

Security and Risk Management

SPARK Matrix™ :

Digital Banking Services, 2022

Market Insights, Competitive Evaluation, and Vendor Rankings

June 2022

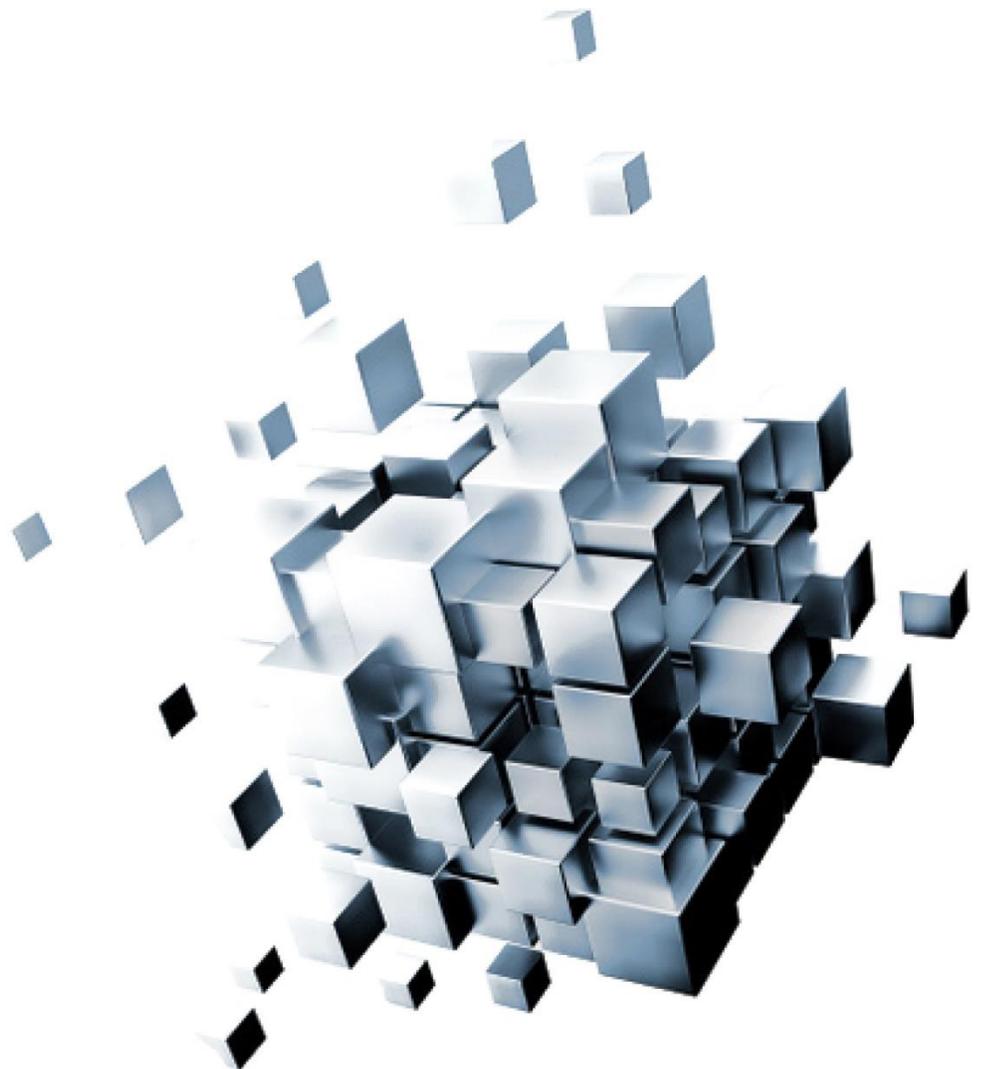


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Executive Overview

This research service includes a detailed analysis of global digital banking services vendors' market dynamics, major trends, vendor landscape, and competitive positioning analysis. The study provides a competition analysis and ranking of the leading digital banking services vendors in the form of the SPARK Matrix™. This research provides strategic information for service vendors to better understand the market supporting their growth strategies and for users to evaluate different vendors' capabilities, competitive differentiation, and market position.

Market Dynamics and Overview

Some critical factors driving the rising adoption of digital banking services include cheaper internet and the ongoing COVID-19 pandemic, which have disrupted the entire banking sector. These disruptors have accelerated the banking industry's transformation from traditional to digital banking. While cheaper internet has accelerated the adoption of mobile banking, the social distancing norms imposed following the COVID-19 pandemic have accelerated the adoption of online banking. To keep up with the increasingly accelerating digital transformation, banking and financial institutions around the world are adopting advanced technologies. However, it is crucial for organizations to realize that the capabilities of digital banking services are not just limited to online banking.

Moreover, the advent of digitalization has made delivering a secure, dependable, and seamless digital customer experience a critical factor. The proliferation of AI/ML in the banking ecosystem is allowing organizations to introduce new capabilities and transform their processes. In addition, Robotic process automation (RPA), which enables banking organizations to drive automation for labor arbitrage processes, has gained traction. These technologies are assisting banks in simplifying repetitive human tasks, improving customer experience, and optimizing end-to-end processes. As a result, several banks and financial institutions are partnering with financial technology providers to leverage the AI/ML, RPA, and advanced analytics capabilities and gain a competitive advantage by eliminating the operational overheads.

