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CONTROL TOWER TECHNOLOGY VALUE MATRIX 2022

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THE BOTTOM LINE

Supply shortages, labor shortages, transportation delays, and price fluctuations continue to disrupt supply chains across the globe. Mid-market and enterprise organizations turn to control tower solutions to predict, detect, and mitigate exceptions. With threats to a business's operations coming from upstream, downstream, and within its own four walls, organizations require control towers to provide visibility and fixes across the entire supply chain. As such, software vendors are consolidating planning, execution, order, inventory, logistics, and trading partner management functionality within a single platform.

Control Tower

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MARKET OVERVIEW

Nucleus defines Control Tower as software that grants an organization supply chain visibility and informs execution and planning teams about events within the four walls of an organization's operations, its trading partners, and beyond. With such a broad market definition, where Supply chain Planning (SCP), Transportation Management System (TMS),

Warehouse Management System (WMS), Inventory Management, Order Management, and ERP vendors are touting Control Tower functionality, prospective customers traditionally sourced their Control Tower solutions with a best-of-breed approach. However, with siloed Control Towers, planners and transportation analysts often find themselves bogged down with swivel chair operations that necessitate emails and last-minute meetings. This methodology proves too slow to adjust to large volumes of supply chain exceptions where planners lack confidence in their plans' efficacy from a logistics perspective, and transportation users do not have visibility of their adjustments' impact on inventory and capacity.

Today's fast-paced and uncertain environment demands organizations quickly align upstream and downstream activities from a single user interface or unified platform. As such, Nucleus has observed increased adoption of supply chain management (SCM) solutions as organizations seek to plan their procurement schedules across greater time horizons, manage inventory and supplies with greater granularity, and notify relevant parties to disruptions at any tier. Within the Control Tower realm, there is increased demand for end-to-end platforms that provide visibility and control to procurement, supplier relations, inventory allocation, production, and transportation processes. Therefore, vendors have geared development and acquisition strategies to develop comprehensive SCM platforms that offer SCP, TMS, WMS, and order management functionality.

Control Tower vendors further differentiate their offerings with AI/ML capabilities for risk detection, prescriptive automation, and improved forecast accuracy. For enterprises that manage thousands of daily transactions, AI decision-making has proven necessary to handle the volume of exceptions whose fixes fall within acceptable parameters, allowing planners and logistics to manage high-priority items. Vendors also strive to incorporate IoT data streams to inform inventory, production and transportation capacity, and orders in transit. IoT enablement also extends to trading partners, where users can get real-time notifications of suppliers' pick, pack, and ship operations and transportation information from their distributors and carriers. Software vendors combining AI/ML and IoT technology within their Control Towers are taking the necessary steps to deliver supply chain autonomy to their clients.

In this Value Matrix, Nucleus provides a snapshot of the market based on how vendors are delivering value to customers through the usability and functionality of their software (Nucleus Research S142 – Understanding the Value Matrix, September 2018). The Value Matrix also captures the direction vendors are headed relative to the rest of the market with respect to the investments they are making today that promise to deliver value in the future. This is helpful for both customers and prospects to understand what a vendor is bringing to market today and what to expect moving forward.

LEADERS

BLUE YONDER

Blue Yonder is a leader in this year's Control Tower Technology Value Matrix. Servicing global enterprises, Blue Yonder supports organizations within the Consumer Goods, Manufacturing, Third-Party Logistics, Retail Hardlines, Grocery, High Tech, Consumer Electronics, Automotive/Industrial, Pharmaceutical, Consumer Healthcare, Hospitality, Food and Beverage and Wholesale industries. Blue Yonder's Luminate Control Tower solution enables customers with a complete supply chain view, which provides prescriptive insights and automated resolutions across a business's supply chain, incorporating internal, partner, and third-party data streams. Blue Yonder helps C-level executives manage corporate objectives, including revenue growth, margin improvements, inventory benefits, transportation and labor benefits, and global sustainability initiatives. Blue Yonder Luminate Control Tower enables logical extensions to both planning and execution, while spanning and orchestrating all parties across extended business processes.

From a control tower perspective, customers often choose Blue Yonder for its collaboration features that allow users to share views and comments on specific transactions with internal and external stakeholders, improving collaboration, decision making, and exception management. With its acquisition by Panasonic last year, Blue Yonder provides end to end supply chain management solutions by combining Panasonic's sensing and edge technologies with its AI/ML to deliver new capabilities.

