The Real-Time Supply Chain
Companies continue to be challenged by inconsistent demand from customers and an increased expectation for responsiveness – as the supply chain itself becomes more complex.

Supply chains are under more pressure from increasingly volatile demand and supply that is complex and difficult to change quickly.

Customer expectations are growing steadily, and greater revenue opportunities are possible – if a company responds quickly.

But today’s supply chains are often spread across global networks. Lack of visibility and long decision time make it difficult to plan and execute with speed and precision.

Companies need a clear understanding of their customers, the ability to respond with flexibility, and the capacity to maximize opportunities.

Fortunately, the line between planning and execution has diminished and the time needed for execution can be reduced.

Innovative technologies can analyze data in real time, enable better collaboration across lines of businesses, and provide vital business information in a network or on demand.
The Real-Time Supply Chain

The most successful companies are agile and responsive enough to operate across a volatile global supply network. By operating their supply chains in real time, they meet demanding customer requirements.

The supply chain processes of the past cannot survive in the face of today’s shorter planning cycles and blurred lines between strategy and execution.

Companies that thrive in this era of real-time, demand-driven visibility and fast response embrace the need to adjust plans in real time by understanding the market and demand.

Also, supply chain decisions must be made in context for maximum impact on financial targets. These processes must be user-friendly to meet the requirements of today’s business user, who expects a smooth transition from “managing by exception” to “managing by information.”

Innovative technologies can completely change the game for supply chain organizations by enabling them to leverage “Big Data” from structured and unstructured sources and turn data into real-time decision support.

New applications that enable collaboration and responsiveness across global networks are becoming the norm, responding to the need for speed in sensing, analyzing, and profitably responding to customers.
Companies want increased efficiency and reduced costs across their supply chain operations. With a real-time supply chain, companies have faster response times and improved service metrics while reducing costs and inventory.

To create differentiation that is consistent, companies must accelerate the entire supply chain and segment business processes. Companies cannot afford to separate their sales and operations planning from tactical planning. The connection between business priorities and operational decisions must be in balance with a clear understanding of their financial impact.

Demand-driven supply chains sense customer-demand signals and respond in real time for reduced planning-cycle times, inventory, and lead times.

This type of supply chain also brings opportunities for more revenue, promotion effectiveness, and new product launches.

Effective supply chain execution enables state-of-the-art, holistic management of all shipping, storage, and compliance needs while ensuring product availability and customer satisfaction through on-time, in-full deliveries.

Efficient, integrated supply chains enable service parts businesses to effectively plan parts inventory, provide superior customer service, and respond swiftly to meet customer requirements.
SAP Innovations

A real-time supply chain requires innovations for fast response to the marketplace, real-time visibility to consumer demand, full accessibility to data, and low-cost, low-risk deployment options. Together, these capabilities empower supply chain professionals enterprise-wide.

Database and technology solutions including the SAP HANA platform enable monitoring of high volumes of internal and external data in real time. This includes information about orders, shipments, point-of-sale purchases, and customer and social sentiments. This data enables enriched analytics and predictive forecasting, and helps mitigate demand and supply risk.

Analytics solutions enable advanced modeling and insight of every aspect of the supply network – from assessing downstream demand, improving new product launches to monitoring stock data and measuring business partner performance.

Mobile solutions give always-on access to status reporting and alerts, enabling better decision making and reducing risks to customer service and product availability. Enterprise mobility for supply chain lets companies see and respond to real-time supply chain information on the go.

Cloud-based solutions such as the SAP Sales and Operations Planning application allow fast, low-risk deployment, minimizing IT footprint while ensuring long-term scalability, flexibility, and integration. Cloud-based processes give immediate access to analysis, new levels of business partner networks, and supply chain data to stakeholders.
Sense, Plan, and Execute to Meet Demand

Real-time supply chains identify current demand, plan for supply to meet forecast demand, and execute to maximize customer satisfaction and ensure product availability where and when demand occurs. These supply chains:

**Self-Monitor and Collaborate**
Monitor key performance indicators in real time

**Align Business Plans to Financial Targets**
Make decisions in context and manage exceptions with an understanding of performance impact

**Demand-Driven**
Sense and accurately respond to customer demands across a complex global network

**Efficiently Execute**
Deliver the perfect order how, when, and where the customer wants it

**Provide Excellent Customer Service**
Implement an efficient, integrated supply chain for your service parts business
Self-Monitor and Collaborate

Business decisions made within the supply chain need to be contextual and exceptions must be managed with an understanding of their impact on performance, enabling a true management-by-information approach.