Moreover, industry regulations like Europe's Payment Services Directive (PSD2), UK open banking standards, Mexico's Fintech Law, and Brazil's open banking regulations are compelling banks and other FIs to be more competitive and able to manage risks effectively. On the other hand, these regulations also make complying with the latest regulations while offering best-in-class service along with seamless customer experience in omnichannel and dynamic channels and environments a challenging proposition.

Thus, Digital Banking Services enables banks to drive digital transformation initiatives and provide customers with a seamless and cohesive banking experience across all digital touchpoints. Digital transformation allows banks to strengthen and rebuild their core banking system. Advancing the core services helps banks thrive in this increasingly competitive digital age with a holistic perspective. Digital banking services providers offer a robust portfolio comprising of software and services, such as banking-as-a-service, core

banking, lending, credit and asset finance solution, cards, payments, financial crime prevention, wealth management, along with smooth customer experience. These solutions and services are backed by technologies like AI, ML, advanced analytics, RPA, etc. Vendors are focusing on building in-house AI/ML capabilities that can be injected into packaged digital banking services and allow financial institutions and banks will be able to provide personalized services, achieve optimal STP rates, and drive augmented marketing.

Some of the major functionalities offered by Digital Banking Services include digital customer onboarding, omnichannel experience and support, microservices architecture, integrations, intelligent automation, cloud migration, consultancy, and customer experience services.

- ◆ **Digital Customer Onboarding:** Digital Banking Services include digital customer onboarding to eliminate the need for extensive documentation and the issues associated with paper-based documents. Customers are now only required to submit the documentation pertaining to their own product. The onboarding process is supported across various channels, such as through sales agents and retail partners. Digital customer onboarding includes an end-to-end process, right from providing guidance on the product selection, product data, and application to the final agreement. In addition, the process is location-agnostic. This ability to onboard anywhere leads to augmented sales and gaining long-term customer loyalty. An automated process minimizes the overall processing costs while providing a best-in-class customer experience.
- ◆ **Omnichannel experience and support:** The digital banking services support banks and FIs in delivering end-to-end seamless banking experiences across all channels, platforms, and devices. They assist in personalizing banking processes from a customer perspective across retail, corporate, and other banking areas. Digital banking services provide insights regarding customer behaviors, needs, and trends that help banks create highly personalized engagements. An omnichannel experience helps the banks achieve higher customer acquisition and retention while delivering better service. Vendors are also offering omnichannel portals to provide customers with self-service features. It also provides a holistic view of the customer to understand their end-to-end journey. Along with omnichannel experience, omnichannel digitization ensures that all the screen sizes and device types are compatible enough with the bank's customer to prevent inconveniences and facilitate seamless customer experiences. Depending on the vendors' capability, the platform may support core banking features for multiple channels.

- ◆ **Microservice architecture:** Microservices architecture is important in digital banking because it enables banks and financial institutions to drive innovation through continuous and rapid delivery of software applications. This enables banks and financial institutions to drive innovation through the continuous and rapid delivery of software applications. Many digital banking service providers have adopted microservices architecture, and the technology is redefining and innovating the overall customer experience across the digital banking ecosystem, in addition to delivering faster, less disruptive new product launches and scalable and rapid responses to customer needs.
- ◆ **Integrations:** Digital banking services integrate with core banking infrastructure and third-party applications and improve the banking ecosystem. Banks that adhere to open standards, stringent data protection laws, and higher scalability can provide consolidation and access to third parties. Many leading digital banking service providers support data source integration, core application integration, and integration via microservices and APIs to create an open ecosystem. A digital banking service provider frequently supports the system, process, and channel integration, as well as central monitoring, business continuity, IT asset reusability, and other features.
- ◆ **Intelligent automation:** Intelligent automation (IA) automates deployment and allows organizations to create an automation ecosystem by combining the external tools, processes, and cutting-edge technologies such as AI, RPA, optical character recognition (OCR), workflow orchestration, ML, and other cognitive capabilities and frameworks. IA aids in data extraction, application alignment, and automating repetitive tasks without any errors. IA plays a crucial role in KYC, customer onboarding, loan credit approval, account maintenance, regulatory reporting, etc., allowing for contactless banking, ensuring business continuity, and delivering operational efficiencies. The capability also helps organizations to align their solution suites/services and frameworks and address industry-specific use cases while providing a seamless user experience.
- ◆ **Cloud Migration:** Vendors are offering cloud migration that helps replace legacy architecture and infrastructure consulting. The process includes cloud assessment to determine the requirements from a business and technology perspective based on the current environment state for migration of the right application approach. This is followed by designing and building the cloud environment wherein vendors are also offering cloud environment-based templates for shifting the workload, irrespective of hybrid or public clouds. Cloud migration reduces the need for capital to invest and maintain on-prem IT

infrastructure. Cloud migration facilitates scalability, lowers costs, and provides enhanced security against threats while focusing on being more customer-centric and agile.

- ◆ **Consultancy:** A vendor consultancy service helps banks and FIs in designing the future roadmap of a digital solution, suggesting designs for delivery models, leveraging the digital disruptors, and driving the customer experience. Leading vendors, are offering assessment and strategy formulation as a part of consultancy, which includes UX strategy, assessment and benchmarking, user research, user journey transformation, and next-generation UX.
- ◆ **Customer Experience Services:** Vendors are offering enhanced visualization and analytical tools, reporting capabilities, self-service, live support, and user authentication to drive a better customer experience. These added capabilities help organizations find new growth opportunities, launch new products, and redesign omnichannel purpose-driven customer services. They also optimize marketing, sales, and services activities across organizational ecosystems. Additionally, the vendors are offering customer experience services through chatbots, as well as fraud prevention and real-time translation for delivering a better customer experience.

