Critical Capabilities for Custom Software Development Services, Worldwide

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By Analyst(s): Gunjan Gupta, Deacon D.K Wan, Luis Pinto, Jaideep Thyagarajan, Ben Pring

Initiatives: IT Sourcing Strategy Development and Execution; Build and Deliver New Digital Products/Experiences to Drive Business Results; Software Engineering Practices

When looking for CSD services, many enterprises struggle to select a provider that can meet their unique business needs. Sourcing, procurement and vendor management leaders can use this research to downselect providers based on their capabilities in different use cases and critical capabilities.

This Critical Capabilities is related to other research:

Magic Quadrant for Custom Software Development Services, Worldwide

View All Magic Quadrants and Critical Capabilities

Overview

Key Findings

- The custom software development (CSD) services market is growing significantly. The market comprises thousands of consulting companies and systems integrators providing CSD services ranging from huge global systems integrators to small local specialist firms.
- Collectively, the service providers in this research post $75 billion in revenue from CSD services. Across the board, they saw an increase of 31% in their business compared with last year.
- Enterprises are looking to build new custom products and engage with these service providers as they struggle with a lack of internal resources. Given the wide set of choices available in the market, clients struggle to identify the best-fit vendor for their unique requirements.

Recommendations

Sourcing, procurement and vendor management (SPVM) leaders deploying an IT services and solution strategy and selection to identify CSD services providers should take these steps:

- Speed up the downselection of service providers matching your needs by reviewing the three use cases and 10 critical capabilities profiled in this research. Each use case covers a spectrum of services that can be explored with the 20 service providers covered here.
- Develop a custom solution by using providers that have proven their ability to collaborate with business and IT resources, understand business requirements, and have the technology and domain expertise to build customized products. Look specifically at providers' business acumen and ability to attract and retain talent.
- Prioritize providers that can help with product design and development by evaluating their industry knowledge, design and development experience in past client engagements. Work with service providers that have capabilities in — and continue to invest in — talent, design thinking and emerging technologies like generative AI (GenAI).

Strategic Planning Assumptions

By 2026, more than 70% of enterprises negotiating with vendors based on labor rate cards will fail to meet business expectations for accelerated digital adoption and innovation.

By 2027, 50% of enterprise software engineers will use ML-powered coding tools, up from less than 5% today.

Through 2025, demand for IT digital transformation skills will be at least 20% higher than the experienced supply available, forcing creative talent acquisition/management solutions.

What You Need to Know

This Critical Capabilities research on CSD services assesses 20 providers' relative capabilities in each use case to successfully design, build and develop custom software and deliver business value. SPVM leaders should use this research to identify and downselect relevant service providers appropriate for their specific business, domain and technical requirements. SPVM leaders should look for providers that can not only develop software, but also help with ideation, transformation and integration with other enterprise solutions. To most effectively assess providers for downselection, SPVM leaders are encouraged to use this Critical Capabilities research in tandem with the companion Magic Quadrant for Custom Software Development Services, Worldwide.

This Critical Capabilities research provides an in-depth view of the service providers beyond the core strengths, cautions and relative positions included in the Magic Quadrant. All service providers have been scored against 10 critical capabilities that Gartner deems are leading factors that sourcing executives need to consider when evaluating service providers for the specific use cases identified. Although the capabilities are the same across the three use cases, their weightings vary depending on the focus of the delivery.

The 10 capabilities listed below, along with the reasons for their inclusion, are described in detail in the Critical Capabilities definition section of this research:

- Business acumen
- Design (user and customer experience [CX])
- Artificial intelligence or machine learning (AI/ML) expertise
- API and integration services
- Analytics and business intelligence (BI) service experience
- Software engineering approaches
- Multiexperience development
- Talent operations
- Technical architecture and cloud
- Quality engineering

Each service provider is scored against these capabilities based on the following:

- The information it provided as part of the Critical Capabilities research process
- Client feedback in Gartner Peer Insights
- Gartner analyst interactions with the service provider and its clients
- Gartner analyst opinion based on market knowledge

The capability scores are then used to position the service providers for three use cases. The three use cases are defined in more detail in the Use Cases section, but are listed here for reference:

- **Unique user experience** — This use case focuses on the provider's ability to build software (used by the buyer's customers, not by the buyer's employees) that offers a differentiated and unique UX.
- **Unique operational processes** — This use case focuses on the provider's ability to develop software that operates or automates business processes unique to the buyer organization.
- **Unique products** — This use case focuses on the provider's ability to build or develop a new product or service that the buyer will sell, and that has differentiating features that can increase revenue and alternative channels for growth for the buyer.

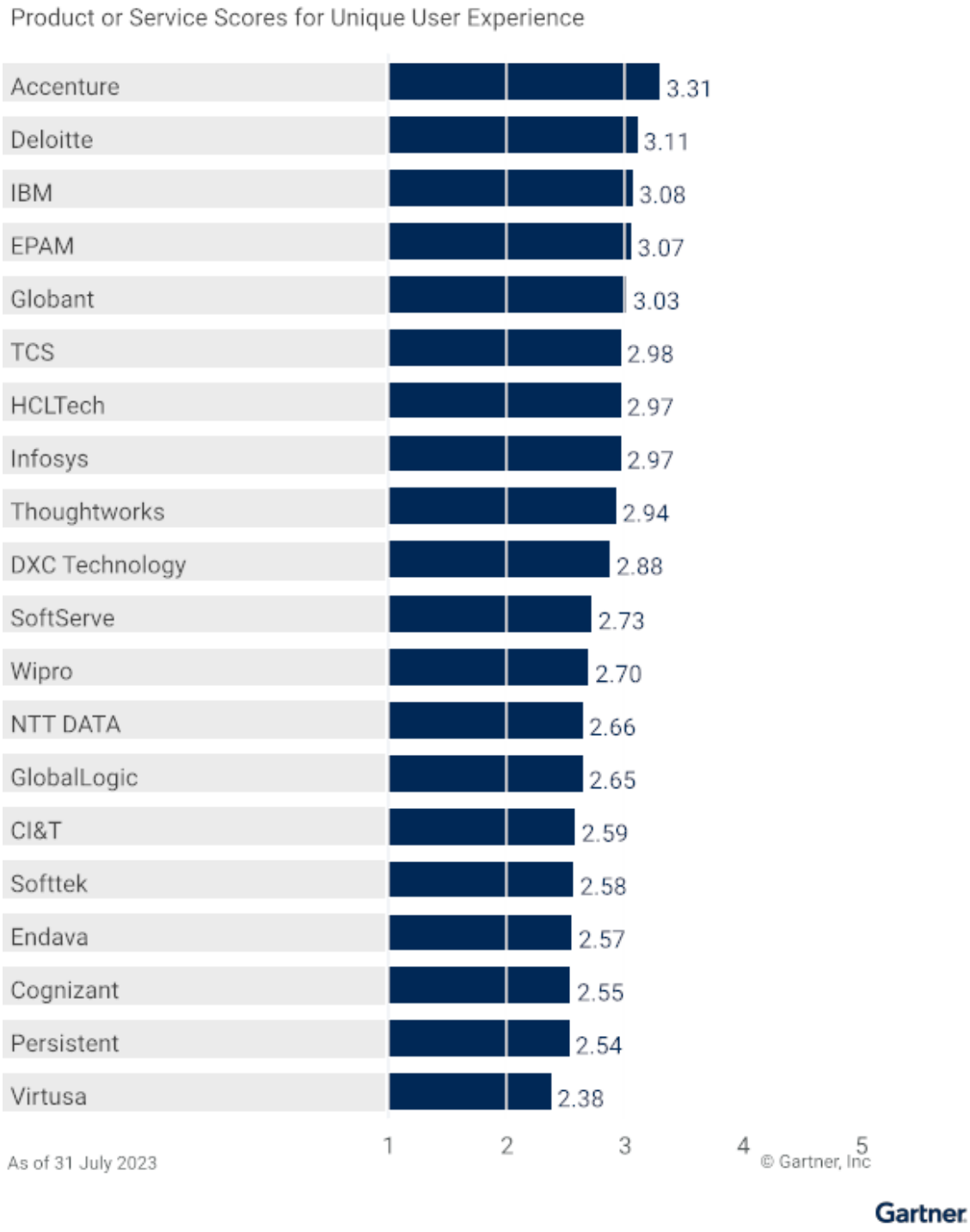
Each critical capability is weighted based on the delivery focus of the use case. The weightings reflect Gartner's analytical position of the relative importance of each critical capability per the respective use case and are listed in the Inclusion Criteria section. Use the interactive view of this research to change the weightings of the criteria to match your individual situation and to see the revised evaluation of providers. Also use the criteria and weightings to evaluate other providers (not included in this research) that might align better in terms of culture, geography, industry experience or other niche criteria.

The profiles below highlight the capabilities and performance of each vendor for the three use cases. Some of the leading providers performed equally well across all three use cases. Use the relative position in the use-case chart and the critical capability scores to gain a better understanding of each provider's capabilities. Leverage these use-case scenarios and capability criteria in conjunction with the Magic Quadrant strengths and cautions to speed up the identification and downselection of candidate providers to meet your CSD service requirements.

