



Data Mesh Adoption

Challenges and Opportunities

WE NEED DATA AND WE NEED IT NOW. For decades, we've been trying to deliver data fast. It seems simple, but there are many complexities. This is where data mesh comes in, bringing structure, security, and governance. It responds to our frustrations with centralized efforts around curating data, which are just not feasible in today's complex data landscapes. This newfound emphasis on decentralization does come with challenges; however, the opportunities far outweigh them. Here are some of the challenges and opportunities.

CHALLENGES

Culture

To implement a data mesh, businesses need to transition from relying on IT for information management to taking the helm directly, designing—and assuming responsibility for—the underlying logic of information management. Business owners must understand how their implementation choices and business processes impact data products. IT's role has been largely reframed to focus on infrastructure and environmental support, impacting IT in areas like software implementation, application development, enhancements, and integration.

Change Control

Normally, business users contribute to the approval portion of change control but are seldom involved in dependency management, regression testing, and integration testing. However, with data mesh, this process must include data product owners. They are not merely passive participants but active stakeholders, responsible for understanding and managing the nuances of these change-related activities.

Support

In numerous organizations, support predominantly falls under the domain of IT, whether managed externally or handled internally. However, with data mesh, this responsibility is shared between IT and product owners. Drawing clear lines of jurisdiction between the two can pose challenges. Furthermore, there arises a pertinent question: Does the business possess the necessary resources to support their products while managing day-to-day operations?

Security and Governance Frameworks

A security and governance framework is beneficial to any organization, even without a data mesh. But the success of a data mesh is dependent on these. As with many tasks necessary to create and share digital assets, IT has been the primary owner. Organizations will need to determine what policies and security models should exist and how best to ensure compliance.

Technology Sprawl and Capacity Planning

When business domains have the autonomy to create data products, there is potential for a wider diversity of technologies. This can lead to a broader range of required skill sets, an infrastructure expansion, a larger scope of security hardening, and other

IT-specific responsibilities. Furthermore, the unpredictability in the number of data products and the extent of their usage can add to these challenges. Together, these factors can complicate the management of the enterprise's technological footprint, making capacity planning and budgeting increasingly complex.

OPPORTUNITIES

Data-Mindedness

An effective data mesh implementation can produce a mindset in which individuals or organizations prioritize and value the use of data in their decision-making processes, strategies, and day-to-day operations. This includes recognizing the value of data, making an effort to collect and store it effectively, favoring data over intuitions for decisions, emphasizing the importance of understanding and interpreting data correctly, and encouraging the use of data throughout an organization so that everyone understands its value.

Innovation and Growth

Organization-wide information access paves the way for observation, understanding, experimentation, analysis, ideation, and innovation. Such transparency allows for the discovery of connections and relationships that might otherwise have remained hidden. To truly harness the creative potential within an enterprise, it's crucial to allow data to flow freely. Embracing this approach can catalyze significant growth and foster a culture of continuous innovation.

Business Transformation

Much has been said about digital transformation, and rightly so. However, business transformation goes beyond that. When individuals adopt a data-minded approach and have access to information, opportunities arise to refine and enhance processes, bolster interactions, and engage in value-driven activities. Embracing this broader transformation can catalyze both technological and cultural shifts within an organization.

CONCLUSION

Much can be gained by adopting a data mesh mentality. There will be challenges, and many of these are organizational and process related, so it is crucial to choose a platform that will empower you to meet these challenges to achieve the benefits. The Denodo Platform, the leading data fabric and logical data management platform, can address the technical aspects of these challenges to enable an organization to adapt to any of the necessary changes in the organization or underlying technology. It enables federated governance and security, self-service creation, exploration, and more—all capabilities that are needed to manage a mesh architecture. With the Denodo Platform, organizations can get started on their business transformation journeys today.