Factors Influencing Digital Banking Services Market: Market Drivers and Trends

The following are the dominant technology and market developments influencing the overall digital banking services and market growth:

Growing adoption of cloud-based deployments to ensure secured, optimum customer experience: Owing to the rising number of cyberattacks and stricter compliance norms, particularly regarding data storage, banks are gradually shifting toward cloud-based strategies. Cloud-based systems are less vulnerable to cyber-attacks than on-prem systems. As banks migrate their on-prem/legacy applications to the cloud, many public cloud vendors are incorporating security-as-a-service into their banking ecosystem as well as investing in developing advanced technologies, processes, and defense mechanisms that will address future cloud storage threats and make their systems flexible and scalable.

Also, while maintaining customer security is a key aspect of digital banking, ensuring seamless customer service is equally important. Therefore, banking organizations are putting in significant investments to support the omnichannel environment and improve mobile experiences to provide consistent messaging and optimize engagements. It is also crucial for them to devise compelling cybersecurity strategies and expand their prescriptive approach to cybersecurity. Therefore, many leading financial technology solution providers are offering integrated and centralized digital banking services that enable banks to deliver simple and secure customer experiences. Several digital banking service providers have also adopted a multilayered security approach that helps banks ensure regulatory compliance. Vendors are focusing on improving the technology value proposition of their digital banking products by adopting cloud platforms and integrating key features, including mobile authentication onboarding and access, biometric authentications, and more.

AI, ML and RPA continue to transform Digital Banking Services: Banks are more vulnerable to data breaches as they have a much wider attack surface due to the wide range of online services they provide. A growing number of third-party providers connected to banks via open banking APIs also pose a security risk due to their potentially inadequate security infrastructure. As a result, banks must establish a cybersecurity framework that ensures a robust infrastructure and monitors compliance with a variety of

IT regulations and standards. AI and ML aid in this regard by providing real-time threat detection and speedy cybercrime prevention, as well as combating sophisticated cyberattacks. The banking industry is also entering a period of widespread automation. AI helps banks augment the security of online accounts, evaluate and find the loopholes in the systems, and lower the overall risk exposure. Banks are also leveraging AI to determine the creditworthiness of an individual with limited credit history and accordingly make informed, safer, and profitable credit and loan decisions. AI also helps ensure an accelerated, error-free KYC process. A combination of AI and ML helps identify the malicious activities and provide information about the same to banks as well as the customers. In terms of continuous process (internal and external) optimization, automation has become a key strategic initiative and a recurring theme for banking organizations. Rapid automation is not only eliminating process inefficiencies but is also transforming banking-related operations, processes, and customer journeys by accelerating the onboarding of new customers as well as the account opening process for existing customers. RPA also shortens the various processes by allowing the customer to refill their credentials while re-entering the information prior to submitting the account applications. RPA technology also enables customers to define and achieve their savings goals through automatic transfers to their savings accounts. Banks also are becoming more progressive in their use of robotic process automation (RPA) technology to drive customer engagement, cost optimization, compliance, and staff administration. RPA eliminates the manual, error-prone work. RPA also automates the rule-based processes wherein it can respond to the queries in real-time, thereby reducing the bank staff's burden. Thus, the RPA technology is gaining traction with banks and financial institutions as it improves the quality of compliance process, credit card application processing, report automation, etc. Therefore, banks are leveraging AI, ML, RPA, and automation capabilities to strengthen identification and authentication methods in order to deal with emerging threats.

AI-driven chatbots facilitating serving of core banking functionalities: The growing focus on adopting a customer-specific approach is shifting customer experience towards customer-driven self-service channels in a pivotal way. These channels are supported by smart assistants such as AI-driven chatbots and virtual assistants. Chatbots are helping bank customers with essential functions like paying bills and tracking financial status and transactions in real-time. The AI-driven assistants are preferred due to their ability to answer not only the basic questions regarding the bank's products and services and user accounts but also provide geolocation-based answers. Chatbots also enable bank customers to manage other facets of their accounts, including transaction limits, recurring payments, bonus points, and more. The banking chatbots are also helping customers in addressing emergencies such as resetting account passwords, locking cards in case of

suspicious activities, reviewing statements, and more. Chatbots are enhancing the customer experience by helping customers to easily apply for loans, new debit or credit cards, or loyalty programs. Additionally, chatbots are capable of engaging with customers by analyzing their preferences and interests. Therefore, digital banking service providers are significantly investing in deploying banking chatbots to deliver customer ownership experience and cater to multiple potential use cases. Banks should focus on listening to customer feedback and understanding their banking experience through the medium of chatbots. It is crucial to optimize chatbot scripts and design more relevant questions that result in highly engaging conversations.

To achieve this, many leading vendors have partnered with conversational AI vendors to deliver enhanced conversational AI experiences. This enables banks to facilitate human-like conversations, deliver enhanced customer digital experience and achieve high customer satisfaction. Conversational AI-enabled digital banking service can offer enhanced customer experience through personalized banking, digital customer service, consistent omnichannel experience, and quick problem-solving at contact centers. Hence, many leading service providers are increasingly building in-house AI capabilities or collaborating with conversational AI platform vendors to offer a broader and enhanced digital banking suite to their customers.

