



Building Enterprise Intelligence: A Framework

ÎDC

IDC eBook

We love to talk – and even boast – about human intelligence. We spend years acquiring and improving intelligence, while using various assessments to measure and demonstrate it. Measuring enterprise intelligence, however, is much more difficult. IDC's Future of Intelligence research practice has taken on this challenge, developing a methodology to help organizations measure their current state of enterprise intelligence.

Enterprise intelligence is often confused with business intelligence. Many organizations think that they have high levels of enterprise intelligence simply because they have invested in tools and technologies that enable intelligence or because they have vast amounts of data.

But, what differentiates an enterprise with greater enterprise intelligence quotient is not simply access to or ownership of more data than their competitors or better analysis of this data. It is also their ability to continuously learn at scale, reflect on and explain outcomes based on that learning and, ultimately, use this learning to adapt faster than competitors.





Source: Future of Intelligence Framework, IDC, 2022

IDC's research shows that organizations need to demonstrate four specific capabilities – enabled by data and technology – to build enterprise intelligence. IDC defines the enterprise intelligence as an organization's combined ability to foster a data culture, learn collectively, synthesize information, and apply the resulting insights at scale to gain a sustainable competitive advantage and fulfill the organizational mission.

This definition incorporates several familiar capabilities and value propositions. Synthesizing information, learning collectively, delivering insights at scale, and having a strong data culture are not new concepts. However, treating these four capabilities cohesively remains elusive for most enterprises.

Enterprise Intelligence: Challenges

IDC's global Future of Intelligence global survey reveals that silos represent the biggest challenge for many organizations. These organizations:

- Cannot see recurring patterns due to poor institutional knowledge retention and dissemination
- Cannot synthesize diverse internal and external data sources into information, resulting in substandard strategic decisions and risk management practices



On average, an organization with excellent enterprise intelligence sees three to four better outcomes in metrics such as increased market share, growth, and lower risk than an organization with low enterprise intelligence.

- Take too long to move from data to information to knowledge to wisdom
- Do not have enough visibility into end-to-end business processes, limiting the ability to identify opportunities and apply automation technologies
- Lack visibility into internal social networks and external stakeholder communities hindering the ability to utilize human resources and labor
- Have inappropriate technology architectures and tools that limit the ability to overcome challenges
- Lack the necessary data science, decision science, and data architecture skills to leverage the latest technology and AI/ML advances

However, the most insidious challenges are cultural:

- Data aversion, or what some have termed the ostrich effect, where valuable information is ignored in lieu of gut feel.
- Lack of data literacy and the resultant inability to create a common language around data.
- Lack of data intelligence resulting in mistrust of data, information, insight, and the AI models reliant on the data

Enterprises that overcome these challenges will learn as a single entity and at scale. The data generated from products, services, experiences, and ecosystems will inform and drive intelligent automation of processes.



IDC's Global DataSphere predicts that the amount of data generated over the next five years will be 2X the amount generated in the past 10 years and will reach 221.2ZB by 2026 (IDC's Global DataSphere 2022, IDC #US49643822, September 2022). On their path to becoming learning enterprises, organizations must develop evidence-based cultures where the information at hand shapes decision making. These enterprises will fully instrument their processes, physical assets, and products to unlock value from dormant data, harnessing crowdsourced intelligence, using digital twins for simulation, tracking social networks, and better understanding customer experiences. They will employ artificial intelligence, business intelligence, data intelligence, and other technologies throughout the entire enterprise – from sales and customer service to operations, risk management, and IT – to develop comprehensive enterprise intelligence. This path to intelligence will depend on having the following capabilities.

Information Synthesis

We define this capability as the process of taking discrete, objective raw facts about people, places, things, and other entities and organizing them for some useful purpose, usually by adding some context. This capability relies on culture, practices, and skills that embrace all data and recognize when and how to apply data management, analysis, and technologies. All data is potentially useful. It can be transactional, financial, behavioral, and attitudinal. It can be internally generated and externally acquired. It can be data at rest or data in motion – generated by people, things, devices, and physical and digital infrastructure.

