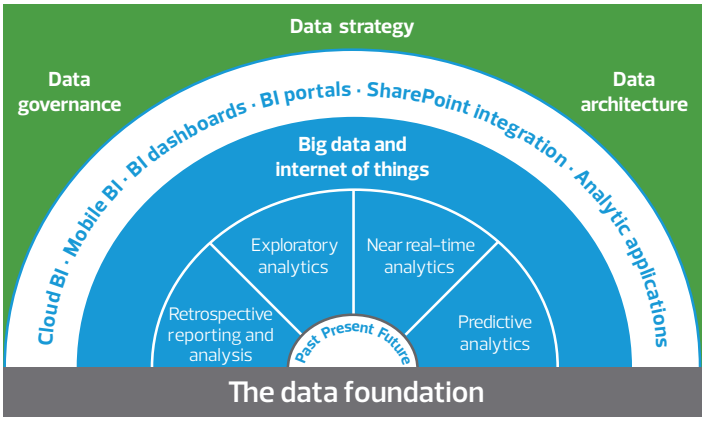
The importance of strategy and data management

Introduction

This is the third of a three-part series focused on designing a business intelligence (BI) solution. In order to design a complete solution, there are three main areas of focus:

- **Strategy and data management** (data-managed) encompasses proactively defining and managing data as an enterprise asset.
- **Reporting, analytics and information delivery** (data-out) encompasses the ability for end users to efficiently consume the integrated data for proactive decision-making, creating a competitive advantage and driving organizational excellence.
- **The data foundation** (data-in) encompasses the integration of data from multiple, disparate sources into a trusted, understandable form for use in reporting and analytics.



Strategy and data management (data-managed)	Reporting, analytics and information delivery (data-out)	Data foundation (data-in)
Proactively defining and managing data as a strategic enterprise asset to foster innovation, drive organizational excellence and create a competitive advantage	The ability for end users to consume the integrated data in an efficient and effective manner	The integration of data from multiple, disparate sources into a trusted, understandable form

Criteria for strategy and data management

Managing data as a strategic, enterprise asset has become a requirement for organizations. They need to use all the tools at their disposal to foster innovation, drive excellence and create a competitive advantage.

A clear vision that data is a valued strategic asset to the organization

For an organization to truly realize the value of its data, it must first acknowledge it as a strategic asset and treat it as it would any other. This includes proactive definition and management, as well as defining how enterprise data will be deployed and used in the organizational decision-making process. Once acknowledged that data can be just as powerful a tool as other assets, an organization can realize exponential value from it.

A plan on how to institutionalize the concept of enterprise data and weave it in as part of the fabric of the organization

Acknowledging the value of data and actually translating it into real, tangible value are two very different things. As with any other asset, care must be taken to develop the proper use and management. However, this can be a challenge for many organizations as data is not a physical asset in the same sense that plant, property and equipment are physical assets. Leading organizations develop a data strategy and road map to introduce, nurture and grow the concept of enterprise data. The goal is that, over time, the use of enterprise data becomes part of the fabric of the organization.

The right processes, best practices and enabling technology to continually support and manage the use of organizational data

Realizing the value of an organization's data and having a plan to institutionalize the use of enterprise data are critical first steps. However, it is equally important to have the right support constructs in place to ensure the continued realization of the value that has been developed. This includes the implementation of a data governance function, the right production support levels, pragmatic processes and procedures, and standardized data architecture and technologies.

A continuous improvement mindset

The concept of enterprise data is not a "once and done" endeavor. Business needs change, new technologies arise and the level of complexity and sophistication in reporting and analytics required by end users increases. The continued review and evaluation of an organization's data ecosystem is required against a number of factors with the goal of maintaining and growing the capabilities.

Benefits of effective strategy and data management

Having an enterprise view of data and providing users the ability to access trusted, enterprise-validated data has significant benefits:

Greater organizational consistency

Data is the lifeblood of organizational decision-making. However, the environment in many organizations puts the onus on end users to find, collect, integrate and summarize the data they need to perform reporting and analytics for their job. This often results in conflicting answers to the same question, data with poor quality being used in decision-making or information not being actionable due to lack of timeliness. Treating data as a strategic asset and ensuring that it is consistently defined and managed drives consistency in the use of data and significantly reduces many of the common pain points in reporting and analytics faced by organizations.

