

IDC MarketScape: Worldwide Manufacturing Intelligence Transformation Strategic Consulting 2023 Vendor Assessment

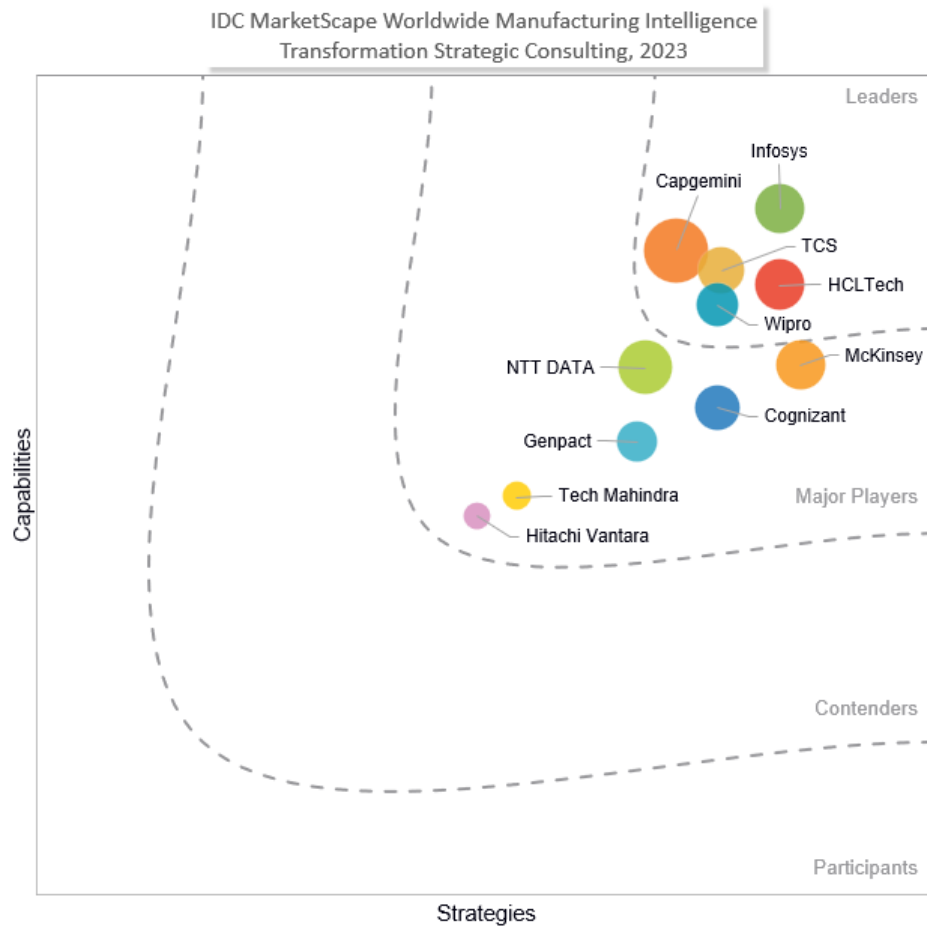
Reid Paquin

THIS IDC MARKETSCAPE EXCERPT FEATURES: INFOSYS

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Manufacturing Intelligence Transformation Strategic Consulting Vendor Assessment



Source: IDC, 2023

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 Manufacturing Intelligence Transformation Strategic Consulting 2023 Vendor Assessment (Doc #US50247922e). 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

This IDC study assesses the market for worldwide manufacturing intelligence transformation (IX) strategic consulting vendors through the IDC MarketScape model. This research is a quantitative and qualitative assessment of the characteristics that explain a vendor's success for intelligence transformation strategic consulting solutions in the manufacturing industry and help assess current and anticipated performance. IDC defines intelligence transformation as the ability of an organization to synthesize the information it needs to learn and to apply the resulting insights at scale. Dimensions of intelligence transformation include data discovery, value development, value realization, knowledge and collaboration, and information architecture. In addition, a key component of IX is applying technologies, such as business analytics, big data, and information and data management, usually in combination with other 3rd Platform technologies and innovation accelerators (cloud, mobile, social, IoT, augmented reality/virtual reality [AR/VR], artificial intelligence/machine learning [AI/ML], cognitive, etc.). A companion to this document is *IDC MarketScape: Worldwide Manufacturing Intelligence Transformation 2023 Vendor Assessment* (IDC #US50247822, February 2023).