Collective Learning

Collective learning refers to understanding the relationships among various pieces of information and previously developed knowledge and their application to a particular problem. A large part of the effort behind collective learning will be to convert tacit knowledge into explicit knowledge and expose it across the enterprise. It relies on a culture that promotes the generation, capture, and sharing of knowledge in the form of best and worst practices; the identification of internal and external experts; and the collection of standards, policies, training, AI initiatives, data literacy, code, or data sets in an enterprise-wide knowledge base. Enterprises will depend on a new generation of AI-based technologies that overcome the challenges of earlier attempts at knowledge management.



a bacad culturac whara the information at

Insights Delivery

IDC defines delivery of insights at scale as having decision support and decision automation requirements for everyone in the enterprise, from executives and managers to analysts and frontline workers (and machines). Enterprises must recognize that the delivery insights at scale, like information synthesis and collective learning, is a team sport that requires a mix of technical, analytical, and business skills.

Enterprises will ensure the delivery of insights at scale by surfacing actionable information to all human and machine users in the workflow. To enable scale, they will take advantage of technical innovations such as persistent memory, 5G, blockchain, and eventually, quantum computing. Scalability will be ensured through cloud-native architectures that process large volumes of data and support requirements of a large number of concurrent users. Enterprises will embrace DataOps and ModelOps alongside DevOps and align technology platform resources with workload usage patterns.

Data Culture

Data culture includes an organization's mission/vision, attitude toward the value of data, data literacy, and norms and policies around collaborating with data. To be truly intelligent, enterprises must empower their employees with the skills to use data and analytics intrinsically, as part of their workstreams. Empowering their organizations with data from the ground up across all levels that truly differentiates leaders from everyone else. However, in our conversations with organizations and individuals, we found that changing organizational culture is very difficult. Enterprises need to leverage investments made in technology and focus on building a culture that helps make them data driven in their day-to-day activities. Business leaders who serve as role models for using data in decision making are much more successful in building a successful data cultures.



IDC eBook

In 1971, Nobel Prize winner in economics Herbert Simon wrote that "in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is the attention of its recipients. Hence a wealth of information creates a poverty of attention." In 1996, he noted that "many designers of information systems incorrectly represented their design problem as information scarcity rather than attention scarcity, and as a result, they built systems that excelled at providing more and more information to people, when what was really needed were systems that excelled at filtering out unimportant or irrelevant information."

A quarter century later, we find ourselves at new heights of information overload, and at a time when large areas of the global economy remain undigitized. As IDC's Global DataSphere demonstrates, more data is coming. Who will be able to turn all that data into actionable intelligence and, ultimately, value for stakeholders?

Building Enterprise Intelligence: Next Steps

To ensure that enterprise intelligence generates sustainable value to enterprises, individuals, and society, today's business and technology leaders must recognize that:

- Information synthesis does not mean delivery of more reports, dashboards, or other human-consumable indicators of past performance or current status of the enterprise. Focus on making actionable and contextual data and analytics accessible to users at all levels and functions in the organization.
- Insights delivery is more than migrating technology to the cloud. Focus on delivering trusted and actionable information in the context of recipients.



Building Enterprise Intelligence: A Framework **IDC eBook**

- Collective learning is more than just sending employees to formal training sessions. Focus on a comprehensive approach to observation, reflection, learning, and information and knowledge access and dissemination.
- Data Culture is more than making data and intelligence available to senior management. Focus on establishing a pervasive data-driven culture that values evidence-based decision making while working to continuously improve data fluency and literacy. Part of achieving this goal is hiring staff with skills (or upskilling current employees) that complement the inevitable increase in data processing automation.

The four pillars of enterprise intelligence (information synthesis, insights delivery, collective learning and data culture) are not independent. To improve your business outcomes, your enterprise must invest in all four.





Successful investment will depend on ongoing measurement and articulation of the value of greater intelligence and the capabilities its enables. Focus on a disciplined approach to value measurement that sets the baseline and tracks progress by project and program over time.

Data can be an asset or a liability; technology can be used for positive or negative ends; regulations and societal norms can encourage or stifle innovation; and security and trust can be resource drains or competitive differentiators. Ensure that ongoing investments in staff, processes and technologies are made purposefully and intentionally to improve enterprise intelligence and, ultimately, your organization's business outcomes.



Interested in learning more about IDC's Future of Intelligence research? Visit idc.com/FoX.

Learn more about the full IDC report: *Future of Intelligence Framework*