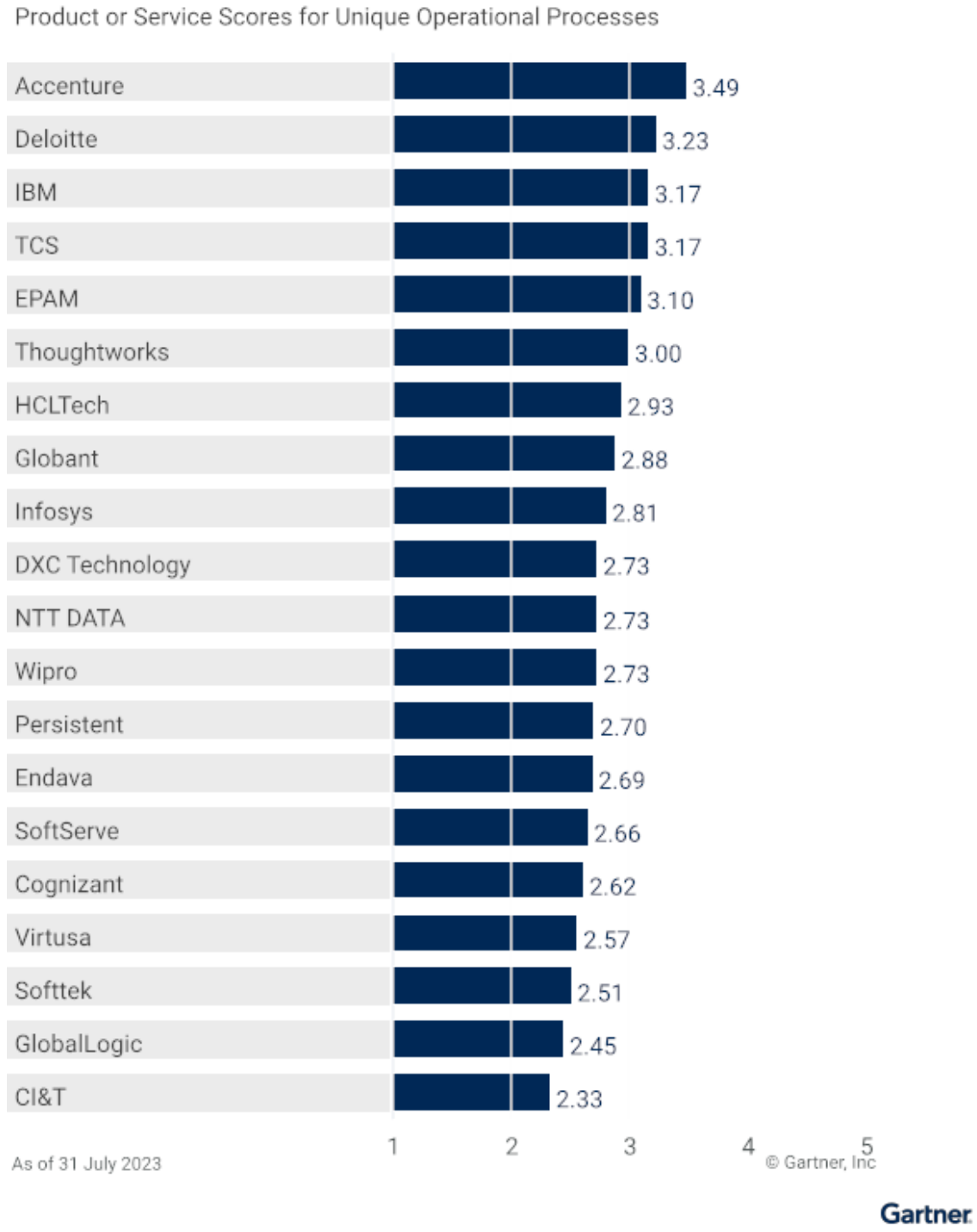
Analysis

Critical Capabilities Use-Case Graphics

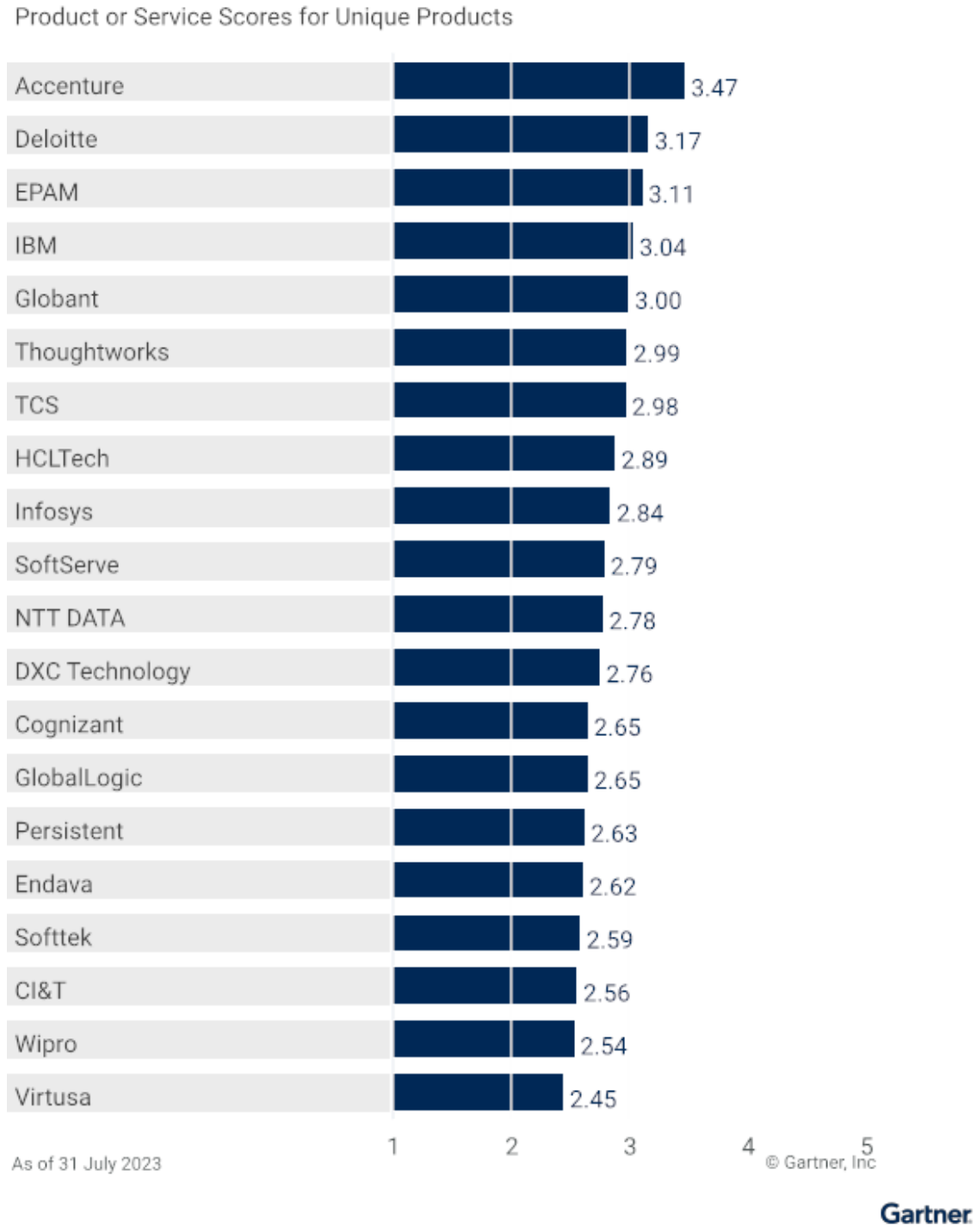
Vendors' Product Scores for Unique User Experience Use Case



Vendors' Product Scores for Unique Operational Processes Use Case



Vendors' Product Scores for Unique Products Use Case



Vendors

Accenture

Accenture is a good fit for global enterprises looking to modernize their business through end-to-end transformation across regions, industries or cloud technology platforms. It has a large CSD practice and strong capabilities across all use cases, but is most suited for large enterprise clients. Accenture provides guidance on strategy, design, development, change management and technology to help clients deploy solutions across technology platforms and architectures.

Accenture has almost 126,000 CSD services resources, roughly 20% of its total employees, which is 183% more than last year. It has 8% of its CSD services resources located in North America (NA), 8% in Latin America (LATAM), 18% in EMEA and 65% in Asia/Pacific (APAC). Accenture invested $1.1 billion in training, learning and development for its employees, completing over 40 million training hours in priority areas such as cloud. In addition, its Cloud Native College, Technology Quotient (TQ) and Cloud Academy offer upskilling and certifications.

Unique User Experience: Accenture's approach to creating unique user experiences is to eliminate barriers created by legacy systems through implementing a digital decoupling strategy (see Note 1). Accenture creates highly tailored and industry-specific digital experience layers for individual client scenarios while ensuring that the target architecture is future-ready to provide consistent omnichannel experiences. Using a combination of proprietary design solutions and industry IP, its client systems run on a fully containerized ecosystem, which can support self-healing, autoscaling and hyperautomation, which makes it a strong client choice for this use case.

Unique Operational Processes: Accenture's broad suite of design (Accenture Song [Fjord]), software engineering (Concierge) and AI (Advisor) solutions, underpinned by its deep AI/ML expertise (Intelligent Email Advisor, Email Sentiment Analyzer and robotic process automation [RPA]), facilitate this use case. Given its full-service heritage, Accenture is also able to leverage its expertise in both package and custom software to meet key client priorities for speed, security and ease of use. As a result, Accenture can enhance digital engagement, increase productivity and provide actionable insights to operations for specific client scenarios. It has a strong focus on large clients, so it may not be best-suited for midsize and small enterprises.

Unique Products: Accenture harnesses its expertise in cloud, IoT, AI/ML and edge technologies to develop new cloud-native products tailored to specific client needs. It also helps co-engineer and co-sell these products. Accenture's business acumen in a variety of verticals makes it a good fit to provide innovative ideas to continuously enhance product features and user experiences to further scale to the global market. Its ability to expedite quality engineering to ensure product quality and usability makes it a very strong choice for this use case.

CI&T

CI&T is a good fit for large and midsize clients in LATAM and NA, mainly in customer-facing industries such as banking, consumer packaged goods, healthcare, retail and media. The company provides services from product strategy and design to software engineering. It is more suitable for the unique product and unique user experience use cases where clients are undergoing transformation in their technology.

CI&T has almost 6,550 CSD services resources, which is 18% more than last year. It has 6% of its CSD services resources located in NA, 86% in LATAM, 3% in EMEA and 5% in APAC. The company offers its employees an internal learning program for software development with over 200 courses. Training also includes workshops, certifications and mentorship initiatives to help employees enhance their skills, expand their knowledge and advance their careers within the organization.

Unique User Experience: CI&T uses design thinking, design sprint, ideation, customer journeys and CX strategy to support user experience (UX) productivity and accessibility. However, CI&T analytics and BI and quality engineering capabilities are not as advanced as other providers in this research. CI&T has 550 full-time equivalents (FTEs) with multiexperience capabilities and 650 FTEs to build customer experiences for different personas and customer journeys. It is investing in proofs of concept (POCs) within healthcare to support virtual reality. CI&T has a smaller proportion of certified consultants in these technical areas than other providers in this cohort.

Unique Operational Processes: CI&T is investing in proprietary solutions and client POCs. It has deep expertise in agile and lean methodologies and Team Topologies. It has hired industry-specific analysts who support retail and banking/financial services. CI&T has 1,900 FTEs with software engineering capabilities who are specialized in agile methods, product management, DevSecOps and visual management, including 600 for API strategy and API developments. It has been developing specific assets for AI — such as CI&T/Flow AI accelerator platform for improving software delivery. IT has also made co-investments with cloud providers, such as Google Cloud Platform (GCP) and Amazon AWS. Clients looking for a high level of business acumen in their industry should ensure that their vertical is a focus area for CI&T.

Unique Products: CI&T has delivered multiservice architecture and new technology platforms using cloud computing and microservices architecture. It uses 4,000 FTEs skilled in technology architecture and cloud for solutions design, target architecture, cloud modernization, governance and operating models for cloud, FinOps, application development, telemetry strategy and execution, continuous integration/continuous deployment (CI/CD) pipeline, automated tests, and infrastructure as code. It has invested in a decision model framework for migration versus modernization, including FinOps for business case rationalization. It leverages its AI accelerator platform (CI&T/FLOW) to increase teams' productivity and ensure efficient coordination throughout the entire project.

Cognizant

Cognizant is a good fit for enterprises in NA and Europe looking for large CSD programs or specialized product development. It has good capabilities in all use cases, although it is strongest in the unique product use case. It has an established CSD practice focused on driving innovation for clients through cognizant IP, industry verticalization and expanded partner offerings.