Recent product announcements in the past 12 months include:

- Personalized Dashboards that can be configured to manage business processes that span over time and across the product maturity lifecycle, including a new Risk Conflict Dashboard.
- The 'BOM Where-Used' tab on the inventory detail page; this tab allows the user to view the relationship between raw materials/components and finished goods. It provides exception monitoring that includes Approximate Demand Impacted and Monetary Impact due to shortage of components within the Evaluation Window.
- Enhanced BOM functionality, enabling where-used capabilities, enhanced usability capability for the end user and What-if scenario analysis.
- New port congestion visibility features, including a new tab on the Shipment Map to see Port congestion based on Marine Traffic data. Shipment Progress graph shows demurrage charge details at each port, and reporting for the number of inbound shipments at the port, time spent by vessels at port, and anchorage area.

- Interactive live-map showing shipment progress, enabling harmonization across all related deliveries, Items, Orders of the shipments within the Detail Page.
- An allocation policy that allows planners to determine how to effectively allocate available component supply to fulfill Production Orders on the Stockout dates.
- Aggregated Forecast-Commits enable users to drill down to site-level details for forecast commits to view a time-phased allocation for a single SKU across multiple locations.
- The ability to switch between Hybrid, Weekly, or Monthly views, enabling real-time data aggregation.
- Predictive and prescriptive analytics paired with better data provides users with greater visibility, data-driven decisions, quicker response times, and better insight into supply chain performance.
- Self-service capabilities to aid with simplified implementation and configuration of functionality; allowing customer users and partners to efficiently implement on their own.
- Several administrator capabilities include the ability to control data permissions, the ability to create & update the policy groups and assign to roles, and the administration tab that allows the admin to define “Policy Groups” for Shipments, Orders, Deliveries and All Nodes, directly from the UI.
- Aggregated Forecast-Commits enable users to drill down to site-level details for forecast commits to view a time-phased allocation for a single SKU across multiple locations.
- Integration capabilities include scalable APIs, which are available for customers to consume via their API management framework.

E2OPEN

E2open is a leader in this year’s Control Tower Technology Value Matrix. The supply chain management specialist primarily serves large global enterprises headquartered within North America and Europe. Supported industries include Consumer Goods (Apparel, Food and Beverage, and Retail), Logistics and Transportation (Ocean Carriers and Over-the-Road carriers), Manufacturing and Industrial (Aerospace and Defense, Automotive, Oil and Gas, and Pharmaceutical), and Technology and Electronics industries.

E2open’s comprehensive supply chain management platform covers Control Tower functionality across distribution, planning, logistics, global trade, and supply. Customers leverage e2open applications, along with embedded AI/ML and analytics, on a single

platform to generate data-backed insights, enhance trading partner visibility, and drive operational efficiencies. The e2open platform is underpinned by its Harmony Unified User Experience and e2open data network, where over four hundred thousand logistics providers, manufacturers and suppliers, and global trade and channel ecosystem partners are linked via one-to-many connections. This allows every member on the network to connect and automatically share pertinent information with one another without building additional connectors, facilitating collaboration and new partnerships. With the breadth of customer and partner data informing e2open's ML algorithms, the Control Tower automates decision-making for customers to maintain an agile supply chain operation that is resistant to supply shortages and transportation delays.

Over the past year, e2open has made the following announcements and product updates:

- Last year, e2open announced the acquisition of BluJay Solutions, a cloud-based, logistics execution platform, to further expand the breadth and depth of its logistics capabilities.
- In March 2022, e2open announced the acquisition of Logistyx Technologies, a global parcel and e-commerce shipping and fulfillment technology. This expands e2open's parcel network and enables coverage of all shipping methods including land, air, and ocean.
- The extended partnership with Shippeo in August 2022 delivers AI-enabled visibility with full-featured geo-location and predictive ETA features for the door-to-door tour, as well as intelligence to proactively alert users to changes in schedule (delays or early arrivals). These functionalities are natively integrated into e2open's connected network platform.
- E2open's new supply sensing capability determines the probability of material shortages and service shortfalls over time for your entire supply chain – including internal operations and goods or materials stored at upstream contract manufacturers or co-packers, downstream distributors or resellers or logistic service providers. Clients also receive recommended actions for mitigating these risks in terms of inventory investments in each specific node.
- E2open announced the introduction of a new Environmental, Social and Governance (ESG) capability to actively reduce greenhouse gas emissions when booking transportation for any mode in any region. The capability enables shippers to compare carbon emissions for different carriers and routes, make ESG-informed decisions at the point of booking, and balance cost, lead times, and emissions when planning or executing freight moves.
- E2open's new Ocean Shipping Index reports the time from booking a container to gating out at the destination port to help shippers be better informed.