A shift to a mobile-first approach: Digital banking service providers are offering a mobile-first approach to ensure that the users' business model is well-aligned with customer requirements, feedback, and expectations. A mobile-first approach eases the customer experience by allowing them to access, monitor, and manage their accounts. Parallely, this approach helps the banks and FIs to augment their customer base and gain brand loyalty with innovative services. The mobile-first approach provides users with benefits such as real-time thread notification, cheque deposit remotely, push notification comprising of discounts and deals, etc. Vendors are also leveraging customer analytics to analyze actionable metrics to better understand customer behavior and improve customer service accordingly. This approach helps in enhancing customer engagement and providing personalized experience along with products via a mobile lens that facilitates innovation, speed, simplicity, and engagement too. A shift to a mobile-first approach calls for third-party integrations for technologies such as RPA, AI, biometrics, etc.

Competitive Landscape and Analysis

Quadrant Knowledge Solutions conducted an in-depth analysis of major Digital Banking Services vendors by evaluating their services, market presence, and customer value proposition. The evaluation is based on primary research with expert interviews, analysis of use cases, and Quadrant's internal analysis of the overall digital banking services market. This study includes an analysis of key vendors, including Accenture, Aspire Systems, Atos, Birlasoft, Capgemini, Cognizant, DXC Technology, Endava, Fujitsu, GFT, HCL Technologies, Infosys, ITC Infotech, LTI, Maveric Systems, Mindtree, Mphasis, NTT Data, Sopra Steria, TCS, Tech Mahindra, Tietoevry, Virtusa, and Wipro.

Accenture, Cognizant, GFT, HCL Technologies, Infosys, LTI, NTT Data, TCS, Virtusa, and Wipro, are the top performers in the global Digital Banking Services market and have been positioned as the top technology leaders in the 2022 SPARK Matrix™ analysis of the Digital Banking Services market. Tietoevry is positioned as an emerging leader.

Accenture offers robust digital banking services through its IPs, including SynOps, myIndustry, AIP+, and myNav, which are designed to help users drive the end-to-end transformation of their banking operations and simulate cloud solutions to determine the best fit for their user business requirements. Accenture also has a strong global partner ecosystem to offer innovative solutions. Additionally, the company's products offer robust capabilities in data analytics that help users to take advantage of the AI-led digital transformation.

Cognizant, with its robust partner ecosystem, is extending its partnership with global cloud solution providers to help the banking industry adopt cloud-native architecture and achieve operational efficiency. Cognizant serves across banking segments, including retail banking, commercial banking, lending, as well as payments, and provides enhanced scalability and stability with automated front and back offices.

GFT offers a digital banking accelerator titled BankLiteX as its flagship solution that enables quick deployment of cloud-based digital banking while ensuring regulatory requirements. The solution aids organizations in building customizable, scalable, and future-proof digital banks by involving code from all layers, including cloud-native core banking and external systems, guaranteeing reusability through a pragmatic component model, promoting seamless collaboration between cross-technologies teams; and supporting quality and security as part of the brick architecture and software lifecycle.

HCL Technologies' 1-2-3 approach helps banks adapt to the changing customer dynamics and evolve from disruptions. The company also supports a robust partner ecosystem to deliver enhanced digital banking services and solutions in the area of digital lending, onboarding, digital payments, reconciliation, and trade finance that are backed by advanced AI and cognitive capabilities.

Infosys's digital banking services help FIs, and banks offer a seamless user experience, build a robust ecosystem, and support software integrations and BPS services. Infosys offers 'Infosys Finacle,' a core proprietary platform that provides digital and cognitive functionalities and can be deployed as a module. The company offers modularized solutions. It also offers consultancies across multiple consumer industries.

LTI offers a wide range of digital banking services across multiple digital channels to the banks that allow them to modernize, scale, and lower their IT expenses. LTI has partnered with financial crime prevention solution providers to offer a cloud-native open and integrated platform for core banking that provides a unified customer view and minimizes the total cost of ownership (TCO).

NTT Data integrates digital solutions into core banking, lending, card, and payments strategies, as well as channel management strategies. The company's digital maturity model (DMM) framework maps the user bank's current digital channel state and assists in developing a tailored action plan. The DMM framework positions banks in either of the following levels on the basis of the integration of digital technologies- physical, online, self-service, connected, and digital.

TCS's proprietary IPs for delivery of digital banking services include Invoscan, automated document check, AI studio, automated financial statement spreading, smart call center, covenant management solution, and personality radar. With its services, TCS enhances superior customer engagement, provides compatibility with other external applications, and supports banking operations. TCS's multiple acquisitions have helped the company to expand its global footprint and support digital transformation on a large scale.

Virtusa's smart digital banking is built on an open stack and offers solutions that can be customized according to individual requirements, patterns, and behaviors. Virtusa's banking and financial services portfolio includes retail, corporate, capital markets, cards and payments, and risk and compliance. The company offers a preconfigured 'Bank-in-a-box' platform that can be coupled with Virtusa's in-house accelerators to deliver an enhanced customer value across retail and commercial banking.

Wipro's portfolio of digital banking services consists of payments, digital channels, credit services, digital core, commercial banking, and corporate banking software. Backed by

the company's AI-driven platform HOLMES, Wipro helps banks in augmenting their efficiency in functions such as application, infrastructure management, and testing. The company also possesses IPs for the mortgage loan origination, eKYC, cybersecurity, and data discovery domains. Wipro also has a partnership ecosystem including FinTech, crowdsourcing platform providers, and service design innovation to offer capabilities in the digital banking services space.

