

Procurement, Supply Chain Management and Retail

SPARK Matrix™: **Source-to-Pay (S2P), 2022**

Market Insights, Competitive Evaluation, and Vendor Rankings

August 2022

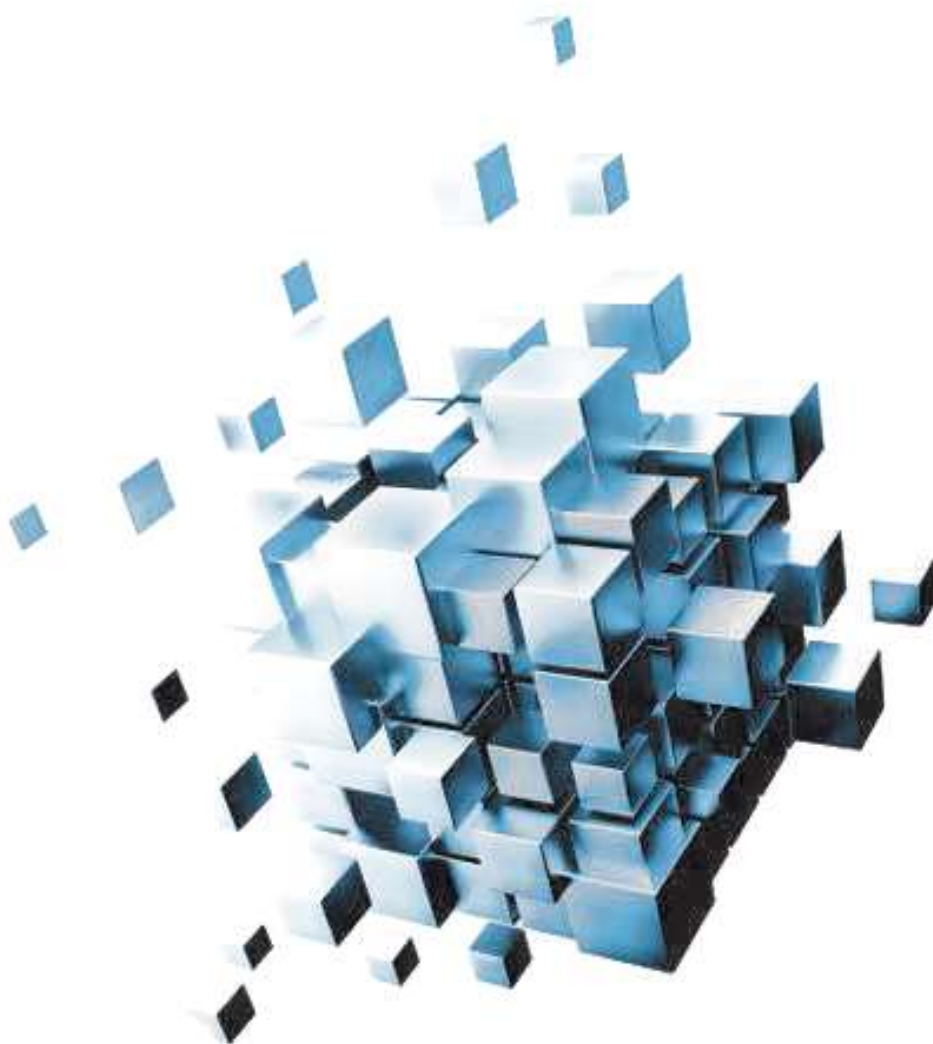


TABLE OF CONTENTS

Executive Overview	1
Market Overview and Definition	2
Competitive Landscape and Analysis	10
Key Competitive Factors and Technology Differentiators	14
SPARK Matrix™: Strategic Performance Assessment and Ranking	20
Vendor Profiles	24
Research Methodologies	29

Executive Overview

This research service includes a detailed analysis of the global S2P market regarding short-term and long-term growth opportunities, emerging technology trends, market trends, and future market outlook. The study provides a comprehensive market forecast analysis, competition analysis, and ranking of the leading S2P vendors in the form of the SPARK Matrix™. This research provides strategic information for technology vendors to better understand the market supporting their growth strategies and for users to evaluate different vendors' capabilities, competitive differentiation, and market position.

Market Overview and Definition

The Source-to-Pay (S2P) suite automates and optimizes end-to-end sourcing and procurement processes to improve internal controls, enhance supply chain processes, offer comprehensive spend visibility, and mitigate supplier risk & compliance. The S2P suites' native and comprehensive capabilities help organizations standardize procurement processes and minimize TCOs to quickly react to changing business scenarios, opportunities, and challenges. It also provides a single consolidated suite for organizations to gain complete visibility by centralizing the entire procurement data and making informed procurement strategies.

