of forthcoming developments that we believe will impact the way in which enterprises provide secure, useable, and reliable data sets:

Low to No Code Machine Learning services are becoming available for all to use, potentially reducing cost overheads by allowing data science projects to be engineered by data engineering staff. This technology may be easily adopted by all organizations needing to implement data cleansing during the process of ingesting data (via Extract-Transform-Load or similar). One example could be cleansing of IoT data used in the resource sector as it is ingested. Another might be address management by health care services, helping keep patient address data as accurate as possible. The inherent quality improvements mean data engineers should be able to tackle what are currently data science projects, thereby negating the need for expensive data scientists to make sense of incomplete or lower-quality data.

Automatically Scalable Graph Computing will scale to accommodate data sets of any size, from hundreds to billions of records. This will provide cost savings as it will no longer be necessary to pre-select a platform of a given size. Enterprises will be able to use it to gain rapid insights across massive data sets - identifying expected or unexpected relationships between data elements and more quickly driving business benefits.

Artificial Intelligence (AI) is already empowering rapid technological hardware advancements from edge and personal devices to data centre and even chip design itself. In turn, many organisations are developing advanced designs that take a holistic approach across hardware and software. Apple's M1 series of processors were developed using advanced AI techniques, producing the best performance per watt chip in the industry. Using AI in the development of industry specific hardware and software speeds up the development of bespoke solutions and maximises hardware utilization.

Automatic Machine Learning (ML) for data processing and analysis is becoming increasingly valuable. The use of Machine

Learning for data analysis and processing is not new. However, use of automatic Machine Learning processes in a data pipeline to cleanse and validate data sets of billions of records is fast approaching maturity within multiple cloud vendors. Machine Learning as a data cleansing or analysis service will become universally adopted, as opposed to the current situation in which it is a specific Platform as a Service (PaaS) offering from a few vendors. This may be used by all industries processing and analysing data to speed up data cleansing and master data management routines. A key benefit is the automation and acceleration of data preparation activities in creating all-important information assets, thereby enhancing speed and quality of decision making.

Quantum Computing is a completely disruptive advancement that will revolutionize anything needing compute power for analysis and design. Estimates vary regarding when it will become available in the mainstream, but it will allow organisations to tackle problems that current compute power is incapable of solving. In 2019, a calculation that would normally take the world's fastest supercomputer 10,000 years to solve was processed within minutes by a quantum computer. Plus, traditional data encryption methods could be easily cracked with quantum computers, so newer encryption methods will need to be developed and adopted for complete data security scenarios.

A smart Enterprise Data Strategy is one that involves incremental learning and adaptation. Over time, this helps the organization to embrace a data-driven culture and use its ‘new oil’ data asset to its maximum potential. It is the best bet to achieve success in the near-to-medium term and to continually position your organization to realise the benefit of current and future technologies.

About Akkodis

Akkodis is a global leader in the engineering and R&D market that is leveraging the power of connected data to accelerate innovation and digital transformation. With a shared passion for technology and talent, 50,000 engineers and digital experts deliver deep cross-sector expertise in 30 countries across North America, EMEA and APAC. Akkodis offers broad industry experience, and strong know-how in key technology sectors such as mobility, software & technology services, robotics, testing, simulations, data security, AI & data analytics. The combined IT and engineering expertise brings a unique end-to-end solution offering, with four service lines – Consulting, Solutions, Talent and Academy – to support clients in rethinking their product development and business processes, improve productivity, minimize time to market and shape a smarter and more sustainable tomorrow. Akkodis is part of the Adecco Group.

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Engineering a Smarter Future Together

Leveraging the power of connected data to accelerate innovation and digital transformation.

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