Cognizant has almost 150,000 CSD services resources, which is roughly 44% of its total employees and 9% more than last year. Cognizant has 15% of its CSD services resources located in NA, 1% in LATAM, 5% in EMEA and 79% in APAC. It has opened centers in Halifax, Canada; Adelaide, Australia; and Leeds, U.K. to provide clients direct access to technology experts who are based locally. It has diverse and distributed teams across its studio network, as well as its own internal IP in the form of purpose-built tools to enable remote work, collaboration and communication. It offers a three-shore delivery model, remote-first approach and 550 new skill paths with Cognizant career architecture.

Unique User Experience: Cognizant has 1,500 UX and creative designers and 250 experience strategists and has built design capabilities through acquisitions (Idea Couture, Softvision, Zone and Devbridge). It is making new investments in integrated behavioral science, quantitative research and analytics, maturing its product prioritization framework with an emphasis on sustainability and providing services through 12 experience studios globally. There are homegrown accelerators like experience blueprints, Toybox and Pixel Perfect.

Unique Operational Processes: Since 2022, Cognizant has invested in API and integration services by adding over 1,100 associates, 3,700-plus certifications across companies such as TIBCO and IBM, and multiple assets (Cognizant Hybrid Cloud Integrator and Cognizant Cloud Integration Brokerage). It has recently launched Neuro AI, a preconfigured technology accelerator for faster AI applications adoption and running internal POC trials to explore how GenAI can accelerate concept definition activities. Cognizant is a good option for clients looking for strong data analytics and AI expertise.

Unique Products: Cognizant has a large workforce trained on agile and DevOps methods and offers product backlog workshops, pod-based product engineering, agility assessment and product-centric delivery transformation. Since acquiring Contino, a specialist provider focusing on scaled agile and DevOps, it has been investing in talent and IPs around agile methods, such as scrum, SAFe, Kanban, Disciplined Agile Delivery (DAD) and extreme programming. It has launched an agile community knowledge management portal, new collaborative go-to-market programs with hyperscalers, and global hackathons. Its CSD practice, with an automation-first approach, is part of its software and platform engineering practice. Unique products is a strong use case for Cognizant as it has worked with large enterprises to build products using augmented reality/virtual reality (AR/VR) and the Internet of Things (IoT).

Deloitte

Deloitte is a good fit for organizations looking for transformational outcomes using industry business knowledge, cloud and AI/ML technology expertise, and strong ecosystem partner practices. It has strong capabilities across all use cases and runs several multiyear agile transformation programs mainly for unique user experience and unique operational processes use cases. The company provides tailored pod-based delivery models and innovative deal structures to address clients' desired outcomes.

Roughly 12.5% of Deloitte employees are CSD services resources, which is 20% more than last year. It has 44% of its CSD services resources located in NA, 4% in LATAM, 23% in EMEA and 29% in APAC. The company offers a global network of 35 global delivery centers across the U.S., LATAM, Europe and APAC regions; 62 digital studios; 10 migration factories; and more than 15 agile centers of excellence (COE). It offers highly personalized learning and expanded training for critical technologies and leadership skills via a digital learning platform, which includes more than 400,000 learning assets from both internal and external sources, including training on GenAI and its implications.

Unique User Experience: Deloitte delivers design and user experience by incorporating a human-centered approach based on a framework that includes insight-driven analytics focused on business goals, and personalized and seamless experiences across all touchpoints and channels, with operating models aligned to customer experiences. It uses proprietary design assets and industry IP as well as a continuous innovation approach leveraging insights, operating models and frameworks. Some clients reported that Deloitte's digital practice played a central role in their success, highlighting UI/UX expertise and accelerated shift toward human-centered design.

Unique Operational Processes: Deloitte is able to design and deploy innovative end-to-end solutions including secure and scalable cloud software platforms and cloud-native applications that lead to significant resource optimization and organizational efficiencies. Clients' complex data and analytics transformations benefit from Deloitte's multicloud AI platform, which features a comprehensive set of technologies for data, analytics, intelligent automation, and ML. It has co-innovated with partners such as NVIDIA, launched offerings such as AIOPS.D, Unlimited Reality, Pallium and MXDR and uses a framework called Trustworthy AI to ensure that AI solutions are implemented safely and responsibly.

Unique Products: Deloitte's experience in product strategy and conceptualization, product roadmap, technical and functional design, pilot launch, and test enables clients' product transformation journeys. Its industry-specific expertise in development pods and labs makes it a strong choice for this use case. Some clients cited Deloitte's ability to not only understand the technology required but also to deliver the business outcome.

DXC Technology

DXC Technology is a good fit for large global companies in North America, Europe and Asia/Pacific seeking a broad range of IT services, but also requiring specialist software engineering expertise and experience. Via its 2019 acquisition of Luxoft, DXC Technology has expanded its existing engineering capabilities with a special focus on digitization and cyber-physical product development. It has strong expertise in the unique operational processes use case, especially for the automotive industry.

DXC Technology has more than 48,000 services resources, roughly 37% of its total employees, which is 41% more than last year. It has 8% of its CSD services resources located in NA, 5% in LATAM, 46% in EMEA and 41% in APAC. It has 17 design and innovation centers worldwide that focus on transformation, business and specific industries. DXC Technology provides ongoing training and certification in core partner technologies, as well as boot camps, hackathons and innovation weeks.

Unique User Experience: DXC Technology has set up two new argodesign studios/collaboration spaces in Austin, Texas and Munich for design talent and creative customer engagement. It has further completed full integration of Luxoft's Smashing Ideas with argodesign and uses a hybrid delivery model to allow strategy and user research to occur near the client's time zone for cost efficiencies. It has worked on many projects for clients developing smart products. For a life science technology company, DXC Technology conceived and created a genome mapping machine; this expertise stems from argodesign's core heritage in the automotive industry and equipment control sector. Some clients noted challenges with resourcing and longer ramp-up time.

Unique Operational Processes: As an early mover in the commercial DevOps industry, DXC Technology has developed and deployed most of the relevant methodologies and philosophies contained within the Agile Manifesto and is now investing in a more structured incubation process. It has built Wardley Maps to identify investment choices in specific industries and domains, launched Automotive Advisory Group, and built LUXidea — a global portal to find, fund and reward new business ideas from the field that address specific client needs. Clients looking for a high level of business acumen in their industry should ensure their vertical is a focus area for DXC Technology.

Unique Products: DXC Technology has over 5,000 developers certified in agile and over 24,000 FTEs certified across various cloud platforms. It works with clients to analyze their organization's value streams using Transformation Kata (an approach to transforming organizations), and to scale adoption by employing DevOps Dojos (weeklong workshops) and a proprietary organizational change management program. DXC Technology works closely with a number of leading automotive companies on the transformation of cars into "computers on wheels." It was instrumental in moving many of these automotive companies (and its other partners and subcontractors) toward agile across the entire development process.

Endava

Endava is a good fit for clients in EMEA and North America that are in payments, financial services, retail and mobility, and seeking assistance in ramping up niche technologies in those verticals. It is also a good fit for clients needing help in product, business and technology architecture and implementation of projects through skilled cross-functional agile teams. It has strong expertise in the unique operational processes use case.

Endava has almost 9,200 CSD services resources, which is roughly 92% of its total employees and 8% more than last year. It has 3% of its CSD services resources located in NA, 31% in LATAM, 65% in EMEA and 1% in APAC. Endava has invested in an internal talent management system for workforce management, career development and training, and signed a multiyear enterprise agreement with O'Reilly for all employees to gain unlimited access to that platform.

Unique User Experience: Endava has broad expertise in customer experience design, product design, game design, service design and brand design. Endava takes a community approach to excel in creating unique user experiences, investing in building professional communities to nurture and expand its approach to design systems, research, extended reality (XR) and AR/VR, and design thinking. It recently released BEEQ, its open-source design system, to create consistent and cohesive digital product interfaces. Given these capabilities, its continual investments in internal and external training of its people, and client feedback, Endava is rated as moderate for this use case.

Unique Operational Processes: Endava uses its proprietary model TEAM (The Endava Adaptive Model) to deliver transformational software systems by adapting industry best practices to meet clients' needs and support deliverables. By leveraging its expertise in analytics and AI/ML, Endava is able to create unique operational processes, particularly for clients in the payments domain. In addition, Endava is able to implement RPA, data science and dashboard solutions for clients to increase process efficiencies. Most of Endava's value addition in this use case has been in the payment, financial services and retail, making it a good fit for clients in these sectors.

Unique Products: Endava harnesses its expertise in technical architecture, cloud and quality engineering to create unique cloud-native, microservice-based products using a range of cloud services (including serverless, messaging, streaming, event hubs and cognitive services) to suit client-specific needs. It continues to invest in its TEAM delivery framework to further its strengths in its engineering methodologies. Endava has delivered outcomes like elevated throughput, better visibility, deeper insights and improved experiences for clients in banking, payment processing and healthcare verticals.

EPAM

EPAM is a good fit for clients seeking leading-edge specialist software engineering capabilities. EPAM has focused on helping clients build net new solutions and modernize existing ones. It has similarly focused on working largely (but not exclusively) with startups or new divisions within more established organizations, looking to develop "next-gen" solutions. Developing for omnichannel, cloud and data platforms has again been a large focus area.

EPAM has almost 37,000 CSD services resources, which is roughly 62% of its total employees and 8% more than last year. The company has 7% of its CSD services resources located in NA, 5% in LATAM, 74% in EMEA and 14% in APAC. Many of EPAM's Ukrainian employees have been relocated to other parts of Europe over the last 18 months, with little to no interruption in client service. It has built EPAM Centers of Engineering Excellence in central and eastern Europe and established new IT hubs in a significantly scaled way to new locations such as Ukraine, Turkey and Kazakhstan.

Unique User Experience: EPAM has deep credentials in generating unique experiences for its clients and for its client's clients. It has expanded its design capabilities through acquisitions (Vivify Ideas, Emakina Group), EPAM creative labs, and EXT learning platform. Across areas like fashion, entertainment and media, EPAM has carved out an enviable niche working with leaders in those industries on their leading-edge initiatives. One example is a recent project for a major fashion house developing an industry-first voice-enabled makeup assistant for the visually impaired, powered by an AI engine. Most notably, EPAM is a key supplier to many "born digital" technology household names.

Unique Operational Processes: EPAM has built a strong team of professionals focused on API, AI/ML and analytics through acquisitions and targeted hiring programs. Key to client traction has been EPAM's specialization in innovating modern software engineering approaches, which has generated an industrywide reputation as it being the "engineering firm for engineers." EPAM's Product Excellence (ProdX) and Engineering Excellence (ExgX) methodologies are the foundation of its philosophy of "build the right products, build the products right," which focuses on automation and consistency across the software development life cycle. EPAM is also deeply committed to the open-source community and is ranked No. 24 in the Open Source Contributor Index.

Unique Products: EPAM helps its clients with assessment of the existing processes, tools, culture and organization structure, execution of agile transformation programs, and offers training and coaching services. Building on a strong foundation of data and analytics capability, EPAM is investing in leverage of large language modes (LLMs; e.g., Microsoft 365 Co-Pilot, Google Vertex) across these areas and others, such as existing accelerators (MLOps, LLMOps) and assets for platform engineering and process orchestration. EPAM is extending its AI capabilities into areas such as computer vision, natural language processing and predictive maintenance with a combination of homegrown and commercially sourced solutions.