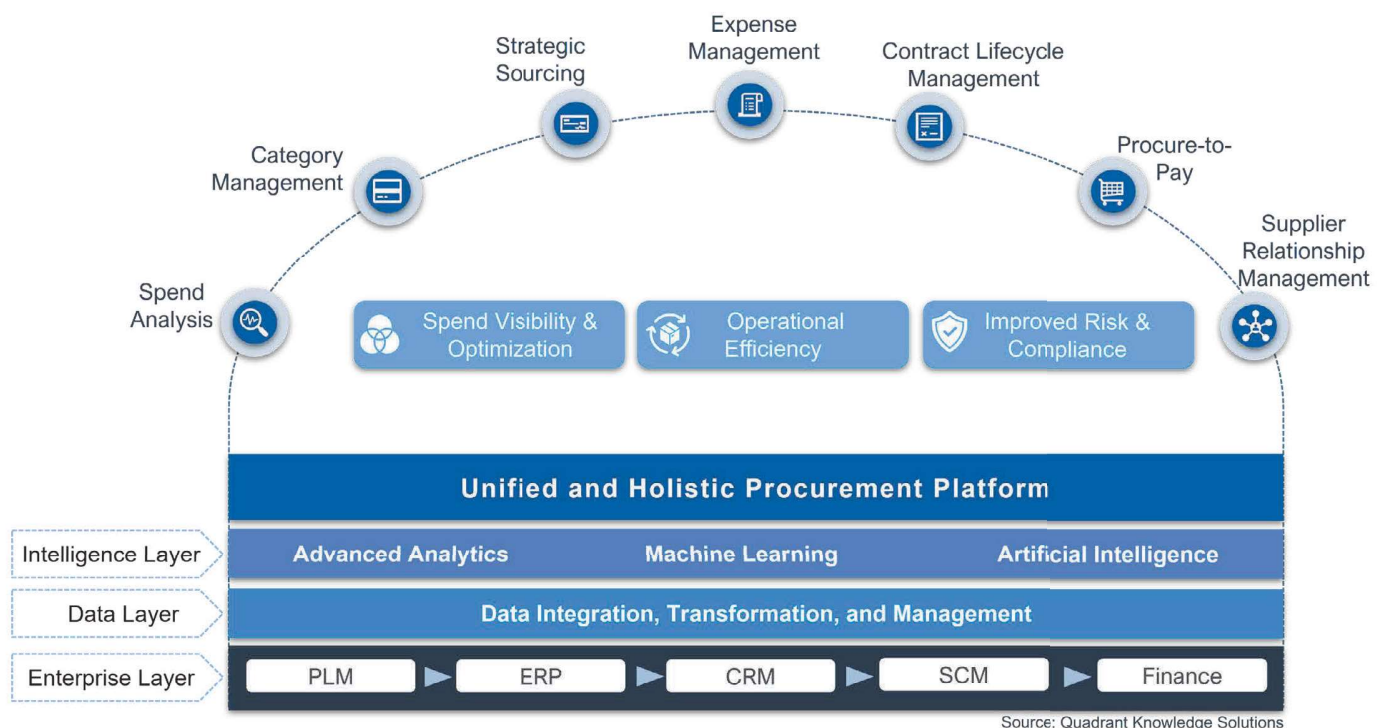
The Source-to-Pay (S2P) model was coined a few years ago. However, with advancements in this concept, organizations have initiated its development and are offering it as a complete S2P suite. Organizations are providing enhanced source to pay solutions with a combination of various intelligent technologies such as cognitive and conversational AI, RPA, machine learning, smart workflow, automation, and blockchain to deliver higher transparency.

There is a continuous focus on optimizing end-to-end source-to-pay suite with the inclusion of various standalone applications and modules such as supplier sourcing, consolidated spend analytics, invoicing and catalog management, purchase of goods and services, contract management, and supplier performance management. Organizations are increasingly looking to digitize their S2P capabilities and enhance user experiences. With the rise in demand for advanced analytics and machine learning capabilities, organizations are also leveraging AI/ML technologies to gain actionable insights as well as foster collaboration with business stakeholders.

Currently, organizations are focusing on developing an advanced S2P suite by leveraging AI/ML technologies to offer a unified solution for managing users' demand for procurement services. This S2P suite helps organizations mitigate risks and comply with future regulatory requirements. As the S2P suite is composed of scalable solutions that can be easily expanded across the user's supply chain network, the S2P suite helps eliminate obsolete custom-made systems that possess expensive maintenance. Vendors in the procurement space are heavily targeting their investments to ensure product competency and gain business advantage.

Figure: Sourcing Procurement Technologies are Transforming Towards Unified and Holistic Procurement Suite

Centralized Visibility, Robust Data Management, Real-time Project Status, Authorization, Authentication, Compliance, Easy-to-Use



Source: Quadrant Knowledge Solutions

The considerable disruption caused due to COVID-19 across the supply chain and procurement has driven organizations to reassess ways to execute various operational tasks. As a result, organizations are making efforts to re-calculate their supply & demand, supplier relationship, supplier diversification, short-term contracting, supplier selection, negotiation, awarding, supplier risk assessment, and spend management. Vendors focus on digitally transforming their business and leveraging automation to optimize their planning and decision-making skills. Additionally, owing to the pandemic-induced norms, the mobile-native approach has gained significant market traction across the global supply chain and allowed employees to access the platform and carry out their operations remotely. The configurable automation of processes and workflows assists organizations in fraud detection, geography-specific compliance, and industry-level access control. Organizations are also leveraging automation for real-time identification and

tracking of direct & indirect spend, as most organizations neglect tail-spend, which is a crucial factor for achieving overall ROI and identifying maverick spending.

Vendors additionally provide a range of professional services, including consulting, training, maintenance & support, managed services, customer care services, and such others. Additionally, major players also provide effective supplier collaboration management and negotiation, dynamic spend management, 360-degree visibility of processes and data, optimized risk management, overall usability, and TCO.

Following are the key capabilities of source-to-pay:

Supplier relationship and risk management:

The supplier relationship and risk management application seamlessly manages the onboarding of new suppliers. The application manages and updates supplier information and minimizes the overall supplier risk.

- **Supplier information in a unified digital repository:** The suite provides a 360-degree view of suppliers' past and present activities through a centralized cloud-based repository. The digital repository holds the data of new and existing suppliers, including basic supplier credentials, scorecards, KPIs, and activity history, to gain organization-wide visibility into supplier performance. This visibility helps organizations gain in-depth information of all the suppliers and focus on individual suppliers to foster supplier relationships and mitigate risk by selecting appropriate suppliers based on the transaction history. The suite can also identify duplicated data to provide a single source of truth data across the organization. It offers an easy supplier search mechanism using NLP through text or voice-based interfaces. It is also integrated with ERP and other master data tools that allow buyers to access the desired information.
- **Supplier portal and dashboards:** The supplier portal allows the supplier to self-onboard. It allows the suppliers to regularly update product, catalog, and profile information to maintain greater transparency. It also offers a real-time dashboard view, allowing procurement experts to instantly view supplier performance and risk, and pull all the relevant data across the procurement suite.