This study assesses the capabilities and business strategies of 11 of the prominent IT service providers for IX strategic consulting projects including process design, system design, platform design, system selection assistance, go-to-market strategy, management consulting, regulatory compliance consulting, and enterprise technology strategy or transformation. This evaluation is based on a comprehensive framework and a set of parameters expected to be most conducive to success in providing services for building an IX road map as well as executing on that road map. Key findings include:

- Intelligence transformation in manufacturing, as defined in this study, is one of the pillars of digital transformation (DX). In its simplest terms, IX services enable manufacturers to define and execute against an intelligence strategy that capitalizes on the value of data that is and will become available to manufacturers and to embed intelligence in how manufacturers manage their operations and deliver products and services. Key elements include the ability to synthesize information, the capacity to learn, and delivering insights at scale. IX strategic consulting is focused on projects where a service provider is hired to help a manufacturer do road mapping, select an IX system, and/or do IX strategy work.
- All 11 vendors included in this IDC MarketScape bring notable capability to the space, although they offer varying approaches to IX strategic consulting. All of them face competition from niche service providers as well as other IT suppliers at times. However, these other categories of competitors have not committed to providing the wide range of services and depth and breadth that we find in the vendors included in this research. In addition to the specific capabilities noted in this document, they dedicate significant resources to developing

a partner ecosystem that is broad and diverse to ensure that they are continually innovating in their approach.

- This IDC MarketScape looks at IX strategic consulting projects across the manufacturing value chain including outcomes such as customer experience management, product innovation, supply chain planning and execution, smart manufacturing, and field service management. This 2023 IDC MarketScape for worldwide manufacturing intelligence transformation strategic consulting was conducted in concert with *IDC MarketScape: Worldwide Manufacturing Intelligence Transformation 2023 Vendor Assessment* (IDC #US50247822, February 2023) and includes analysis, with recently published IDC MarketScape documents focused specifically on service life-cycle management (SLM) strategic consulting and product life-cycle management (PLM) strategic consulting:
 - *IDC MarketScape: Worldwide Manufacturing Service Life-Cycle Management Systems Integrators/Business Process Outsourcing 2022-2023 Vendor Assessment* (IDC #US48840322, December 2022)
 - *IDC MarketScape: Worldwide Manufacturing Service Life-Cycle Management Strategic Consulting 2022-2023 Vendor Assessment* (IDC #US48840422, December 2022)
 - *IDC MarketScape: Worldwide Manufacturing PLM Systems Integrator and BPO Services 2022 Vendor Assessment* (IDC #US49838022, November 2022)
 - *IDC MarketScape: Worldwide Manufacturing PLM Strategic Consulting Services 2022 Vendor Assessment* (IDC #US48867622, November 2022)
- While this study is focused on only strategic consulting, it is also important to consider a provider's entire offering. References commonly cited an end-to-end engagement as one of their top selection criteria when it came to strategy work – executing the IX project cannot be overlooked.
- IT service providers' global network of delivery centers and centers of excellence (COEs) supports ongoing development and delivery of IX projects. This includes traditional analytics, cybersecurity, big data, and advanced analytics, as well as increasingly incorporating other 3rd Platform technologies and innovation accelerators. Innovation and thought leadership are key components to consider when selecting a strategic consulting provider.
- The criteria used in this IDC MarketScape on worldwide manufacturing IX strategic consulting (and the resulting position of the vendors [refer back to Figure 1]) are across dual dimensions of strategy (future plans and where the vendor is headed) and capability (where the vendor is today in terms of capabilities). Each of the elements within strategy and capability is then assigned a weighting based on the relative importance of each criterion in the opinion of IDC Manufacturing Insights and feedback from manufacturing customers.
- The results of this study reveal differences in experience by subindustry and delivery approach, and this information can be useful to manufacturers as they evaluate IT service providers in the strategic consulting space. How the vendor locates resources and what industries are most heavily represented in its customer list are two useful points of information.
- This IDC MarketScape is a starting point for manufacturers that are evaluating IT services vendors for help with implementation of IX strategic consulting projects. It is a "short list," if you will – a way to initially winnow down the long list of providers that exist in the marketplace. It does not replace the "due diligence" that companies must then complete to select the ultimate vendor for assistance in an intelligence transformation initiative.

IDC MARKETSCOPE VENDOR INCLUSION CRITERIA

Intelligence transformation is a work in progress for many manufacturers. Far too many organizations learn and apply knowledge in silos (customers, operations, and finance) and one transaction/activity/data point at a time, leading to many challenges and limiting the success of IX initiatives. The advanced manufacturers can accelerate the pace of sophisticated analysis, the mix of data and data types, and the ability to optimize and predict business decisions. To gain competitive advantage and become increasingly customer centric, manufacturers must adapt their classic data management approaches to master a differentiated information value chain.