Tietoevry provides scalable and modular Banking as a Service that helps in accelerating financial institutions' digital transformation. The company's software portfolio is based on open architecture and APIs, allowing it to leverage the full range of SaaS capabilities to drive the digitalization of core banking value chains. Tietoevry's portfolio includes a specialist team for data science, AI, and analytics; financial fraud experts; a multi-channel approach to boost customer acquisition; and comprehensive security testing features.

Vendors such as Capgemini, Fujitsu, Atos, DXC Technology, Mphasis, and Endava have been positioned as challengers. These companies provide comprehensive service capabilities and are rapidly gaining market traction across industry and geographical regions. These companies are also aware of upcoming market trends and have developed a comprehensive roadmap to capitalize on future growth opportunities. Furthermore, these companies are primarily concerned with catering to large and complex organizations.

The other key vendors captured in the 2022 SPARK Matrix™ include Tech Mahindra, Sopra Steria, Maveric Systems, ITC Infotech, Mindtree, Aspire Systems, and Birlasoft, which are placed as emerging challengers and aspirants. These companies are constantly focusing on enhancing their in-house capabilities, inheriting leading technologies, and providing a wide range of use cases. These companies also intend to broaden their reach beyond their current market offerings in order to enter new markets and acquire new customers.

All the vendors captured in the 2022 SPARK Matrix™ of Digital Banking Services are enhancing their capabilities while ensuring a seamless customer experience. Additionally, these vendors help organizations expand their partnership channels and support diverse use cases. Vendors continue to enhance their offerings to strengthen the organization's defense-in-depth strategies to significantly improve threat detection and response processes. Additionally, vendors are looking forward to providing functionalities for safeguarding organizations from third-party risks and facilitating integrations with external card management systems providers. The vendors are also focusing on increasing their customer base, geographical presence, different industry verticals, and expanding use

case support. Vendors are also looking at expanding support for multiple deployment options.

Key Competitive Factors and Technology Differentiators

The following are the key competitive factors and differentiators for the evaluation of Digital Banking Services vendors. While most of the vendors of Digital Banking Services may provide all the core functionalities, the breadth and depth of functionalities may differ by different vendors' offerings. Due to the increasing competition in the market, vendors are improving their service capabilities and overall value proposition to remain competitive. Some of the key differentiators include:

The Sophistication of Service Capabilities: Before making a purchase decision, users should conduct a thorough evaluation and weighted analysis of various digital banking services vendors based on their specific organization's needs and use cases. The need of an organization for a key digital banking services vendor may vary depending on the industry vertical, consulting services, customer experience, and end-user size. Users should also look for vendors of digital banking services who have a track record of successful large-scale deployments and thoroughly examine the use cases that have already been deployed. Users should look for vendors providing holistic digital banking services with integrated technology such as AI, ML, and cognitive capabilities and enhancing banking services to cater to a wide range of industry-specific use cases. However, Companies that provide digital banking services may differ in terms of ease of development, deployment and usage, scalability, integration, analytics and reporting, and support for a wide range of use cases.

Industry Experience and Domain Knowledge: Users should evaluate vendors based on their specific domain knowledge in order to gauge their ability to provide basic service functionalities, consulting services and cater to a diverse range of industry-specific use cases. Users should also consider the vendor's offering of advanced technological tools such as explainable AI, machine learning, blockchain, and other technologies to improve their service capability. Users must carefully evaluate vendors based on their offering of various process automation, data-led transformation, and third-party partnerships in order to scale their service offering and provide enhanced customer experience services. Users are also advised to evaluate vendors based on their track record, customer success stories, ability to support innovation for the creation of compelling banking products, and offering some delivery models.

Competitive strategies and Use Cases: Users should evaluate digital banking services vendors based on their ability to provide industry-specific use cases such as digital customer onboarding, layered architecture, transaction monitoring for card fraud prevention, real-time payment infrastructure upgrades, card service processes for issuing and processing cards, dispute resolution support, card production, cash management, and many others. Users should also look for vendors who offer seamless integration, business and technical value, analytics and automation, reporting capabilities, and research and development services. Furthermore, users with one or more specific requirements should evaluate digital banking services vendors based on their differentiating strategies, which include customized services, a multi-channel approach to increasing customer acquisition, security testing features, exclusive fraud experts, and a cloud-based platform. Users must carefully evaluate vendors who offer automation of various processes in order to improve stakeholders' experiences and business outcomes.

Integration of Orchestration and Automation: Vendors of digital banking services specialize in service orchestration and automation while integrating advanced technologies into organizations' platforms. Users should carefully examine vendors offering AI/ML technologies that assist users, analysts, and decision-makers in prioritizing, analyzing, and responding to automated processes. Users should also select providers who can provide analytical tools for real-time reporting and automation while reducing time-to-market.

Partnership for Scalability: In collaboration with digital banking service providers and technology suppliers, hyper-scaling for deployment capabilities across on-premises and cloud platforms is being developed. The breadth of service capabilities and the rate of adoption for up-scaling and down-scaling may differ between vendors. Users should look for a digital banking service provider who can meet scalability requirements for large-scale deployment, offers cloud-native core banking, ensures reusability through a pragmatic component model as well as meets industry-specific requirements for deep learning, analytics, and insights, as well as explore innovative opportunities and improve business performance.

Vendor's Expertise and Domain Knowledge: Organizations should conduct a comprehensive evaluation of numerous digital banking service providers and vendors before making a final decision. Organizations should evaluate vendors' expertise and domain knowledge in understanding their unique business problems, use cases, industry, and region-specific requirements. Users should look for ease of use, comprehensiveness of the service offering, flexibility to adapt to constant market changes and regulatory requirements, minimizing the total cost of ownership, and transparency. Organizations should also consider an effective service provider that swiftly provides appropriate

information vital to making the right decisions. Users should look for a service provider with a history of successful large-scale deployments and carefully analyze the existing case studies. This analysis should form the basis for preparing the best practice for digital banking services.

