ANALYST CONNECTION

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The path to generating business value and ROI from AI investments is multifaceted, requiring a strong AI-ready data foundation and strategies to overcome a range of technical and organizational challenges along the way.

Maximizing ROI from AI-Ready Data: Foundations, Architectures, and Service Strategies

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Questions posed by: DI Squared

Answers by: Jennifer Hamel, Senior Research Director, Enterprise Intelligence Services, and Stewart Bond, Vice President, Data Intelligence and Integration Software

Q. Why is building a strong AI-ready data foundation essential for organizations seeking to maximize business value and ROI from AI investments?

A. Organizations increasingly recognize that successful AI initiatives depend on the quality and readiness of their data. An AI-ready data foundation is not just a technical necessity; it is a strategic asset that drives measurable improvements in operational and financial performance. IDC's 2024 *Office of the CDO Survey* showed that organizations with mature data foundations achieve a 5.9% improvement in operational metrics and a 4.4% increase in financial metrics, supporting effective and scalable AI and analytics deployments.

Investing in AI-ready data is crucial for maximizing returns on AI investments and achieving long-term success. Critical factors for enabling AI to deliver meaningful outcomes include data accessibility, trustworthiness, and alignment with business objectives. As organizations scale AI initiatives, a strong data foundation becomes even more essential, enabling faster innovation cycles and sustainable business outcomes. Treating data as a product, rather than a by-product, accelerates time to value and fosters innovation. This mindset ensures data is curated, governed, and managed with clear ownership, supporting reliable and relevant AI models. According to the aforementioned IDC's *Office of the CDO Survey,* organizations adopting data product approaches reported 8.7% faster time to value and a 10.6% improvement in innovation KPIs.

Q. What are the key components and benefits of an enterprise intelligence architecture, and how do they make data AI ready?

A. Transitioning to AI-ready data requires a comprehensive and structured approach, embodied in the enterprise intelligence architecture. This architecture is organized into four distinct planes, with each plane playing a vital role in transforming raw data into actionable insights and outcomes that drive business value. The data plane organizes distributed, diverse, dynamic, and dark data across hybrid cloud and multicloud environments, ensuring data from various sources is accessible and manageable. The data control plane focuses on governance, protection, and curation, leveraging data intelligence and engineering to maintain data quality, compliance, and security — essential for establishing trust and meeting regulatory requirements. The data synthesis plane integrates analytics and AI models, enabling organizations to generate advanced insights through data visualization, model fine-tuning, and multimodal synthesis. This is where data is transformed into higher-order products and outcomes, supporting both human- and machine-driven decision-making. The business activity plane applies these data-driven outcomes to business processes, facilitating communication, decision-making, and simulation across the organization. Common services such as automation, knowledge management, security, integration, governance, collaboration, and administration span all four planes, providing end-to-end support for data value delivery. The architecture enables organizations to move from siloed data management to integrated, AI-driven enterprise intelligence, accelerating decision velocity and business transformation.

Q. What are the benefits and downsides of unified data platforms?

A. Unified data platforms have emerged as a preferred approach for organizations seeking to streamline data, analytics, and decision-making processes, according to IDC's 2025 *Enterprise Intelligence Services Survey*. These platforms provide a cohesive environment for mixing and accessing data from multiple sources, reducing inconsistencies and facilitating more effective data management. Organizations can accelerate their data cleansing and literacy journeys by leveraging unified platforms that support proper storage, management, and governance practices. This integrated approach enables faster joining of data sets, improved data quality, and streamlined compliance with regulatory requirements.

However, unified platforms are not without their challenges. The "one size does not fit all" principle often applies, as organizations may have unique requirements that a single platform cannot fully address, sometimes necessitating alternative solutions to fill functional gaps. Reliance on a single vendor's ecosystem introduces the risk of vendor lock-in, limiting flexibility and potentially hindering adaptation to technological advancements or changing business needs. Cost management is another concern, as unified platforms can be expensive and require robust FinOps solutions to optimize storage and computation expenses. Furthermore, the benefits of unified data platforms are contingent upon the organization's commitment to data literacy for both technical and business users. Without prioritizing training and change management, users may not fully leverage platform capabilities.