- E2opens Global Knowledge® database added three new jurisdictions (Somalia, Melilla, and Canary Islands) to the global tariff coverage - now at 225 countries, territories, and jurisdictions.
- New probabilistic AI and analytics functionality were introduced for e2open's supply sensing application.
- E2open's Freight Market Index now analyzes \$18B in freight under management to understand the average rates and variances for the industry, making this visible for actionable insights at the time of need for planning and executing transportation so that clients are better aware of the tradeoffs between cost and service.

INFOR

Infor is a leader in this year's Control Tower Technology Value Matrix. The vendor serves the Consumer Goods, Aerospace and Defense, Automotive, Technology, Manufacturing, Energy and Natural Resources, Hospitality, Healthcare, Financial, Construction, and Distribution industries on a global scale. The Infor Nexus Control Center is a multi-enterprise business network and supply chain management platform. Nexus offers real-time visualization of the end-to-end supply chain by onboarding trading partners to the nth tier via one-to-many connections. Offering predictive insights, intelligent decision support, and collaborative execution, Infor Nexus enhances and automates Control Tower decision-making. Control Center accelerates transportation processes, adjusts procurement and distribution plans, and surfaces and responds to disruptions in real-time. Infor differentiates itself due to its sense-and-respond functionality that combines the Infor Nexus network with Coleman AI to identify bottlenecks, predict exceptions, and provide fixes to reduce costs and increase efficiency.

Recent product announcements in the last year include:

- The vendor introduced Nexus Focus Apps, in-context applications that provide end-to-end visibility, navigation, and decision support tools for users as they bring relevant supply chain information and execution capabilities directly in context. Nexus Focus Apps are available across a number of business processes so that users can see related information directly in context, providing more informed decision-making and action-taking. These in-context apps are mini-apps of individual applications, including orders, inventory, shipments, issues, master data, etc., displaying information that can be accessed directly from other network applications.
- Control Center now offers a dynamic and interactive matrix canvas that users can quickly configure and adjust to access key data.
- Infor Nexus now leverages process mining to identify patterns and variants in supply chain flows and such as order and shipment lifecycles to provide greater intelligence

on the variability of processes and to enable idle process detection. Users can set monitors to trigger alerts when a process does not occur as expected.

- Nexus users are now able to provide their customers with a link to track their shipments directly. The customers can see the real-time live status of their shipments, including details such as location, distance remaining, and the Predicted ETA.
- Infor Nexus has enhanced its ML-based Predictive ETA algorithms by now providing predicted insights into waypoints of a transportation journey. Users now receive ML-based ETAs to the final port of discharge and final destination for end-to-end moves simultaneously.
- Infor Nexus released several new analytics and network benchmarking capabilities. For instance, new Detention and Demurrage Community Performance Dashboards provide users with insights into their detention and demurrage charges, how they are trending and how they compare to the broader Nexus community.

KINAXIS

Kinaxis is a leader in this year's Control Tower Technology Value Matrix. Kinaxis works directly with companies of all sizes to solve complex supply chain processes. Kinaxis supports Aerospace and Defense, Automotive, Consumer Products, Technology, Industrial, Life Science, and Retail industries. With Kinaxis, customers can onboard trading partners to streamline collaboration, provide alerts to exceptions in real-time, and automate prescriptions via AI/ML functionality, allowing planners to focus on high-priority items. Kinaxis RapidResponse, the company's concurrent planning platform, has built-in control tower technology that helps mitigate risk, identify opportunities, and cope with escalating volatility in the global markets. While its Command & Control Center application adds on more advanced control tower and automation functionality, allowing companies to visualize supply chain operations on a global scale, granting planners the visibility to manage exceptions and inform both upstream and downstream impacts along with risk and performance metrics. Customers often add on Kinaxis' Self-Healing Supply Chain to leverage AI/ML to automatically identify bottlenecks, rectify issues, and correct inaccurate planning inputs.

