



IDC ANALYST CONNECTION



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The Intelligent Enterprise: A New Foundation for Organizations Globally

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Legacy systems are no longer satisfying business needs because of inefficient access to fresh data, archaic business processes, and constant configuration changes. Many companies have accumulated "technical debt" defined as unfunded critical technology liabilities including the risks associated with legacy systems that need to be retired, replaced, or modernized. To move beyond this state, enterprises are enabling a new technology foundation utilizing what IDC calls intelligent ERP applications, or i-ERP. IDC research reveals that organizations moving to this new intelligent technology are initiating digital transformation (DX) activities that include three aspects: a digital platform; 3rd Platform technologies with innovation accelerators; and intelligent applications and systems. SAP has followed a similar path with three main categories of solutions called the digital core, intelligent technologies, and intelligent application suites. IDC expects that over 60% of businesses will depend upon these intelligent systems for the intelligent core in their digital platforms and to enable them to scale in the digital economy.

The following questions were posed by SAP to IDC's Mickey North Rizza, vice president of Enterprise Applications and Digital Commerce research, on behalf of SAP's customers.

Q. What is an intelligent enterprise?

A. An intelligent enterprise is an organization that takes advantage of and leverages intelligent ERP and associated technology applications to effectively own data assets to achieve its desired outcomes faster and with less risk. At IDC, we coined the term "intelligent ERP," or "i-ERP," which is a new wave of enterprise applications that uses the power of the cloud and embedded artificial intelligence capabilities on curated data sets and offers intuitive and conversational user interfaces to deal with increasing complexity, disruption, and new customer demands. i-ERP systems allow organizations to automate more within a business process (beyond just prescriptive rules and guidelines), including bringing massive amounts of data forward and putting the data in context, enabling enterprises to make more informed and better decisions immediately. This capability results in much more streamlined and real-time workflows that are not based solely on historical transactional data point capture.

With this increased intelligence built into the workflows, the enterprise becomes smarter (i.e., an intelligent enterprise). The intelligent enterprise is enabled by the intelligent systems because decisions are made with more context because data is enabled at the front end of a workflow and outcomes can be predicted, understood, and managed to achieve the best results. For instance, the improved data sets at the front end of the process allow employees to respond to business conditions sooner and thereby spot opportunities earlier that can lower costs, reduce or eliminate inventory, quickly fulfill orders, and so forth.

This "built-in intelligence" helps prioritize employees' work, makes recommendations on how to tackle problems, simplifies and automates repetitive tasks, and uncovers insights across workstreams so the right decision can be made at the right time. Intelligent systems are optimizing multiple workstreams, adding more information to the employee's decision-making process, and improving business outcomes. Intelligent systems are enabling the intelligent enterprise.

Q. How does IT drive visibility and support for the intelligent enterprise?

A. IDC finds the intelligent enterprise technology strategy is typically tied to the enterprise DX strategy. The CIO and IT lead the technology-focused aspects of the DX strategy aimed at developing a digital core. This IT focus has the following attributes:

- A platform strategy that includes the management of a portfolio of platforms (Today's approach by businesses is the enablement of a pyramid of industry platform layers sitting on top of digital business platforms that are all built on a technology platform. The platform concept expands from microservices, technology stacks, and software bundles to platform as a service [PaaS] to entirely new digital business and industry-specific platforms, ecosystems, and operating models.)
- 3rd Platform technologies and innovation accelerators, including cloud, social, mobile, big data/analytics, cognitive, 3D printing, augmented reality/virtual reality (AR/VR), robotics, Internet of Things (IoT), advanced security, and blockchain
- Intelligent ERP and associated technology applications

The intelligent enterprise is built on a foundation of data-driven, technologically advanced business processes. IT helps the enterprise identify the critical and relevant data, at the right time in the right format, that must be tied to these business processes. In the intelligent enterprise, data is present in many forms. It can be operational data and transactional data utilized to run the business. It can also be historical data that provides context for current situations and helps predict the future. It may even be external data such as customer and supplier financials or weather data. All these data sources — when married with intelligent workflows — can provide context for the right decisions at the right time.

