Supply chain planning technology is needed to facilitate responsive, agile planning that supports a company’s strategic goals. Supply chain technology leaders should use this research when evaluating and selecting software tools to enable their supply chain planning maturity progression.

Strategic Planning Assumption

Through 2023, demand for new functionality in supply chain management (SCM) business applications will be driven by the effects of changing business models triggered by digital transformation.

Market Definition/Description

Gartner defines a supply chain planning (SCP) solution as a platform that provides technology support which allows a company to manage, link, align, collaborate and share its planning data across an extended supply chain. It supports demand creation through to the detailed supply-side response and from strategic planning through tactical-level planning. An SCP solution is the planning decision repository for a defined end-to-end supply chain and is the environment in which end-to-end integrated supply chains are managed. It establishes a single version of the truth for the plan data and decisions, regardless of the underlying execution technology environment.

The core capabilities of the SCP solution are:

- **Demand planning** — Typical capabilities include demand forecasting and consensus demand planning.

- **Supply planning** — Typical capabilities include inventory planning, replenishment planning, order promising, production planning and production scheduling.

- Support for aligning planning decisions across the enterprise and across multiple planning time horizons.

The optional capabilities of an SCP solution include:
- Advanced analytics and artificial intelligence (AI)
- Digital supply chain twin
- Integrated business planning (IBP)
- Continuous planning
- Supply chain segmentation

Magic Quadrant

Figure 1. Magic Quadrant for Supply Chain Planning Solutions

Source: Gartner (February 2021)
Vendor Strengths and Cautions

Adexa

Adexa is a Visionary. Its focus is on its digital supply chain planning solution, which delivers end-to-end (E2E) planning. Its operations are mainly focused in North America, Western Europe and APAC, where it targets midsize to large enterprises in a range of verticals but especially in discrete manufacturing. Its investment focus is on accurate, detailed plans leveraging artificial intelligence (AI)/machine learning (ML) in both demand and supply planning, and support for digital planning.

Strengths

- **Market Understanding:** Adexa has a strong vision regarding the need to enable the planning layers of the Gartner configure, optimize, respond and execute (CORE) model. It scored high on its vision to converge planning and execution, and to drive higher levels of planning decision automation.

- **Product or Service:** The vendor scored above average here, which reflects the strength of its supply planning capabilities, as well as its architectural strengths, particularly in areas such as linking decisions across planning layers and decision automation through the use of ML.

- **Marketing Strategy:** Adexa received a high score for its vision for the use of a broad range of analytical techniques to support supply chain planning (SCP). Its visions for algorithmic SCP and digital SCP are above average compared to the other vendors in this Magic Quadrant.

Cautions

- **Sales Execution/Pricing:** Adexa’s median project budgets and implementation timelines are above average compared to other vendors cited in this research. This may be due to the extent to which Adexa models its client’s environment and the level of detail that goes into creating a more accurate model of the supply chain. Its pricing model considers multiple factors such as number of users, number of sites and model size, making it less simple than other vendors in this research.

- **Customer Enablement:** Adexa is often deployed to support a company’s supply planning activities and has a lower tendency to be used as a single global instance for end-to-end planning compared to other vendors in this Magic Quadrant.

- **Sales Strategy:** Adexa’s new customer acquisition rate over the last year is below average compared to the other vendors in this Magic Quadrant. It has not been adding new employees at the same average level as other vendors. Its strategy is to use partner resources to lower customer implementation cost and further increase availability of Adexa resources.

Anaplan

Anaplan is a Niche Player. The Anaplan platform originated in sales and financial planning and expanded into supply chain planning in 2014. Its operations are strongest in North America followed...
by Europe and Asia/Pacific, and it provides support to enterprises in all vertical industries covered in this Magic Quadrant. Anaplan introduced its planning AI and predictive insight capabilities via the acquisition of Mintigo in the second half of 2019, further deepening its capabilities within AI/ML.

**Strengths**

- **Sales Strategy:** Anaplan has invested significantly in growing the team that supports its SCP products over the past 18 months. It also scored high for its cloud growth rate increase.

- **Market Responsiveness/Record:** Anaplan received high scores for its ability to support planning capabilities across the different layers of planning — specifically the configure, optimize and respond layer — with strong links to sales planning and financial planning. Its total number of supply chain customers continues to grow faster than average.

- **Customer Experience:** Anaplan has a strong structure for customer engagement through customer councils, regional conferences, standardized on-demand and live training, and certification offerings for partners and customers, and its university program for students.

**Cautions**

- **Product or Service:** Anaplan scored below average for its support for advanced planning capabilities and supply chain model, largely based on its newness as an SCP vendor.

- **Market Understanding:** Anaplan’s vision for multienterprise planning is below average compared to other vendors, which contributes to a below-average score for its vision for supply chain convergence. Its vision for decision automation is below average compared to other vendors especially with regard to its strategy for automated prescription.

- **Marketing Strategy:** Anaplan’s vision of how it will support algorithmic SCP and digital planning is below average compared to other vendors. Its vision for supporting digital planning as envisioned by Gartner is not as comprehensive as others in this Magic Quadrant.

**Arkieva**

Arkieva is a Visionary. Its focus is on its new Orbit platform, which delivers a range of planning capabilities that encompass demand through scheduling. Its operations are mainly focused on North America, Western and Eastern Europe, and APAC, where it targets mainly midsize and large enterprises in process manufacturing and wholesale distribution. Its investment focus has been on moving from on-premises to full SaaS with its next-generation platform and adding digital capabilities.

**Strengths**

- **Marketing Strategy:** Arkieva’s vision for the breadth of planning capabilities and resources it can plan is strong. It received high scores for its vision for algorithmic SCP and digital SCP, which would interest companies looking for SCP solutions to help enable SCP transformations.
Product or Service: The vendor showed strength in 13 out of the 15 capabilities assessed. It scored particularly well in its demand planning functional strength, advanced planning capabilities and data integration capabilities.

Offering (Product) Strategy: Arkieva’s vision for the use of a broad range of analytical techniques, the evolution of its digital supply chain twin and the linking of decisions vertically through the planning layers is above average compared to the other vendors in this Magic Quadrant. Its vision for its use of granular data is also above average.

Cautions

Market Responsiveness/Record: Arkieva’s breadth of capabilities across the configure, optimize and respond planning layers is below average compared to other vendors in this Magic Quadrant.

Vertical Strategy: Although it has a strong focus on the process manufacturing verticals, its coverage of the verticals in the discrete manufacturing and distribution-intensive industries is below average, but is being addressed in its forward-looking market strategy.

Sales Strategy: Arkieva has above-average cloud and employee growth rates, but its acquisition of net new customers over the last 12 months is below average compared to the other vendors in this Magic Quadrant.

Blue Yonder

Blue Yonder is a Leader. Its new Luminate Planning platform is focused on providing E2E multienterprise planning. Its operations are geographically diversified, and it provides support to enterprises in all vertical industries covered in this Magic Quadrant. Its investments are focused on modernizing its legacy SCP applications and strengthening its machine learning capabilities.

Strengths

Innovation: Blue Yonder has a strong vision for the use of AI in SCP, for supporting speed and scalability, and for providing an open platform for analytics. It has built an ecosystem of application developers to help end users build custom models and analytics.

Market Responsiveness/Record: Blue Yonder is among the vendors with the highest number of companies using its SCP product set and scored above average for customer functional penetration. It also received high scores for its support for SCP decision making within the optimize and respond time horizons.

Product or Service: Blue Yonder demonstrated strength in its ability to support its end users’ efforts to execute an E2E SCP process. It scored especially high in its support for supply planning functional strength, advanced planning capabilities and scalability.
Cautions

- **Sales Execution/Pricing:** Blue Yonder has above-average pricing, and its pricing model scored low with regard to its simplicity. Its typical implementation timelines are above average as is its service-to-software ratio. This means end users have longer project timelines and higher costs for vendor implementation services.

- **Operations:** Blue Yonder releases new versions of its product less frequently than other vendors and received lower scores for its vendor implementation services.

- **Business Model:** Since SCP is one of many supply chain business process areas Blue Yonder supports, it scored below average for its management team’s priority on SCP. R&D spend is spread across applications in the Blue Yonder Supply Chain Platform — the foundation of all its E2E supply chain solutions — from which SCP applications benefit.

**Dassault Systèmes**

Dassault Systèmes is a Challenger. Its Quintiq product is mainly focused on integrated planning across resource types such as people, materials, machines and transportation. Its operations are mostly focused in North America and Western Europe, and its clients tend to be large enterprises in process and discrete manufacturing industries. Its investments are focused on further integrating Quintiq into its 3DEXPERIENCE platform to align product life cycle management (PLM) and execution activities with SCP, and on aligning supporting analytics from applications including EXLEAD and NtVibes into its planning applications.

**Strengths**

- **Offering (Product) Strategy:** Dassault Systèmes received above-average scores for its vision for range of analytics, decision data granularity, decision data latency and decision alignment. This comes mainly through the 3DEXPERIENCE platform.

- **Overall Viability:** Dassault Systèmes has long-term viability and scored above average with its vendor financials and its SCP solutions product line. It is seen as a stable product in the market.

- **Geographic Strategy:** Dassault Systèmes has a broad geographic footprint. It has deployed instances across all major regions with sufficient support for deployments through its own vendor service team and third-party service teams within each region.

**Cautions**

- **Sales Execution/Pricing:** Dassault Systèmes has above-average project budgets and above-average implementation timelines. This leads to customers having longer implementation projects with higher spend for implementation services.

- **Innovation:** Dassault Systèmes’ vision for speed and scalability is average, and its vision for AI is below average. While it has a vision for machine learning and big data, it has more opportunity to demonstrate how other types of AI can add value to SCP.
- **Operations:** Dassault Systèmes has below-average scores for frequency of upgrades and vendor domain experience due to its tendency to be used as a specialist vendor for supply planning.

**Demand Solutions**

Demand Solutions is a Challenger. Its Digital Supply Chain platform is mainly focused on providing integrated enterprise planning from demand planning to supply planning through manufacturing scheduling. Its operations are geographically diverse across all major regions, and it targets mainly midsize enterprises in a range of different industries across manufacturing and retail. It has invested in Microsoft technology and the Azure platform, and is building up its digital planning capabilities.

**Strengths**

- **Geographic Strategy:** Demand Solutions has implementations in all major regions supported either directly or through an extensive network of resellers and implementation partners to target its mainly midsize to large enterprise customer base.