- **Supplier risk and performance management:** The suite automatically validates and verifies each supplier's information based on questionnaires, contracts, certifications, and other documents. It integrates with third-party data for risk analysis. After gathering the data, the suite helps organizations automatically categorize the suppliers into different risk scales and assign flags as per the business rules and standards. The suite also schedules inspections of supplier risk and performance weekly, quarterly, or yearly. Furthermore, the suite updates the supplier ratings based on the gathered information.
- **Supplier issue management:** The suite can provide real-time notifications and alerts to both suppliers and buyers. It allows both parties to quickly identify the issue and work together to resolve it. It classifies the issues according to the set business rules and allows the involved members to actively track the issues to take necessary actions.

Contract Management and Negotiation:

Contract management allows procurement professionals to gain real-time visibility of contract records, track and monitor the contract, manage the catalog, and negotiate a contract under a single cloud-based suite.

- **Contract repository:** The suite consolidates all contracts and provides a single source of truth across the organization. The contract repository dashboard provides real-time visibility of contract records and offers an advanced contract search feature. The dashboard also offers an overview of contract-related information, including author, price, timestamp, renewals, and terminations to the buyer/organization.
- **Contract authoring:** The suite enables quick creation of e-contracts from pre-built approved templates and clause libraries. It continuously keeps track of any contract changes and updates the changes immediately to both parties to avoid any further conflicts. The suite also stores every version of the contract and enables experts to compare the versions side-by-side. The suite also offers out-of-the-box integration with third-party e-signature service providers to accelerate contract process execution as per the organization's defined workflow. The suite also supports blanket orders to achieve maximum savings while collaboratively buying multiple products in a single order.

- **Catalog management:** The suite provides both punch-out and hosted catalogs for suppliers to easily maintain and update product lists and services. With e-catalogs, users can enhance tenders and simplify the purchasing process by providing quick product and price information to the contracting authorities. The suite can also provide access to information on specific contracts to all parties and offer regular updates to the stakeholders.
- **Contract notification and alerts:** The suite generates automatic notifications and alerts for all parties involved in contract management. In case the contract reaches any milestone or raises any issues, the suite alerts both parties for further action. The contract alerts can benefit organizations in contract creation, renewal, termination, and any due payments. The suite provides a reminder to organizations to pay the supplier in advance and provides an opportunity to negotiate with suppliers to achieve maximum savings.

e-sourcing & RFx management:

eSourcing enables organizations to collaborate with their suppliers to identify organizational requirements, based on which they can create RFx, invite potential suppliers, carry out eAuction processes, and eventually award the contract. Furthermore, the suite can collect data from ERP and other data sources to classify suitable suppliers based on past transactions and performance.

- **eRFx:** The suite automatically manages the entire RFx event step-by-step. It allows organizations to create a centralized library of questionnaires and RFx sections and store created RFx templates to be utilized for any future event. It also supports collaborative RFx authoring capabilities, enabling multiple members to work collaboratively on RFx creation from different locations.
- **eAuction:** The suite offers a real-time bidding strategy with multi-lingual and multi-currency support to all the involved members. The suite automatically extends pre-bids to facilitate the bidding process. The eAuction feature supports multiple proposal acceptance and negotiation rounds to get the right supplier offering the most cost-effective product/service. The supplier can easily configure an intuitive eSourcing dashboard as per their business or individual requirements.

Spend Analytics:

Spend analytics offers real-time spend visibility across the enterprise and parallelly provides control to the buyers over the entire spend.

- **Saving and tracking:** Organizations can set up annual saving plans for sourcing teams and track all spend for individual, team, or business level categories. The suite enables users to set their spending and saving goals and set benchmarks based on their time preferences to negotiate and realize these savings. It allows organizations to create, monitor, and administer their savings pipeline by engaging in real-time with stakeholders and team members. The buyers can handle their spend activities by leveraging savings dashboards, performance benchmarking, and savings validation features.
- **Spend analysis:** The suite is equipped with the spend analysis capability that focuses on savings opportunities, tracking compliance, identifying price change, and mitigating risks. The suite integrates with various IT sources such as enterprise resource planning systems (ERPs), purchase-to-pay suites, shared Excel reports, and other spend resources into a single centralized repository. The captured data provides valuable insights into the organizations and enables them to easily search, segregate, and manage the spend data with the desired KPIs. The suite automatically cleans the duplicate data to avoid conflict and helps organizations evaluate historical data and detect spending trends to identify future savings opportunities. The suite can set up monthly or quarterly reviews to check the overall performance of spend, and based on the performance, it anticipates short- and long-term savings.

Procure-to-Pay:

Procure to Pay (P2P) enables organizations to manage and streamline end-to-end procurement lifecycle processes, from requisitioning, purchasing, payment processing, and accounting for goods and services.

- **e-Purchasing:** e-Purchasing is a substitute for manual buying and selling activities in a digital form. It comprises end-to-end purchasing from the requisition of buyers to the payment of suppliers. In e-purchasing, the requisition is generated with the help of e-forms, catalogs, or free-text orders, and is further channeled for sanction by

a predefined rule-based workflow. The requisition is modulated into single or multiple purchase orders (POs) post approval. Thereafter, the purchase orders are sent to the suppliers through email, auto fax, portal, electronic data interchange (EDI), or XML integrations. The receipt is generally received via mobile, desktop, or dock, which is the last stage in procurement operations. Moreover, the system can perform budget monitoring and management by coherent integration with the system. It recommends budget utilization and capacity based on budget analysis by providing flags.