Q. What are the primary challenges organizations face in building and scaling AI-ready data architecture, and how can they be addressed?

A. The journey toward AI-ready data architecture is complex, requiring both technical modernization and organizational transformation. Organizations must navigate technical challenges such as ensuring data security, privacy, and governance; managing the accuracy and relevancy of generative AI outcomes; maintaining data quality; and handling the intricacies of AI model training and tuning. They must also manage expectations around AI capabilities, address skills and resource constraints, manage changing business priorities, and overcome collaboration barriers between business and IT.

To overcome these challenges, organizations must implement a combination of technical solutions and organizational strategies. Technical approaches such as data observability, automated data engineering, and event-driven architecture can enhance data quality, accessibility, and responsiveness. Organizational strategies, including developing a clear vision and use case road map tied to key business objectives; establishing a center of excellence to speed development, share expertise, and drive success; and investing in end-user enablement, training, and change management, are critical for fostering a culture of innovation and collaboration. Services providers and technology partners can play pivotal roles in guiding organizations through this transformation, offering expertise and support in navigating complexity, implementing best practices, and accelerating the adoption of AI-ready data architecture.

Q. What should organizations look for when selecting an external services provider to assist with enterprise intelligence initiatives?

A. Selecting the right external services provider is a critical decision for organizations embarking on enterprise intelligence initiatives. Their role spans the design, implementation, and optimization of architectural planes, ensuring alignment with business goals and technical and regulatory requirements. Key characteristics such as quality of skills and expertise, use of AI-enabled delivery tools and platforms, and innovation capabilities influence provider selection. These attributes demonstrate whether providers can address diverse organizational needs, solve problems, and support faster, smoother, and more cost-effective enterprise intelligence technology deployments.

But capabilities are one thing, and results are another. The most important component of a successful enterprise intelligence services engagement is the connection between services delivered to measurable business value and ROI. According to IDC's 2025 *Enterprise Intelligence Services Survey*, organizations investing in enterprise intelligence services report significant gains, on average, including 24% faster innovation, 23% increase in operational efficiency, 23% improvement in business agility, 21% revenue growth, and 19% cost savings. The same survey also found that the top challenge with using an external services provider for enterprise intelligence initiatives was the inability to determine potential financial benefits. This underscores how critical it is for organizations to work with partners that understand their business goals and AI maturity, craft strategies that optimize their desired KPIs, and deliver results.

About the Analysts

Jennifer Hamel, *Senior Research Director, Enterprise Intelligence Services*

Jennifer Hamel is a senior research director for IDC's Worldwide Services team, responsible for the Enterprise Intelligence Services research program. In this research, Ms. Hamel covers the life cycle of project-oriented, managed, and support services related to the deployment of technologies, such as data management, analytics, artificial intelligence (AI), and automation, as part of enterprise intelligence initiatives. In particular, her research focuses on how services providers work with organizations to ensure investments in enterprise intelligence technologies result in improved business outcomes.

Stewart Bond, *Vice President, Data Intelligence and Integration Software*

Mr. Bond has led numerous research projects and publications and is recognized as a valued industry analyst by leading software vendors, consumers, and peers in the areas of enterprise and data integration, business-to-business integration, Big Data, and cloud. Prior to becoming a market and industry analyst in 2011, Stewart spent 10 years with IBM as a master-certified IT architect, consulting on information management and middleware strategies and delivering integration solutions to customers around the globe.

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Every company faces the challenge of turning raw data into intelligent insights. But not every organization is equipped to manage this complexity or able to do so quickly. DI Squared fills that gap by building AI-ready data foundations aligned to strategic priorities and clear business value. Our approach is rooted in data clarity. We build scalable data products that integrate cloud and on-premises sources, delivering fast, reliable access to trusted data. We build and maintain robust data models that ensure accuracy and prepare data for advanced analytics. This enables organizations to make confident, faster decisions based on a comprehensive understanding.

By leveraging AI/ML, we develop advanced solutions that reveal deeper insights and automate critical processes. We guide organizations in deciding when and how to adopt cognitive computing solutions responsibly, embedding risk management in their data strategy. Trusted by Fortune 500 clients, DI Squared delivers practical, scalable solutions that grow with your business and keep you ahead in a rapidly evolving landscape.

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