- **Business Model and Sales Execution/Pricing:** The vendor is focused solely on SCP and invests an above-average percentage of its revenue back into its SCP platform. Its pricing is below average.

- **Product or Service:** Demand Solutions scored above average in this criterion for 14 out of the 15 capabilities (the exception being scalability, which reflects its installed base on older versions and not the current Azure release). This reflects a good level of functionality and architectural strength from a technology perspective due to its relationship with Microsoft.

**Cautions**

- **Market Responsiveness/Record:** Demand Solutions doesn’t have the same breadth of planning capabilities (particularly in the configure and optimize planning layers) compared to other vendors in this Magic Quadrant.

- **Offering (Product) Strategy:** The vendor’s visions for digital supply chain twin, data latency and granularity, and decision alignment are below average, which likely reflects where it sits in the market targeting midmaturity, midmarket companies predominantly.

- **Innovation:** Demand Solutions has put a lot of effort and thought into to its latest Azure-based solution. However, it needs to continue to invest and push forward. Its vision in areas such as opening up its planning platform to third-party development and other sources of analytics is below average.

**E2open**

E2open is a Leader. Its business planning products are broadly focused on integrated planning with support for demand planning and supply network planning. Its operations are geographically diversified, and its clients tend to be large enterprises in process or discrete manufacturing
industries. Beginning in June 2020, E2open offered its In-Transit Visibility capacity to all customers as a standard offering, which enhances its ability to support the execution visibility layer in CORE.

**Strengths**

- **Market Understanding:** E2open has a strong vision for supply chain convergence, for supporting planning throughout the different layers of CORE, and for the user experience, all of which are supported by its Harmony platform.
- **Marketing Strategy:** E2open has a strong vision for enabling digital supply chain planning and supporting higher levels of SCP maturity through algorithmic SCP.
- **Operations:** E2open scored above average in this criterion. This is driven by its capabilities around implementation services and the frequency of software upgrades.

**Cautions**

- **Sales Strategy:** E2open has a below-average number of net new customers compared to other vendors evaluated in this Magic Quadrant. The year-over-year change in the number of employees supporting its SCP products is below average.
- **Product or Service:** E2open scored below average in this criterion for 13 out of the 15 capabilities; the exceptions were supply planning functional strength and multienterprise planning, which scored above average. E2open can strengthen its capabilities as its customers that use its SCP product suite extend their use of the tools.
- **Market Responsiveness/Record:** E2open has a below-average number of customers using its SCP products. Customer functional penetration is below average compared to the other vendors evaluated in this Magic Quadrant.

**GAINSystems**

GAINSystems is a Visionary. Its GAINS product is mainly focused on enterprise planning including demand management and supply network planning. Its operations are mainly focused on North America, Eastern Europe and APAC, and its clients tend to be midsize enterprises primarily in discrete manufacturing and distribution-intensive segments. Its investment focus is on enhancing its decision support capabilities through advanced analytics and machine learning.

**Strengths**

- **Business model:** GAINSystems scored above average for the management team’s priority on SCP, which is impacted by the fact that the vendor only focuses on providing software to support planning activities. It also scored above average on its percent of R&D spend on SCP.
- **Market Understanding:** GAINSystems scored above average for its visions for CORE, supply chain convergence and decision automation.
- **Offering (Product) Strategy:** GAINSystems received an above-average score for the strength of its vision for digital supply chain twin, data latency and decision alignment. It received
average scores for its vision for the range of analytics used in SCP and vision for decision data latency.

Cautions

- **Geographic strategy:** GAINSSystems has a smaller global footprint compared to the average vendor evaluated in this Magic Quadrant, having deployments in only four of the seven global regions covered for this research. It also has a much smaller distribution network.

- **Market Responsiveness/Record:** GAINSSystems scored below average on this criterion primarily due to the below-average number of customers using GAINS for SCP. It scored average for customer functional penetration, which may mean that its customer base is building a foundation to transition into higher levels of maturity.

- **Operations:** GAINSSystems’ below average operations score is in part due to its limited number of third-party implementation services partnerships. This limited number of partnerships is a strategic choice. In GAINSSystems’ experience, deployments supported by its own services team provide customers with shorter time to value and lower implementation costs.

**Infor**

Infor is a Challenger. Its SCP solution is called Infor Supply Chain Planning, which comprises nearly all aspects of supply chain planning. Its operations are mostly focused in North America and Europe, and its clients are often working with complex manufacturing environments in the process and discrete manufacturing industries. Infor was acquired by Koch Industries in spring 2020, providing it with additional resources to continue its growth.

**Strengths**

- **Geographic Strategy:** Infor has broad geographical coverage by leveraging its presence in the ERP area, resulting in an above-average score in geographic strategy for its global coverage.

- **Market Responsiveness/Record:** Infor has above-average coverage of functionalities, especially within optimize and respond planning, as well as execution visibility through the Infor Nexus.

- **Customer Experience:** Infor customers indicate a high tendency to extend their use of Infor for SCP as they progress along their SCP journey. It has above-average support for customer engagement/enablement and average scores for technical support.

**Cautions**

- **Marketing Strategy:** Infor scores below average for marketing strategy as it does not articulate a strong vision for supporting Level 5 planning maturity or digital planning.
- **Sales Execution/Pricing**: Infor scores below average in this criterion due to low scores in the service-to-software ratio and the lack of a simple pricing model compared to other vendors in this Magic Quadrant. Furthermore, its typical implementation times are also above average.

- **Operations**: Infor’s vendor implementation services and cloud options (mainly deploying on Amazon Web Services) weaken its score within operations. Its domain expertise is also below average because of its tendency to be used primarily as a demand planning tool. However, it has placed more emphasis on developing its supply planning and production scheduling capabilities as Infor for Supply Chain Planning evolves and matures.

**Kinaxis**

Kinaxis is a Leader. Its solution, RapidResponse, is focused on delivering concurrent planning across a broad range of planning capabilities. Its operations are global, but mostly focused in North America while continuously expanding in Europe and APAC. Starting in discrete manufacturing, it has grown to become extensively used within life sciences, consumer packaged goods and process manufacturing. In mid-2020, Kinaxis acquired Rubikloud to strengthen capabilities for demand forecasting and make an entry into the retail vertical.

**Strengths**

- **Market Understanding**: Kinaxis has a strong vision for user experience and supply chain convergence linking ecosystems across the supply chain. Combined with a solid score for decision automation, its resulting score within market understanding is well above average.

- **Marketing Strategy**: Kinaxis scores above average in marketing strategy as it shows strong articulation of how it will be able to support digital planning and Level 5 planning maturity scenarios.

- **Offering (Product) Strategy**: Kinaxis has strong scores in its vision for decision data/granularity as well as solid scores for decision alignment and the strength of its vision of a digital supply chain twin.

**Cautions**

- **Sales Execution/Pricing**: Kinaxis has higher historical median project budgets and longer typical implementation times than other vendors in this Magic Quadrant. In 2020, Kinaxis introduced a new pricing model in order to simplify and make its offerings affordable to companies of all sizes. Kinaxis also introduced two new implementation offerings to greatly reduce starting costs and accelerate deployment timelines.

- **Geographic Strategy**: Kinaxis scores below average in geographic strategy. It has users globally, but is by far most present in North America, Western Europe and APAC. The Kinaxis distribution strategy is also below average, but the vendor continues to expand its regional partner community in addition to global partners.
- **Operations**: Kinaxis scored below average for vendor implementation services due to its historical internal capacity to support deployments. In 2020, Kinaxis doubled the size of its services to alleviate constraints with the acquisition of Prana Consulting and significant hiring.

### Logility

Logility is a Leader. Its Logility Digital Platform is mainly focused on providing E2E enterprise or multienterprise planning. Its operations are mainly focused in North America, Europe and APAC, where it targets upper-midsize to large enterprises in a range of manufacturing and retail sectors. It has invested in its digital planning capability over the last couple of years as it modernizes its capabilities, particularly in advanced analytics and machine learning.

#### Strengths

- **Product Strategy**: Logility scored above average for its vision for the range of analytics techniques it will deploy, the evolution of its digital supply chain twin, the latency of data into the planning platform and the alignment of planning decisions.

- **Innovation**: The vendor’s innovation strategy is above average. This is driven by above-average scores for vision for AI, vision for data sources/management, and vision for speed and scalability. Its vision for opening up the Logility Digital Platform to third-party developers is average.

- **Product or Service**: Logility scored above average for all 15 of the capabilities used to assess this criterion, which reflects strong functionality, range of functionality and architectural aspects such as process management, scenario management and collaboration.

#### Cautions

- **Geographic Strategy**: While many of Logility’s customers are based in North America, Western Europe and APAC, the company has deployments and provides support around the globe.

- **Sales Execution/Pricing**: Median project budgets are typically above average for Logility compared to the other vendors in this Magic Quadrant. Logility does price at the higher end of the market.

- **Market Responsiveness/Record**: Despite average total SCP customers and above-average functional penetration in these customers, Logility has a narrower range of planning capabilities across the planning layers of optimize and respond planning. This is not typically a problem for companies operating up to midlevels of maturity, but would be more of a concern for companies targeting Level 5 maturity.

### o9 Solutions

o9 Solutions is a Visionary. Its o9 Platform is the sole focus for providing integrated demand and supply planning. Its operations are mainly focused on North America, Western Europe, Eastern Europe and APAC, where it targets midsize and large enterprises looking for digital planning
capabilities. It is focused across industries and has customers in a range of verticals. Its investments are focused on its next-generation planning capabilities where it has some unique capabilities.

**Strengths**

- **Product Strategy:** o9 Solutions scored high for its vision for a digital supply chain. The use of a graph model (what o9 calls its Enterprise Knowledge Graph) is a unique capability among the vendors in this Magic Quadrant. It gives o9 a superior capability in the way it can create and manage the model of the physical supply chain. Its vision for the evolution of this into a full digital supply chain twin is strong.

- **Product or Service:** Although o9 Solutions is a relative newcomer to the SCP market overall, its product is above average in terms of capabilities, particularly in areas such as planning decision automation, scalability, linking decisions vertically between planning layers and demand planning functionality.

- **Innovation:** o9 Solutions scored above average for its innovation and product strategy, including its vision for AI, data sources/management/latency/granularity, speed and scalability, and range of analytics. This reflects the modern architecture it has employed since its inception and its focus on advanced analytics and AI.