GlobalLogic

GlobalLogic is a good fit for companies in NA and Europe looking for engineering, design and digital transformation expertise. It has a strong focus on unique user experience and unique products. It specializes in agile training and coaching, providing clients of all sizes with the advantage of learning and adapting to proven approaches in lean-agile thinking.

GlobalLogic has almost 27,100 CSD services resources, which is roughly 67% of its total employees and 21% more than last year. It has 8% of its CSD services resources located in NA, 3% in LATAM, 38% in EMEA and 52% in APAC. Its Talent Engine 2.0 is geared toward employee retention and skills development using AI/ML trending, while GlobalLogic Education offers personalized skills plans for custom curriculum development. Continuous employee development also occurs within its eight design studios and 30 engineering centers.

Unique User Experience: GlobalLogic's strategic design studio, Method, takes a holistic approach to experience design by considering the client's brand and relationship with its customers to define coherent and intuitive services. GlobalLogic prioritizes working with key client stakeholders, aligning on project goals and auditing current system/experience before creating new information architectures and crafting new design strategies to create unique user experiences to its clients' customers. However, client feedback indicated that GlobalLogic sometimes makes nonideal choices for implementation due to a lack of understanding of clients' customers.

Unique Operational Processes: GlobalLogic harnesses its expertise in cloud, agile methodologies and DevOps practices, which clients can leverage to build and deliver automated solutions to streamline critical tasks, thereby contributing to improvements in process efficiencies. It also has a solid quality and testing practice to speed products to production. In addition, GlobalLogic has strengthened its digital advisory and assessment offering, which is aimed at clients who need help in ideating on a new concept, or are looking for new revenue streams or process reengineering. However, clients looking for a high level of business acumen in their industry should ensure their vertical is a focus area for GlobalLogic.

Unique Products: GlobalLogic has developed a number of digital accelerators like Data Platform, OpeNgine and Microservices Accelerator to help clients with new product and platform strategy and configuration. These come with out-of-the-box (OOTB) DevOps capabilities like orchestration, provisioning and multicloud support and are intended to get clients started on their product journey from Day 1. GlobalLogic focuses on design and software engineering and leverages Hitachi Vantara (or other third parties) for RunOps services. Clients without an existing agile and DevOps partner to support them postexecution should contract for transition planning with care.

Globant

Globant is a good fit for large and midsize companies looking to design new solutions using the latest technologies and trends. Its resources are based predominantly in LATAM. It has good capabilities in all use cases, especially where it has industry knowledge, and uses its hybrid delivery model and agile process framework to build new solutions.

Globant has almost 27,000 CSD services resources, roughly 90% of its total employees, which is 22% more than last year. Globant has 3% of its CSD services resources located in NA, 74% in LATAM, 7% in EMEA and 16% in APAC. It offers onshore, "nearshore" and offshore capabilities using more than 50 development centers and 13 reinvention studios. Globant University is a key company program, providing tools and 1,000 technical trainings to thousands of Globant employees every week. Globant claims its focus on diversity and inclusion is demonstrated by its inclusion of women in technology; women make up approximately 28% of its workforce.

Unique User Experience: Globant has 900 design professionals and its design capabilities are centralized in its design studios. It offers design strategy, design research, visual design and usability analysis to help clients observe user behavior and enhance interactions. It has designed and built an immersive environment (digital content platform) for several large clients and enhanced its digital marketing and product design capabilities through acquisition of HABITANT. It has expertise in conversational interfaces, digital experience platforms, UI engineering and metaverse to build innovative omnichannel solutions. Clients appreciated its design, research and discovery teams and the way it helped them to significantly improve their UI.

Unique Operational Processes: Globant is focused on increasing its industry specialists and has expanded its operations in emerging markets such as APAC, EMEA and LATAM. It helps clients to envision, define and build data products and data strategies using agile methodologies. Globant's multidisciplinary teams with professionals from various backgrounds, including agile, OCM and product management, work with clients to understand their context, forge strategic alliances and engage key stakeholders to drive change. It has trained employees on data and AI and built products such as Augoor and MagnifAI as part of its Globant X division. However, its capabilities in analytics and AI/ML are not as advanced as other providers in this research.

Unique Products: Globant has more than 2,000 agile and DevOps-certified professionals. It helps clients with rapid evaluation and enhancement of software products through an agile design and interaction process. It typically has a percentage of the pod on-site with the client, and the rest of the members can be in a combined nearshore and offshore model. It has delivered many successful engagements, including a calculator for a healthcare client that calculates psoriasis area and severity using AI. Many customers appreciate the commitment, collaborative culture and quality resources provided by Globant.

HCLTech

HCLTech is a good fit for large and midsize organizations focused on growing product-centric services and building an agile or DevSecOps practice as a discipline. HCLTech has strong capabilities in new product development use cases. It has a specific CSD framework and multiple platforms, from digital transformation and engineering processes to analytics, design thinking and 3D process value discovery.

Gartner estimates that HCLTech's CSD services resources increased roughly 31% compared with last year. It has about 20% of its CSD services resources located in NA, 2% in LATAM, 16% in EMEA and 62% in APAC. It has an extensive network of Digital Experience Studios and co-innovation facilities around the world, including Redmond, Washington in the U.S. as well as London, U.K. and Frankfurt, Germany. HCLTech offers a range of talent development programs such as its School of Talent Advancement and Reskilling (STAR), ASCEND (women's career development) and TechBee, which is focused on India, multiple South Asian countries and Australia.

Unique User Experience: HCLTech uses its experience design framework (Nexus) to promote co-design and collaboration using rapid iteration, feedback and improvement of experience governed by data points like iterative usability testing cycle, taxonomy testing and design thinking sessions. HCLTech has undertaken a number of projects focused on the maturing MACH (Microservices, APIs, Cloud and Headless) concept and is keen to instantiate that methodology more deeply into its approach going forward. One client project that HCLTech has undertaken along these lines is for a U.S. cosmetics company, where it led a project aimed at creating a "store of the future" that would fully integrate in-person and online experiences and transactions. Some clients cited challenges with getting access to niche skills and senior resources.

Unique Operational Processes: HCLTech has expanded its digital consulting capabilities in the financial services domain through gbs and Confinale acquisitions. Via the acquisition of Starschema, HCLTech is working on niche data engineering-related domains. One such example includes creating a data marketplace solution to increase data ingestion speeds through more efficient metadata-driven, configuration-based, simplified data pipelines to eliminate the need to interact with a database, extraction, transformation and loading (ETL), or process orchestration tool. Some clients cited challenges with resources lacking business and functional knowledge of the system.

Unique Products: HCLTech has made investments in agile and DevOps programs by providing dedicated coaches paired to key customer accounts and seeding change agents in key roles (architects, site reliability engineers, etc.) to influence behaviors. In addition, it runs hackathons/agility days to drive innovation, collaboration and knowledge sharing. HCLTech has a wide range of products, platforms, accelerators and assets; many are tailored to engagements in particular vertical markets, and an increasing number leverage open-source principles and relationships. Among these are ADvantage Code, which is "future-proof" framework for developer productivity, and ADvantage Assess, which is a DevSecOps assessment tool based on the DevOps Research and Assessment (DORA) maturity model.

IBM

IBM is a good fit for large global enterprises looking to create secure and scalable applications that enable digital and cognitive capabilities through the application of IBM Garage methods and tools. It has strong capabilities in the unique operational processes use case and is well-positioned in other use cases. It helps clients to deploy complex technologies by using a product engineering mindset and leveraging IBM Garage-led experience.

IBM has almost 24,000 CSD services resources, which is roughly 5% of its total employees, 7% more than last year. It has 17% of its CSD services resources located in NA, 4% in LATAM, 15% in EMEA and 64% in APAC. It offers a flexible delivery approach using more than 230 delivery centers in 70 countries, including 26 iX experience design studios and 75 innovation centers. IBM invests in learning and knowledge programs, staff upskilling, and internal and external certifications. It also runs several HR initiatives throughout the year to keep the practitioners engaged and motivated.

Unique User Experience: IBM design thinking is centered on creating human-centered solutions, and IBM Garage is used to create and scale new ideas. IBM Garage methodology is used to drive enterprise design thinking at scale, is built on agile principles for co-located and distributed teams, leverages DevOps tools and techniques for continued delivery and operations, and fosters digital talent and culture change. IBM has expanded its India studio to more than 190 designers to create digital products, and has over 100,000 design professionals who offer product innovation, experience design and digital product development services.

Unique Operational Processes: IBM leverages analytics innovation center and IBM research labs to develop intelligent analytics software solutions. It is investing in watsonx, an AI and data platform to help enterprises scale and accelerate the impact of GenAI with trusted data. It plans to launch three solutions under the watsonx platform. Watsonx.ai is an enterprise-ready AI studio consisting of GenAI models; watsonx.data is a data store built on open lakehouse architecture; and watsonx.governance is a toolkit encompassing both data and AI governance. IBM acquired StepZen to expand its offerings in API and integration services. IBM is well-positioned to deliver on this use case using its extensive and advanced analytics, AI and integration capabilities.

Unique Products: IBM is investing significantly in the area of product engineering (leveraging the Dialexa acquisition) as well as enhancing its tooling and accelerator framework around software engineering. It uses the IBM DevOps maturity model to assess the client's current practices, define a roadmap to scale DevOps adoption, implement agile practices and measure improvements. It helps clients to build a scalable IT operating model designed for the cloud, and fosters a culture of agility, speed and continuous improvement, including developing the necessary cloud skill sets and capabilities. For clients looking to develop unique products, IBM is a good choice as a service provider.

Infosys

Infosys is a good fit for large and midsize enterprises based in NA, Europe and APAC looking for a CSD provider focused on building products and platforms. The company has a strong focus on execution and has invested in enhancing its product engineering capabilities. It has strong capabilities in all use cases and has further strengthened its digital marketing and experience design capabilities through acquisitions.

Infosys has more than 240,000 CSD services resources, which is roughly 71% of its total employees, 23% more than last year. It has 17% of its CSD services resources located in NA, 1% in LATAM, 4% in EMEA and 78% in APAC. It uses more than 20 innovation labs and design studios to deliver CSD services and has built Infosys Cobalt with 300-plus industry cloud solution blueprints and cloud assets. Clients and employees can use Lex, a platform for experiential learning, and Infosys Springboard, a digital skills platform.

Unique User Experience: Infosys has expanded its design capabilities by acquiring a digital agency, oddity, in 2022, which added 300 digital experts globally. It also acquired Kaleidoscope for consulting, market intelligence, and new product design and development. It has also onboarded 200 niche startups, many of which specialize in user experience. It has developed several client platforms using its experience in AR/VR, computer vision, conversational interfaces and blockchain. It has established Infosys Innovation Network to partner with startups, universities and hyperscalers to incubate emerging technologies. This is a strong use case for Infosys, given its design acquisitions and technology expertise.