Notable announcements over the past year include:

- Kinaxis acquired MPO, a Transportation Management System specialist, in August 2022. The acquisition connects supply chain planning and real-time execution to bring concurrency across the entire end-to-end supply chain. The combination of Kinaxis planning and MPO's Multi-Party Orchestration will deliver a real-time picture of every order across the lifecycle.

- Enhanced Command & Control Center capabilities include streamlining the user experience and extending functionality with added visualization options and pre-built automation templates. Kinaxis increased the number of out-of-the-box external exception signals via its expanding partner ecosystem. The Command & Control Center leverages dashboards, alerts, and AI/ML to highlight disruptions and automates planning decisions.
- A giant leap for advanced analytics for supply chain planning is Planning.AI offered on Kinaxis' RapidResponse platform, hamstrung by machine learning and a fusion of heuristics and optimization to automatically detect and present an analytical approach to help solve the most complex supply chain problems.
- Kinaxis' Supply.AI helps create a more optimal plan faster at any level of the supply chain by balancing tradeoffs and incorporating costs, revenue, and capacity to create flexible business objectives.
- With Demand.AI, planners can accurately forecast demand across all horizons using machine learning algorithms by leveraging analytics, insights, and workflows to prioritize high-value add work. Improve the starting point for demand and supply plans with more accurate forecasts.
- Kinaxis Planning One provides a low-risk, low-cost starting package for companies transitioning from excel to advanced planning. Planning One combines the capabilities of the control tower, including KPI-driven dashboards and root causes analysis, with continuous synchronization of concurrent planning across demand, supply, inventory, and operational planning.

Kinaxis also release several RapidResponse Applications:

- Kinaxis Production Scheduling by PlanetTogether combines production scheduling with RapidResponse's concurrent planning to improve visibility with planners and schedulers to maximize production.
- Kinaxis Recycling End-to-End Planning by OCYO improves a supply chain's sustainability and compliance by planning and monitoring recycling flows of incoming and outgoing productions, both internally and externally. Leveraging reverse end-to-end logistics processes to measure the number of recyclable materials used to meet sustainability goals.
- Kinaxis Transportation Load Optimizer by 4flow gives end-users an accurate view of rail, air, ocean, and truckload transportation costs, improving profit-driven decision-making by planners.
- Kinaxis Probabilistic MEIO by Wahupa calculates inventory targets and safety stock settings through market-driven service planning, assisting companies in reaching

their strategic, financial, and service goals while removing waste from the supply chain.

MPO

MPO is a leader in this year's Control Tower Technology Value Matrix. MPO caters to organizations of all sizes in the Logistics, Distribution and Wholesale, Manufacturing, Consumer Goods, Pharmaceutical, Oil and Gas, and Retail industries. As an order and transportation management specialist, MPO's Control Tower solution enables multi-party orchestration for B2B, B2C, and D2C business models through a single user interface. By integrating with ERP, WMS, carrier systems, and trading partners, MPO consolidates supply chain data to provide a complete view of all orders in transit, allowing the organization to respond to delays and exceptions with knowledge of the impacts of their decisions. Customers choose MPO to streamline the order lifecycle and transportation processes for the breadth of its logistics capabilities, including support for all sales channels, all transport modes, reverse logistics, spare parts management, and inventory management.

Notable product updates from the past year include:

- Integrated AI, ML, and Deep Learning models now feature automated learning and closed feedback loops with software devices and decision-making capabilities.
- Dynamic graphical visualization of the micro supply chain per order with real-time supply chain visibility of any order in the multi-party, multi-tier, and multi-leg flows.
- MPO's Integral Sustainability management can now optimize and execute all order flows activity.
- Configurable mobile apps on any mobile platform for IoT devices, smartphones, board computers, and handheld terminals

ONE NETWORK

One Network Enterprises is a leader in this year's Control Tower Technology Value Matrix. One Network serves large enterprises in the following industries: Aerospace and Defense, Automotive, Manufacturing, Consumer Goods, Healthcare & Pharmaceuticals, Technology, Food and Beverage, Hospitality, and Retail. One Network's supply chain management platform, NEO, offers Supply Chain Planning, IBP/S&OP, WMS, TMS, OMS, and Control Tower functionality. The platform is underpinned by its many-to-many network of thousands of customers, suppliers, distributors, and carriers.