**Cautions**

- **Market Responsiveness/Record:** o9 Solutions scored below average on this Ability to Execute criterion. It has a low number of total SCP customers. This is reflective of its relatively young age; focus on serving larger customers, which means longer sales cycles; and having had to do pilots in some cases to prove out functionality.

- **Vertical Strategy:** o9 Solutions has a below-average industry strategy, which would be expected at this point in its life cycle. It has a primary focus on 10 of the 19 industries covered in this market, which accounts for 85% of its customer base. It has customers and/or pilots running in seven other industries.

- **Marketing Execution:** o9 Solutions scored below average for its marketing execution. It scored below average for its mind share in the SCP market and for the tendency for its users to deploy it in a single global instance.

**OMP**

OMP is a Leader. Its Unison Planning solution covers nearly all aspects of supply chain planning, from network modeling to detailed scheduling. OMP’s operations are mostly focused in Europe and North America, but it has global coverage. Having grown up in scheduling, OMP has many clients within process manufacturing. It recently rebranded the solution to create a stronger message about its functional capabilities and vision.
Strengths

- **Product or Service:** OMP scores above average in nearly all elements within this criterion, showing strong capabilities in demand and supply planning, advanced planning capabilities, scalability, process management, and advanced analytics.

- **Sales Execution/Pricing:** OMP’s simple pricing model is a significant factor in the above-average scores for sales execution/pricing.

- **Business Model:** OMP scores above average in this criterion, as it shows continuously high focus in the supply chain planning area supported by an above-average spend in R&D to grow its solution.

Cautions

- **Vertical/Industry Strategy:** Although OMP supports all vertical industries, its major focus is still within the process manufacturing industry where it has its strongest value proposition.

- **Geographic Strategy:** OMP has a global reach covering all regions, but its distribution strategy is weak, which results in a slightly below average score in this criterion.

- **Marketing Execution:** OMP scores below average in all elements of marketing execution. It is less likely to be used as a single global instance for SCP, although many of its clients are extending the use of OMP to make it a global tool. It scores lower for mind share, which is reflective of its limited presence in the market with regard to blogs, webinars and white papers.

Oracle

Oracle is a Challenger. Its Cloud Supply Chain Planning solution focuses on demand management through supply planning for in-house or outsourced manufacturing. Its operations are geographically diversified, and its clients tend to be midsize and large enterprises. Its near-term investment focus is on enhancing its production scheduling and process manufacturing planning capabilities and on becoming a more prominent vendor across multiple industries.

Strengths

- **Overall Viability:** Oracle has long-term viability based on its financial health and the high likelihood that Oracle will continue to invest in further enhancing its SCP solution product.

- **Geographic Strategy:** Oracle scored above average for the global reach of its SCP product and for its SCP product’s distribution strategy.

- **Operations:** Oracle scored above average for vendor domain expertise, third-party implementation services and cloud deployment options. This led to it being one of the top performers for Ability to Execute.
Cautions

- **Market Understanding**: Oracle’s vision for CORE is below average. Oracle Cloud Supply Chain Planning has adequate support for the optimize and respond layers. But it has an opportunity to develop a stronger vision for financial impact analysis of plans and scenarios in the configure layer and for extending multienterprise supply chain visibility in the execution visibility layer.

- **Marketing Strategy**: Oracle scored below average with its vision for enabling a Level 5 planning maturity environment. It has a breadth of products to enable a customer’s journey and has an opportunity to build a cohesive story to align decision making across the portfolio of products.

- **Product or Service**: Oracle scored below average across the 15 capabilities. As Oracle Cloud Supply Chain Planning continues to gain traction in the market, we will expect to see continued development to further strengthen its foundational and advanced planning capabilities.

**QAD DynaSys**

QAD DynaSys is a Niche Player. Its supply chain planning solution, QAD DynaSys DSCP (Digital Supply Chain Planning), is strongest within demand planning and midterm supply planning but is expanding capabilities continuously. Through the QAD network, it covers clients globally with a broad industry approach slightly dominated by process and semiprocess industries. With no acquisitions made to expand capabilities, QAD DynaSys is focused on natively developing and expanding its capabilities.

**Strengths**

- **Geographic Strategy**: QAD DynaSys scores above average in geographic strategy due to its global coverage. Its number of distribution partners is on an average level.

- **Marketing Execution**: QAD DynaSys scored well above average in all elements of marketing execution. It shows strong a communications focus covering different communication channels combined with an above-average tendency to be used as single global reference for supply chain planning.

- **Vertical/Industry Strategy**: QAD DynaSys scores above average in industry coverage. It supports industries within the process manufacturing, discrete manufacturing and distribution-intensive verticals.

**Cautions**

- **Market Understanding**: QAD DynaSys’ marketing strategy score is driven by its vision for decision automation, which is centered on exception resolution and the use of predictive analytics to predict parameter values.

- **Innovation**: QAD DynaSys scores below average in innovation due to its vision for AI. While it has made efforts in this area, it is not developing use cases for as many branches of AI as other vendors in this Magic Quadrant.
- **Operations**: QAD DynaSys scores below average on operations. This is especially due to the lack of cloud options (only deploying on its own data centers) and limited support for third-party implementation services.

**SAP**

SAP is a Challenger. SAP Integrated Business Planning (IBP) is its main focus for its SCP capabilities, but it also has some supplementary capabilities in other platforms such as S/4HANA and SAP Ariba. SAP IBP focuses on demand and supply planning but not on detailed manufacturing scheduling. SAP is geographically diverse and targets midsize and large enterprises in all industries except for retail. Its main areas of investment are continuing to strengthen SAP IBP functionality and to integrate and leverage the other platforms in its portfolio.

**Strengths**

- **Sales Strategy**: SAP scored above average in its sales strategy, which is generating above-average net new customers per year. There is pent up demand in the SAP ERP installed base for a better planning solution than SAP APO on which SAP can capitalize.

- **Geographic Strategy**: SAP scored well in relation to its strategy for targeting all the major regions of the world with a direct mode or through an extensive network of implementation partners.

- **Market Responsiveness/Record**: SAP provides a good range of planning capabilities with its various solutions. It has a significant number of total customers for SAP IBP now that have an average level of functional penetration of SAP IBP capabilities across their supply chains.

**Cautions**

- **Offering (Product) Strategy**: SAP’s strategy for supporting SCP is centered around the use of SAP IBP as its SCP solution. Companies seeking to gain additional benefits from their planning (as associated with high maturity) beyond the capabilities of SAP IBP may leverage SAP S/4HANA for detailed manufacturing scheduling, SAP Analytics Cloud for cross-enterprise analytics and SAP Ariba for direct materials collaboration. The SAP vision is to enable interoperability between the different SAP products by using common master data elements via its Intelligent Enterprise Strategy and specifically the new Synchronized Planning solution. However, this approach could weaken SAP’s capabilities in areas such as digital supply chain twin, the application of the CORE framework and planning decision alignment (both horizontally and vertically).

- **Product or Service**: SAP scored below average in this criterion. It has a couple of bright spots in areas such as demand planning and process management, but is below average on many of the product capabilities. Most notably, these are supply planning functionality, data integration capabilities, and the range of predictive and prescriptive analytics available in SAP IBP.
Sales Execution/Pricing: Despite having one of the simplest pricing models on the market (module- and revenue-based), the project budgets are above average and require more services to implement than average.

Slimstock

Slimstock is a Niche Player. Its Slim4 product is mainly focused on demand planning and inventory management. Its operations are mostly focused in Western Europe, and its clients tend to be midmarket in process manufacturing and distribution-intensive industries. Its investments are to enhance its artificial intelligence and machine learning capabilities and standardize them into Slim4.

Strengths

- **Sales Execution/Pricing:** Slimstock has below-average scores for project budgets, typical application timelines and service-to-software ratio. This leads to Slimstock customers spending less on average for their SCP deployments.

- **Sales Strategy:** Slimstock gained an above-average number of new customers in 2019 and increased the total number of employees that support SCP at an above-average rate.

- **Operations:** Slimstock scored above average for its options for cloud deployments, frequency of upgrades and vendor domain expertise.

Cautions

- **Market Understanding:** Slimstock's vision for CORE and supply chain convergence are below average, which is driven by its strategic focus on inventory optimization. With its focus on traditional, exception-based planning, it articulated a limited vision for full automation of SCP.

- **Marketing Strategy:** Slimstock scored below average for its vision for the use of a broad range of analytical techniques to support SCP. Its visions for algorithmic SCP and digital SCP are below average compared to other vendors in this Magic Quadrant.

- **Market Responsiveness/Record:** Slimstock scored below average for CORE functionality coverage with the exception of scoring average for the optimize layer. This is not surprising given Slimstock's strategic focus on inventory optimization.

ToolsGroup

ToolsGroup is a Niche Player. Its solution, Service Optimizer 99+, is focused on demand, inventory, and supply planning and optimization. Its operations are geographically diversified with Western Europe and North America being the dominant regions. It has clients within all industries, with a slight weight on consumer products, food and beverage, and automotive. By partnering with other planning vendors, ToolsGroup covers multiple aspects of the supply chain planning space.
Strengths

- **Sales Execution/Pricing:** ToolsGroup scores significantly above average in this criterion, showing below-average median project budgets and implementation times combined with a simple pricing model compared to other vendors in this Magic Quadrant.

- **Vertical/Industry Strategy:** ToolsGroup has strong coverage within the distribution-intensive industries and solid coverage within process and discrete manufacturing verticals.

- **Geographic Strategy:** ToolsGroup scores above average in all elements of geographic strategy with a global reach accompanied by a solid distribution strategy.

Cautions

- **Market Understanding:** ToolsGroup has a below-average score in this criterion due to its vision of how to ensure support and alignment between the different planning layers in the CORE model.

- **Offering (Product) Strategy:** ToolsGroup has just-below-average scores in several elements in this criterion, resulting in an overall below-average score. ToolsGroup uses a single data model but lacks strength in its digital supply chain twin.

- **Customer Experience:** ToolsGroup has less structure around customer engagement activities such as its customer councils and training programs compared to other vendors in this Magic Quadrant. It also received lower scores for its technical support options.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor’s appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

**Added**

None. This is a new Magic Quadrant.

**Dropped**

None. This is a new Magic Quadrant.
Inclusion and Exclusion Criteria

To qualify for inclusion, vendors need to demonstrate all four of the following for their SCP solution that is considered the vendor’s primary product/offering to support the capabilities outlined in the market definition:

- **SCP Market Presence:** The vendor must have SCP solution (product/SaaS license and maintenance, and excluding managed services) revenue exceeding $50 million for the calendar year ending 31 December 2019. Or it must have a minimum of $35 million in revenue and 25% year-over-year revenue growth as of the end of that same period.