Improved enterprise collaboration and communications

By treating data as a strategic, enterprise asset, organizations spend less time discussing whose numbers are right or how they were created, and more time using the data in achieving business goals and objective. This allows for individuals across the organization to collaborate more effectively as they work together on applying the results of using the data instead of getting to a common understanding of the data.

Increased productivity

As noted earlier, when the onus is not on users to find, collect, integrate and summarize the data they need to perform reporting and analytics for their job and everyone is operating on a common data platform, their time is spent on using the data to foster innovation, drive organizational excellence and create competitive advantage. This can have an exponential effect on productivity as the bottleneck of getting usable data for reporting and analytics has been significantly reduced.

Improved ability to deliver results

When end users are operating under a common understanding of data and on a consistent and well-managed data and technology platform, not only does their productivity increase, but also their ability to deliver results. Driving innovation, improving processes and finding new ways to differentiate from competitors can be significantly enhanced when end users truly leverage enterprise data.

Potential reduced cost of technology ownership

Many organizations have a wide range of technology options available to them for reporting and analytics. Additionally, these technology options often offer very similar functionality and capabilities. However, a technology landscape that is oversaturated with similar tools and technologies can come at a high price including high licensing costs, inefficient training and excessive infrastructure.

By standardizing on a common data and technology platform that is focused on promoting the business goals and objectives, the overall total cost of ownership can be significantly reduced. Consolidation of servers, enterprise licensing, reusable training materials, etc., all have the potential for significant cost savings and avoidance. Additionally, when a common data and technology platform is defined, the ability to realize additional cost savings from such things as cloud technology becomes more realistic.

Consequences of the lack of effective strategy and data management

Without an enterprise data strategy, effective governance and a robust data and technical infrastructure that support the enterprise view and use of data, an organization puts itself at risk for unintended consequences. These include:

Conflicting information, reporting and analysis

When the onus is put on end users to find, collect, integrate and summarize the data they need to perform the reporting and analytics for their job, the result is often conflicting answers to the same question and erroneous analysis. This can have a significant negative impact (both in terms of financial and reputation) in the decisions an organization makes.

Greater cost of technology

Without a consistent and commonly defined and managed data and technology platform, the total cost of ownership for reporting and analytics can potentially be significantly inflated. Duplicative costs of tools that essentially perform the same job, excessive support, inefficient training and administration all contribute to organizations potentially unnecessarily spending scarce dollars.

Organizational waste (time, infrastructure)

The amount of waste generated from a disconnected data ecosystem and data silos can be significant for an organization. From duplicative infrastructure (hardware and software), to unnecessary production support, the amount of organizational waste can result in significant dollars, elongated project delivery times and overall reduced employee morale.

Reduced productivity

Directly related to the organizational waste generated from a disconnected data ecosystem is the reduction in overall organizational productivity. From time spent finding and collecting data to needless discussions on which numbers and analysis are correct, the productivity drain from a disconnected data ecosystem can be significant to many organizations.

Implementing an enterprise data strategy and an effective data management platform

Putting effective data management capabilities in place that support the overall data strategy (and in turn, the business goals and objectives) requires a balance between people, process and technology. Each of these components plays an equally important role in the ability to maximize the value of organizational data. It can be broken down into the categories of data strategy, data architecture and data governance.

While these are listed separately in the illustration below, they are very much interrelated. Additionally, even though a category might sound purely technical (data architecture) or more organizational-related (governance), they all have people, process and technology aspects to them.

ENTERRPRISE DATA STRATEGY	
▪ Strategy definition ▪ Road map definition ▪ Business and technology alignment	
DATA GOVERNANCE	**DATA ARCHITECTURE**
Management and oversight ▪ Monitoring and compliance ▪ Continual improvement ▪ Portfolio management	**Infrastructure** ▪ Technical architecture ▪ Hardware ▪ Software ▪ · Data security and privacy
Enterprise view ▪ Enterprise data models ▪ Enterprise master data program ▪ Enterprise metadata program ▪ Enterprise data quality program	**Guidance and advice** ▪ Standards and best practices ▪ Data architecture direction

Start with a plan (enterprise data strategy)

An enterprise data strategy starts with understanding the business goals and objectives and then defines how properly leveraging an organization's data can help achieve them. By aligning the data strategy with the business goals and objectives, the necessary data is identified from the volumes of data available.