One Network's Intelligent Control Tower predicts and monitors for exceptions, automates prescriptive decisions, and informs execution functions from a single instance. This allows companies to plan as well as optimize upstream and downstream execution processes

across the entire supply chain, leveraging a common platform and single data model. In addition, One Network enables collaborative information sharing, autonomous decision-making and control, and AI/ML-backed decision support. Using NEO intelligent agents, customers can automate supply chain functions and leverage insights from external sources as part of their decision-making. The Developer Network enables organizations to quickly adapt and create multi-party apps on the NEO Platform. One Network's "Tunable System of Control" coordinates business processes across multiple parties and systems with multi-party network capabilities.

Over the past year, One Network has made the following product announcements:

- Improved network collaboration with structured and unstructured collaboration data attached to transactions.
- With constrained supply planning, stakeholders can optimize product mix and volume based on customer service, revenue, and margin targets.
- Enhanced predictive analytics based on solving root causes combined with targeted business and process KPIs, incorporating local and global objectives.
- Improved Smart Prescriptions to allow networks to merge and increase decision-making capabilities.
- Continuous and Incremental Planning provide real-time demand-supply matching across the network.
- With "Bring Your Own Intelligence" (BYOI), companies can leverage insights from elsewhere as part of their decision-making on the Digital Supply Chain Network.
- With planning and optimized execution on a unified platform and equipped with forecasting tools, real-time insights, decision support, and decision execution, many supply chain processes can now run autonomously. Users can review and execute NEO's smart prescriptions or collaborate with NEO and trading partners on resolutions.
- Advancements in NEO's AI/ML algorithms now provide transparency into how it arrived at its recommended prescriptions.

EXPERTS

O9 SOLUTIONS

o9 Solutions is an expert in this year's Control Tower Technology Value Matrix. The supply chain planning specialist serves large organizations around the globe, primarily in the Automotive, Aerospace and Defense, Consumer Goods, Energy, Food and Beverage, High-Tech, Manufacturing, Medicine, Life Sciences, Pharmaceutical, Retail, Transportation, and Telecom industries. With o9 Solutions' Control Tower capabilities, customers can monitor supply and demand signals in real-time to detect disruptions early, predict potential exceptions, and automate decision-making with AI/ML to alleviate or altogether avoid disruptions and increase efficiency within the supply chain process. o9's value proposition lies in its ability to support and inform integrated business planning (IBP) initiatives from a supply chain, production, and financial perspective. Combining IoT, control tower, and IBP functionality, o9 grants customers the ability to automatically adjust short and long-term plans and inform execution.

Notable company and product updates from the past year include:

- Expanded global office network to Australia and New Zealand to support a growing customer base.
- Users can generate notifications based on AI/ML and IoT augmented transaction inputs and updates, supply transaction alerts, demand alerts, constraint alerts, and inventory alerts to support a complete end-to-end supply chain network.
- With o9 Event Management, end-users can assign alerts to external events and provide visibility of events. Be able to assign operational reason codes, both manual and auto-generated, to event owners.
- Supply Chain analytics improved on network parameters and stakeholder behavioral patterns through AI/ML models that leverage historical transactions and outside-in inputs.
- Implemented external IoT integration provides cutting-edge, near real-time data ingestion hamstrung by Axure Event Hub and data transformation workflows.
- o9 Market Intelligence Hib provides data feeds related to events, news, weather, demographics, and indices that frame the context of decision-making and help Control Towers ML algorithms fine-tune predictions.
- Scenario planning helps generates manual and auto resolution scenarios for users to leverage for alert resolution through master and transaction data updates.

- o9 Solutions is now available on Google Cloud Marketplace. Additionally, o9 Solutions achieved premier status on Google Cloud Partner Advantage Program.
- o9 Solutions joined the AWS Partner Network (APN).
- o9 Solutions announced a partnership with digital solutions, consulting, and software company Valantic, to offer the o9 Digital Brain to its customers in the DACH region trying to optimize supply chain planning.
- A partnership with logistics visibility IoT platforms FourKites, Project44, and Shippeo was announced earlier this year, providing customers with access to multi-modal track and trace capabilities, and assisting customers in sensing disruptions in inbound and outbound material flow.
- To improve external data streams, o9 Solutions announced a partnership with weather-related data such as NOAA and CustomWeather, price-related data from US Census Bureau and the IMF, and syndicated data sources such as Nielsen to improve Control Tower capabilities.