- **SCP Deployments:** The vendor must have a minimum of 100 fully implemented production customers as of 31 December 2019. Or it must have at least 30 fully implemented production customers as of 31 December 2019 with 25% year-over-year growth in production customers as of the end of that same period. Production customers are defined as those that have licensed the SCP solution for both demand planning and supply planning and are monitoring demand and supply planning environments with the SCP solution.

- **Global Coverage:** The vendor must generate at least 20% of SCP solution (product/SaaS license and maintenance, and excluding managed services) revenue for the calendar year ending 31 December 2019 from outside its headquarters region. The seven regions considered for this market are North America, Latin America, Western Europe, Eastern Europe, the Middle East, Africa, and Asia/Pacific. The vendor must generate SCP solution revenue from three regions inclusive of the vendor’s headquarters region. A minimum of 20% of the SCP solution revenue from outside the vendor’s headquarters region must be generated in North America. A minimum of 10% of the SCP solution revenue must be generated in Western Europe.

- **SCP Functional Coverage:** All of the following SCP solution capabilities must be generally available (GA) as of 31 December 2019:
  - **Demand Planning** — Support for development of a consensus-driven demand plan that optimizes the balance between market opportunity and supply network capability.
  - **Supply Planning** — Support for the translation of demand expectations into supply network requirements that orchestrate reliable, efficient delivery outcomes.
  - **End-to-End SCP** — Support for aligning horizontal and vertical planning decisions across the internal enterprise supply chain and into external trading partners.

Honorable Mentions

A number of vendors with reasonably capable and, in some cases, strong SCP solutions did not qualify for this Magic Quadrant. This does not mean that their solutions might not be viable alternatives for some customers. We limit participation in this Magic Quadrant to vendors that demonstrate current strengths in the market in several dimensions.

There are several reasons why a vendor may not have qualified. As stated in the inclusion criteria outlined above, a vendor may or may not have communicated to Gartner that it has the functional coverage, revenue growth or international coverage necessary to qualify for this research. These
reasons alone should not prohibit users from considering these vendors. They may be strong in a user’s geography, or their criteria may fit the needs of a given user. Furthermore, one of these vendors may have capabilities that make it more appealing than other vendors in the Magic Quadrant, regardless of the characteristics that might have excluded it from this research.

**AIMMS**

AIMMS is a privately held vendor headquartered in the Netherlands. It provides a modeling and optimization platform that can be used across multiple functions, and is available only on cloud. In recent years, it started providing a range of apps (under the name SC Navigator) that support the most common use cases it sees in supply chain for its optimization platform.

AIMMS did not meet the inclusion criteria for SCP market presence. It is a vendor that is growing rapidly and continues to invest in rounding out its portfolio. Its latest investment is in its new IBP application, which is now being released to existing customers.

**Blue Ridge**

Blue Ridge is a privately held SaaS vendor based in the U.S. It is focused on distribution-intensive companies with an emphasis on retail and wholesale/distribution. It is primarily focused in North America with a strong presence in Europe. Blue Ridge traditionally focused on demand planning and replenishment. Over the last several years, the vendor has invested in developing its supply planning capability.

Blue Ridge did not meet the inclusion criteria for SCP market presence. Its growth plans are in part fueled by a partnership with NetSuite and the acquisition of Prolific Virtue, a price optimization vendor.

**Demand Works**

Demand Works is a privately held vendor based in North America. Its SCP solution includes support for demand forecasting, inventory planning, replenishment planning, finite capacity planning, and sales and operations planning (S&OP). Most of its customers are identified as midmarket and large enterprise. Its SCP solution called Cloud Smoothie is a cloud-native SaaS offering.

Demand Works did not meet the inclusion criteria for SCP market presence. It is primarily focused in North America with customers in 15 other countries.

**FuturMaster**

FuturMaster is a privately held, Europe-headquartered vendor. It focuses on selling SCP into the Northern Europe, Southern Europe, Singapore and China markets through its own sales team, and in Brazil, Asia/Pacific, and the DACH markets through a network of partners. It traditionally had a strong focus on the food and beverage, cosmetics, and healthcare industries. FuturMaster has a single data model supporting planning decision making, and is further developing predictive and
prescriptive analytics capabilities. FuturMaster offers its SCP solutions as either cloud or on-premises deployments.

FuturMaster did not meet the inclusion criteria for SCP market presence. It has experienced strong growth with its SaaS offering. In June 2020, it received funding from Cathay Capital, which will be used to invest in international development and its SaaS offering.

ICRON

ICRON is a Europe-headquartered privately held vendor that has a focus on the SCP space and decision processes. Its concentration is on discrete manufacturing environments. ICRON's customers are located mainly in Western and Eastern Europe, and it has a smaller presence in APAC. ICRON offers on-premises and cloud deployment models.

ICRON did not meet the inclusion criteria for SCP market presence and global coverage. It has grown its sales organization, and it has added to its network of partners to include Deloitte.

John Galt Solutions

John Galt Solutions is a U.S.-headquartered, privately held vendor that offers the Atlas Planning Platform, an end-to-end SCP solution, through cloud deployment models. John Galt has a mix of process manufacturing, discrete manufacturing and distribution-intensive clients focusing on consumer products, food and beverage, chemicals, and high-tech markets. John Galt serves midmarket and large enterprises, with most customers based in North America and a moderate and growing presence in APAC, Latin America and Western Europe.

John Galt did not meet the inclusion criteria for SCP market presence. All new customers subscribe to a SaaS cloud-based deployment. It continues to build automated machine learning into multiple planning areas.

LLamasoft

LLamasoft, acquired by Coupa in November 2020, is a North America-headquartered publicly held vendor that specializes in supply chain modeling, design and optimization. It is best-known for its Supply Chain Guru modeling product. But it also has capabilities for demand modeling with short-, medium- and long-term demand sensing that leverages machine learning and external causal factors (in Demand Guru and the llama.ai platform) and data modeling (in Data Guru and llama.ai). LLamasoft has a strong global presence with customers in all regions. It also has a strong industry strategy with customers in all major industry sectors.

LLamasoft did not meet the inclusion criteria for SCP functional coverage. It continues to develop capabilities for the CORE planning layers via the llama.ai platform, supplementing its historical focus on the configure and optimize layers.
Manhattan Associates

Manhattan Associates is a U.S.-headquartered publicly held vendor that offers a broad suite of SCM solutions. It is best-known for its warehouse and transportation management solutions. Manhattan Active Inventory, the company’s supply chain planning suite, provides demand planning, inventory planning and replenishment planning solutions. Manhattan Associates is focused primarily on finished goods for the retail and distribution-intensive industries.

Manhattan Associates did not meet the inclusion criteria for SCP functional coverage. Within its suite of inventory solutions, Manhattan also offers an S&OP solution that supports midterm planning. Multienterprise planning is available with Manhattan’s Replenishment and Vendor Managed Inventory solutions.

River Logic

River Logic is a U.S.-based privately held software vendor. Its planning and scenario analysis capabilities come from its predictive and prescriptive analytics platform. This is a highly flexible modeling and optimization platform that can simultaneously consider a range of strategic, tactical and operational constraints while satisfying multiple objectives across all functions (including finance). The vendor offers a packaged application on the platform for its customers in S&OP. Packaged and custom-built solutions are primarily available on the Microsoft Azure cloud, although on-premises deployments are available.

River Logic did not meet the inclusion criteria for SCP market presence. It continues to invest in its digital supply chain twin, its cloud-based what-if analysis capabilities and its supply chain optimization (SCO) app to help supply chains improve their decision making across the value chain.

Vanguard Software

Vanguard Software is a North America-based privately held software vendor. It provides support for demand forecasting through supply network planning and S&OP. Primary industry verticals supported include consumer products, pharmaceutical, medical device, industrial manufacturing and retail. It is a cloud-native solution that is offered on an AWS platform.

Vanguard did not meet the inclusion criteria for SCP market presence. It is expanding its product coverage to include available to promise, supplier collaboration and customer collaboration capabilities. In 2019, it invested heavily in building out its sales and support team and strengthening its partner network, which has resulted in a growth rate greater than the market average.
Evaluation Criteria

Ability to Execute

To help assess the capabilities of the vendors evaluated in this Magic Quadrant, Gartner has supplemented the seven top-level Ability to Execute criteria with a number of subcriteria. Each subcriterion was specifically chosen to help distinguish the different vendors by providing an SCP solution-relevant assessment against the Gartner standard. For some of the subcriteria, reference customers’ scores and vendors’ RFP and survey responses were combined to help with the assessments. Statements regarding vendors’ strengths and cautions that relate to “averages” (either above or below) refer to the subject vendor’s subcriterion scores as compared with the average across all the vendors evaluated in this Magic Quadrant.

Product or Service

This criterion assesses the vendor’s ability to support, to an acceptable level, a reasonable proportion of the core capabilities of an SCP solution. These core capabilities can be supported either natively or via OEM agreements and partnerships. Strength was assessed via a weighted standard SCP solution RFP in combination with feedback from reference customers.

Subcriteria:

- Strength of functional demand planning capability
- Strength of functional supply planning capability
- Strength of advanced planning capabilities (including S&OP, MEIO)
- Strength of supply chain model (aka digital supply chain twin; including supply chain modeling, configurability, segmentation and pegging)
- Strength of multienterprise planning capabilities (including MDM)
- Strength of linking decisions vertically (including hierarchy management, disaggregation)
- Strength of planning decision collaboration
- Strength of planning decision automation
- Strength of data integration capabilities (including granularity and latency)
- Strength of scenario management
- Strength of user experience (including how transparent the predictive and prescriptive analytical outputs are)
- Strength of solution scalability (including public clouds, in-memory computing)
- Breadth of resource types that can be planned (including materials, machines, people, space, finance, transportation, labor)
- Strength of process management
- Support for multiple types of predictive and prescriptive analytics (business rules, heuristics, solver-based optimization, machine learning, NLP, discrete event simulation).

**Overall Viability**
Viability includes an assessment of the vendor’s financial health and the financial and practical success of the vendor. It also encompasses the likelihood that the vendor will continue to invest in and offer its SCP solution, and advance the state of the art of SCP within its portfolio of products.