- **e-Invoicing:** e-Invoicing helps suppliers consign the invoice in digital form, automate its reception, and invoice-matching processes for purchase and non-purchase orders-based invoices. Such documents consist of invoices, purchase orders, debit notes, credit notes, payment terms and instructions, and payment slips. Requisitions and POs are automatically paired with the arriving invoices, sanctioned by the concerned stakeholders, saved based on audit requirements, and configured in accordance with global ordinances. Suppliers can easily access invoice acceptance and payment through the network or portal feature. The system has the ability to administer any user or system created exceptions. It reduces time and effort in several invoice processing stages and fosters the buyer and supplier relationship. Additionally, the system offers dynamic discounting on advance payments and increases the cash available for each transaction.
- **e-Catalog management:** e-Catalog yields detailed information of products and services traded by any vendor and enables online ordering and payment functionality. The catalog constitutes core components such as product names, product hierarchy, descriptions, prices, and supplier and internal codes. e-catalogs are primarily utilized to purchase replenished indirect goods and services. However, it also furnishes purchase instructions for complex procurements that are rare and valuable.
- **Accounts payable invoice automation:** Accounts payable invoice automation (APIA) can automate arriving invoices comprising rule-based matching against POs, even when the PO is not issued, channeling the invoice for sanction and account coding. The exceptions emerging from transportation charges or other expenses

like taxes not illustrated on the purchase order are handled by APIA tools. APIA can also tackle situations where the cost or quantity of the products obtained is not equal to the preapproved PO. Comprehensive accounts payable automation is initiated when the invoice data is in electronic format, which is gained through scanning or capturing, like optical character recognition (OCR). AP Automation optimizes process efficiencies and enhances control and visibility across the invoice processing cycles to accomplish an exceptional level of operating efficiency.

Competitive Landscape and Analysis

Quadrant Knowledge Solutions conducted an in-depth analysis of major Source-to-Pay vendors by evaluating their products, 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 market.

This study includes an analysis of key vendors, including BirchStreet Systems, Coupa, Elcom, GEP, Ivalua, JAGGAER, Medius (Wax Digital), Opus Capita, Oracle, Proactis, SAP (Ariba), Tradeshift, Xeeva, and Zycus.

Coupa, GEP, Ivalua, JAGGAER, SAP (Ariba), and Zycus are the top performers and technology leaders in the global S2P market. Leaders in procurement technology continue to invest in offering tightly integrated, unified, and holistic procurement suites that provide spend analysis, category management, strategic sourcing, expense management, contract lifecycle management, procure-to-pay, supplier relationship management, and other capabilities. These suites offer a significant advantage in terms of enhanced visibility into enterprise spending and procurement decisions, greater control of overall performance, increased flexibility with an integrated solution, and seamless information flow across different procurement modules.

Coupa offers a unified, cloud-based business spend management (BSM) platform. The company offers a BSM platform that includes integrated transactional capabilities such as procure, invoice, and pay. The platform offers specialized applications, including supply chain design & planning, spend analysis, strategic sourcing application, contract management, contingent workforce, and supplier management as a part of its comprehensive suite.

GEP offers GEP SMARTTM, a SaaS-based procurement and supply chain software platform that provides unified, comprehensive source-to-pay functionalities for direct and indirect procurement. GEP offers an AI-based, cloud-native strategic sourcing tool that helps organizations automate and optimize their sourcing processes by mitigating risks, accelerating time-to-market, and maximizing overall value. GEP Software provides robust technology key value propositions, including unique sourcing & category management, global strategic sourcing projects, AI-based sourcing, CLM & P2P integration, direct material supports, and third-party risk management.

Ivalua's source-to-pay (S2P) platform enables organizations to gain real-time visibility into their spending, sourcing processes, contract management, supplier relations, and desired KPIs. The S2P platform provides a comprehensive procurement solution with added focus on visibility, collaboration, and automation. Ivalua's technology partners enable organizations to be agile by offering a breadth of personalized adoption, crisis management, process management, and innovation management capabilities. Ivalua also offers multiple quick deployment options to reduce go-to-market time to just a few months. Ivalua offers an integrated and intuitive dashboard experience across the platform with robust actionable & analytics tools. Ivalua also provides robust actionable & analytics tools that offer an integrated and intuitive dashboard experience across its platform.

JAGGAER ONE spend management software offers solutions across indirect, direct, services, and Capex spending. JAGGAER's CPG procurement software provides flexible solutions with purpose-built capabilities to manage all spend categories, including materials, finished goods, packaging, and logistics that reach the customer. The platform offers role-based access to sensitive data that is safeguarded through intuitive business guidelines. It also provides reminders to organizations to pay a supplier in advance and provides an opportunity to negotiate with suppliers to achieve maximum savings.

SAP Ariba provides a cloud-based unified network and spends management suite. The solution suite includes supplier management, strategic sourcing, procurement, service procurement & contingent workforce, selling & fulfillment, and travel & expenses. SAP Ariba Strategic Sourcing helps organizations streamline the supplier selection process, identify and optimize revenue possibilities, rapidly convert sourcing into the contract, and eliminate administrative tasks for manual spend calculations by automating the process to minimize risks. SAP Ariba offers a unified procurement platform, including strategic sourcing, spend analysis, procure-to-pay, CLM, and supplier risk and performance management solutions.

Zycus offers an S2P suite that helps organizations optimize supplier risk and contract compliance, automate the P2P process, and leverage comprehensive spend insights for decision-making. The suite also aids in the contract creation process, supplier onboarding, and overall direct & indirect spends. The company also offers comprehensive functional capabilities for spend analysis and spend data management to gain comprehensive visibility into the spend profiles and identify savings opportunities. It helps organizations foster supplier and partner relationships and drive operational efficiency. The scalable, SaaS-based solution

can manage a vast volume of transactions and supplier data and enables users to seamlessly connect this data to various accounting and procurement activities.