Organizations have evolved by functions, and many utilize function-specific disparate applications that do not consume and share the multitudes of data elements across the enterprise that are required to make better and more informed decisions. While IT understands finance needs the same information on suppliers as procurement, sourcing, and supply chain, the various applications are different based on the required workflows by function. In the intelligent enterprise, IT drives the reasoning within the enterprise that the supplier data used in financials will also be needed in the tracking of supplier performance and the maintenance of regulatory compliance. This new treatment of data, from disparate to enterprisewide, reduces the redundancy and disparity of information across multiple applications and frameworks. IT increases the visibility into the data required across the enterprise.

In addition, IT identifies the integration points, workstreams, and data that need to come together in the enterprise digital core so that the organization can perform at an optimal level. IT's focus on a digital core that brings together the required internal and external data points, applications, innovation, and platforms is critical to enabling the intelligent enterprise.

Q. How does IT help enable a more focused and intelligent enterprise?

A. As part of the DX strategy, the CIO and IT department drive the technology aspects of the strategy aimed at enabling a digital core consisting of the digital platform, 3rd Platform and innovation technologies, and intelligent systems. The CIO and IT help the organization align its efforts to become an intelligent enterprise because of the focus on the overall required technology and also leverage all aspects of technology for a more optimal enterprise performance. Alignment of the business requires an understanding of how the intelligence will change the technology usage, the functional workflows, and the employees' interactions with the systems and data.

As intelligence is added to functional workflows, the systems automate more processes so that employees can spend more time making the required decisions further up the value chain. For instance, IT can open the door to the change in transaction processing and matching as a company becomes more intelligent. In the intelligent enterprise, functions such as processing and matching purchase orders, receipts, and invoices become completely automated. Only exceptions will remain, and those too will disappear once the systems learn more about how to process them. These routine transactions and the exception decisions ultimately become part of the intelligent ERP, allowing employees to focus on higher-value business decisions such as order-to-cash metrics.

The intelligent enterprise enables a new methodology with more workflows automated by the technology. By making the business workflow more intelligent, IT becomes a catalyst for a more informed workforce. With access to the right data sets incorporated in intelligent models, employees are better able to make decisions that positively impact business outcomes. As the technology furnishes more information, employees can interact with the information such that questions are answered, what if scenarios are pursued, and the right outcomes are selected before the enterprise needs the results. With intelligence come more informed action and choice.

Q. How does IT provide agility in the intelligent enterprise?

A. As organizations think about becoming intelligent enterprises, IDC finds the focus shifts to DX activities. In most organizations, the CIO and IT are the focal point for technology within the DX strategy. With technology as the core component for DX, the CIO and IT must be leaders in the efforts. This means IT is now responding to the organization's needs for:

- **Scale**, with systems that scale rapidly from a single user to the entire world or contract economically in harmony with market fluctuations
- **Speed**, with systems designed and implemented so they are continuously improving and evolving and able to operate digital services in shorter time frames
- **Scope**, such that systems must expand beyond traditional limits, from a single industry to multiple sectors, with the elimination of intermediaries

IDC notes that organizations can be broadly grouped into three DX categories: digital transformers, technology optimizers, and technology disrupters. While these groups are typically present in any given organization, the specific digital strategy will determine how the IT organization prioritizes strategies and engages the enterprise on its journey to become an intelligent enterprise. The three DX categories are as follows:

- **Digital transformers** are organizations at the forefront of DX, and for them, DX means transforming the business. Their DX priorities include both business process transformation and new monetization model creation. This group has a strong leadership team, a comprehensive strategy, DX programs linked across the enterprise, and mature change management capabilities. It may take these organizations longer to implement new digitally transforming principles, technologies, and workflows, but the IT professionals are the critical drivers who recognize, assist with, and implement the changes required for transformation.
- **Technology optimizers** drive initiatives focused on modernization. Such initiatives focus on cost optimization and process automation so that these organizations can implement technology quickly, minimize risk, and prioritize efficiency and effectiveness. IT leads the modernization effort for optimization and must come together with the business so the full enterprise value can be realized. Once optimization occurs, the transformation journey can begin.
- **Technology disrupters** focus on technologies that drive new market spaces and large-scale opportunities. For these organizations, 3rd Platform technology and innovation disrupters are critical. These companies focus on how technologies drive their businesses forward as opposed to how their businesses can be transformed by technology. Typically, these organizations have strong IT leaders who help the company leapfrog the competition, implement new technology quickly, embrace a higher risk mentality; however, these IT leaders will have some change management challenges.

DX activities are critical to enabling the intelligent enterprise. However, IT is the organization that understands the technology component is a significant factor to making the intelligent enterprise real. For instance, when finance can intelligently manage and optimize taxes, including automatic filing and reporting and even predicting tax payments, the organization can spend more time on managing performance. Managing performance with real-time information means the organization can consume the insights faster, model predictive opportunities and, based on the modeling, move the organization in a different direction to capitalize on the best opportunities. But this happens only with IT bringing the right technology into the equation of the DX strategy.

Q. In general, how important is IT's role in ensuring the intelligent enterprise, and are there other stakeholders that are equally important in this transformation?

A. The CIO and IT are drivers of DX systems, while the CFO becomes the spokesperson for the lines of business that will reap benefits within the intelligent enterprise. Many organizations have purchased line-of-business applications focused on HR and talent, procurement and sourcing, sales and marketing, and expense applications with minimal input from IT. Enabling the intelligent enterprise requires an organizational approach from both IT and the CFO. While IT will direct the platform strategies, 3rd Platform and innovation technologies, and intelligent systems, the CFO will oversee the changes in the organization and coach the enterprise into a more intelligent enterprise methodology. The CFO's role will help the organization embrace the changes and focus on the metrics and outcomes that are measures of success for the intelligent enterprise.

As the organization becomes more intelligent, the key performance indicators (KPIs) will change across the organization. IT will help the organization understand the dynamics, but it can also work with the CFO and the lines of business to understand how the business KPIs will change. According to IDC, three aspects will impact current KPIs as the enterprise digitally transforms and becomes more intelligent.

- Measurement of process repeatability and how much of the process is automated
- Reduction of nonrepeatable processes and underlying understanding of barriers to repeatability
- Ease of getting the data, timeliness of data being analyzed, completeness of data, and quality of data in the analytic framework

With IT and the CFO working closely to enable the intelligent enterprise, the organization can now have new finance workflows such as continuous anytime close, digital dashboard, real-time operational performance, continuous compliance and audit, predictive liquidity, scenario-based risk assessments, and evidence-based loss prevention. Manufacturing will have improvements because of real-time integrated capacity and inventory alignment with suppliers and real-time asset monitoring. Add to this mix smart settlement with customers and suppliers, as well as comprehensive supply visibility, monitoring, and remedy, and the intelligence starts to easily be recognized.

As the organization becomes more intelligent, utilizing all the internal and external data possible, it can do a better job of not only running in real time but also predicting the future based on multiple variables and influences. The ultimate objective is for the enterprise not only to become more intelligent but also to drive better performance outcomes because of the optimization of technology and employees' focus on the insights.

ABOUT THE ANALYST

Mickey North Rizza is program vice president for IDC's Enterprise Applications and Digital Commerce research practice. She leads a team of analysts responsible for IDC's coverage of the next generation of enterprise applications, including ERP, financial, procurement, supply chain automation, project and portfolio management, enterprise asset management, services resource planning (SRP) and related project-based solutions software, and the digital commerce business network.

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