SAP

SAP is an expert in this year's Control Tower Technology Value Matrix. SAP caters to large global organizations, serving the energy (chemical, mining, oil, and gas), financial, consumer goods, aerospace and defense, automotive, technology, manufacturing, healthcare, and government industries. SAP provides control tower functionality through its SAP IBP solution, which facilitates Sales and Operational Planning (S&OP), forecasting, demand and supply planning, and inventory optimization; its Ariba Network enables users to collaborate with trading partners by sharing forecast, order, inventory, and quality information in a real-time and secure manner; and Leonardo, SAP's microservices system, supports planners and transportations teams by enabling big data, IoT, blockchain, AI/ML functionality. Typical benefits cited by SAP customers include control and representation of their business network, real-time alerts and dashboards, and descriptive insights to improve decision-making. Organizations can access SAP's control tower solutions on the S/4 HANA cloud platform.

SAP made the following notable announcements over the past year:

- On July 21st, 2022, SAP acquired search-driven analytics company Askdata to help customers make better-informed decisions by leveraging AI-driven language searches. End-users can maximize live data to help interact and collaborate with key stakeholders within an organization.

- SAP and Accenture partner to help large enterprises move to the cloud and drive continuous innovation. The partnership enables companies with complex IT landscapes to accelerate and improve their operations.
- In early March, SAP finished its acquisition of working capital management solutions company Taulia. Taulia will become a part of the SAP solutions rolodex, as the acquisition aims to help companies gain financial flexibility and stability to make supply chains more resilient.
- SAP and IBM collaborate to provide technology and consulting expertise to assist customers in transitioning to a hybrid cloud approach to move mission-critical workloads from SAP solutions to the cloud for regulated and non-regulated industries.

FACILITATORS

ALLOY

Alloy is a facilitator in this year's Control Tower Technology Value Matrix, recognized for its Connected Planning & Execution Platform. Alloy targets global retail organizations corporations primarily within consumer electronics, food and beverage, automotive, beauty and wellness, sporting goods, and clothing sectors. Alloy delivers control tower functionality to enable visibility and real-time alerts to coordinate decision-making across nodes of the supply chain. By connecting internal ERP data with inventory data, distributor information, and more, Alloy allows disparate teams to collaborate on the same data. The Alloy Intelligence product enables early warning to inventory risks and shifting consumer demand within the supply chain. The Alloy Planning product provides Point-of-Sale driven forecasting capabilities for customer demand and inventory, allowing users to track performance against projections. Customers achieve value with Alloy by leveraging real-time adjustments, real-time inventory management, and visual dashboards to support complex supply chain processes.

COUPA

Coupa is a facilitator in this year's Control Tower Technology Value Matrix. Coupa offers its services to organizations of all sizes across the Oil and Gas, Technology, Retail, Public Sector, Manufacturing, Media, Financial, Life Sciences, Insurance, Healthcare, Food and Beverage, and Consumer Products sectors. With the Coupa Control Tower, organizations can consistently develop and adapt supply chain structures, policies, and flows through the

analysis of digital models underpinned by its proprietary algorithmic engines. An organization equipped with Coupa can answer tough supply chain questions with confidence through scenario modeling. With Coupa, users can also leverage AI-enhanced decision-making to respond to supply chain disruptions, identify potential vulnerabilities and optimize supply chain performance.

Recent product announcements in the past 12 months include:

- In July 2022, Coupa announced its physical expansion to three Latin American cities: Mexico City, São Paulo, and Bogotá. This marks the first Coupa offices in the region, delivering expanded support for Latin American companies.
- In May 2022, the vendor announced new capabilities for regulatory compliance. These include the German Supply Chain Due Diligence Act, Lieferkettensorgfaltspflichtengesetz (LkSG), as well as other ESG regulatory targets. For German customers, this enables users to request and manage ESG compliance information through a digital assessment and create reports to submit to German regulators. This new capability extends real-time visibility into supplier health, risk, and sustainability information when conducting sourcing events.
- On March 15th, 2022, Coupa announced its achievement of FedRAMP authorization. For users engaging with US federal government entities, this authorization will enable compliance with government contract requirements.