For the purposes of this IDC MarketScape, and any subsequent research on the topic from IDC Manufacturing Insights, we are defining services for intelligence transformation to include a combination of services, tools, and methodologies to support the development of an information strategy, ongoing information management, and increasing embedded intelligence and value from data. This includes analytics and visualization tools for IX and the ability to integrate across enterprise systems.

There are many IT service providers that offer services around manufacturing processes that make up intelligence transformation. For the purposes of this IDC MarketScape, we are focusing on the notable players with annual revenue of \$500 million or greater. In addition, each vendor had to be able to support global deployments and have at least 10% of its revenue stemming from the manufacturing industry. We define manufacturing very broadly, including consumer products; chemicals, pulp and paper, metals, and other process manufacturing segments; automotive, aerospace, farm, construction, and industrial machinery and other discrete manufacturing segments; and high-tech equipment and components. (Note that our definition did not always align with the 11 vendors included in this study.)

ADVICE FOR TECHNOLOGY BUYERS

- **Think about your future business while solving the problems of today.** Manufacturers need to make sure to not just solve the problems in front of them without an eye to future disruptions and customer needs. Each investment and initiative should build upon each other to avoid siloed projects. Being successful in the long term requires a mindset of linked achievement and investments; this is especially true for strategic consulting engagements.
- **Be realistic in assessing your organization's readiness for digital transformation – technology can't fix poor processes and organizational structure.** Manufacturers need to evaluate their current processes and approach digital investments after the foundation for success has been laid.
- **Pay attention to industry-specific domain knowledge and capabilities.** Services providers have varying levels of expertise across segments (automotive, chemicals, etc.) and business processes (R&D, supply chain, plant floor, service, etc.). This combination of industry-specific needs and deep process understanding enables them to identify and recommend "best practices" that enable projects to deliver value and scale quickly. Therefore, understanding how the services provider addresses the business process within your industry segment is essential. If it's through packaged IP (intellectual property) in the form of tools, ensure that the provider's project leadership will make sure the tools work together for one solution; references commonly cited extra work being needed to make the solutions work for their specific company. Operational technology (OT) and cybersecurity are two areas that should be paid close attention to for most manufacturers focusing on intelligence transformation.

- **Look to providers to supplement internal skills gaps.** Manufacturers have been combating a talent gap across their organization for years. IX projects lack the necessary resources and knowledge around data science, decision science, and data architecture skills to take advantage of the latest technology and AI/ML. All the service providers in this IDC MarketScape have made commitments to expand the manufacturing expertise of their workforce, hiring directly from the industry.
- **Consider the advantages of working with a services provider that already knows your business.** Multiple references indicated that they selected a provider based on the provider's knowledge of their systems or their products and processes and how that knowledge allowed the project to move forward more quickly.
- **Have tough conversations with your IT partners and ecosystem.** Partnerships need to be built on trust and shared outcomes. However, in a client relationship sometimes the vendor will just deliver to your specifications or stated needs. Be willing to accept critical feedback on your enterprise and the path necessary to improve.
- **Don't wait for perfection in your strategy.** Although one of the critical outputs of a strategic consulting engagement is strategy definition, the most successful engagements recognized that strategy must be able to change. Many projects are about helping manufacturers articulate what they want to achieve and the business case to initiate action. However, their objectives and how they execute will evolve over time depending on the progress they make with each individual project.
- **Speak with customer references.** Because of the strategic nature of these types of projects, there is a need for a higher level of comfort and evaluation of the prospective service providers with regard to their approach to IX and the ways they engage with clients to facilitate a strategic engagement. This may also involve seeking feedback from references within your own company, as many may have had experiences with other IT services firms in prior jobs.
- **Focus on becoming a data-driven organization.** The ability to synthesize information does not mean delivery of more reports, dashboards, or other human-consumable indicators of past performance or status of operations. It should focus on delivering actionable information in the context of its recipient. This is where true value can be derived and what will differentiate successful companies from those that struggle.
- **Do not let data quality challenges hold back IX projects.** All the providers in this study were able to help customers make forward progress without doing an all-encompassing data quality initiative. In some cases, they built some degree of data quality automation into the project or they established a parallel data quality-as-a-service initiative.
- **Pay close attention to the AI capabilities/strategies.** It is clear that artificial intelligence will be a key technology for the industry as more manufacturers progress down their transformation initiatives. While AI is a hot topic across space, there is usually work that needs to be completed before a manufacturer can start taking advantage. Challenges around the data, both access to enough data and data cleanup, are commonly cited as inhibitors to AI adoption.
- **Understand how the services providers structure their interactions and populate the project teams.** In countless interviews with manufacturers, there was consistent advice to ensure that the way the services firm balanced onshore needs with offshore resources matched what the manufacturer needed. In the wake of COVID-19, this balancing and the ability to offer remote assistance has become even more pressing. This approach varies by services provider, and it is worth an extensive discussion up front to be certain the right expectations are established to support the initiative.