**Subcriteria:**
- Vendor’s financial rating
- Vendor’s SCP solution viability

**Sales Execution/Pricing**
This criterion examines the vendor’s ability to provide business value, compared with the price it charges for the software and the amount of services required to deploy the SCP solution. Subcriteria examine the vendor’s strength in relation to the overall budget required to implement its software. Also included are the ratio of implementation services to license/subscription costs, the typical implementation times users can expect (a proxy for how quickly a user may see business benefits and, hence, an ROI) and the transparency of the pricing model.

**Subcriteria:**
- Median project budgets based on vendor’s self-reported responses
- Typical service-to-software ratios based on vendor’s self-reported responses
- Typical implementation time based on vendor’s self-reported responses
- Simplification of pricing model

**Market Responsiveness/Record**
This criterion is the vendor’s ability to respond, change direction, be flexible and achieve competitive success as the market and requirements for an SCP solution evolve. This includes the degree to which a vendor can cover all the potential planning functional requirements to support algorithmic SCP.

A vendor’s market record is also reflected by two other factors. The first is how many customers it has globally (although, above a threshold, this diminishes in significance). The second factor is the extent to which its customers are using the vendor’s solutions across all their SCP requirements (that is, the vendor’s degree of SCP functional penetration, which is indicative of the expanded use of the SCP solution).
Subcriteria:

- The degree to which a vendor covers all the functional areas included in the configure planning category based on vendor’s self-reported response
- The degree to which a vendor covers all the functional areas included in the optimize planning category based on vendor’s self-reported response
- The degree to which a vendor covers all the functional areas included in the respond planning category based on vendor’s self-reported response
- The degree to which a vendor covers all the functional areas included in the execution visibility category based on vendor’s self-reported response
- The total number of SCP customers a vendor has based on vendor’s self-reported response
- The degree to which a vendor has been able to penetrate its installed base across the different SCP functional areas validated by customer references

Marketing Execution

This criterion is the vendor’s ability to create mind share with companies that are looking for capable SCP solutions for potentially global deployments. It involves the clarity, quality, creativity and efficacy of programs that are designed to deliver the vendor’s message. This is to influence the SCP solutions market, promote the brand and business, increase awareness of the products and establish a positive identification with the SCP solution in the minds of buyers. There should be an increased incidence of users deploying the SCP solution as a global single instance to support integrated E2E SCP.

Subcriteria:

- The types and volume of programs designed to deliver the vendor’s message
- The degree of evidence, validated through its customer references, that the vendor’s SCP solutions are being deployed as a global single instance to support E2E integrated planning

Customer Experience

This criterion examines evidence of the viability of the vendor’s product in the SCP solutions market. Customer experience evaluates how vendor’s enable their customers to use the SCP solution more effectively to drive more value in SCP activities and how vendors enable customers to be more self-sufficient in their use of their SCP solution. It also evaluates the methods used by vendors to solicit feedback from their customers to gain insight on where to focus future product enhancement.

Subcriteria:

- Opportunities for customers to engage with the vendor’s product and development teams and with their other customers to solicit best practices for tool use
The likelihood of customers to extend their use of the vendor’s SCP solution validated by customer references

The level of technical support offered by the vendor based on vendor’s self-reported response

Operations

This criterion assesses the vendor’s ability to meet its goals and commitments to users satisfactorily. This includes aspects such as a vendor’s capacity to provide internal professional services resources. Or it includes the ability to partner with system integrators or other service providers to provide customers with SCP domain expertise, deployment options and frequency of upgrades.

Subcriteria:

- Vendor’s SCP domain expertise validated by customer references
- Capacity of own implementation services based on vendor’s self-reported response
- Availability of third-party implementation services based on vendor’s self-reported response
- Availability of cloud deployment options based on vendor’s self-reported response
- Frequency of software upgrades based on vendor’s self-reported response

Table 1. Ability to Execute Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product or Service</td>
<td>High</td>
</tr>
<tr>
<td>Overall Viability</td>
<td>High</td>
</tr>
<tr>
<td>Sales Execution/Pricing</td>
<td>Medium</td>
</tr>
<tr>
<td>Market Responsiveness/Record</td>
<td>High</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>Medium</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>High</td>
</tr>
<tr>
<td>Operations</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Gartner (February 2021)

Completeness of Vision

To help assess the capabilities of the vendors evaluated in this Magic Quadrant, Gartner has supplemented the eight top-level Completeness of Vision criteria with a number of subcriteria. Each
subcriterion was specifically chosen to help distinguish the different vendors by providing an SCP solution-relevant assessment against the Gartner standard. For some of the subcriteria, reference customers’ scores and vendors’ RFP and survey responses were combined to help with the assessments. Statements regarding vendors’ strengths and cautions that relate to “averages” (either above or below) refer to the subject vendor’s subcriteria scores as compared with the average across all the vendors evaluated in this Magic Quadrant.

Market Understanding
This criterion is the vendor’s ability to demonstrate a strategic understanding of how the SCP market is evolving to include the provision of suitable and capable SCP solutions today and in the future. This is also the vendor’s ability to articulate how it will translate emerging SCP solution requirements, changing SCP environments and technology trends into suitable products and services. Vendors that show the highest degree of vision listen to and understand buyers’ wants and needs, and they can shape or enhance those wants and needs with their product vision.

Subcriteria:
- The strength of the vendor’s vision for the alignment and synchronization of business planning, S&OP and S&OE through a model, such as CORE
- The strength of the vendor’s vision for converging planning with internal business processes and with ecosystem partners
- The strength of the vendor’s vision for automation of planning decisions
- The strength of the vendor’s vision for a unified user experience

Marketing Strategy
This criterion is the vendor’s ability to demonstrate that it has a well-articulated strategy for SCP solution market expansion and revenue growth. Key elements of the strategy are a clear position on an integrated SCP platform that enables a company’s digital ambitions. The vendor must demonstrate the availability and utility of appropriate SCP capabilities to support users’ moving into Level 4 and above planning process maturities when required by the business.

Subcriteria:
- The vendor’s vision for a broad portfolio of functional components that supports and enhances the value that can be derived from the SCP solution that addresses longer-term and shorter-term planning and alignment
- The vendor’s articulation of a future SCP vision that is consistent with Gartner’s Level 5 S&OP maturity
- The vendor’s articulation of a future SCP vision that is consistent with Gartner’s vision for digital planning
Sales Strategy

This criterion assesses the vendor’s strategy for selling its SCP solution. To do that, it uses an appropriate network of direct and indirect sales, marketing, service, and communication affiliates to extend the scope and depth of its market reach, skills, expertise, technologies, services and customer base, and expanding capability needs.

Subcriteria:

- Vendor’s net new SCP solution customers in the past 12 months
- Vendor’s cloud growth rate based on revenue derived from its cloud deployment model
- Vendor’s year-over-year change in employees that support its SCP product

Offering (Product) Strategy

This criterion examines the vendor’s ability to clearly articulate to Gartner and the market a “statement of direction” for the next two to three years that will keep pace with (or surpass) Gartner’s vision for the SCP solutions market. The vendor understands the major technology/architectural shifts that will be required by the SCP solutions market, and can communicate a believable plan to leverage them and deliver appropriate solutions. This may also include any migration issues these shifts may create for current customers.

Subcriteria:

- The strength of the vendor’s vision for the range of analytics used for planning
- The strength of the vendor’s vision for a digital supply chain twin
- The strength of the vendor’s vision for supporting higher levels of data granularity
- The strength of the vendor’s vision for supporting low data latency
- The strength of the vendor’s vision for aligning planning decision making from the strategic level to execution and across the enterprise and ecosystem

Business Model

This criterion examines the soundness and logic of a vendor’s underlying business proposition through its focus on and prioritization of its SCP capabilities, and the level of R&D investment in its SCP capabilities and solutions.

Subcriteria:

- The vendor management team’s focus on and prioritization of its SCP solutions and portfolio
- The vendor’s level of R&D spending on its SCP solutions, as measured by the percentage of revenue allocated to SCP R&D
Vertical/Industry Strategy

This criterion examines the vendor’s strategy to direct resources, skills and offerings to meet the needs of individual vertical markets. The vendor needs to articulate how it balances the needs of its target industries within its SCP solution. Vendors are assessed on the breadth of their vertical market focus for SCP. Key for SCP solutions is the vendor’s focus on three industry groupings:

- **Process manufacturing:**
  - Consumer goods
  - Food and beverage
  - Pharmaceuticals
  - Paper and pulp
  - Oil and gas
  - Metals
  - Chemicals

- **Discrete manufacturing:**
  - Automotive
  - Industrial manufacturing
  - High tech/electronics
  - Aerospace and defense
  - Mining and construction
  - Medical devices
  - Footwear/apparel
  - Consumer durables

- **Distribution-intensive:**
  - Telco/utilities
  - Aftermarket
  - Retail
  - Wholesale/distribution

**Subcriteria:**

- Strength in process manufacturing industries
- Strength in discrete manufacturing industries
Strength in distribution-intensive industries

Innovation

This criterion examines the vendor’s ability to articulate how it will innovate its SCP products and services to meet the evolving needs of an SCP solution. The vendor should be able to articulate how its vision (and innovation strategy) for an SCP solution supports a customer's journey to mature its planning processes with the help of a relevant enabling technology.

Subcriteria:

- The strength of the vendor’s vision for the use of AI
- The strength of the vendor’s vision or the use of an open platform for analytics
- The strength of the vendor’s vision for data sources used in SCP and master data management strategies
- The strength of the vendor’s vision to support planning speed and scalability

Geographic Strategy

This criterion considers the vendor's strategy to support customers in all the main world regions to ensure successful global deployments of its SCP software. The vendor’s strategy should direct resources and skills to meet the specific needs of geographies outside the “home” or native geography — directly or through partners, channels and subsidiaries — as appropriate for those geographies and markets.

Subcriteria:

- Global reach of customer base across seven regions (North America, South America, Western Europe, Eastern Europe, the Middle East, Africa and Asia/Pacific)
- Number of distribution partners
<table>
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<th>Evaluation Criteria</th>
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<td>Market Understanding</td>
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<td>Sales Strategy</td>
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<td>Geographic Strategy</td>
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</tr>
</tbody>
</table>

Source: Gartner (February 2021)

**Quadrant Descriptions**

**Leaders**

Leaders demonstrate strong SCP solution vision and execution capabilities. They have a broad, deep and differentiated functionality that addresses a broad range of user requirements. Their coverage across the three categories of planning capability — configure, optimize and respond — is good enough, with a good balance across the categories now and/or planned for the future. They have a reasonable range of features to support a user’s maturity journey. Their visions for supporting the three paradigms of SCP — algorithmic SCP, digital supply chain planning and resilient planning — align with Gartner’s vision. When these three paradigms are blended together, they build the foundation to support a Level 5 SCP environment. Leaders anticipate where customer demands and markets are moving and identify how innovative technologies can be applied to planning applications. They have strategies to support these emerging requirements to build a future-proof SCP solution. Because leaders are well-established in leading-edge complex user environments, they benefit from a user community that helps them remain in the forefront of emerging needs.