Medius (Wax Digital), Opus Capita, Oracle, and Tradeshift have been positioned among the primary challengers. These companies offer end-to-end S2P capabilities and are rapidly gaining market traction across industry and geographical regions. These strategic sourcing applications vendors continue to improve the technology value proposition, integration and interoperability, and data management functions of their offerings to improve the technology ownership experience of a unified procurement suite. Some of the key value propositions of a holistic procurement suite include granular, multilevel sourcing and cost optimization, end-to-end process optimization, enterprise-wide spend visibility and optimization, advanced negotiation intelligence and supplier analysis, AI-powered recommendation on supplier selection, automated supplier performance, risk assessment, classification, qualification, and greater usability with a common user interface across different procurement modules.

The other key vendors captured in the 2022 SPARK Matrix include BirchStreet Systems, Elcom, Proactis, and Xeeva. Many vendors are focusing on automating and optimizing their supplier management, fostering long-term relationships, determining potential performance issues, and driving value from supplier contracts. In order to meet these organizational requirements, many vendors are enhancing their suites to enable organizations to seamlessly perform supplier selection, onboarding, evaluation, and risk management. Additionally, vendors are focusing on supplier onboarding and qualification process with KPI management and third-party data integration, as well as a quick quotation from purchase requests.

The global strategic sourcing and procure-to-pay market is in the mature stage with the presence of well-established vendors with a loyal client base and the maturity of core procurement and sourcing functionalities. While most S2P vendors target SMBs organizations for competitive pricing and relevant application functionalities, large enterprise organizations look for a more comprehensive and integrated technology suite with advanced functionalities.

While a majority of the vendors may provide all the core functionalities, the breadth and depth of the capabilities may differ based on different vendors' offerings. Users should evaluate S2P vendors that offer comprehensive capabilities to provide seamless connectivity to supply chain tools and systems, a broad

range of out-of-the-box functionalities, scalability & extensibility, comprehensive visibility, advanced analytics, automation, AI/ML support, customer support, end-to-end spend management, and supplier management. The vendor's customer value proposition may differ in terms of ease of deployment, ease of use, price/performance ratio, support for a broad range of various use cases, providing a unified & in-house integrated procurement suite from sourcing-contract-purchase-pay, guided buying and shopping experience, global indirect category procurement, global contract and process compliance, direct material procurement, third-party risk assessment, and automated P2P processes. Some of the differentiators are seamlessly configurable workflow, data integration, AI-powered OCR, guided shopping experience, country-specific compliance, accounts payable automation, real-time dashboard & analytics, automatic queue management, traceability and transparency, data privacy, and third-party risk management.

The supply chain and procurement industries are undergoing a rapid transformation, compelling S2P vendors to expand their R&D budget and make continuous enhancements to their software value proposition to serve futuristic customer needs. Users should evaluate vendors that offer a robust technology strategy and roadmap to enhance their software features & functionalities and SaaS strategy aligned with the emerging transformational trends.

Key Competitive Factors and Technology Differentiators

Following are the key competitive factors and differentiators for the evaluation of S2P systems and vendors. While a majority of the suite providers may provide all the core functionalities, the breadth and depth of functionalities may differ based on different vendors' offerings. Driven by increasing competition, vendors are increasingly looking to improve their technology capabilities and overall value proposition to remain competitive. Some of the key differentiators include:

AI-powered auto-classification engine: An AI-powered classification engine reduces the time and resources spent by users on data classification. AI classification helps users remove language barriers and inconsistent classification inputs and recognizes errors in items and service descriptions. The range of automation and machine learning capabilities offered by vendors varies considerably. Users can choose from a varied range of capabilities, such as supplier intelligence with user-centric mapping, rules engines, levels of commodity classification, and discovering hidden category insights. Vendors also provide trained AI integrated spend analytics applications that use anonymized data from previous deployments. Some applications also enable users to obtain a deeper understanding of spending and supplier behavior.

Intelligent savings opportunity finder: An intelligent savings opportunities finder helps reduce the time to value by discovering savings and business productivity opportunities. Vendors provide an AI/ML-powered opportunity finder tool that follows supplier rationalization, contract compliance, demand aggregation, or others. Users must evaluate the vendors based on the performance benchmarks and degree of savings potential that they provide.

Enriched data with supplier-related insights: Supplier insights, when added to the supplier data, add far greater value. Vendors maintain a database of supplier data with hierarchical information, industry codes, business financials, and sustainability information. Users should opt for vendors that provide detailed information of the suppliers they have. This helps users to manage their suppliers better with better compliance and risk mitigation practices. The performance of the spend analytics application depends on the volume and classes of data available to be sourced, apart from the strategies used for data classification and data analysis. However, several procurement companies adopt the strategy of

investing only in developing ways to find more savings opportunities, which has reached saturation levels. Procurement teams are now looking for easier ways to improve the spend analytics outputs.

Maturity of AI, ML, and Advanced Analytics: A key factor for adopting a strategic sourcing platform is its ability to provide comprehensive analytics, reporting, and AI capabilities. Users should evaluate the vendors' capabilities to deliver a robust platform with an easy, intuitive, and graphical interface. The adoption of AI and ML has emerged as the most important trend across all enterprise and business systems to transform operations and provide intelligent insights. As AI and ML technologies are still in the emerging stage, users should evaluate vendors' existing maturity as well as the roadmap of these technologies. Additionally, the platform should be equipped with real-time, robust reporting and customizable/configurable, interactive dashboarding capabilities. Depending on the vendor's capability, the platform may be equipped with a robust AI engine consisting of out-of-the-box models to cater to various predictive and prescriptive use cases. Vendors may also provide business intelligence (BI) tools for data visualization, which can be either native or through partnerships. Leading vendors continue to leverage AI technologies for data-driven intelligence for the negotiation process, constraint-based bid analysis and optimization, cost predictions and classification, and supplier risk insights. Organizations can significantly benefit from granular-level supplier selection intelligence based on qualification, proven performance, and associated risks. Leading vendors are increasingly incorporating AI into their solution to provide AI-powered recommendations for contract authoring, contextual insights, and negotiation intelligence; and proactively identify governance risk and compliance (GRC) issues to improve overall contract performance. Advanced analytics and AI can also help organizations visualize and discover complex relationships across contract portfolios to reduce overall risk. Vendors are enhancing their analytics and insights capabilities to help organizations understand KPIs and metrics to make informed procurement and sourcing decisions.