ELEMENTUM

Elementum is a facilitator in this year's Control Tower Technology Value Matrix. The vendor targets global enterprises of various scales and serves the Pharmaceutical, Consumer Goods, Chemical, Food and Beverage, and Technology industries. With the Elementum Orchestration platform, customers can combine their internal and partner data streams to enable real-time supply chain visibility and coordinated planning processes with suppliers, logistics, and manufacturers. Additionally, Elementum matches data across each instance in the network providing users with a single version of the truth. This integrated operational ecosystem also helps users predict potential supply chain disruptions with access to numerous external data streams, including commodity prices, order status, product availability, geopolitical events, and weather. With Elementum, the core value proposition lies in its cloud-native architecture and integrated approach, which gives all stakeholders access to real-time data across their enterprise and partner networks. For companies prioritizing low cost of ownership and quick time-to-value, Elementum supports integration-free deployments, instant provisioning, and no-code administration.

Notable product announcements from the past year include:

- In June 2022, Elementum announced an extended partnership with Snowflake. As a part of the Powered by Snowflake program, Elementum will be able to accelerate the development of its supply chain applications by leveraging Snowflake's Data Cloud. Customers can expect benefits, including improved data access, faster updates, and performant supply chain data analysis.

CORE PROVIDERS

ELEMICA

Elemica is a core provider in this year's Control Tower Technology Value Matrix. Elemica serves organizations of all sizes across the globe. The vendor serves the chemicals, oil and gas, pharmaceutical, and automotive industries with its SCP solutions. Elemica delivers control tower functionality through its Buy, Sell, Move, Assure, and See solutions. With the Elemica Control Tower, customers can leverage supply chain connectivity with partners, and traditionally siloed departments can digitize operations, automate processes, eliminate data siloes, and provide real-time updates. Customers often choose Elemica due to its ability to connect with carriers to provide automated transportation management and transparent dock scheduling. Elemica leverages supplier connections to provide customers with supplier intelligence, streamlined procure-to-pay software, and supplier QA/QC documentation that accommodates the Supply Chain planning and procurement process.

Recent announcements include:

- In April 2022, the company announced the naming of Sam Addeo as chief technology officer. Addeo brings experience in the same role at BluJay Solutions, a provider of transportation and customs compliance software, to Elemica.
- In March 2022, Elemica announced its achievement of SAP Certified Integration with SAP HANA. Customers of SAP Business One will benefit from native integration with Elemica, enabling total connectivity across business processes, suppliers, and carriers.
- In September 2021, the vendor announced the integration of OmPrompt technologies, enabling a Sales Order Management solution to automate all transactions, documentation, and communications for any enterprise and customer type. Customers will benefit from order-to-cash document digitization, including sales orders, fulfillment requests, shipping, invoicing, and accounts receivable communications.

SHIPITSMARTER

ShipitSmarter is a core provider in this year's Control Tower Technology Value Matrix. The vendor primarily targets small to mid-sized business ventures and serves the Medical, Technology, and pharmaceutical industries. ShipItSmarter's technology acts as a Fulfillment Control Tower delivering solutions for carrier and freight management, financial management, fee and rate management, and shipment lifecycle management. ShipitSmarter boasts partnerships with all major shipping carriers in Europe and maintains a constant flow of information exchange to keep track of supply transportation changes. All relevant shipping details are synchronized in real-time to the control tower platform via an application programming interface (API), electronic data interchange (EDI), and email integrations. The platform automatically sends out alerts to a user and notifies them if there are any deviations in shipping costs, service levels, weight size, and delivery times. Users can also visualize their shipping supply chain with intuitive dashboards to assess current health and facilitate short- and long-term planning.

VIEWLOCITY

Viewlocity is a core provider in this year's Control Tower Technology Value Matrix. Viewlocity offers end-to-end control tower capabilities that give the end-user real-time supply chain insights and offers prospective solutions to eliminate bottlenecks, increase collaboration between stakeholders, and improve flexibility for an efficient Supply Chain process. The vendor serves organizations of various scales across the aerospace and defense, automotive and industrial, consumer goods, technology, manufacturing, retail, and third-party logistics industries. Customers often choose Viewlocity because of their lean six sigma methodologies that increase productivity while reducing errors and waste in the supply chain process. Viewlocity also allows customers to connect inventory and asset management with collaborative planning, forecasting, and replenishment software to improve operational performance and customer satisfaction while reducing corporate expenses.