Unique Operational Processes: Infosys has invested in analytical and BI assets, vertical assets like Infosys Vision Analytics based on AI and computer vision, and technology assets for specific problems. The company has made significant investments in AI/ML by launching Infosys Topaz using GenAI technologies; it offers over 150 pretrained AI models, covers 12,000 AI use cases and has 676 patents. It has connections with more than 200 universities and research communities worldwide for joint research and development. Infosys has also developed 150-plus vertical solutions for financial services, insurance, healthcare and telecommunications, and has more than 9,000 domain specialists with deep industry knowledge. Clients appreciate its technical expertise, responsiveness and focus on building relationships.

Unique Products: Infosys has trained many resources as design thinking experts, reskilled support analysts to SRE, and extended training and certifications for Scrum, Kanban, SAFe and Spotify. It has adopted GitHub Copilot and ChatGPT, and is using GPTX models trained via OpenAI Azure services for custom code generation. It has further invested in building product-centric capabilities, and assets and accelerators (Infosys DevSecOps Platform, Infosys Live Engineering and Infosys Cognitive Automation Studio) and provides advisory services for agile and DevSecOps, value stream mapping, and product management. Some clients highlighted attrition and talent onboarding time as a concern.

NTT DATA

NTT DATA is a good fit for global enterprises that are looking for a combination of local and global delivery models and a long-term innovative partner. The company helps enterprises transform from traditional software projects to differentiated products using an iterative process utilizing design thinking, agile methods, lean UX, cloud and DevSecOps.

NTT DATA has almost 56,800 CSD services resources, which is roughly 64% of its total employees, and 14% more than last year. It has 10% of its CSD services resources located in NA, 17% in LATAM, 29% in EMEA and 45% in APAC. The company has adopted a platform-driven approach for talent management and career architecture and a learning management system to focus on cross-skilling of talent.

Unique User Experience: NTT DATA offers customer experience advisory, delivery and management capabilities to its clients as part of its continuous design and evolution offering. NTT DATA leverages its business intelligence and applied analytics expertise to create unique user experiences for its clients, while also driving data maturity on the client side by using its proprietary Enterprise Data Maturity model. It has also developed two proprietary accelerators that enable end-user experience management to aggregate and convert customer data into insights and measurable KPIs. In addition, NTT DATA has capabilities to do KPI mapping, CX measurement and social media monitoring.

Unique Operational Processes: NTT DATA's full-stack value proposition with a scaled agile/DevOps delivery model underpinned by a high degree of automation allows for the creation of unique client-specific operational processes. Automation services are part of NTT DATA digital services, implying a high degree of strategic emphasis is placed on automation-associated offerings. It has developed Nucleus, a cloud-based intelligent enterprise platform consisting of use-case-focused application automations and custom software development solutions, which allows clients to automate part of or all of the critical activities. This capability is available to clients across all industries.

Unique Products: NTT DATA's vast amount of proprietary IP includes Coding by NTT DATA, BuDDy and AI Test Engine, which facilitate creation/co-creation of new cloud-native products for clients. It has also formed partnerships with low-code development platform providers and invested in furthering its expertise in AI/ML. In addition, NTT DATA's quality engineering global services portfolio offers digital business assurance, DevTestOps, intelligent quality assurance and digital asset reliability solutions, which ensure high product quality. This use case is NTT DATA's strongest use case; client feedback applauds NTT DATA's engineering talent and its ability to create new solutions under tight timelines.

Persistent

Persistent is a good fit for large and midsize enterprises in North America looking for a CSD provider focused on product engineering. It has good capabilities and is well-positioned to deliver on unique operational processes. It works with clients as a co-innovation partner to advance modern digital engineering skills.

Persistent has almost 14,700 CSD services resources, which is roughly 65% of its total employees, and 34% more than last year. It has 5% of its CSD services resources located in NA, 1% in LATAM, 1% in EMEA and 92% in APAC. It has opened 13 delivery centers and satellite offices in the last year. It launched Persistent Digital Engineering Academy to develop future-ready skilled talent, and Persistent University provides more than 350 technical and power skill courses to its employees.

Unique User Experience: Persistent has over 100 experienced architects, interaction designers and visual designers and has built design studios in Santa Clara, California, London, U.K., and Pune, India. It has further invested in training and certification programs through the Interaction Design Foundation, Human Factors International and IDEO for internal training sessions on various aspects of UX. Persistent's design thinking approach — Digital Greenhouse — brings together a multidisciplinary team of designers, technology architects and domain experts to deliver a colocated solution including a digital vision, roadmap, stakeholder engagement plan and interactive prototype. It has also invested in building design frameworks, but its design capabilities are not as advanced as those of other providers in this research.

Unique Operational Processes: Persistent works with clients in software, high tech, banking and financial services, and healthcare and life sciences, and is hiring leaders and subject matter experts to build domain expertise. It strengthened capabilities for MuleSoft, TIBCO and API-led integration services through its acquisition of CAPIOT. Its capabilities for API, AI/ML, and analytics and BI are not as strong as other providers in this research. It continues to invest in talent in these areas by forming strategic alliances with colleges and universities and organizing hackathons.

Unique Products: Persistent has more than 8,800 agile-trained associates and provides mandatory training on the product engineering mindset. It has built tools and frameworks such as WingMate (AI-assisted code generation), ExtenSURE (developer effectiveness), and TestMate (test case generation using GenAI). It is a gold partner with Scaled Agile and has a team of experienced agile coaches who coach enterprise clients. It uses the Persistent DevSecOps framework and CSD delivery governance platform to improve client delivery. It engineers for security right from the start by transforming DevOps into DevSecOps and embeds security testing into the development pipeline, combining the speed of agile with security by default. Clients appreciate the technical expertise, flexibility and collaboration approach of its resources.

SoftServe

SoftServe is a good fit for organizations in NA and Europe seeking a specialist software engineering provider with an emphasis on new product development. SoftServe has strong capabilities in healthcare and life sciences, financial services, and technology, but is most suited for customers looking for highly technical development projects. The company primarily focuses on core engineering services but continues to invest in advisory-led and solution-led engagements.

SoftServe has almost 8,700 CSD services resources, which is roughly 67% of its total employees, 9% less than last year. It has 1% of its CSD services resources located in NA, 4% in LATAM, 94% in EMEA and 1% in APAC. Like other companies with substantial presence in Ukraine, SoftServe has relocated many of its employees to other parts of Europe and the Middle East over the last 18 months. It has a series of COEs and innovation laboratories focused on areas such as experience design, cloud, big data, AI/ML and other emerging technologies.

Unique User Experience: SoftServe is investing in its design capabilities (including design skill specializations), design domain expertise across industries and user-centered multimodal experiences. SoftServe worked with an augmented reality company on its latest headset, providing services across the entire product development life cycle, from UX design to the creation of perception algorithms. While AR/VR is still struggling to scale in consumer markets, specialized industry areas such as medical surgery and construction are its key growth areas, for which SoftServe is well-placed. It has partnered with industry leaders such as NVIDIA/Omniverse and innovators such as Ultraleap to facilitate haptic/touchless interface research.

Unique Operational Processes: SoftServe has placed a significant focus on leading innovation in software engineering methodologies and has a large array of tools, assets and intellectual property that it brings to bear in client engagements. These range across areas such as continuous delivery, infrastructure as code, and DevOps as a service. This emphasis extends to aligning its approaches with industry best practices such as those offered by the Pragmatic Institute and Scrum Alliance. It also focuses on AI-driven process transformation by leveraging the latest techniques in AI/ML, often complemented by big data, IoT and robotics.

Unique Products: As a "digital native" aligned with many digital-native clients, SoftServe has experience working on very leading-edge initiatives. For example, it partnered with the GPU/AI pioneer NVIDIA to create a vertical farming solution; this culminated in SoftServe becoming NVIDIA's Impact Partner of the Year. In this partnership, SoftServe led the development and deployment of a "digital twin" R&D approach to accelerate a complex design solution for a product (and experience and service) where there were few established design parameters. SoftServe's development work crossed robotics, ML and extended reality technologies on a POC that has the potential to become more common in the years to come, particularly in regions suffering from low crop yields due to environmental factors.

Softtek

Softtek is a good fit for large and midsize clients in the U.S. and Europe looking for a strategic partner to deliver at speed leveraging a lean-agile approach, hyperautomation accelerators and nearshore services. It continues to invest in its CSD practice and has its strongest expertise in the unique operational processes use case in its focus industries.

Softtek has approximately 10,147 CSD services resources, which is roughly 63% of its total employees, and 15% more than last year. It has 5% of its CSD services resources located in NA, 61% in LATAM, 34% in EMEA and none in APAC. Softtek has innovation labs in cognitive automation, blockchain, metaverse and DataOps, located in the U.S., Mexico, Argentina, Spain and India. It offers professional development opportunities to foster excellence in agile and DevOps, such as Enterprise Lean-Agile Excellence career paths and collaboration with universities and institutions across various regions.

Unique User Experience: Softtek has 227 design professionals leveraged by its digital creative agency (La Moderna), which specializes in brand strategy, advertising and digital products with experience in behavioral design, customer needs and journeys, multipurpose apps, integrated voice control and VR and augmented reality. Softtek co-innovated with a professional sports team to develop a technology platform that transformed it into a content-driven entertainment brand with an advanced data-driven monetization strategy. It has developed new products across web, hybrid, and native apps and deployed multiexperience platforms. Softtek has a smaller proportion of certified consultants in these technical areas than other providers in this cohort.

Unique Operational Processes: Softtek uses data and AI professionals, technology architects, and API and integration experts to build new custom processes. It developed ML models to predict sales and the work schedule for staff, and delivered event-driven architectures based on hybrid and native platforms and cloud-agnostic microservice technologies. Softtek continues to invest in its FRIDA platform to extend its AI-enabled capabilities to enable faster deployment and delivery velocity, which is used by over 50% of its large contracts. Softtek employs 777 analytics and BI professionals, 280 AI/ML professionals, and 252 FTEs with API and integration capabilities to augment its software engineering capabilities.

Unique Products: Softtek has 4,982 agile and DevOps professionals and it supports the transition to a product-centric model through digital consulting services, COE and innovation labs. Softtek collaborates with clients to define their product-centric vision for new products and services. It offers data democratization and BI self-service models, and vertical solutions with tools like Tableau, PowerBI, and Looker. Softtek provides a new organizational structure based on business process management, robotic process automation, agile release trains and full-stack agile pods, DevOps and platform engineering. However, some of these offerings are not as mature as those of leading providers in this research.

TCS

TCS is a good fit for global organizations across verticals adopting a digital transformation journey to differentiate themselves through unique customer experiences that can require customized software and solutions. TCS has strong capabilities on all use cases and is focused on building highly personalized solutions for its large pool of clients using TCS's IP and digital expertise.

TCS has almost 92,300 CSD services resources, roughly 23% of its total employees, 13% more than last year. It has 9% of its CSD services resources located in NA, 1% in LATAM, 7% in EMEA and 84% in APAC. TCS has established a strong culture of flexible commercials, trusted client relationships and continuous learning, and it offers TCS Corporate Digital Academy to deliver domain training for all verticals to its employees.