Robust enterprise data strategies take into consideration both the technical and nontechnical aspects of data. While the data architecture, tools and technology decisions are important, ensuring that the proper processes, procedures, best practices and organizational constructs are in place to support the use of data is just as (or even more) important. Balancing the technical and nontechnical aspects of data is mandatory for a sustainable and growth-oriented data ecosystem.

An enterprise data strategy will also assist in understanding the costs and benefits associated with creating the integrated enterprise data and analytics ecosystem. In conjunction with a phased implementation road map, a clear financial picture cost and benefits can be assessed for each set of capabilities that are enabled.

A final consideration is that an enterprise data strategy is not a "once and done" exercise. Changes in business goals, objectives and priorities can accelerate or slow down the implementation of a given set of capabilities. Having the end-state vision and the implementation road map greatly facilitates addressing these changing needs.

Develop an enterprise data and technology platform (data architecture)

As noted earlier, implementing the right data architecture, tools and technology is a critical step in the use of enterprise data. The data strategy should define the conceptual data architecture and, at a minimum, identify the required end-state capabilities and discuss the options for tools and technologies. The realization of the physical data architecture will occur during the execution of the strategy. Likewise, the tools and technology, if not selected as part of the data strategy, will be implemented as part of the strategy execution.

The data and technical architecture essentially defines the data foundation and reporting, analytics and information delivery components of the integrated data and analytics ecosystem. It should cover items such as:

- Data foundation
  - Data storage (including data modeling)
  - Data integration
  - Data quality
  - Master data management
  - Metadata management
  - Security, access and privacy
  - Job processing
- Reporting and analytics
  - Retrospective reporting and analytics
  - Exploratory analytics
  - Near real-time reporting
  - Predictive analytics
  - Big data and the internet of things
- Information delivery
  - Business intelligence dashboards and portals
  - Mobile business intelligence
  - Cloud business intelligence
  - Intranet and SharePoint integration
  - Analytic applications
- Infrastructure
  - Hardware
  - Software
  - Security, access and privacy

The data architecture should also define the standards, processes and best practices that will be followed in the realization of the physical architecture and in the implementation of data and analytics related projects. In addition, the processes around how the data and analytics technical platform will be managed needs to be addressed.

Define a pragmatic, phased implementation road map

The needs of an organization can change rapidly. Shifting business goals and objectives, new regulatory requirements and changes in the competitive landscape are examples that show the need for flexibility in reporting and analytics. By defining a phased implementation road map, an organization can quickly adapt to changing needs, while still progressing towards the long-term vision. A phased implementation road map also allows for periodic evaluation of the current processes, organizational constructs and enabling technology to ensure their continued applicability.

Consider use case-based governance framework (governance)

Governance plays a critical role in ensuring an organization's data is properly defined and managed. The data strategy should, at a minimum, define the data governance framework, which outlines the process under which the use of enterprise data will be realized. Even if an organization currently has a data governance function, the data strategy should evaluate the ongoing role it will play.

An effective and efficient method to realize governance capabilities is to align them with the implementation of reporting and analytics use cases. As each use case is implemented, the required supporting governance capabilities are put in place to ensure the use case is implemented under the correct processes, best practices and enabling technology, as well as ensuring the proper ongoing support is defined. Use case-based governance relies on the aforementioned data governance framework. Leveraging a use case-based governance methodology also allows organizations the ability to evolve their data governance capabilities over time instead of taking a "big bang" approach, as well as providing the necessary flexibility to accommodate changes in business priorities.

Right-sizing processes and procedures (strategy, governance, architecture)

Implementing an enterprise data management framework can be a daunting endeavor. Organizations can go overboard in defining overbearing and cumbersome processes and procedures in reaction to not wanting to get it wrong. This can have a devastating effect. If an organization has a clear data strategy, a well-defined data architecture and a pragmatic approach to data governance, defining and implementing the right level of processes and procedures become much easier. Additionally, by taking a continual improvement approach, an organization can adjust processes and procedures to reflect changes in the overall business environment.

Conclusion

While the path to truly having an enterprise view of data can be a challenging journey, the benefits can pay dividends many times over. Having a strategy and plan in place can make the journey easier, and realizing the capabilities in an incremental fashion in support of business goals and objectives can provide an early return on investment.

For more information on how you can get the most out of your most important asset, download The basics of data and reporting governance e-book.

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