SPARK Matrix™: Strategic Performance Assessment and Ranking

Quadrant Knowledge Solutions' SPARK Matrix™ provides a snapshot of the market positioning of the key market participants. The SPARK Matrix provides a visual representation of market participants and provides strategic insights into how each supplier ranks related to their competitors, concerning various performance parameters based on the category of technology excellence and customer impact. Quadrant's Competitive Landscape Analysis is a useful planning guide for strategic decision makings, such as finding M&A prospects, partnerships, geographical expansion, portfolio expansion, and similar others.

Each market participant is analyzed against several parameters of Service Excellence and Customer Impact. In each of the parameters (see charts), an index is assigned to each supplier from 1 (lowest) to 10 (highest). These ratings are designated to each market participant based on the research findings. Based on the individual participant ratings, X and Y coordinate values are calculated. These coordinates are finally used to make the SPARK Matrix™.

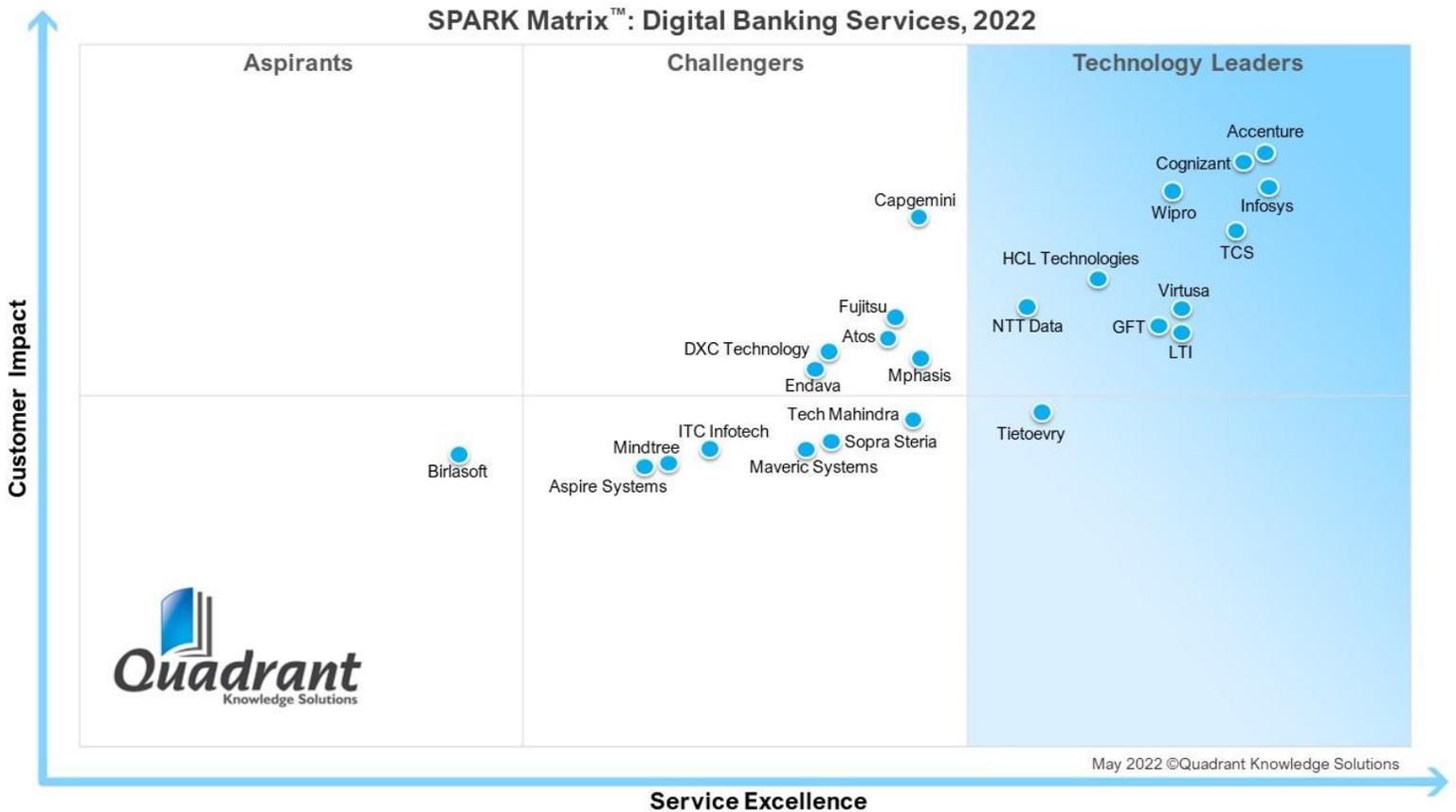
Service Excellence	Weightage	Customer Impact	Weightage
Sophistication of Service Capabilities	25%	Diversity of Client Base	25%
Competitive Differentiation Strategy	25%	Market Presence	25%
Industry Experience & Domain Knowledge	25%	Proven Record	25%
Global Reach & Service Capabilities	15%	Customer Service Excellence	15%
Vision & Roadmap	10%	Unique Value Proposition	10%

SPARK Matrix™:

Digital Banking Services, 2022

Strategic Performance Assessment and Ranking

Figure: 2022 SPARK Matrix™
 (Strategic Performance Assessment and Ranking)
 Digital Banking Services Market



Vendor Profiles

Following are the profiles of the leading Digital Banking Service vendors with a global impact. The following vendor profiles are written based on the information provided by the vendor's executives as part of the research process. The Quadrant research team has also referred to the company's website, whitepapers, blogs, and other sources for writing the profile. A detailed vendor profile and analysis of all the vendors, along with various competitive scenarios, are available as a custom research deliverable to our clients. Users are advised to directly speak to respective vendors for a more comprehensive understanding of their service capabilities. Users are advised to consult Quadrant Knowledge Solutions before making any purchase decisions regarding Digital Banking Services and vendor selection based on research findings included in this research.