Unique User Experience: TCS has an extensive array of assets and IP to create purpose-led unique user experiences for a variety of client scenarios. TCS offers capabilities across product concept, product and experience design, product engineering and development with a strong associate base of over 9,200 in digital product design and 27,000 in design thinking. TCS continues to invest in the creation of TCS Interactive Business Unit, TCS Design Studios and other accelerators, making it a strong contender for this use case. Through these capabilities, TCS is able to deliver outcomes like improved NPS/CSAT, increased savings and online customer footprint.

Unique Operational Processes: TCS has a strategic interest in leveraging a combination of intelligent automation and team augmentation, allowing it to create unique operational processes for its clients. In addition, TCS continues to invest in extending AI-embedded business analytics solutions and newer capabilities, such as neural manufacturing. With an eye on scalability, automation, building trust and future-proofing, TCS approaches this use case with clear outcomes like creating real-time visibility, improving employee/customer experiences and increasing throughput. Client feedback validates TCS's strong business acumen and domain expertise, making it a strong contender for this use case.

Unique Products: TCS harnesses its ecosystem partnerships, industry knowledge, deep business domain and technology expertise in conjunction with its assets to create new containerized software solutions for hybrid cloud. In addition, TCS' comprehensive quality engineering IP like T-SQEAR (a maturity assessment framework) and industry-specific quality engineering solutions for banking, retail and healthcare among other verticals assist in guaranteeing superior product quality. TCS' flexible pricing and engagement models, collaborative product development practices and focused investments further help it to co-develop new solutions tailored to solve client-specific challenges. Clients appreciate the strong sense of ownership and accountability in CSD engagements with TCS.

Thoughtworks

Thoughtworks is a good fit for global enterprises evolving their digital capabilities and looking to accelerate DevOps transformation, reducing cycle time for releases and minimizing developer onboarding time and cost. It has strong capabilities in the unique operational processes and unique products use cases and is also well-positioned in the unique user experience use case.

Thoughtworks has around 12,693 CSD services resources, roughly 100% of its total employees, 20% more than last year. It has 9% of its CSD services resources located in NA, 15% in LATAM, 15% in EMEA and 61% in APAC. Its learning and development team provides an extensive training portfolio, partnered with Udemy across 15,000-plus courses, DataCamp for data and machine learning, Pluralsight (A Cloud Guru) for cloud, and PentesterLab for web security.

Unique User Experience: Thoughtworks offers CX strategy, user-centered design, product roadmapping and user journey/user story mapping, persona development, process gap analysis, test-driven development, and continuous delivery. The company developed custom chatbots for several industries based on a team of 2,500 experienced FTEs in user and customer experience. It acquired Handmade Design, a design consultancy specialized in product strategy and design, and Connected, which is focused on end-to-end product development. It offers specialized services in voice and personal assistants, wearables, AR/VR and mobile app development using various stacks.

Unique Operational Processes: Thoughtworks has invested in a dedicated service line, digital transformation and operations (DTO) for solving complex transformation problems, focused on product management, engineering best practices and agile delivery processes through co-sourced delivery. Thoughtworks built a developer experience platform on Backstage.io with the aim of enabling technical health and best practices, resulting in maximizing developer effectiveness. It has 4,134 FTEs experienced in integrating with a wide range of enterprise integration platforms and 1,400 FTEs experienced in cloud AI providers: AWS Analytics, Microsoft Azure AI and GCP. Some clients noted that services may cost a little more than other providers in some cases, but are well worth the cost.

Unique Products: Thoughtworks has a team of over 11,000 agile and DevOps practitioners. The company works with clients to determine the best business and technical solutions. It delivers innovative solutions based on voice recognition technology and machine translation and modern software development processes, and enables synchronization across hundreds of repositories. It has a focus on further expanding its cloud, agile and DevOps footprint as well as test-driven development (TDD), pair programming, built-in security, quality engineering, and Kanban, and XP-based delivery models. Clients looking for a high level of business acumen in their industry should ensure that their vertical is a focus area for Thoughtworks.

Virtusa

Virtusa is a good fit for clients in banking, healthcare and telecommunications looking for a provider with engineering heritage and domain expertise. The company provides design services, full-stack engineering, enterprise architecture, development and testing, cloud services, and managed services (DevSecOps) to help clients deploy custom solutions. It continues to invest in its CSD practice and has its strongest expertise in unique operational processes in its focus industries.

Virtusa has around 26,708 CSD services resources, which is roughly 76% of its total employees, and 13% more than last year. It has 13% of its CSD services resources located in NA, none in LATAM, 5% in EMEA and 82% in APAC. It has increased its nearshore delivery centers and established incubation centers in Mexico and Poland. Virtusa is focused on providing personalized learning and development, running hackathons, collaborating with academic institutions and running leadership development programs.

Unique User Experience: Virtusa has 1,800 design professionals and it has created an extensive experience design playbook for its global design team. Design teams will use the playbook to understand expectations, process and delivery of experience design activities and deliverables. It is making investments toward training and shadowing to ensure best-practice methodologies, platform knowledge and design tool usage are applied and used correctly. Its multiexperience development capability harnesses a data-driven approach, encompassing diverse modalities, touchpoints and devices. Virtusa's design capabilities are not as advanced as those of other providers in this research.

Unique Operational Processes: Virtusa invested in building industry assets in targeted areas across banking and financial services, healthcare and life sciences, telecom, and emerging industries, and in a global innovation process that is an integrated hub of delivery frameworks for enabling smooth delivery of projects and services. Virtusa is also investing in newer and advanced technologies like blockchain, AI/ML, AR/VR, Web3, IoT, edge computing and 5G. Virtusa has a smaller proportion of certified consultants in software engineering approaches, analytics and BI, and quality engineering than other providers in this cohort.

Unique Products: Virtusa has a team of over 6,000 agile and DevOps practitioners. It has made multiple investments toward creating experiential learning platforms and is enabling hackathon events for various technology stacks. It has a focus on further incubating and expanding cloud, agile and DevOps footprint as well as Kanban, Scrum, pair programming, and test data management-style of software engineering approaches through industry events and certifications. It has partnered with leading enterprise platforms around value creation and visualization (value stream delivery platform and value stream management platforms), and continues to invest in the development of accelerators.

Wipro

Wipro is a good fit for large multinational organizations that require advice, guidance and support across the entire life cycle of their technical and business process estate. The company provides strategy, design and technology know-how to help clients deploy innovative and sustainable platforms and products. It has a balanced portfolio of CSD services and can deliver on all three use cases.

Wipro has around 74,089 CSD services resources, which is roughly 31% of its total employees, 8% more than last year. It has 11% of its CSD services resources located in NA, 3% in LATAM, 8% in EMEA and 78% in APAC. It uses Designit pods to generate insights, interactions, integrations and innovations with clients. It has partnerships with learning management firms like Coursera and Udemy and academic institutions to scale talent pools and trained resources.

Unique User Experience: Wipro has worked with several clients on omnichannel and total experience initiatives, focused on developing differentiated experiences across a variety of platforms, including virtual and augmented reality. Wipro has capabilities in experience design (defining the vision of the service/experience), multisensory touchpoints (creating solutions for different types of IoT devices) and business process reimagination (developing the process workflow to enable an experience). Wipro is focused on helping clients scale such experience platforms, often taking them from initial POCs to cross-enterprise rollouts, and ensuring hyperscale-grade performance and reliability.

Unique Operational Processes: Wipro's FullStride Cloud model (its methodology to provide comprehensive transformation services) is a differentiated view and means of integrating the many different components of technology, process and staffing within enterprise-class digital transformation. Within this, customer software development is a core element. Increasingly, Wipro is aligning the FullStride approach to specific industry domain areas such as tackling financial crime, virtual game development and the burgeoning connected car trend. Clients appreciate the flexibility, partnership approach and open communication it brings to engagements.

Unique Products: Wipro has invested $10 million in the last year to develop software platforms, frameworks and accelerators aimed at code reuse and improved ROI. This is done in part by Wipro in isolation, and in part with partners such as IBM/Red Hat, Atlassian, and Gitlab. This also includes greater leverage of the Topcoder freelance developer community, which Wipro acquired in 2016. These platforms and products, and the underlying adoption of the team management notion of guilds and pods, are aimed at creating a "best of both worlds" solution for clients. That is, it couples the agility of a smaller specialist to the portfolio and capacity of a full-service generalist. Some clients cited challenges with documentation quality and timeline estimation.

Context

This Critical Capabilities research is a companion note to Magic Quadrant for Custom Software Development Services, Worldwide. It focuses on 10 critical capabilities for success across three use cases:

- Unique user experience
- Unique operational processes
- Unique products

This Critical Capabilities research addresses the CSD services capabilities of vendors that meet Gartner's criteria for inclusion. The evaluation of providers in this Critical Capabilities research is based on factors determined by Gartner as being relevant to the market for CSD services. This Critical Capabilities research is a point-in-time analysis, with all the vendor profiles reflecting the status as of 31 July 2023. Quantitative data collected was for a 12-month period ending 31 December 2022.

Additionally, because the inclusion criteria in this research result in the analysis of the largest vendors in the CSD services market, clients should not disqualify any potential competitors simply because they do not appear in this Critical Capabilities report. Other IT services vendors not evaluated in this report might present better alternatives for your business requirements. A Gartner analyst can help with a shortlist of the most suitable candidates based on client requirements.

Use this Critical Capabilities report as a tool to help inform your shortlist and evaluation of providers. However, do not discount a provider simply because of its use-case placement or because it does not appear in this research.

Product/Service Class Definition

Gartner defines the market for CSD services as development of software in rapid increments and iteration of custom applications and software products specifically for an organization to satisfy its unique business needs. This Critical Capabilities research evaluates the worldwide capabilities of vendors and includes:

- Business requirements gathering and coding the application from inception, or building it on a platform as a service (PaaS), or assembling it from existing software components
- Integration of the developed application with other systems, within the enterprise or with external partners
- Incident resolution at Level 2 or Level 3, correction of defects in the software, and refactoring of technical debt in the software
- Continual development and ongoing management of the developed software using agile/DevOps in multidisciplinary teams

This Critical Capabilities research excludes:

- All activities related to enterprise commercial off-the-shelf application suites (e.g., SAP, Oracle, Workday, Salesforce, etc.)
- Stand-alone engagements for testing, integration/API, data migration, analytics and AI/ML
- Ongoing application management of legacy applications
- All activities related to business process outsourcing
- Any product revenue, such as resale of software licenses or your own or third-party products
- Any revenue associated with physical (on-premises and cloud) compute assets
- Advisory consulting on business strategy and technical processes such as agile or DevOps transformation

Services that are marketed as “software product engineering” or “digital product development” are likely to be good examples of the category Gartner defines as “custom software development services.”

A more detailed analysis of the included vendors’ capabilities, with scoring based on use cases, is available in Magic Quadrant for Custom Software Development Services, Worldwide.

Critical Capabilities Definition

Business Acumen

This critical capability focuses on the provider's ability to understand the client's business issues and operations and to articulate desired business outcomes to help shape a vision for new custom software.

