

## **IDC** MarketScape

# IDC MarketScape: Worldwide SaaS and Cloud-Enabled Manufacturing ERP Applications 2022 Vendor Assessment

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#### THIS IDC MARKETSCAPE EXCERPT FEATURES INFOR

#### **IDC MARKETSCAPE FIGURE**

#### FIGURE 1

## IDC MarketScape Worldwide SaaS and Cloud-Enabled Manufacturing ERP Applications Vendor Assessment



Source: IDC, 2022

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

#### IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide SaaS and Cloud-Enabled Manufacturing ERP Applications 2022 Vendor Assessment (Doc # US49047922). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

#### **IDC OPINION**

## **Navigating Constant Disruption Through Digital Transformation**

Customer and market expectations for more personalized products, deliveries, and services – as well as unanticipated events and sudden demand shocks such as COVID-19 – are driving change and creating opportunities for a company to transform how its operation stays aligned with its markets. In addition, competition has never been higher in manufacturing, as there are more companies competing for the same customer base and this makes differentiation a challenge. The commoditization of products impacts a manufacturer's ability to grow revenue or move into new markets. Lean and other types of continuous improvement philosophies used by operations teams in factories and plants will always be important. These methods have benefited companies as they pushed for operational excellence. However, the key to success moving forward will be to become more innovative, market driven, and customer focused. The rapid pace of change has led the industry to start defining its future success by how well it can react to market disruptions – which IDC calls operational resiliency. This is achieved by providing employees with near-real-time information, detailed insights on performance, and analytics to improve the decision-making process across the manufacturing value chain.

The improvements that can be realized through data-driven decision making are too important to overlook. However, using data to make decisions requires that the proper digital foundation be in place, something many manufacturers currently lack. Manufacturers are now viewing cloud as the platform to drive tangible business outcomes and digital transformation. Enterprise resource planning (ERP) is the backbone of manufacturing organizations; shifting to SaaS and cloud-enabled ERP applications is essential to compete in the digital economy.

## SaaS and Cloud-Enabled Software Driving Investment

Instead of continuing to invest in antiquated on-premises systems, smart digital-first organizations have turned their focus to SaaS and cloud-enabled software because they need flexible and agile ERP applications that are relatively easy to implement, configure, and update. Demand for cloud-based ERP applications continues to grow because of the ability to access and analyze massive amounts of data in near real time and with anywhere, anytime access. SaaS and cloud-enabled ERP systems enable growing businesses to quickly expand into new regions around the globe without making major investments into their technology infrastructure because they are extremely adaptive to accelerated rates of change. SaaS and cloud-enabled systems are adaptive to dynamic operations environments, which is why this 2022 IDC MarketScape for worldwide SaaS and cloud-enabled manufacturing ERP applications is extremely important as a technology vendor guide for today's COO, CFO, CIO, and IT buyer.

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## Manufacturing Industry

Included in this IDC MarketScape are providers with offerings for manufacturing, which includes product-centric organizations across four distinct value chains:

- Asset-oriented value chain (AOVC): Industries include chemicals, metals, and pulp and paper.
- Brand-oriented value chain (BOVC): Industries include consumer packaged goods (CPG), food and beverage (F&B), fashion, and life sciences.
- Engineering-oriented value chain (EOVC): Industries include automotive, aerospace and defense (A&D), and industrial machinery.
- Technology-oriented value chain (TOVC): Industries include electronics and semiconductors (high tech).

There are unique industries challenges and business processes within different segments of manufacturing, and it is critical to understand these differences. However, while there are many variables across value chains, segments, enterprises, and even individual locations within a company, ERP is a foundational system that all manufacturers utilize to run their business. Manufacturing ERP systems incorporate operational modules, including order management, finance, procurement, enterprise asset management (EAM), production, and supply chain, to maximize operational efficiencies. Manufacturers see benefits from the integration between core finance and operational capabilities, so that operational transactions with a financial impact are reflected directly in financial modules.