Use-case diversification: Users should evaluate vendors capable of supporting their organizational use cases across industry verticals and have a customer-centric approach. The platform should be capable of handling dynamic business requirements in an ever-evolving environment. Users should evaluate vendors that support various use cases such as public sector organizations, unified and in-house integrated procurement platforms from sourcing-contract-purchase-pay, guided buying shopping experience, global indirect category procurement, global

contract and process compliance, direct material procurement, third-party risk assessment, and automated and creation process for P2P (catalogs, RFx, invoices, good receipts, purchase orders, etc.). Users should also focus on vendors with a broad use case coverage in industry verticals comprising chemical, gas, oil, BFSI, automotive, life sciences, CPG & retail, telecom, media, public & private sector, energy & utilities, e-commerce, and more. Depending on the vendor's capability, the solution may also support customized industry-specific and organization-specific use cases for predicting spend, assessing risks, material procurement, and extracting information from PO/AP/invoices. The solution must provide flexibility in addressing organizations' challenges by supporting modern-day use cases that can be customized based on business requirements and objectives.

Vendors' Expertise and Domain Knowledge: Organizations should evaluate vendors' expertise and domain knowledge to understand their unique business problems, use cases, and industry-specific & user-specific requirements. Organizations are advised to comprehensively evaluate different S2P vendors before purchasing an offering. Users should employ a weighted analysis of the several factors important to their specific organization's use cases and industry-specific requirements. Requirements of key features may differ significantly based on the industry sector, from SMBs to large enterprise organizations. Users should also look for strategic sourcing solutions with a history of successful large-scale deployments and carefully analyze the existing case studies of those deployments. This should form the basis for preparing best practices for strategic sourcing application deployments.

Integration and Interoperability: Leading procurement vendors continue to invest in offering integrated, unified, and holistic procurement platforms consisting of spend analysis, category management, strategic sourcing, expense management, contract lifecycle management, procure-to-pay, supplier relationship management, and others. A unified procurement platform facilitates a seamless information flow across different procurement functions and thereby offers a significant advantage over standalone systems. The platform offers enhanced visibility into enterprise spends and procurement decisions, greater control of procurement processes, and improved overall flexibility. Seamless integration and interoperability with the organization's existing technologies are amongst the most crucial factors impacting technology deployment & ownership experience. All organizations have a long-term vision of exponential growth. In addition, it is essential to be compatible with all existing platforms and capable of being easily scalable. S2P vendors should offer seamless integration and

interoperability with a wide range of enterprise and business applications, including ERP, CRM, supply chain management, procurement, finance systems, security, payments, and other cross-functional departments. Vendors may provide out-of-the-box integration connectors, well-documented APIs, and RESTful APIs to achieve integration with multiple enterprises and business systems. Users should also evaluate the vendors' capability to provide out-of-the-box integration for best-of-breed technologies and custom integration with various enterprise, supply chain, procurement, and finance systems. Also, users should assess the ability of S2P to offer breadth and depth of integration capabilities specific to their existing tools and infrastructure. Some integration tools and APIs are not comprehensive and may only provide limited functionality. Additionally, vendors are increasingly integrating with advanced analytics solutions providers for a granular understanding of procurement patterns and spend analysis. Vendors are also focusing on providing e-invoicing and automated accounts that will leverage campaign design.

Vendors Strategy and Roadmap: Strategic sourcing and procurement technologies are constantly evolving to accommodate emerging and ongoing technology disruption and market trends. Users should carefully select the right technology partner as per their digital transformation roadmap, specific use cases, and emerging industry trends. Procurement vendors are continuously improving their technology value proposition in terms of integrating and transforming a wide range of spend data across enterprise systems, advanced data visualization to uncover hidden business and cost-saving opportunities; NLP-based data discovery and search capabilities, process automation, and workflow capabilities; and AI-powered recommendations and contextual intelligence across spend, and procurement processes. The vendor's capability to formulate a comprehensive and compelling technology roadmap and market and growth strategies is crucial for users before adopting the S2P suite. The vendors should possess an in-depth understanding of the market dynamics to analyze the potential investments of their assets. Vendors should have a strong strategic objective and action plan that can accommodate ongoing and anticipated market disruption and continued innovation to improve the overall technology ownership experience. Users should evaluate vendors that have a customer-centric approach and engage with their customers to understand the critical needs and requirements to design a comprehensive roadmap. The roadmap may include upgrading existing technology, implementing modern AI/ML-driven technologies, and product launches. Users should consider the vendor's focus on potential investments in mergers and acquisitions and partnerships, as well as R&D of new platform's

features and functionalities. Users should also evaluate the vendor's ability to leverage capabilities of AI/ML, analytics, transformation, and automation across their business and applications. It is also critical for users to evaluate vendors with the necessary expertise to execute the outlined roadmap. In addition, users need to assess the vendor's ability to set benchmarks and deadlines for their strategy and roadmap.

Ease of configuration and customization: Leading vendors may provide packaged solutions for several industry sectors for various horizontal and vertical-specific use cases. The vendors also provide configuration and process design tools, workflow capabilities, content templates, and other functionalities to customize solutions for their industry-specific and organization-specific use cases. Additionally, vendors may offer professional services to configure solutions to meet users' specific needs and also provide best practices and guidance for various configurations. End users should evaluate S2P for ease of configuration and customization without direct involvement by vendors.