Leaders exhibit strong financial performance and the viability of their SCP solutions. Customers get good ROI although they will often have to pay relatively more for the software. Leaders generally have good market penetration as well as broad functional penetration into their customer base. Many customers have a single instance of the software that is often supporting large planning models and high supply chain complexity.

**Key Characteristics:**

- Reasonably broad and deep SCP offerings
- Proven success in moderate- to high-complexity SCP environments
- Deployed with the intent to be the long-term SCP technology strategy
- High customer functional penetration
- Deployed as a single global instance to support vertical and horizontal alignment
- A reasonable number of end users at Level 3 or higher maturity
- Enduring visibility in the marketplace from both a sales and marketing perspective
- High levels of customer satisfaction
- Compelling supply chain convergence strategy and capabilities
- Global scale
- Strong viability

**Challengers**

Challengers exhibit strong execution capabilities today, but they have product roadmaps that are not yet closely aligned enough with Gartner’s view of the future for SCP solutions. They have a consistent track record of successful implementations. They provide reasonable support for enabling a Level 3 SCP process and have a tendency to be used as a single global instance for planning. While their product features and technical capabilities are sufficient enough to support Level 3 planning, aspects of their offering are still maturing. Their understating of SCP market trends and how to apply innovative technologies into SCP technologies is lagging, which may make it challenging for SCP processes to move to higher levels of maturity. Customers are usually satisfied with Challengers and get reasonable to good value from these vendors’ deployments across their supply chains.

Challengers are preferred by buyers that favor Ability to Execute over Completeness of Vision. They may be favored if part of an incumbent enterprise vendor’s product set or if there is some other preexisting vendor relationship. They have long-term viability with sound financials and product stability. The customer experience is very sufficient with customers having resourcing available to manage and sustain their instance on their own with little support needed from the vendor. Buyers need to evaluate Challengers based on the vendors’ current capabilities and deltas, and determine the extent to which those deltas will impede near-term aspirations to achieve higher levels of maturity.

**Key Characteristics:**

- A capable, proven and mature SCP solution with many live customers
- Large-scale SCP deployments
- A proven ecosystem of partners
- Reasonable customer functional penetration
- Wide range of product features and capabilities
- Generally lacking the overall thought leadership, innovation or compelling visions for higher levels of SCP maturity

**Visionaries**

Visionaries articulate a strong vision for SCP solutions. Their product roadmap demonstrates a good balance between their understanding of where a user's SCP solution requirements are heading and their intended use of key technology developments to help support those requirements. Visionaries are often thought leaders in one or more key characteristics of SCP technology environments (e.g., digital supply chain twin, mult-enterprise planning, artificial intelligence), and their management teams place high prioritization on developing advanced SCP capabilities. They have compelling product strategies, but they may have functional gaps in their SCP solution, lack too few live customers or have relatively weaker financial positions. They may be newer entrants (relatively speaking) to the SCP solutions market with lower customer functional penetration. Or they may have developed a very innovative product set but their end users aren’t yet mature enough to effectively use it to get the anticipated value.

**Key Characteristics:**

- A thought leader on one or more SCP domains that tend to be on the edge of emerging concepts
- Execution gaps (e.g., viability, growth, global scale or operations)
- Has articulated a good vision for how it plans to fill gaps in its solution offering through development, acquisition or partnership
- Relatively lower customer functional penetration
- Tendency to be used as a regional or local instance

**Niche Players**

Although there might be an assumption that vendors in the other quadrants are better choices for new SCP solution buyers, in certain circumstances, Niche Players are just as good or better choices for prospective users. This is because they might focus on a geographic or vertical component of the market that is meaningful to particular users. Niche Players are often seen as specialist vendors — being used as point solutions to support one or two parts of SCP (e.g., demand forecasting, inventory planning, S&OP) — and are less likely to be used as a single global instance for supply chain planning. There is low customer functional penetration and end users may be using a Niche Player with other SCP solutions to support end-to-end supply chain planning needs.

**Key Characteristics:**

- Might focus primarily on a vertical industry or SCP domain
- Not a generally differentiated offering, although may have some unique capabilities
- Has growth strategies, either geographic or in other markets, that may be lacking
- Limited ecosystem of partners
- Market momentum and product or company viability that is possibly in question

**Context**

Several years ago, Gartner identified a shift in buyer behavior evolving from an approach of investing in best-of-breed solutions for functional SCP activities to evaluating a vendor’s ability to support a holistic SCP suite that provides support for end-to-end planning. Over time, companies outgrow their SCP technology — whether that be spreadsheets, internally developed tools or an SCP application provided by a third party. As result, they look to invest in a product that will help them advance to higher levels of SCP maturity and scale as their planning needs evolve. Some companies will evaluate SCP solutions looking for a specific functional need, like demand forecasting or supply network planning, with the intent to leverage additional features available in the planning tool over time. In the past, these functional needs may have been provided through a heterogeneous SCP application landscape. However, companies were challenged with supporting a process that gave them the required visibility across the enterprise and across planning time horizons. To respond to that challenge, SCP solutions evolved into a unified data model environment where a single model of the supply chain is used for planning. Hence, buyers have become more inclined to engage with a single vendor that provides an SCP suite that covers most, if not all, of their SCP technology needs.

**Key Actions to Help With SCP Technology Selection**

Supply chain technology leaders and IT leaders looking to make the appropriate investments in SCP technology should:

- Get clarity on the business strategy. What are the key factors that need to be considered for the supply chain?
- Link the business strategy to the supply chain and SCP strategy. What does the SCP capability need to deliver to generate the required business value?
- Identify the current “as is” maturity level for the relevant SCP processes (for example, S&OP, demand planning and supply planning).
- Define the desired “to-be” maturity level for the relevant SCP processes to support the business strategy. It can be helpful to phase the journey to the to-be state to allow sufficient time to stabilize the planning environment between phases of the journey.
- Audit the current SCP technology assets using the Gartner pace-layered model — clarify what is SOR, SOD and SOI.
Audit the current SCP technology assets using the Gartner CORE model — clarify what is configure, optimize and respond.

Align the audit outputs with the desired to-be maturity levels, and identify technology gaps now and in the future.

Construct an overall SCP technology roadmap with a view to filling any gaps.

Identify suitable technology options in support of current and future gap filling. Use this Magic Quadrant when considering options to fill in the gaps in the SCP arena.

Evaluation Frameworks

All the vendors in this Magic Quadrant sell and support products that enable companies to achieve at least Level 3 maturity, which is characterized as horizontally integrated demand and supply planning, supporting linked optimization across the supply chain. A vendor’s ability to support and sustain a company’s desires for Level 4 and above maturity, which provides support for capabilities such as multienterprise planning, continuous planning and resilient planning, varies greatly. Vendors that demonstrate stronger visions for SCP solutions have and are building technology infrastructure and features that align with needs of companies that aspire to support a Level 4 and above planning environment. Vendors that demonstrate stronger ability to execute have a high likelihood of having customers that have invested in or intend to invest in designing a future-state SCP environment that supports Level 5 planning. These customers have also placed a strong emphasis on enabling elements of planning that engender change such as reevaluating organization structures and their approach to decision making. They are essentially at a point where they are ready to radically transform their approach to supply chain planning.

Gartner has identified four evaluation frameworks that when used collectively help define and analyze the market for suitable and emerging SCP solution providers. Companies looking for suitable solutions to support their SCP environments should use these frameworks to build their software evaluation models:

- SCP process maturity framework
- Gartner’s pace-layered framework
- SCP configure, optimize, respond and execute (CORE) model
- Digital supply chain planning maturity framework

SCP Process Maturity Framework (see Supply Chain Score for Planning and Demand-Planning Maturity Assessment Guide for Supply Chain Planning Leaders for more details). The business value derived from SCP technology is largely dependent on the maturity of the planning processes that the software is helping to enable. The higher the maturity of the planning process, the more business value will be generated. However, different technology capabilities will be needed to help enable the different levels of planning process maturity. It is important to identify which level of planning maturity is being targeted to ensure that the right technology capabilities are acquired at the right time and in the right way. It is also important to try to map out the maturity journey that the business wants to follow. This is done so that selected SCP technology can be future-proofed
against these maturity aspirations and doesn’t become obsolete and require replacement or substantial customization or supplementation with third-party solutions at a later date. Refer to Note 1 for additional guidance on each maturity level.

**Gartner’s Pace-Layered Framework** (see How to Develop a Pace-Layered Application Strategy). The SCP technology a company requires to support different planning process maturities evolves as maturity increases. To describe this technology evolution for the SCP market, we use Gartner’s pace-layered framework to define what SCP technology is in each layer and which pace layer is aligned with which level of SCP maturity (i.e., systems of record [SORs], systems of differentiation [SODs] and systems of innovation [SOIs]). Identifying this alignment is key to ensuring that the right SCP technologies are being considered and deployed for each maturity level, and in support of the journey a company will be taking through the maturity levels. It is also important that the layers work well together. The higher-quality plans created in the SODs and SOIs must be managed back (that is, integrated and aligned) into the SOR. This is done so their output can be used by the next step, or level, in the overall planning process, and it maintains the integrity of the underlying SOR process and data models. In summary, the Gartner paced-layered framework identifies three layers:

- **Planning SORs** — These are used by companies to support Level 3 planning maturity. This level of planning maturity doesn’t call for the deepest functionality, but it does require an integrated E2E plan that synchronizes the previously fragmented departmental/siloed plans that companies have at Levels 1 and 2 planning maturity. The planning SOR is typically separate from a company’s ERP system or systems that are fulfilling more of a transactional SOR role. An SCP SOR is a platform that enables a company to create, visualize, manage, link, align, collaborate and share its planning data across a supply chain. The platform encompasses demand plan creation, the supply-side response, and detailed operational and tactical-level planning. It is likely to be a packaged SCP application that spans a complete defined supply chain, at least at the enterprise level, and provides good-enough planning functionality to produce a reasonable quality plan. The rate of business change for the SOR is relatively low because the planning processes are well-established, fairly common to most organizations and often subject to recommended practices.