As the digital economy continues to influence organizations, the finance, manufacturing, supply chain, sales, and asset management functions will play a larger forward-facing role – interacting with clients and customers. The operations of an organization can be complex and fraught with inefficiencies for companies of all sizes. During our interactions with manufacturing professionals, the following issues were top of mind:

- Resiliency/agility: With disruption being a constant challenge facing the industry, the ability to adapt and change has become even more important. This is resulting in factories being relied upon to handle more complex operations serving a wider range of products, with faster throughput, and smaller lots, all at minimized costs. Balancing cost, quality, throughput, and agility is a complex equation that many manufacturers struggle with, especially when faced with supply/labor shortages.
- Product/service mix: Many industries are suffering from the commoditization of products and concerned with the long-term viability of current business models. A way to combat these issues and differentiate is through new value-add services that can be provided leading many manufacturing organizations to embrace servitization. This allows a company to provide services and solutions that supplement their traditional product offerings. Making this shift is no easy task; it requires a digital-first strategy and rethinking many aspects of how manufacturers have traditionally operated.
- Customer experience: Standing out among a growing competitor base is an important objective for any manufacturer, and the best way to achieve this is by knowing your customer. Customer needs are evolving faster than ever before, and customization of products is key. In addition, the ways customers research and purchase products are evolving. Today's buyers want to research, shop, and order on their own terms and time something manufacturers have not been well suited to deliver. Finding new ways to attract, engage, and satisfy consumers will be the hallmark of successful organizations.

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- Talent/skills gap: Talent is a hot button issue for most companies, but the manufacturing industry is feeling the pressure more than most. Labor and skills issues have been the topic of conversation for years in the industry; however, COVID-19 has accelerated these issues even further. IDC's February 2022 Talent Management Study showed that on average manufacturers experienced a 5% decrease in workers because of COVID-19 (furloughed workers not returning, etc.) and 43% of manufacturers are currently understaffed in their skilled positions. This number is only expected to increase as larger portions of the workforce reach retirement age. As labor shortages continue to grow, the ability to maximize the productivity of a limited workforce and become a more attractive place to work has clear advantages in terms of talent management.
- Sustainability: Sustainability is a topic that has been discussed for years across manufacturing, but recently there has been a clear shift; today sustainability is not just a marketing and brand discussion. Organizations now realize that sustainability must be ingrained into the business. While this recognition is important, making it a reality is no simple task. Manufacturers must start using sustainability data as part of their day-to-day decision-making process, as this is the only way to truly drive sustainable operations.
- Modular and integrated systems: Many organizations are focused on modern and modular systems, so they can integrate as needed with their other technology systems. The less issues with integrations because of APIs, and microservices, the easier it is to consume the information within the business process.
- Anywhere, anytime access: Manufacturers we spoke with all agreed that SaaS and cloudenabled ERP systems allowed their organizations to operate more effectively even in the face of continual disruption. Some organizations told us that while their working location may have changed, having access to their ERP systems helped them stay focused on the job at hand.
- Remote and autonomous tasks: The trend to further automate tasks is gaining speed as more companies realize numerous health, safety, and productivity benefits. This will accelerate digital transformation use cases such as factory automation, warehouse robotics, mobile workforce empowerment, remote virtual assistance, and augmented technician guidance. Highly configurable ERP applications will help each organization support automation in its unique, diverse, and large-scale operational portfolio.
- Innovation accelerators: Manufacturers are increasingly benefiting from the incorporation of innovative digital technologies into their ERP solutions. ERP applications are being bolstered with new capabilities through IoT, big data and analytics, mobility, and augmented/virtual reality. These all present new opportunities to maximize the value of ERP investments that manufacturers are making, through optimization and location-based service technologies to maximize asset performance, improve technician productivity, and increase customer satisfaction. IoT, in particular, is becoming pervasive throughout all manufacturing value chains, with ongoing activity across three primary use case categories (smart manufacturing, connected supply chain, and connected products/services) and with the biggest opportunity for transformation coming from a product/service standpoint.