Robust AI-Powered negotiation intelligence: S2P vendors should offer AI-powered negotiation intelligence support to simplify and streamline the processes of contract negotiation and contract termination by using automated workflows and past and anticipated data. The solution should leverage machine learning capabilities to seamlessly detect and identify patterns from contract data to improve future contracting processes. The suite is equipped with AI-driven optical character recognition (OCR) to automatically scan contract documents and extract various attributes to review and negotiate contracts. The organization will gain insights from past contracts and intelligence from similar other contracts to set a realistic benchmark for contract pricing, discount, terms, and conditions. The solutions should deliver ML-driven insights about the evolving behavior of contract patterns that will enable users to enhance the contract template, structure, language (terms and conditions), and clause alternatives. While various vendors may offer a basic analytics tool to deliver these insights, ML-powered negotiation intelligence is considered a key differentiator in the space. From the perspective of the AI-ML application, the negotiation stage is a crucial area of improvement for vendors. The AI-powered S2P suite should drive agility, efficiency, and speed across the contract negotiation process to reduce the overall time consumed from contract initiation to termination. It should help organizations mitigate the risk during the negotiation process and provide value to sales, legal, and procurement teams.

Sophisticated contract analytics, workflow automation, and visibility:

Organizations should seek S2P suites that can offer sophisticated contract analytics, workflow automation, and visibility to streamline and optimize the contracting process and cycle time. The platform should offer an integrated, intuitive, and visually rich dashboard. This dashboard helps all stakeholders gain a real-time view of KPIs and make intelligent business decisions based on perspective and predictive analytics. This, in turn, assists organizations in performing root cause analysis on all charts, graphs, and reports to identify bottlenecks. Users should evaluate an S2P suite that offers automated contract creation and self-service to streamline the contract authoring, approval, and negotiation process. The platform should offer automated metadata extraction and bulk contract import/export from databases. It should also offer automated bulk e-signatures from multiple contract addenda. An S2P suite should provide enterprise-wide contract visibility, serving as a single source of truth for each contract, supplier relationship, and performance datum. It should provide a single version of the document for effective audit control, negotiation, and approvals through a single unified platform. The S2P suite should offer a centralized contract repository that enables users to access their contract and clause extraction. It should also offer virtual assistance, including text and voice-based search, to help users interactively process requests and fetch desired documents from the repository.

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™ provides a visual representation of market participants and provides strategic insights on 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 Technology 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 SPARK Matrix.

Technology Excellence	Weightage	Customer Impact	Weightage
Sophistication of Technology	20%	Product Strategy & Performance	20%
Competitive Differentiation Strategy	20%	Market Presence	20%
Application Diversity	15%	Proven Record	15%
Scalability	15%	Ease of Deployment & Use	15%
Integration & Interoperability	15%	Customer Service Excellence	15%
Vision & Roadmap	15%	Unique Value Proposition	15%

Evaluation Criteria: Technology Excellence

- **The sophistication of Technology:** The ability to provide comprehensive functional capabilities and product features, technology innovations, product/platform architecture, and such others.
- **Competitive Differentiation Strategy:** The ability to differentiate from competitors through functional capabilities and/or innovations and/or GTM strategy, customer value proposition, and such others.

- **Application Diversity:** The ability to demonstrate product deployment for a range of industry verticals and/or multiple use cases.
- **Scalability:** The ability to demonstrate that the solution supports enterprise-grade scalability along with customer case examples.
- **Integration & Interoperability:** The ability to offer product and technology platform that supports integration with multiple best-of-breed technologies, provides prebuilt out-of-the-box integrations, and open API support and services.
- **Vision & Roadmap:** Evaluation of the vendor's product strategy and roadmap with the analysis of key planned enhancements to offer superior products/technology and improve the customer ownership experience.

Evaluation Criteria: Customer Impact

- **Product Strategy & Performance:** Evaluation of multiple aspects of product strategy and performance in terms of product availability, price to performance ratio, excellence in GTM strategy, and other product-specific parameters.
- **Market Presence:** The ability to demonstrate revenue, client base, and market growth along with a presence in various geographical regions and industry verticals.
- **Proven Record:** Evaluation of the existing client base from SMB, mid-market and large enterprise segment, growth rate, and analysis of the customer case studies.
- **Ease of Deployment & Use:** The ability to provide superior deployment experience to clients supporting flexible deployment or demonstrate superior purchase, implementation and usage experience. Additionally, vendors' products are analyzed to offer user-friendly UI and ownership experience.
- **Customer Service Excellence:** The ability to demonstrate vendors capability to provide a range of professional services from consulting,