- **Planning SODs** — These are used by companies to support Level 4 planning maturity. These applications enable differentiating company processes or deep, industry-specific capabilities. They have a medium life cycle (i.e., one to three years), but require frequent reconfiguration to accommodate changing business practices and customer requirements. In SCP, these SODs will tend to be planning-process-oriented in areas such as Level 4 S&OP, Level 4 inventory planning (e.g., MEIO), Level 4 demand planning (e.g., demand sensing) and Level 4 manufacturing scheduling (e.g., complex process industry scheduling).

- **Planning SOIs** — These are used by companies to support Level 5 planning maturity and are likely to be E2E predictively and/or prescriptively analytical in nature. These typically would be in-house-developed or vendor-co-developed applications that are built on an experimental basis to address Level 5-type emerging business requirements and opportunities. These are typically short life cycle projects, up to 12 months or so, using departmental or outside resources and probably consumer-grade technologies. Often, they will leverage the planning
data available in the planning SOR and pass the results of their analytics back into the planning SOR to be used in the next step of the process.

**SCP Configure, Optimize, Respond and Execute (CORE) Model.** Gartner recognizes three major categories of planning functionality out of about 60 discernible solution types. Some help to “configure,” or design, the supply chain (e.g., in terms of an appropriate supply chain segmentation strategy or postponement strategy). Others “optimize” the supply chain (e.g., helping to create an optimal plan using constrained resources). Still other types can “respond” when execution doesn’t happen according to the optimal plan (e.g., customer order prioritization for Class A customers when a supplier delivery is shorted). But, to be able to respond effectively, the planning solution must “see” what’s happening in near-real-time execution — the “E” of CORE. In summary, the CORE model stands for:

- **C = Configure** — helping to decide the configuration or design of the supply chain to deliver the company goals by enabling the supply chain strategy (the “S” of the original SCORE name)
- **O = Optimize** — helping to create optimal demand and supply plans, taking account of any constrained resources
- **R = Respond** — helping to create an intelligent response to execution events that keeps the short-term plan as close as possible to company goals
- **E = Execution Visibility** — helping to ensure that the planning capability has the right level of visibility to the relevant demand- and supply-side execution events

Traditional planning solutions tend to be heavily focused on the “optimize” category. However, over time, a company will need to rebalance its planning capabilities more evenly across these three categories — configure, optimize and respond. Therefore, it is important — particularly when thinking about future SCP requirements — to consider this rebalancing of planning capability in any technology-related roadmaps.

**Digital Supply Chain Planning Maturity Framework.** Digital planning is about driving toward higher-quality planning decisions using digital technologies such as cloud, big data, advanced analytics and AI. The use of digital optimizes the time planners take to focus on what is important.

In summary, these are the seven dimensions of digital supply chain planning (for a full explanation, please see Defining Digital Supply Chain Planning):

- **Horizontal Alignment of Decisions** — Aligning (aka synchronizing) planning decisions across the end-to-end (E2E) supply chain (which can be either enterprise or multienterprise).
- **Vertical Alignment of Decisions** — Aligning (synchronizing) the planning decisions that need to be made at the different levels of granularity and time horizons (e.g., strategic, tactical and operational planning).
- **Degree of Decision Automation** — The degree to which supply chain visibility, decision prediction and decision prescription are automated.
- **Mix of Decision Types** — The progressive shifting of the decision type mix shifts toward E2E decisions that can successfully be automated more. Decision types can apply to functional,
domain-level and E2E decisions. The following four types are used to characterize planning decisions:

- **Chaotic decisions** — No cause-and-effect relationship is known or knowable because there is no visibility to enable this understanding.
- **Complex decisions** — No cause-and-effect relationship is known, but it is knowable because there is visibility to enable this understanding if the data is examined.
- **Complicated decisions** — Cause-and-effect relationship is known by the few but is not known by all stakeholders. It is knowable by all stakeholders if it is socialized with them sufficiently.
- **Simple decisions** — Cause-and-effect relationship is known by all stakeholders. This is the realm of best practices.

- **Latency of Decision Data** — Using data for planning that is much fresher and, therefore, more in line with what’s happening in the supply chain.
- **Granularity of Decision Data** — Using data for planning that is much more granular in nature, providing far better resolution as to what’s happening in the supply chain.
- **Degree of Bimodal Planning** — Moving from predominantly Mode 1 planning (the way we have always done it) to a balance of Mode 1 and Mode 2 planning (exploring and innovating the way we do planning).

The seven dimensions of digital SCP are not about digital technology — any company can throw technology at planning. The seven dimensions are about the impact and use of appropriate digital technology. The more effectively digital technology is applied to planning, the further a company can journey along each of these seven dimensions. The further a company progresses along each of these seven dimensions, then the more digitized its SCP will be. As companies digitize their planning, the digital supply chain twin concept emerges (see Innovation Insight for Digital Supply Chain Twin). A digital supply chain twin is a digital representation of the physical supply chain that can be used to create plans and make decisions. It replaces the traditional supply chain model that sits at the heart of any planning solution with a model (twin) that is built from granular data and provides a near-real-time reflection of the real world. It effectively allows companies to align their planning across the supply chain and vertically through their organizations.

By bringing together these four frameworks (planning maturity, pace layering, CORE and digital SCP), companies evaluating SCP solutions can analyze the SCP market effectively to ensure a direct comparison of the different SCP offerings in the market.

**Market Overview**

The supply chain planning (SCP) market was worth $5.2 billion in 2019 and is projected to grow at a five-year compound annual growth rate (CAGR) of 7.5% (see Forecast: Enterprise Application Software, Worldwide, 2018-2024, 4Q20 Update). The SCP market is made up of a large array of
planning solutions that range from sales and operations planning (S&OP) to manufacturing scheduling and all points in between. The planning solutions span the spectrum of providing foundational planning capabilities through to those enabling business differentiation and innovation.

The crowded SCP solutions market includes everything from long-standing and large technology players to smaller, privately funded software vendors. Many more-established vendors in this space started as specialist vendors that focused on a few aspects of planning, such as inventory planning, production planning and scheduling, or S&OP, and have extended their reach into multiple areas of supply chain planning. This has been achieved either through in-house development or acquisition. New entrants are typically coming from the worlds of big data and AI.

Vendors of traditional SCP solutions have evolved their capabilities to include advanced analytics and AI and have replatformed their solutions for cloud deployments to take advantage of some of the benefits of cloud. Newer vendors have built their offering around addressing the gaps of traditional, on-premises solutions like streamlined user experience, scalability, speed of deployment and AI.

As organizations begin the journey of improving SCP (in which they seek to increase the quality of their planning decisions), they will seek support for planning across multiple time horizons. The objective is to converge planning, strategy and execution to facilitate more responsive, agile planning that supports a company’s strategic goals. The SCP solution will be implemented across a complete enterprise supply chain, which increasingly means a global deployment.

As a company evolves its SCP from focusing on tactical, short-term planning insulated within its enterprise to extending its view to include midterm and long-term planning across a multienterprise ecosystem, the company’s use of the SCP solution will evolve. It will need to converge planning and execution to facilitate more responsive, agile planning across extended value chains. It will need to link financial planning with operational planning to more effectively meet revenue and profitability projections while taking into account trade-offs required across the extended supply chain. It will need to develop stronger, more structured customer and supplier connectivity and collaboration environments that satisfy the need for ecosystem visibility and orchestration.

Gartner has identified a link between planning process maturity (using a five-level maturity framework) and the extent to which a planning organization can use an SCP solution effectively. Up to and including Level 3 planning, process maturity is supported by the basic, foundational aspects of an SCP solution. Any Level 4 and above planning processes rely more heavily on an SCP solutions’ differentiating capabilities, which include support for demand sensing, MEIO and S&OP. The differentiating capabilities are built natively into the SCP solution environment or made available through third-party applications, but should leverage the same supply chain model.

New Paradigms in Supply Chain Planning

There are new, emerging constructs that impact the SCP SOR and S&OP SOD, requiring more innovative SCP solution technology. These constructs converge as companies evolve and mature their planning processes. They culminate in Level 5 maturity (see Technology Reference Model for Stage 5 Maturity Supply Chain Planning). Emerging constructs include:
- **Algorithmic Planning** — The industrial use of complex mathematical algorithms to drive speed, scale and improved decision making, and appropriate decision automation through the leveraging of multiple data sources across all categories of supply chain planning (SCP). The algorithms facilitate encapsulation of the genetics, behaviors, decision making and responses of the supply chain to current and emerging environmental stimuli.

- **Digital Supply Chain Planning** — The use of digital technologies such as cloud, big data, RPA, AI and/or ML to improve or transform the quality of the planning decision making in the supply chain.

- **Resilient Planning** — The use of midterm and long-term plans that mitigate against uncertainty by ensuring the right degree of resiliency is built in so that short-term plans are more executable. A defining characteristic of resilient planning is that the short-term planning algorithm is not always end to end, but primarily considers only a single decoupling point to ensure the built-in resiliency is fully leveraged to ensure execution is feasible.

Some SCP solutions market providers recognize these paradigm shifts and are responding to them in different ways, but many are doing so incrementally, as opposed to delivering major releases of functions in these areas. Demand for the latest digital technology (e.g., AI, Internet of Things [IoT]) in all enterprise software markets is also applying pressure to providers in the SCP solutions market. As planning evolves to support the future needs of connected supply chain, so, too, the SCP solutions vendors and technologies available in the market will evolve.

**Focus on Reducing the Four Evils of Supply Chain Planning**

As companies aim to create higher-quality plans, Gartner has identified four evils of planning that impede those efforts (see Supply Chain Brief: Counter the Four Evils of Supply Chain Planning to Improve Plan Quality). By focusing on these four evils, companies can target their SCP technology investments to focus on the key challenges that are negatively impacting the ability to create high-quality plans. The four evils are:

- **Uncertainty** — Considers the demand-side uncertainty associated with the variability of customer and end-consumer needs and the supply-side uncertainty that can come in the form of supplier failures, manufacturing disruptions or execution-level events.

- **Bias** — Reflects the impact human decision making has on plans.

- **Data** — Considers challenges associated with data availability, quality and age.

- **Model** — Considers the accuracy of the model used for making decisions for planning and how reflective it is of real-world conditions. Companies that use multiple tools to support SCP will have multiple models.