Continued focus on artificial intelligence (AI)/machine learning (ML): Artificial intelligence is a technology that continues to be of high interest for both ERP providers and manufacturers. There is a general consensus that AI/ML can have a profound impact on how companies operate and do business; however, there is still work to be done. Manufacturers must address data concerns first (lack of data, data quality, etc.) before they can truly take advantage of what is being promised. Recently, companies have turned to structured machine learning to speedup/streamline key financial processes such as matching, invoice reconciliation, transaction processing, and compliance. In addition, early adopters of machine learning have been able to eliminate a large amount of time spent on manual tasks while also decreasing the error rate of these same tasks. Artificial intelligence is being used to automate many of these lower-level tasks – freeing up valuable organizational resources to focus on higher-level strategic tasks. When we look at the future of manufacturing transformation, AI and machine learning will be woven into every use case undertaken.

The goal of this document is to provide potential software customers with a list of manufacturing ERP software companies that have taken great strides to address the challenges previously listed. We have profiled and assessed their capabilities to support the complicated area of manufacturing ERP.

#### IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

Through its clients and contacts across most industries, IDC frequently has unique visibility into vendor selection processes within many companies. The vendor inclusion list for this document includes those SaaS and cloud-enabled manufacturing ERP solutions that IDC was familiar with having been evaluated for selection within recent manufacturing ERP deals. IDC then supplemented those solutions with several additional ERP vendors that it believed also provided qualifying manufacturing ERP systems. In addition, at least 15% of the vendor's revenue should come from manufacturing segments. Vendors must have a SaaS or cloud offering that was being used by clients — on-premises-only solutions are out of scope — and the vendor had won recent deals within the relevant customer segment. Also, vendors needed to be able to support global deployments and have clients in at least two major geographic regions (North America, Latin America, EMEA, and APAC). Ultimately, all manufacturing ERP solutions included in this document met these criteria.

All vendors actively participated in the research with multiple customer references being contacted and interviewed for each provider. Discussions with references included the systems utilized and their perception of the vendor and software in terms of technical support, account management, marketing message, level of value delivered versus price paid, ease of integration, user interface (UI), innovation, intelligent workflows, and ROI. In addition, references also provided areas of improvement, their future business requirements, and top metrics.

#### ADVICE FOR TECHNOLOGY BUYERS

ERP systems are evolving rapidly as vendors invest research and development dollars into bolstering, augmenting and, in some cases, redesigning their ERP applications. As a result, it is extremely important for manufacturers to understand how vendors and their software are positioned currently as well as how ERP solutions may be situated in the next three to five years. Investment decisions for an ERP system are going to be a long-term commitment, especially within manufacturing segments, because of the costs, criticality of the system, and effort involved for implementation. Thus it is vital to evaluate the software vendor's strategy, road map, and responsiveness to customer feedback in addition to its present features and functionality. In addition, as the digital-first world continues to bring

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more innovation and digital accessibility, organizations must understand the need to utilize their systems quickly while also relying on them to do more than in the past. Systems that are easily integrated, in the cloud, and bring more innovation on a regular basis are in high demand. Manufacturers are finding that the more effectively they can respond and pivot their organization to handle the next crises the more control they have over their outcome, but all of this depends upon the underpinning of the right modern, modular, and intelligent ERP system.