GFT

URL: <https://www.gft.com/sg/en>

Founded in 1987 and headquartered in Stuttgart, Germany, GFT is an IT services and software engineering provider, offering consulting and development capabilities across key areas such as cloud engineering, artificial intelligence, mainframe modernization, and the Internet of Things for Industry 4.0. The company offers a digital banking accelerator titled BankLiteX as its flagship solution. The solution enables quick deployment of cloud-based digital banking while ensuring compliance with the regulatory requirements.

The BankLiteX solution uses an API-based Bank-as-a-Service approach to provide a unified experience across third-party apps, solutions, microservices, and custom-built software. The solution allows a multi-core banking system approach to migration risk reduction. The solution has been designed with building block architecture and pluggable components for delivering digital channels to integrate with external service providers and the fintech ecosystem. BankLiteX, developed in collaboration with Thought Machine and AWS, helps organizations reduce time to market, de-risk the project, and optimize the ROI of the overall new digital journey.

The solution offers a single development hub that serves as a repository for all projects, technologies, and programming languages. The hub allows organizations to secure collaboration among all teams involved in a business. BankLiteX leverages AWS Cloud Native Services, a cloud-based platform, to allow new digital banks to meet regulatory requirements and develop new business models. BankLiteX provides organizations with a foundation for launching the digital bank and simplifies the implementation of digital banks, thereby lowering the development costs through one platform that also delivers multi-brand and multi-currency implementations. The solution also provides business logic, a workflow engine, enabling solutions (smart contracts), and configuration management.

The company also offers a high-performance computing (HPC) tool which can be used to perform any complex calculation and is useful in capital markets, insurance, payments, and industrial IoT applications that require massive performance and heavy workloads. The company's HPC accelerators set up TIBCO GridServer environments, run compute at scale, and then decommission them when workloads are finished. GFT's open-source cloud landing zone and HPC accelerator aid in the automation of the organization's cloud framework's build and automation of HPC grid builds. The HPC tool runs large and

complex computational calculations at scale, ensuring that the organization's compute requirements are matched with the business's requirements.

Analyst Perspective

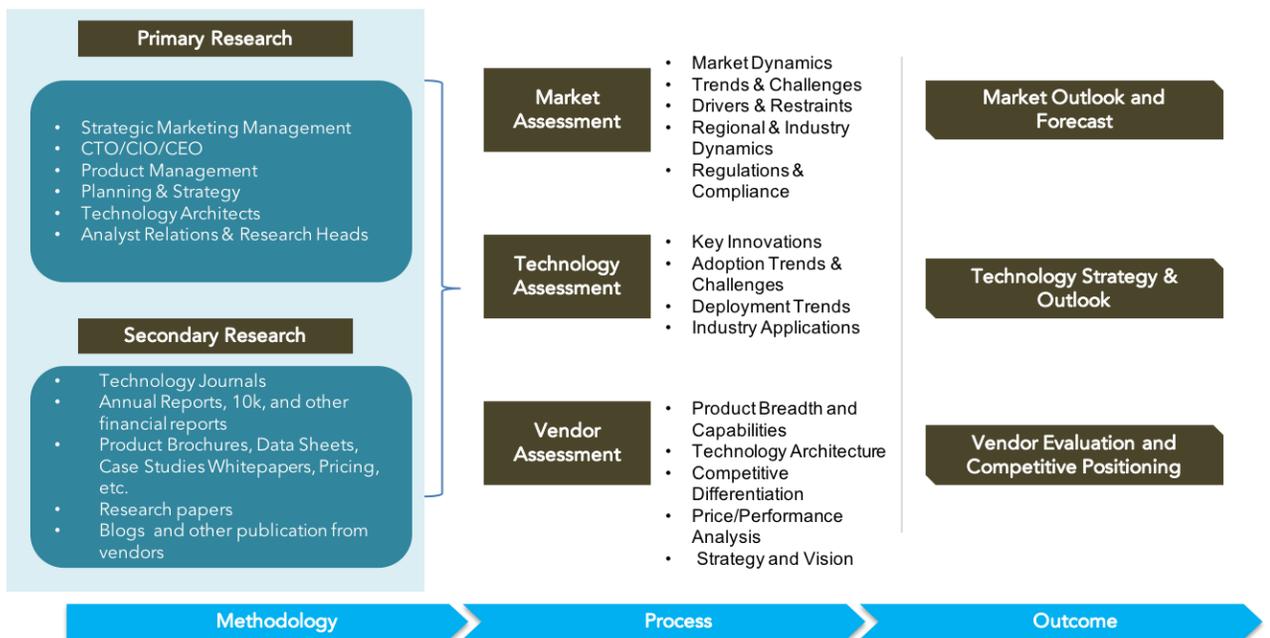
Following is the analysis of GFT's capabilities in the global Digital Banking Services market:

- ◆ GFT's flagship solution BankLiteX is architected to leverage native cloud services with reliability, scalability, and resilient managed services to reduce potential downtime. The solution aids organizations in building digital banks that are customizable, scalable, and future proof by involving code from all layers, including cloud-native core banking and external systems, guaranteeing reusability through a pragmatic component model, promoting seamless collaboration between cross-technologies teams; and supporting quality and security as part of the brick architecture and software lifecycle.
- ◆ The company's key differentiators include its architecture, which enables all the services capabilities pertaining to digital banking through one solution, and to cater to the customer's technical problems as per their business requirements. With its tools for digital banking services, GFT offers services capabilities such as digital onboarding, AML, KYC, transaction monitoring, end-to-end loan origination and loan processing, payment/e-payment, cards, wallets, core-banking systems, buy now, pay later, and more.
- ◆ In terms of geographical presence, GFT has its major presence in Europe, followed by APAC and the Americas. The company caters to use cases such as layered architecture that supports local requirements and developments for quick development of digital solutions for new and niches markets. The company also caters to industry verticals, including banking, insurance, manufacturing, and automotive.
- ◆ GFT might face growing competition from emerging and well-established vendors in the North American region, providing digital banking services backed by robust tools and frameworks. However, with its comprehensive capabilities, GFT is well-positioned to expand in the digital banking services space.
- ◆ The company's roadmap includes providing support for insurance solutions in smart contracts, Microsoft Azure hosting for digital banking solutions with integrated core banking systems and integrating crypto-assets. Moreover, the

company also plans to expand the security layer for third-party solutions and provide integration to third-party card management systems.

Research Methodologies

Quadrant Knowledge Solutions uses a comprehensive approach to conduct global market outlook research for various technologies. Quadrant's research approach provides our analysts with the most effective framework to identify market and technology trends and helps in formulating meaningful growth strategies for our clients. All the sections of our research report are prepared with a considerable amount of time and thought process before moving on to the next step. Following is a brief description of the major sections of our research methodologies.



Secondary Research

Following are the major sources of information for conducting secondary research:

Quadrant's Internal Database

Quadrant Knowledge Solutions maintains a proprietary database in several technology marketplaces. This database provides our analysts with an adequate foundation to kick-start the research project. This database includes information from the following sources:

- Annual reports and other financial reports
- Industry participant lists

- Published secondary data on companies and their products
- Database of market sizes and forecast data for different market segments
- Major market and technology trends

Literature Research

Quadrant Knowledge Solutions leverages several magazine subscriptions and other publications that cover a wide range of subjects related to technology research. We also use the extensive library of directories and Journals on various technology domains. Our analysts use blog posts, whitepapers, case studies, and other literature published by major technology vendors, online experts, and industry news publications.

Inputs from Industry Participants

Quadrant analysts collect relevant documents such as whitepaper, brochures, case studies, price lists, datasheets, and other reports from all major industry participants.

Primary Research

Quadrant analysts use a two-step process for conducting primary research that helps us in capturing meaningful and most accurate market information. Below is the two-step process of our primary research:

Market Estimation: Based on the top-down and bottom-up approach, our analyst analyzes all industry participants to estimate their business in the technology market for various market segments. We also seek information and verification of client business performance as part of our primary research interviews or through a detailed market questionnaire. The Quadrant research team conducts a detailed analysis of the comments and inputs provided by the industry participants.

Client Interview: The Quadrant analyst team conducts detailed telephonic interviews of all major industry participants to get their perspectives on the current and future market dynamics. Our analysts also get a first-hand experience with the vendor's product demo to understand their technology capabilities, user experience, product features, and other aspects. Based on the requirements, Quadrant analysts interview more than one person from each of the market participants to verify the accuracy of the information provided. We typically engage with client personnel in one of the following functions:

- Strategic Marketing Management
- Product Management
- Product Planning
- Planning & Strategy

Feedback from Channel Partners and End Users

Quadrant research team researches with various sales channel partners, including distributors, system integrators, and consultants, to understand the detailed perspective of the market. Our analysts also get feedback from end-users from multiple industries and geographical regions to understand key issues, technology trends, and supplier capabilities in the technology market.

Data Analysis: Market Forecast & Competition Analysis

Quadrant's analysts' team gathers all the necessary information from secondary research and primary research into a computer database. This database is then analyzed, verified, and cross-tabulated in numerous ways to get the right picture of the overall market and its segments. After analyzing all the market data, industry trends, market trends, technology trends, and key issues, we prepare a preliminary market forecast. This preliminary market forecast is tested against several market scenarios, economic most accurate forecast scenario for the overall market and its segments.

In addition to market forecasts, our team conducts a detailed review of industry participants to prepare a competitive landscape and market positioning analysis for the overall market as well as for various market segments.

SPARK Matrix:

Strategic Performance Assessment and Ranking

Quadrant Knowledge Solutions' SPARK Matrix™ provides a snapshot of the market positioning of the key market participants. SPARK Matrix representation provides a visual representation of market participants and provides strategic insights into how each supplier ranks in comparison to their competitors, concerning various performance parameters based on the category of technology excellence and customer impact.

Final Report Preparation

After the finalization of market analysis and forecasts, our analyst prepares necessary graphs, charts, and tables to get further insights and preparation of the final research report. Our final research report includes information including market forecast, competitive analysis, major market & technology trends, market drivers, vendor profiles, and such others.