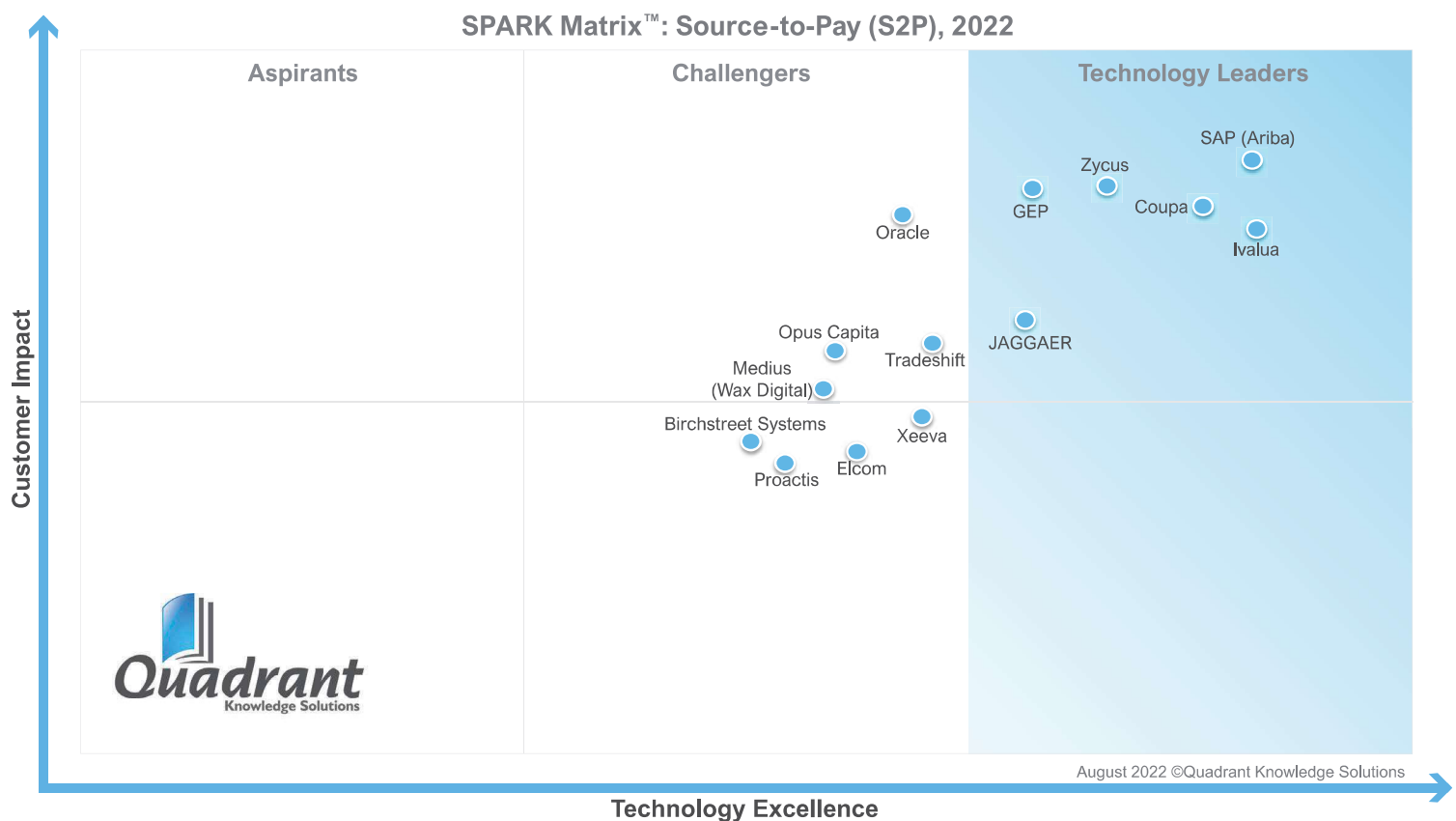
training, and support. Additionally, the company's service partner strategy or system integration capability across geographical regions is also considered.

- **Unique Value Proposition:** The ability to demonstrate unique differentiators driven by ongoing industry trends, industry convergence, technology innovation, and such others.

SPARK Matrix™: Source-to-Pay (S2P) suite

Strategic Performance Assessment and Ranking

Figure: 2022 SPARK Matrix™
(Strategic Performance Assessment and Ranking)
Source-to-pay Market

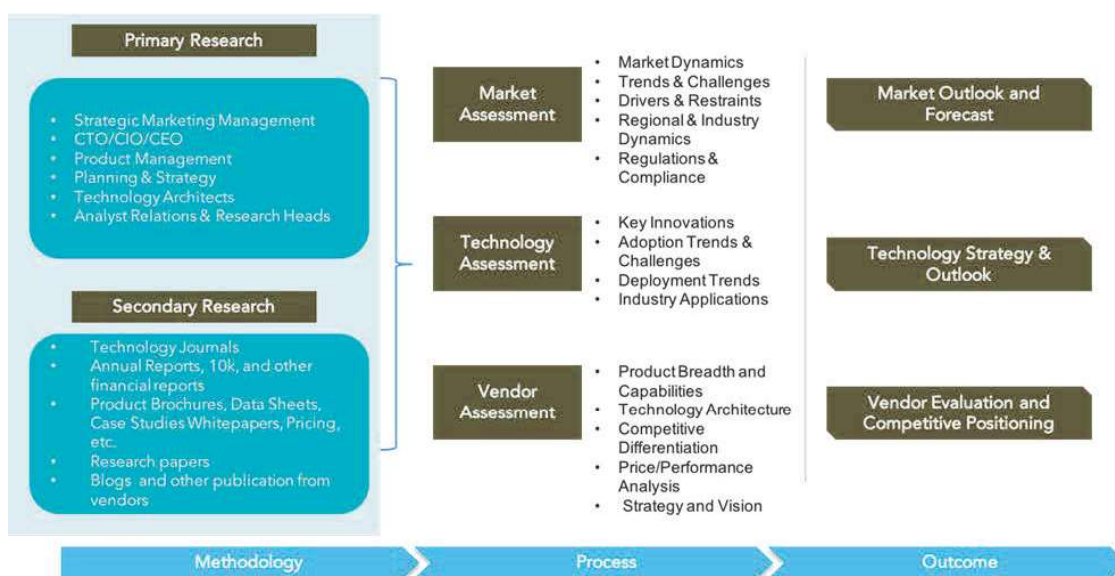


Vendor Profiles

Following is the profile of Ivalua for the S2P market with a global impact. The following vendor profile is written based on the information provided by the vendor's executives as part of the research process. 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 technology capabilities. Users are advised to consult Quadrant Knowledge Solutions before making any purchase decisions, regarding S2P technology and vendor selection based on research findings included in this research service.

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 the 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 analyst 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 on 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, datasheet, 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 analyses 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: Quadrant analyst team conducts a detailed telephonic interview of all major industry participants to get their perspectives of the current and future market dynamics. Our analyst also gets their 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 with 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 to a computer database. These databases are 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 preliminary market forecasts. This preliminary market forecast is tested against several market scenarios, economic scenario, industry trends, and economic dynamics. Finally, the analyst team arrives at the 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 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 on 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 finalization of market analysis and forecasts, our analyst prepares necessary graphs, charts, and table 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.

Client Support

For information on hard-copy or electronic reprints, please contact Client Support at rmehar@quadrant-solutions.com | www.quadrant-solutions.com