SaaS and cloud-enabled manufacturing ERP technology is evolving with functionality improvements occurring as often as daily. From the addition of the 3rd Platform with big data and analytics, social, and mobile to the innovation accelerators of Al, 3D printing, robotics, IoT, and advanced security, the systems continue to advance and improve rapidly. Speed is the critical factor in the digital economy, enabling businesses to significantly improve in terms of market share, revenue, and profitability. As SaaS and cloud-enabled manufacturing ERP systems have increased in popularity, so too has the requirement for companies to utilize an ERP system regardless of their business size. Large enterprises find that manufacturing ERP systems enable visibility across the entire organization – from customers to suppliers. But just as important are small and midsize organizations using manufacturing ERP systems. Many large enterprise CFOs and ClOs move to small and medium-sized manufacturers and need a holistic ERP package they are accustomed to but at a fraction of the cost. The executives of small and midsize organizations want to move beyond spreadsheets and databases to SaaS and cloud-enabled manufacturing ERP software because it is an integrated, real-time business system that is always accessible and grows with the business.

Last, ensure that your vendor can support the unique industry challenges you face on a day-to-day basis — the needs of a food and beverage manufacturer can often be different from an automotive manufacturer. It is critical that buyers look for a technology partner they can trust and can take them well into the future. Several vendors outlined in this research study have more manufacturing depth and breadth than others, while some specialize and support specific segments. Figure 1 places providers based upon their ability to serve all types of manufacturing segments; keep this in mind when thinking in terms of your specific industry. Before making purchasing decisions on SaaS and cloud-enabled manufacturing ERP software, companies should ask or consider the following:

- Does the vendor have experience with my type of industry, product, and operational requirements?
- Does the vendor understand the regulations that will impact my business? How are these regulations reflected in my current technology, and how will it change in the future?
- What levels of support are available, and are they geographically available for my business?
- What are my internal support resources and capabilities?
- Should I hire a third party to plan and assist with the implementation of the manufacturing ERP solution?
- Is the vendor financially able to provide needed support? Can the vendor support the development of future manufacturing ERP software requirements?
- Is the vendor committed to this market or industry for the long term?
- Is the ROI achievable? Does the vendor have a track record of meeting the ROI requirements?
- Can the vendor or partners support global operations?
- Can the vendor integrate with my company's other IT systems and those of my partners?
- Can the vendor integrate with my company's operational technology (OT) systems, connecting the shop floor with the top floor?

- Is the product available anywhere and anytime?
- Is the product updated frequently enough for my business needs?
- What new innovations is the vendor considering, investing, and tied to with its road map? How and when will it impact manufacturing as a whole and my business?
- What is the vendor's strategic investment outlook for the next three to five years? Why?
- Will the vendor be a partner, helping my business grow now and in the long term?

This IDC MarketScape vendor assessment assists in answering some of these questions and others. Some of the references that participated in this study noted that the current state of the SaaS and cloud-enabled manufacturing ERP software market is evolving. Many organizations were concerned with the lack of speed to the cloud by some vendors and also the lack of innovation to enhance business processes and the employees' experience. Other references told us they love the new innovation pace, but they are still trying to come to terms with the update cycles within their own business.

IDC expects that some consolidation and specialization by niche providers may occur as the market matures and as manufacturing ERP software vendors look to add additional capabilities to their portfolio of products. The point being, there are a lot of options when it comes to manufacturing ERP, selecting the best vendor for your requirements is a challenging task, but one critical to long-term success.

#### **VENDOR SUMMARY PROFILES**

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and challenges.

#### Infor

After a thorough evaluation of Infor's strategies and capabilities, IDC has positioned the company in the Leaders category within this 2022 IDC MarketScape for worldwide SaaS and cloud-enabled manufacturing ERP applications.

Infor builds industry-specific suites of applications deployed in the cloud as a complete suite. Infor brings forward three main versions of its products within the manufacturing ERP market:

- Infor CloudSuites for enterprise-level discrete manufacturing is built for complex discrete manufacturing companies, typically those needing to operate in multiple countries, languages, and currencies within a single instance of the software. The scope of each CloudSuite varies according to industry need and will include specialist capabilities such as aftermarket service and repair, product life-cycle management, product configuration, and plant automation. Infor CloudSuites are configured to industry needs and include CloudSuite Industrial Enterprise, CloudSuite Automotive, and CloudSuite Aerospace and Defense.
- Infor CloudSuite Industrial is focused on small to midmarket manufacturers across a broad range of industries. The solution is focused on being highly flexible across multiple manufacturing processes, easy to implement, easy to maintain, and self-contained. CloudSuite Industrial supports hundreds of manufacturers globally.