- **Understand the delivery infrastructure the service providers offer and how they innovate with the partners in their ecosystem.** Given the global nature of most manufacturers' businesses, and the potential for many IX projects to span geographies, it is important to understand what resources service providers have located in each region, including delivery centers and domain-specific FTEs, with most providers expanding their local presence. In addition, most service providers have built centers of excellence around various IX and innovation accelerator domains. They often rely on COEs and other centers to strengthen their ability to leverage partners' capabilities and to foster the kind of innovation that is often only found in academia or in start-ups.
- **Use this IDC MarketScape as part of the vendor evaluation process.** Use this IDC MarketScape in contract negotiations and as a tool to not only short-list vendors for IX service bids but also evaluate vendors' proposals and oral presentations. However, this should only be one part of your vendor selection process. It is important to also collaborate with internal SMEs and build KPIs/characteristics that you are looking for in a provider.

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.

Infosys

Infosys Ltd. is positioned in the Leaders category in this 2023 IDC MarketScape for worldwide manufacturing intelligence transformation strategic consulting.

Infosys, with headquarters in Bengaluru, India, is a multinational corporation providing business consulting, information technology, and outsourcing services. Founded in 1981, Infosys has provided services to the manufacturing industry for more than 40 years with clients across the globe and North America as its largest geography. Infosys' customers are distributed across all manufacturing segments, with discrete manufacturing representing the top segment and the majority being large organizations with revenue over \$1 billion.

Infosys provides intelligence transformation consulting services across the manufacturing value chains, including projects supporting product design/innovation, customer relationship management, supply chain planning and execution, enterprise quality management, plant/operational performance, asset performance management, and field service. Infosys has over 80 dedicated innovation centers and digital studios for its manufacturing-related services. Infosys has a dedicated Data and Analytics practice across the globe providing a broad range of IX services including road map development, business process and IT consulting, technology strategy, data governance, and master data management.

Along with traditional pricing models like time and materials and fixed-pricing models, Infosys is increasingly adopting new pricing models such as KPI/milestone-based, studio-based, usage-based, outcome-based, MVP-based, story point-based, IP/royalty-based, and as-a-service pricing models. Infosys helps clients justify software/service expenses as part of its strategic consulting practice, leveraging its proprietary Value Realization Model to develop ROI and business cases for transformation initiatives.

Strengths

Infosys brings together a strong focus on the manufacturing industry, expertise and IP in data management and advanced analytics, innovation with new technologies such as IoT and AI, and numerous technology and strategic partners. One reference noted that Infosys, "possesses strong data management and migration expertise," which is critical to digital transformation in the legacy manufacturing environment. Infosys has a strong commitment to helping manufacturers evolve their business models to include as-a-service or servitization offerings to deliver increased value to customers. Finally, the flexibility that Infosys provides from a pricing model perspective is also a strength as it can allow more manufacturers to start their IX projects sooner, especially with economic concerns being top of mind for the industry currently.

Challenges

Infosys must continue to invest in both technical and industry expertise to maintain its Leaders position in this IDC MarketScape, especially as more IX projects require both aspects to deliver manufacturing outcomes. Infosys must continue to invest in OT functionality, especially as this group and IT/OT convergence become higher priorities among manufacturers. One reference did note that Infosys, "needs to improve consulting for business strategy, especially hybrid architectures and transitioning to the cloud." As the industry shifts more to cloud systems, manufacturers are seeking more guidance on which workloads are best to move to the cloud and which are best to stay on premises/at the edge.

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.

For this IDC MarketScape on worldwide manufacturing intelligence transformation strategic consulting, because we are evaluating 11 vendors that are dominant in terms of market share and presence (rather than niche players), nearly all of the vendors ended up within either the "Major Players" segment or the "Leaders" segment of this IDC MarketScape. These vendors have all demonstrated depth of experience with global 1,000 companies in this area. And while we have outlined some of the differences of offerings and strengths within the individual vendor profiles, IDC Manufacturing Insights would not hesitate to recommend any of them to a manufacturer evaluating this space.