**Top Evolutions of SCP Technology to Counter These Challenges**

SCP solution providers have invested in developing capabilities into their products to counter the four evils. There are eight trends observed that leverage digital technologies to achieve this goal.
A master data management strategy that uses machine learning to identify data anomalies and eventually clean and self-correct data.

The rise of continuous planning, where planning algorithms can run in the background, triggered by new data coming up from the execution world (e.g., customer order changes). This continuous planning enables near-instant assessment of upstream and downstream implications through E2E scenarios and contextualized collaboration between stakeholders.

Development of a digital supply chain twin that creates a digital representation of the physical supply chain by using actual event-level real-time data.

The use of hyperscale cloud platforms to deliver scale, integration, collaboration and multienterprise capabilities.

Ability to support bimodal planning through the emergence of some Mode 2 experimentation. This helps the planners to understand previously undiscovered cause-and-effect relationships across the E2E supply chain.

Integrating event-stream processing platforms into the technology architecture to further reduce data latency.

The use of ML-derived prescription that evolves into ML-derived prescriptive recommendations. This leads itself to more automation of planning decisions.

Increasing data granularity through IoT and including signals from the execution visibility layer of CORE.

Top Drivers for Vendor Selection

For this Magic Quadrant, Gartner surveyed 139 vendor reference companies about their SCP technology experiences and preferences. When asked why they purchased a vendor’s product, customer references overwhelmingly stated that functionality was a key driver. The next-strongest driver was the vendor’s innovation and thought leadership. This is further evidence that end users are highly valuing a vendor’s ability to enable higher levels of SCP maturity. The order of importance observed for drivers involved in selecting a vendor’s SCP solution is as follows (references were allowed to select multiple responses so the total will be greater than 100%):

- Functionality — 89%
- Vendor’s innovation and thought leadership — 60%
- Integration with other applications — 49%
- Vendor’s professional services, support and maintenance — 45%
- Total cost of ownership — 43%
- ROI or payback period — 37%
Application platform — 37%
Technical architecture — 31%
Application development model — 20%
Availability of third-party system integrators — 9%
Other — 8%

Likewise, when asked what key factors drove their decision, product functionally and product roadmap led the pack:

- Product functionally and performance — 88%
- Product roadmap and future vision — 57%
- Overall cost — 42%
- Strong services expertise — 35%
- Strong customer focus — 34%
- Strong consulting partnership — 31%
- Financial/organizational viability — 29%
- Preexisting relationships — 28%
- Breadth of services — 27%
- Strong user community — 15%

Over time, some companies will want to move to Level 5 S&OP maturity. This will call for a technology roadmap that strengthens long-term configurable supply chain modeling to link further with strategy and deeper financial impact analysis for end-to-end profitable trade-off analysis. It will also call for a move toward algorithmic SCP with appropriate automation of key decision-making elements supported by a high-resolution digital supply chain twin of the physical end-to-end multienterprise supply chain. This will help with:

- Alignment with corporate financial planning
- Multienterprise supply chain visibility to further support extended horizontal value chain integration
- Respond planning to better align execution and strategy
- Architectural changes necessary for scale, planning speed and collaboration
- Pace layer integration

The most likely scenario for the SCP market is that SCP vendors, and vendors with SCP solution sets, will continue to invest in extending their capabilities. For example, specialist vendors in production planning and scheduling will extend their offering to support demand forecasting and
S&OP to some degree. This will happen either through organic development, acquisitions or partnerships. Vendors that support financial planning such as CPM will continue to look at the S&OP market and, to some degree, the rest of the SCP market as an expansion opportunity. Additionally, new entrants will come from the analytics platform providers looking for business-specific use cases.

**Gartner Recommended Reading**

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

Tool: Vendor Guide for Supply Chain Planning Technology

Hype Cycle for Supply Chain Planning Technologies, 2020

Digital Business Requires Algorithmic Supply Chain Planning

Defining Digital Supply Chain Planning

Leverage Gartner’s Digital Supply Chain Planning Maturity Model to Improve Planning Quality

Mastering Uncertainty: The Rise of Resilient Supply Chain Planning

How Markets and Vendors Are Evaluated in Gartner Magic Quadrants

Implementation Best Practices for Supply Chain Planning Solutions, Part 1 — Initiation

**Evidence**

Gartner used multiple data sources to help analyze and assess each vendor included in this Magic Quadrant. Each vendor:

- Completed a detailed vendor survey covering its current operations, solution set, strategic direction, technology vision, and market and industry focus.

- Completed a standard SCP solution RFP, which included 498 detailed questions. Each RFP response was weighted based on Gartner’s view of its importance to an SCP solution and was compared with a Gartner SCP solution RFP standard.

- Submitted up to 10 customer references. Vendors were asked to submit references that best reflected their ability to deploy broadly and at scale for SCP. References were asked to complete an online survey that was used to help assess the vendor’s installed base’s level of planning maturity, current and future engagement, deployment mode, functional use, and overall satisfaction with the specific solutions they had implemented. Overall, nearly 140 end-user companies completed the survey, which also helped Gartner derive subcriteria weightings that reflected the level of interest in and importance of certain capabilities for companies deploying SCP solutions.
Presented detailed information on 17 predetermined, key SCP solution areas at a briefing with Gartner analysts, which also included a demonstration of the vendor’s solution set.

To supplement and validate the above data sources, Gartner used data from the hundreds of SCP technology client inquiries it takes each year.

**Gartner’s 2020 Customer Reference Survey methodology:** In April 2020, Gartner fielded an online survey to 154 companies that have implemented SCP technology. Vendors were asked to submit references that were using their solution to perform integrated planning across a supply chain (as opposed to a local-, regional- or functional-only deployment). References needed to demonstrate the scalability and applicability of the vendor’s solutions for broad (even global) single-instance implementations. These are key characteristics of an SCP solution deployment.

Gartner received 139 responses (a response rate of 90%) across 17 vendors. Forty-four percent of respondents were classified as large organizations ($3 billion or greater in 2019 revenue), 35% as midsize (between $500 million and $3 billion in 2019 revenue) and 17% as small (less than $500 million in 2019 revenue). Seventy-five percent of the respondents are using their SCP technology in North America; 59% in Europe, the Middle East and Africa; 46% in Asia/Pacific; and 26% in Latin America.

The survey was developed by the authors of the Magic Quadrant for Supply Chain Planning Solutions, and it was reviewed, tested and administered by Gartner’s Research Data and Analytics team. The results of this survey are representative of the respondent base and not necessarily the market as a whole.

**Note 1 The Five-Level SCP Maturity Model**

Gartner has identified the best way to analyze a company’s planning maturity and its requirements. This involves using the five levels of planning process maturity to assess the organization’s planning capability at the overall SCP level and/or the specific planning process level (for example, demand planning, supply planning and S&OP). The five levels of planning process maturity are summarized as follows:

- **Level 1** — Characterized as departmentally focused and fragmented, with unconstrained planning:
  - There is fragmented, localized planning with only basic concepts in place.
  - There is use of ERP, Excel (heavy use), business intelligence (BI) reports and maybe some commercial-off-the-shelf planning solutions deployed as point solutions locally/narrowly at a departmental level.
  - The various ERP systems are seen as the SORs, with some form of “vertical” integration to/from the discrete planning solutions, but with no horizontal integration across departmental planning activities.

- **Level 2** — Characterized as functionally focused, with local optimization and a strong cost focus:
There is an evolution of functional-level scale, such as demand planning or distribution planning.

There is use of ERP, Excel (fairly heavy use), BI reports and, increasingly, commercial-off-the-shelf planning solutions deployed at a functional/subprocess level.

The various ERP systems are seen as the SORs with “vertical” integration to/from the functional planning systems, but with only weak or patchy horizontal integration across functional planning processes (for example, between demand planning and distribution planning).

**Level 3** — Characterized as horizontally integrated demand and supply planning, supporting linked optimization across the supply chain:

- There is an evolution of horizontally integrated demand and supply planning across the enterprise supply chain, with a focus on the optimize planning capability.
- Basic planning concepts are in place, but there will be more focus on establishing a credible integrated plan that multiple stakeholders can buy into.
- There is use of integrated SCP suites to provide functional breadth across the various planning processes where demand and supply planning are covered.
- The ERP system is seen to be the transaction SOR only, with a separate SCP SOR “over the top” to support integrated horizontal planning.
- SCP SORs are implemented over a complete enterprise supply chain; however, they are currently defined for the company.

**Level 4** — Characterized as having an extended, external view of the supply chain, with profit-oriented optimization:

- Specific planning processes (such as S&OP, inventory optimization and demand planning) have matured to provide more tangible value to the business — especially through the addition of the configure planning capability.
- Level 4 planning process requirements are supported by appropriate SCP SOD functionality.
- The SCP SOR that was implemented to get to Level 3 maturity is now used to ensure that the additional SCP SOD functionality is used effectively. This means it’s used within the context of the underlying planning data, process and analytical models mastered in the SCP SOR.
- SCP SODs are likely to come from one of two sources. They may be commercially available solutions from smaller Niche Players or, ideally, additional modules from the SCP vendor that is providing the SCP SOR capability and knows how the SCP SODs and SOR work best together.
- A more dynamic single-data model of the supply chain is leveraged, and is starting to represent a digital twin of the supply chain because of the granularity and latency of data now being used to construct the model.
Level 5 — Characterized as having a multienterprise network view supported with planning and execution convergence:

- SCP SOIs are used to provide innovative planning capabilities to enhance beyond the Level 4 SCP SOD capabilities. Examples include long-term demand sensing, profitable to promise and short-term respond planning.

- SCP SOIs are likely to be in-house-developed analytical solutions or co-developments between an end-user company and an independent software vendor. SCP SOIs will probably be focused on advanced configurable analytics to help drive valuable new insight and action across a multienterprise network.

- Respond planning and execution have converged at the SCP SOR level, which has also evolved to be multienterprise.

- A digital supply chain twin is fully evolved and is a very close mirror of the physical E2E supply chain. Predictive and prescriptive analytics are pluggable into this digital twin.

- Resilient planning is supported to help midterm and long-term plans mitigate against uncertainty by ensuring the right degree of resiliency is built in so that short-term plans are executable (see Mastering Uncertainty: The Rise of Resilient Supply Chain Planning).

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**Evaluation Criteria Definitions**

**Ability to Execute**

**Product/Service:** Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability:** Viability includes an assessment of the overall organization’s financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization’s portfolio of products.

**Sales Execution/Pricing:** The vendor’s capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness.
**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

**Completeness of Vision**

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.

**Vertical/Industry Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.
**Geographic Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.