For enterprise-level process and distribution-based manufacturers, Infor offers solutions, including CloudSuite Food and Beverage, CloudSuite Chemicals, CloudSuite Distribution, CloudSuite Equipment (for dealers, service, and rental businesses), and CloudSuite Fashion. All CloudSuites are built on the enterprise application platform of Infor OS that provides API integration to third-party applications, business workflow management, extensibility tooling, and data lake with analytics.

In addition, through its ERP platforms, Infor offers solutions spanning the manufacturing value chain including product life-cycle management, supply chain execution, advanced planning and Scheduling, ecommerce, configure price quote, and service management. In mid-2021, Infor agreed to sell its EAM business and formed a strategic partnership with Hexagon AB and acquired MES provider Lighthouse Systems to bolster its plant floor functionality.

#### Quick facts about Infor:

- Employees: Over 17,000
- Total number of clients: 65,000 customers
- Globalization: Supports local sales in over 46 countries, deployed in over 90 countries, with 63 localizations, and available in 32 languages
- Manufacturing focus: Offers solutions across all four manufacturing value chains –AOVC, BOVC, EOVC, and TOVC
- Ideal customer size: Manufacturers from \$100 million to \$3 billion in revenue
- SaaS: Multitenant SaaS via Amazon Web Services, private cloud, or FedRAMP Cloud
- Pricing model: Subscription fee based, primarily on named users with transactions-based pricing depending on functionality
- Largest customer: Largest customer supports 8,000 users
- Partner ecosystem: Has own consultants in addition to partner capabilities (The Infor Alliance Partner organization works with systems integrators and consultants [Accenture, Capgemini, Atos, etc.] to serve as SMEs by region/industry/so forth. Infor also partners with application vendors such as Ephesoft, FORCAM, or OpenText to provide additional functionality.)

#### Strengths

- Industry expertise: Infor recognizes that deep industry knowledge is key to its customers' success, and multiple references cited its expertise as critical in the selection process and the most important reason they have stayed with Infor. Another reference stated that Infor provides it the functionality breadth and flexibility it needs to meet unique requirements.
- Innovation: Manufacturing references noted that Infor has exceeded its expectations when it comes to innovation. One reference cited reporting/analytics in particular as an area where it has maximized the value of its data as a result of the innovation that Infor has brought. Combining technology expertise with industry expertise previously mentioned is the best way to ensure that tangible manufacturing outcomes are delivered through the use of new technology (IoT, AI/ML, etc.).
- Implementation experience: Infor's implementation experience generally exceeded customer expectations based upon reference interviews. Deployment is aided by the application's flexibility, adaptability, and extensibility, combined with simple screen designers and role-based views. One manufacturing reference noted that it was able to manage deployment itself with minimal support required from Infor channel partners.

## **Challenges**

- Customer support: Manufacturing references stated that they have experienced some issues with Infor support recently. One reference noted that while it can always get the support it needs, the process itself can sometimes be a little cumbersome. Another reference stated that implementing the latest version hasn't been the smoothest process, although after it escalated its issues, it got the support it required. For users on the latest version, this should be less of a concern due to single version software.
- Communication: Customer stated that Infor could still improve in how it communicates with customers around new functionality/updates. While insight into the product road map is easily available, better documentation on the smaller changes was mentioned as a potential opportunity by references.
- Industry cloud adoption: Infor differentiates in the market with a true multitenant SaaS solution; while more of the industry continues to embrace cloud deployment models, there are still some manufacturers hesitant to make the move. Infor will need to continue to incentivize and provide a smooth transition for new/existing customers to move to the cloud.