Business acumen capabilities are measured against:

- An ability to understand business requests effectively and to efficiently and rapidly deliver them using the relevant technology
- Experience in working with organization dynamics and collaborating with business and IT
- Investments in industry-specific functional experts
- Investments in industry and process assets such as preconfigured processes and industry-specific enhancements

Design (User & Customer Experience)

This critical capability focuses on the provider's ability to enable rich UI design and UX interaction functionality for custom software or products that translate into meaningful and relevant user and customer experiences.

Design (user and customer experience) capabilities are measured against:

- A service provider's ability to bring in a human-centered approach to experiences — anchored in understanding the customer's needs, rapid prototyping and generating creative ideas — that will transform the way customers develop products
- Proprietary design system capabilities (i.e., a repository of reusable assets) — guided by clear visual, UI and technical standards — that serve as the building blocks to quickly and consistently design and develop digital products

AI/ML Expertise

This critical capability focuses on the provider's ability to embed AI and/or ML models as part of a custom software solution.

For example, a custom application could use AI/ML to analyze consumer buying behavior, extract data from scanned documents, detect patterns in pictures or videos, or translate speech into structured commands.

AI/ML expertise capabilities are measured against:

- Expertise in major pretrained cloud AI service providers
- A capability to build and train new ML models using leading technologies
- A capability to set up and manage a data pipeline to drive AI-based systems, such as data wrangling, DataDevOps and feature selection
- A capability to include data scientists as an integrated part of a multidisciplinary team
- Client examples of the solutions delivered using AI/ML expertise
- Certified AI/ML experts
- Capability to deliver, integrate and monitor ML models inside applications and provide support for the full MLOps life cycle
- Capability to utilize a wide variety of AI techniques including, but not limited to ML, optimization, rule-based systems and graph techniques.

Analytics and BI Service Experience

This critical capability focuses on the provider's ability to offer best practices, strategies and implementation services for analytics and BI tools, applications, and packaged solutions as part of custom software.

Analytics and BI service experience capabilities are measured against:

- Knowledge of best practices and strategies for implementation
- Preconfigured solutions (e.g., for problems found within implementations)
- Experience in using analytics and BI tools, applications and packaged solutions
- Certified analytics and BI experts

API and Integration Services

This critical capability focuses on the implementation of technologies and solutions that integrate, share and govern data in the same or different systems, ensuring the real-time exchange of data and events, along with monitoring.

API and integration expertise capabilities are measured against:

- Expertise in API design, implementation and management
- Expertise in full life cycle API management, service mesh, integration platforms, and messaging and event management technologies
- Skill sets to manage different integration scenarios, real-time data integration, application integration, batch data integration, event streaming and B2B integration

Software Engineering Approaches

This critical capability focuses on the provider's ability to develop software in rapid increments using methods such as agile, DevOps and product centricity.

Software engineering approaches are measured against:

- Investments in training and certifying consultants in agile and DevOps methods
- Methods beyond Scrum, such as Kanban, SAFe and Spotify
- Adopting and enforcing agile/DevOps behaviors and culture, and not just the use of agile terms and ceremonies
- Expertise in the key technology tools that facilitate agile/DevOps ways of working, such as value stream management platforms and value stream delivery platforms
- Adoption of product-centric principles, such as business-aligned and multidisciplinary teams
- Enterprise Agile and enterprise DevOps approach

Multiexperience Development

This critical capability focuses on the provider's ability to leverage various modalities, digital touchpoints, apps and devices to design and develop optimized and seamless experiences for multiple personas for customers.

Multiexperience describes the interactions across a variety of digital touchpoints (e.g., web, mobile apps, chatbots, AR/VR, wearables), using a combination of interaction modalities (e.g., no-touch, voice, vision, gesture) in support of seamless and consistent digital user journeys.

Multiexperience development capabilities are measured against:

- The number of touchpoints to serve customers (and employees) effectively, including chatbots, voice and personal assistants, wearables, and AR/VR
- An ability to ensure that all touchpoints of interaction with a client's business are consistent, and that customers can transition seamlessly between them without having to relearn or duplicate steps
- An ability to provide optimized experiences supporting different workflows for different personas

Talent Operations

This critical capability focuses on the provider's ability to attract and retain talented people through strong learning programs, training and certifications to efficiently develop new custom applications globally.

It can be defined as a philosophy held by an organization that focuses on using problem-solving skills, teamwork and leadership to continually improve how it operates.

Talent operations capabilities are measured against:

- Investments in resourcing globally, regionally and by country. These investments also include talent management, staff attraction and retention, knowledge management, and partnerships with clients and/or educational institutions.
- Investments in and delivery against standardized measures (KPIs, SLAs, etc.).
- An ability to attract, grow and retain talent to deliver custom software.

Technical Architecture and Cloud

This critical capability focuses on the provider's ability to design a new software solution and scalable infrastructure that grows with the client's business. It involves establishing a technical design (blueprint), including software building blocks with required functionality and interfaces.

Technical architecture and cloud capabilities are measured against depth of capabilities and certified expertise in:

- Cloud-native architecture
- Microservices architecture and mesh app and service architecture
- Cloud-native services
- Containerization, Kubernetes, Docker, etc.
- Edge computing
- Serverless/functions as a service
- Polyglot languages, web frameworks, progressive web apps and cross-platform frameworks
- The ability to tightly integrate application security and other compliance practices into development and deployment processes and tooling —e.g., infrastructure as code, API-driven provisioning and deployment, CI/CD toolchains, DevOps, DevSecOps, and value stream delivery platforms
- Use of specific technologies, such as IoT, big data, blockchain, edge computing and AR/VR
- Security and privacy architecture
- Vulnerability mitigation strategies

Quality Engineering

This critical capability focuses on the provider's ability to provide quality engineering practices to help build custom software with high levels of quality, reliability and maintainability.

Quality engineering capabilities are measured against:

- An ability to provide static code analysis, automated testing, functional and nonfunctional testing, site reliability engineering, and chaos engineering
- Experience in using testing tools and solutions
- Certified quality engineers

- A focus on quality issues such as overall user experience, quality of service, availability, scalability and performance
- An ability to support clients with test-driven development, behavior-driven development and automated acceptance testing

Use Cases

Unique User Experience

The provider's ability to build software (used by the buyer's customers, not by the buyer's employees) that offers a differentiated and unique UX.

Examples include developing dynamic websites and personalizing content and promotions, smartphone apps, tablet applications, and interactive voice and text responses.

This use case is common in consumer-facing industries, such as retail, financial services and entertainment. Businesses in these verticals seek to differentiate themselves through the digital experience they offer their customers.

Unique Operational Processes

The provider's ability to develop software that operates or automates business processes that exist only at the buyer's business.

These processes increase the effectiveness of the business. The new processes improve operating efficiencies by streamlining the regular operations of a business and increase productivity by eliminating the variability of human and systematic error. Some providers might offer specialization in industry verticals and their regulatory environment.

Unique Products

The provider's ability to build or develop a product or service with differentiating features that a buyer can sell to increase revenue and have other channels for growth.

Such products and services are driven by consumer demand and require a good understanding of the market and competitors.

They may require specialization in specific technologies, such as IoT, AR/VR, AI/ML or embedded systems. They would require rapid prototyping, experimentation, hypothesis-based development and close collaboration with clients to create a product implementation roadmap.

Vendors Added and Dropped

Added

The following vendors were added to this Critical Capabilities:

- CI&T
- Endava
- Persistent
- SoftServe

Dropped

The following vendors were dropped from this Critical Capabilities:

- Atos
- Ciklum
- Tech Mahindra

Inclusion Criteria

This Critical Capabilities document is a companion report to Magic Quadrant for Custom Software Development Services, Worldwide. These two reports use the same provider inclusion criteria. Thus, the providers analyzed in this Critical Capabilities document are the same as those analyzed in the Magic Quadrant.

The criteria for inclusion of service vendors for this Critical Capabilities research are based on a combination of quantitative and qualitative measures.

The inclusion criteria represent the specific attributes that analysts believe are necessary for inclusion in this research.

Quantitative Criteria:

A full-service provider is a company that derives less than 70% of its revenue exclusively from custom software development services. Full-service providers included in this Critical Capabilities research **must satisfy two of the following three** criteria:

- A minimum of $2.29 billion annual worldwide revenue during the period of January 2022 through December 2022 for CSD services.
- A minimum of 30,800 employees dedicated to CSD services in 2022.
- A minimum of 22% of CSD revenue growth in 2022 OR a minimum of $11 billion annual worldwide total revenue in 2022

A pure-play provider is a company that derives more or equal to 70% of its revenue exclusively from custom software development services. Pure-play providers included in this Magic Quadrant **must satisfy two of the following three** criteria:

- A minimum of $650 million annual worldwide revenue during the period of January 2022 through December 2022 for CSD services.
- A minimum of 8,000 employees dedicated to CSD services in 2022.
- A minimum of 30% CSD revenue growth in 2022 OR a minimum of $1 billion annual worldwide total revenue in 2022.

Qualitative Criteria:

- Overall market interest in and visibility of the service vendor as determined by serious consideration for selection from enterprise clients
- Gartner analysts' interactions with enterprise buyers, which reveal interest in specific CSD services vendors
- Demonstrated capability to consistently invest in methodology, frameworks and processes related to custom development, as well as investing in resource development

Table 1: Weighting for Critical Capabilities in Use Cases

(Enlarged table in Appendix)

Critical Capabilities	*Unique User Experience*	*Unique Operational Processes*	*Unique Products*
Business Acumen	5%	15%	20%
Design (User & Customer Experience)	25%	0%	10%
AI/ML Expertise	5%	20%	5%
Analytics and BI Service Experience	5%	10%	5%
API and Integration Services	5%	15%	5%
Software Engineering Approaches	10%	20%	25%
Multiexperience Development	25%	0%	5%
Talent Operations	10%	10%	10%
Technical Architecture and Cloud	5%	5%	10%
Quality Engineering	5%	5%	5%
As of 31 July 2023			

Source: Gartner (November 2023)

This methodology requires analysts to identify the critical capabilities for a class of products/services. Each capability is then weighted in terms of its relative importance for specific product/service use cases.

Critical Capabilities Rating

Each of the products/services has been evaluated on the critical capabilities on a scale of 1 to 5; a score of 1 = Poor (most or all defined requirements are not achieved), while 5 = Outstanding (significantly exceeds requirements).