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

IDC defines IX as an organization's ability to synthesize the information it needs to learn and to apply the resulting insights at scale to transform. Dimensions of intelligence transformation include data discovery, value development, value realization, knowledge and collaboration, and information architecture. In addition, a key component of IX is applying technologies such as business analytics, big data, and information and data management, usually in combination with other 3rd Platform technologies and innovation accelerators (cloud, mobile, social, IoT, AR/VR, cognitive/AI/ML, etc.). Leaders in intelligence transformation can treat data and information as they would any critical business asset – with investments in people, processes, and technologies that acknowledge information's strategic importance and with a road map to maximize information's contribution to the business' success.

IX strategic consulting is the delivery of advice to customers aimed at managing their information architecture and at improving an organization's performance, infrastructure including cybersecurity, and related processes. IX strategic consulting assists an organization with building a vision and goals for the entire organization and then aligning resources accordingly. This includes strategic planning (including human resources, facilities, and financial planning), infrastructure needs assessment, operations assessment, development of enterprise architectures, technology road map design, and data governance.

The following are select service capabilities/offerings for IX strategic consulting in manufacturing that vendors were evaluated against in the areas of business process focus:

- Customer relationship management (sales, contact center, marketing, website, and price)
- Supply chain execution (procurement, logistics, production plans, supplier, and inventory)
- Production/supply chain planning (demand, supply, production, and S&OP)
- Product (new product design, costing, product quality, compliance, sustainability, and product portfolio)
- Enterprise quality (in products and processes)
- Plant performance (manufacturing intelligence, OEE, output quality, environmental, energy, and compliance)
- Asset performance management (maintaining owned assets)
- Service (new service design and delivery, warranty, customer service, field service, and supporting sold products)

Among the considerations for engaging with an IX services firm is its experience in vertical markets and presence in each geography. Often, the geographic presence indicates how well the provider can offer onshore resources to meet customer needs. While there is a concentration of customers in North America and Europe for most of the vendors, there is an increasing opportunity in emerging markets for these companies, and we expect to see growth continue in these regions. Another consideration is the level of experience the vendor has within a certain vertical market or manufacturing segment.

LEARN MORE

Related Research

- *IDC MarketScape: Worldwide Manufacturing Intelligence Transformation 2023 Vendor Assessment* (IDC #US50247822, February 2023)
- *IDC MarketScape: Worldwide Manufacturing Service Life-Cycle Management Systems Integrators/Business Process Outsourcing 2022-2023 Vendor Assessment* (IDC #US48840322, December 2022)
- *IDC MarketScape: Worldwide Manufacturing Service Life-Cycle Management Strategic Consulting 2022-2023 Vendor Assessment* (IDC #US48840422, December 2022)
- *The Implications of Inflation and Potential Recession on the Manufacturing Industry* (IDC #US49844622, December 2022)
- *IDC MarketScape: Worldwide Manufacturing PLM Systems Integrator and BPO Services 2022 Vendor Assessment* (IDC #US49838022, November 2022)
- *IDC MarketScape: Worldwide Manufacturing PLM Strategic Consulting Services 2022 Vendor Assessment* (IDC #US48867622, November 2022)
- *Fostering Safety to Promote Operational Excellence* (IDC #US49736722, October 2022)
- *IDC FutureScape: Worldwide Manufacturing 2023 Predictions* (IDC #US48630122, October 2022)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2022: Asset-Oriented Value Chains in the Manufacturing Industry* (IDC #US49323522, September 2022)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2022: Brand-Oriented Value Chains in the Manufacturing Industry* (IDC #US49295122, July 2022)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2022: Engineering-Oriented Value Chains in the Manufacturing Industry* (IDC #US49294222, July 2022)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2022: Technology-Oriented Value Chains in the Manufacturing Industry* (IDC #US48629822, July 2022)
- *Manufacturing 2022 IT Investment Guide* (IDC #US49296222, June 2022)
- *Manufacturing Skills Gap: 2022 Talent Management Survey Highlights* (IDC #US48986121, March 2022)

Synopsis

This IDC study uses the IDC MarketScape model to provide an assessment of 11 service providers participating in the worldwide manufacturing intelligence transformation (IX) strategic consulting market. This IDC MarketScape is based on a comprehensive framework and a set of parameters expected to be most conducive to success in providing services for building an IX road map as well as executing on that road map.

"Intelligence transformation is an essential pillar of digital transformation and the future of intelligence. Most manufacturers today struggle with scaling their IX projects, leading to knowledge silos and wasted time. IX service providers can play a critical role in the development and execution of an intelligence road map, allowing for data to become a competitive advantage for a manufacturer," says Reid Paquin, research director for IDC Manufacturing Insights' IT Priorities and Strategies Practice.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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