#### **APPENDIX**

## Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed.

It is critical that buyers look for a technology partner they can trust and that can take them well into the future. Several vendors outlined in this research study have more manufacturing depth and breadth than others, while some specialize and support specific segments. Figure 1 places providers based upon their ability to serve all types of manufacturing segments, keep this in mind when thinking in terms of your specific industry.

## IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

#### **Market Definition**

This IDC MarketScape evaluation focuses on SaaS and cloud-enabled manufacturing ERP solutions. ERP is a packaged integrated suite of technology business applications with common data and process models that digitally support the administrative, financial, and operational business processes across the manufacturing industry. These processes manage resources including some or all the following: people, finances, capital, materials, suppliers, production, supply chains, customers, products, projects, contracts, orders, and facilities.

Manufacturing ERP includes solutions for product-centric organizations across four distinct value chains:

- Asset-oriented value chain (AOVC): Industries include chemicals, metals, and pulp and paper.
- Brand-oriented value chain (BOVC): Industries include consumer packaged goods (CPG), food and beverage (F&B), fashion, and life sciences.
- Engineering-oriented value chain (EOVC): Industries include automotive, aerospace and defense (A&D), and industrial machinery.
- Technology-oriented value chain (TOVC): Industries include electronics and semiconductors (high tech).

Manufacturing ERP systems incorporate operational modules, including order management, finance, procurement, enterprise asset management (EAM), production, and supply chain, to maximize operational efficiencies. Manufacturers see benefits from the integration between core finance and operational capabilities so that operational transactions with a financial impact are reflected directly in financial modules. Typically, ERP solutions are architected with an integrated set of business rules and metadata, accessing a common data set (logical or physical) from a single, consistent user interface. Manufacturing ERP solutions are available as on-premises, hybrid and, increasingly, cloud SaaS deployments.

## The Role of Technology in Manufacturing

Technology is critically important within manufacturing. From transactions to production to compliance, to savings and discounts to inventory management and cash flow, technology is a critical resource for the organization. Manufacturing ERP touches upon:

- Purchase orders
- Customer orders
- Bill of materials
- Invoicing
- Inventory

- Products
- Assets
- Suppliers
- Payments
- Customers

#### **LEARN MORE**

#### Related Research

- Manufacturing Skills Gap: 2022 Talent Management Survey Highlights (IDC #US48986121, March 2022)
- The Future of Enterprise Applications (IDC #DR2022\_BC\_MNR, March 2022)
- Artificial Intelligence Is Reshaping ERP and Finance Use Cases (IDC #US48897722, March 2022)
- Manufacturing Cloud Adoption: CloudPath 2021 Survey Highlights (IDC #US48574421, December 2021)
- Asset-Oriented Manufacturing Value Chain 2021 Investment Guide (IDC #US47583821, April 2021)
- Brand-Oriented Manufacturing Value Chain 2021 Investment Guide (IDC #US47583921, April 2021)
- Engineering-Oriented Manufacturing Value Chain 2021 Investment Guide (IDC #US47584021, April 2021)
- Technology-Oriented Manufacturing Value Chain 2021 Investment Guide (IDC #US47584121, April 2021)

### **Synopsis**

This IDC study provides an assessment of the most popular SaaS and cloud-enabled manufacturing ERP software solutions and discusses what criteria are most important for manufacturers to consider when assessing/selecting a system.

"The manufacturing environment is changing faster than ever before, making the ability to adapt a premium. Manufacturers have encountered many challenges in their efforts to become more resilient, but one of the most cited issues is outdated/legacy systems. While the shift to cloud has been slower than other industries, manufacturers have clearly realized the importance of modernizing their ERP software," stated Reid Paquin, research director, IDC Manufacturing Insights' IT Priorities and Strategies (ITP&S). "There are a lot of options when it comes to manufacturing ERP; selecting the best vendor for your requirements is a challenging task, but one essential to long-term success."

#### **About IDC**

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