Table 2: Product/Service Rating on Critical Capabilities

(Enlarged table in Appendix)

Critical Capabilities	Accenture	CI&T	Cognizant	Deloitte	DXC Technology	Endava	EPAM	GlobalLogic	Globant	HCLTech	IBM	Infosys	NTT DATA	Persistent	SoftServe	Softtek	TCS	Thoughtworks	Virtusa	Wipro
Business Acumen	3.5	2.4	2.6	3.6	1.9	2.0	3.2	2.4	3.0	2.9	2.9	2.4	2.7	2.1	3.0	2.4	2.7	2.4	2.5	2.2
Design (User & Customer Experience)	3.7	2.8	2.7	3.6	2.5	2.6	3.0	2.9	2.7	2.7	3.1	3.3	2.7	2.5	2.5	2.6	2.8	2.8	2.5	2.6
AI/ML Expertise	3.8	1.7	2.3	3.5	2.7	2.6	3.4	2.3	2.7	2.5	3.5	2.6	2.4	2.8	2.3	2.4	3.5	3.4	2.6	3.4
Analytics and BI Service Experience	3.4	1.6	2.2	3.0	2.8	3.1	3.2	1.9	2.1	3.2	3.3	3.0	3.1	2.5	2.9	2.5	3.6	2.8	3.2	3.3
API and Integration Services	3.2	2.5	3.2	3.4	2.6	3.0	2.6	2.0	2.7	3.6	3.4	3.1	2.5	2.7	2.2	2.1	3.5	2.6	2.9	2.7
Software Engineering Approaches	3.2	2.9	3.1	2.7	3.0	3.3	3.1	3.2	3.4	2.8	2.9	3.0	2.9	2.9	3.0	2.7	2.9	3.4	2.5	2.2
Multiexperience Development	2.5	2.7	2.4	2.5	3.3	2.4	3.1	2.7	3.6	3.3	3.0	2.9	2.3	2.1	3.0	2.5	2.9	2.9	2.1	2.8
Talent Operations	3.5	2.6	2.1	3.4	3.0	2.1	3.0	2.1	3.5	3.1	2.9	3.0	2.9	3.1	2.2	2.9	3.1	3.0	1.7	2.6
Technical Architecture and Cloud	4.3	2.7	2.6	3.1	3.5	2.5	3.3	2.8	2.7	2.6	3.1	2.6	3.0	2.8	2.7	2.7	3.2	3.7	2.3	2.6
Quality Engineering	3.5	2.3	2.1	2.8	3.1	2.3	2.9	2.9	2.1	2.7	3.3	2.7	2.8	2.8	3.5	2.7	2.6	2.5	2.7	3.1
As of 31 July 2023																				

Source: Gartner (November 2023)

Table 3 shows the product/service scores for each use case. The scores, which are generated by multiplying the use-case weightings by the product/service ratings, summarize how well the critical capabilities are met for each use case.

Table 3: Product Score in Use Cases

(Enlarged table in Appendix)

Use Cases	Accenture	CI&T	Cognizant	Deloitte	DXC Technology	Endava	EPAM	GlobalLogic	Globant	HCLTech	IBM	Infosys	NTT DATA	Persistent	SoftServe	Softtek	TCS	Thoughtworks	Virtusa	Wipro
Unique User Experience	3.31	2.59	2.55	3.11	2.88	2.57	3.07	2.65	3.03	2.97	3.08	2.97	2.66	2.54	2.73	2.58	2.98	2.94	2.38	2.70
Unique Operational Processes	3.49	2.33	2.62	3.23	2.73	2.69	3.10	2.45	2.88	2.93	3.17	2.81	2.73	2.70	2.66	2.51	3.17	3.00	2.57	2.73
Unique Products	3.47	2.56	2.65	3.17	2.76	2.62	3.11	2.65	3.00	2.89	3.04	2.84	2.78	2.63	2.79	2.59	2.98	2.99	2.45	2.54
As of 31 July 2023																				

Source: Gartner (November 2023)

To determine an overall score for each product/service in the use cases, multiply the ratings in Table 2 by the weightings shown in Table 1.

Evidence

Evaluation in this Critical Capabilities research is informed by:

- Gartner client interactions — Gartner inquiries between user organization clients and analysts on service vendors relating to CSD services and over the research period (September 2022 through July 2023).
- Primary research — Feedback from 61 Peer Insights submissions.
- Primary research — A 75-minute vendor briefing from each participating service vendor addressing capability proof points of each evaluation criterion in the Critical Capabilities research.
- Secondary research — Press releases and publicly available information, including company websites and financial reports.

- Other Gartner analysts — Peer review by 20 Gartner analysts. Their views and comments were considered. In addition, this research was reviewed at internal research community sessions.
- Gartner Peer Insights and inquiries — Gartner's analysis in this Critical Capabilities research is also based on customer responses, Gartner Peer Insights reviews (at the time of writing) and inquiry interactions. We considered reviews from Gartner Peer Insights posted from September 2022 through July 2023.

Note 1: Digital Decoupling

Digital decoupling is the separation of the digital end from the back end, especially when there is a legacy back-end component. While the legacy system remains operating in the back end, digital decoupling uses APIs and abstraction to allow back-end systems to connect with modern interfaces.

Note 2: Industries Used for the Analysis

This Critical Capabilities research addresses the capabilities of the included providers in the following 27 industries:

- Aerospace and defense
- Agriculture
- Automotive
- Banking
- Chemicals
- Consumer products
- Defense and security
- Engineering, construction and operations
- Healthcare (providers)
- High tech
- Higher education and research
- Industrial machinery and components

- Insurance
- Life sciences
- Media
- Mill products
- Mining
- Not for profit
- Oil and gas
- Professional services
- Public sector
- Retail
- Sports and entertainment
- Telecommunications
- Travel and transportation
- Utilities and energy
- Wholesale distribution

Critical Capabilities Methodology

This methodology requires analysts to identify the critical capabilities for a class of products or services. Each capability is then weighted in terms of its relative importance for specific product or service use cases. Next, products/services are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities for each use case is then calculated for each product/service.

"Critical capabilities" are attributes that differentiate products/services in a class in terms of their quality and performance. Gartner recommends that users consider the set of critical capabilities as some of the most important criteria for acquisition decisions.

In defining the product/service category for evaluation, the analyst first identifies the leading uses for the products/services in this market. What needs are end-users looking to fulfill, when considering products/services in this market? Use cases should match common client deployment scenarios. These distinct client scenarios define the Use Cases.

The analyst then identifies the critical capabilities. These capabilities are generalized groups of features commonly required by this class of products/services. Each capability is assigned a level of importance in fulfilling that particular need; some sets of features are more important than others, depending on the use case being evaluated.

Each vendor's product or service is evaluated in terms of how well it delivers each capability, on a five-point scale. These ratings are displayed side-by-side for all vendors, allowing easy comparisons between the different sets of features.

Ratings and summary scores range from 1.0 to 5.0:

1 = Poor or Absent: most or all defined requirements for a capability are not achieved

2 = Fair: some requirements are not achieved

3 = Good: meets requirements

4 = Excellent: meets or exceeds some requirements

5 = Outstanding: significantly exceeds requirements

To determine an overall score for each product in the use cases, the product ratings are multiplied by the weightings to come up with the product score in use cases.

The critical capabilities Gartner has selected do not represent all capabilities for any product; therefore, may not represent those most important for a specific use situation or business objective. Clients should use a critical capabilities analysis as one of several sources of input about a product before making a product/service decision.

Document Revision History

Critical Capabilities for Custom Software Development Services, Worldwide - 18 November 2022

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

How Products and Services Are Evaluated in Gartner Critical Capabilities

Magic Quadrant for Custom Software Development Services, Worldwide

How to Manage Blended Teams of In-House and Outsourced Software Engineering Personnel

Table 1: Weighting for Critical Capabilities in Use Cases

Critical Capabilities ↓	*Unique User Experience* ↓	*Unique Operational Processes* ↓	*Unique Products* ↓
Business Acumen	5%	15%	20%
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API and Integration Services	5%	15%	5%
Software Engineering Approaches	10%	20%	25%
Multiexperience Development	25%	0%	5%
Talent Operations	10%	10%	10%
Technical Architecture and Cloud	5%	5%	10%
Quality Engineering	5%	5%	5%
As of 31 July 2023			

Source: Gartner (November 2023)

Table 2: Product/Service Rating on Critical Capabilities

Critical Capabilities	*Accenture*	*CI&T*	*Cognizant*	*Deloitte*	*DXC Technology*	*Endava*	*EPAM*	*GlobalLogic*	*Globant*	*HCLTech*	*IBM*	*Infosys*	*NTT DATA*	*Persistent*	*SoftServe*	*Softtek*	*TCS*	*Thoughtworks*	*Virtusa*	*Wipro*
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Design (User & Customer Experience)	3.7	2.8	2.7	3.6	2.5	2.6	3.0	2.9	2.7	2.7	3.1	3.3	2.7	2.5	2.5	2.6	2.8	2.8	2.5	2.6
AI/ML Expertise	3.8	1.7	2.3	3.5	2.7	2.6	3.4	2.3	2.7	2.5	3.5	2.6	2.4	2.8	2.3	2.4	3.5	3.4	2.6	3.4
Analytics and BI Service Experience	3.4	1.6	2.2	3.0	2.8	3.1	3.2	1.9	2.1	3.2	3.3	3.0	3.1	2.5	2.9	2.5	3.6	2.8	3.2	3.3
API and Integration Services	3.2	2.5	3.2	3.4	2.6	3.0	2.6	2.0	2.7	3.6	3.4	3.1	2.5	2.7	2.2	2.1	3.5	2.6	2.9	2.7

Critical Capabilities	*Accenture*	*CI&T*	*Cognizant*	*Deloitte*	*DXC Technology*	*Endava*	*EPAM*	*GlobalLogic*	*Globant*	*HCLTech*	*IBM*	*Infosys*	*NTT DATA*	*Persistent*	*SoftServe*	*Softtek*	*TCS*	*Thoughtworks*	*Virtusa*	*Wipro*
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Multiexperience Development	2.5	2.7	2.4	2.5	3.3	2.4	3.1	2.7	3.6	3.3	3.0	2.9	2.3	2.1	3.0	2.5	2.9	2.9	2.1	2.8
Talent Operations	3.5	2.6	2.1	3.4	3.0	2.1	3.0	2.1	3.5	3.1	2.9	3.0	2.9	3.1	2.2	2.9	3.1	3.0	1.7	2.6
Technical Architecture and Cloud	4.3	2.7	2.6	3.1	3.5	2.5	3.3	2.8	2.7	2.6	3.1	2.6	3.0	2.8	2.7	2.7	3.2	3.7	2.3	2.6
Quality Engineering	3.5	2.3	2.1	2.8	3.1	2.3	2.9	2.9	2.1	2.7	3.3	2.7	2.8	2.8	3.5	2.7	2.6	2.5	2.7	3.1
As of 31 July 2023																				

Source: Gartner (November 2023)

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Use Cases	*Accenture*	*CI&T*	*Cognizant*	*Deloitte*	*DXC Technology*	*Endava*	*EPAM*	*GlobalLogic*	*Globant*	*HCLTech*	*IBM*	*Infosys*	*NTT DATA*	*Persistent*	*SoftServe*	*Softtek*	*TCS*	*Thoughtworks*	*Virtusa*	*Wipro*
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Unique Operational Processes	3.49	2.33	2.62	3.23	2.73	2.69	3.10	2.45	2.88	2.93	3.17	2.81	2.73	2.70	2.66	2.51	3.17	3.00	2.57	2.73
Unique Products	3.47	2.56	2.65	3.17	2.76	2.62	3.11	2.65	3.00	2.89	3.04	2.84	2.78	2.63	2.79	2.59	2.98	2.99	2.45	2.54
As of 31 July 2023																				

Source: Gartner (November 2023)