Supply chain information must be accessible in real time so decisions and trade-offs are done in full context of your KPIs and business performance objectives.

This accessibility includes direct access to analytical data as supply chain decisions are being made, thereby reducing delays between supply chain processes and availability of performance impact measurements.

Real-time supply chains move beyond blanket policy management by empowering stakeholders with the ability to segment their business, allowing direct access to their business rules with clear understanding of business policy impact.

Today’s collaboration must be facilitated using real-time insight to information, key performance indicators, and the impact across a network of business participants.

By managing the supply chain in this manner, organizations can make collaborative decisions and address different business segments with real-time insights into the impact of their actions.
Best-run companies in all industries can effectively manage risk using an established sales and operations planning approach. Organizations can effectively introduce new products, enter new markets, capture new customers, and outpace their competition while maintaining high levels of customer service and profitability.

Using leading sales and operations business planning practices, organizations cross-functionally integrate people, processes, and systems to optimize their sales and operations planning processes. Effective management decisions are made using a comprehensive overview of demand, supply, inventory, capacity, and impacts to financial targets. Also, organizations can run simulations of varying business conditions that impact on revenue, market share, and profitability as well as implement better inventory policies.

Best-run organizations focus on formal sales and operations processes including incorporating key business functions to align with demand, supply, and financial decisions. These companies use holistic business planning in which input from multiple sources enables an accurate, real-time demand picture that is balanced with the realities of operational decisions and aligned with a clear understanding of financial targets.

46% Lower supply chain planning cost (% of revenue) for organizations with higher maturity of sales and operations planning process

Source: SAP Performance Benchmarking
Companies anticipate and shape demand based on near-real-time visibility to demand signals, then easily incorporate demand into core business processes.

Business moves and changes quickly. Companies must implement supply chain processes that are demand-driven.

The constant fluctuation of demand and supply requires demand-driven business processes that are agile and responsive to change.

Companies need a more accurate overview of demand, including new types of visibility, which may include downstream demand signals, market data, or social-sentiment information.

Once this insight is obtained, companies can better sense and respond to changing demand patterns and incorporate predictive insight into what is coming next.

This insight enables better manufacturing and supply decisions by removing aggregate planning assumptions for more accurate alignment of inventory and service objectives.
Efficiently Execute

Achieve superior customer satisfaction levels, reduce logistics costs, and utilize operational assets more efficiently. With these best practices, companies can manage their warehouses and transportation processes while providing insight into product creation and the movement of goods and assets across the supply chain.

In the face of demanding, knowledgeable customers, aggressive competitors, and shrinking margins, profitably delivering the “perfect order” every time is a business imperative. As always, this is a balancing act between superlative customer service and the cost of delivering that level of customer service.

The best plan in the world will not generate the “perfect order” if distribution and fulfillment processes are not aligned. It’s all about speed, efficiency, and sustainability.

Integrated logistics improve efficiency, readiness, and agility by operating, orchestrating, and monitoring resources both inside and outside your organization.

Having the ability to sense and respond to changes in your network and anticipate and avoid bottlenecks by managing your labor, assets, and equipment is vital. It is critically important to have the tools in place to monitor and analyze performance across your network.

22% Lower transportation spend (% of revenue) when transportation is integrated with enterprise planning functions, trading partners, and key carriers

Source: SAP Performance Benchmarking
Provide Excellent Customer Service

Organizations that establish an efficient, integrated supply chain using planning, execution, and collaboration for their service parts business respond quickly to meet customer requirements.

Today’s service-parts customers demand higher performance. They don’t want to wait for a part to be ordered and delivered; they expect you to have it right here, right now.

To meet customers’ high expectations, companies must manage inventory costs and the complexity of their global supply chain to ensure the right parts are in the right places at the right times – at the right cost.

Also, companies must coordinate and collaborate across all service parts processes including planning, procurement, transportation, warehousing, and fulfillment, not just for a single location, but globally, across the entire service supply network – in real time.

In the past, companies cobbled point solutions and homegrown systems into a conglomeration of not-quite-integrated data sources that were “real time” as of the previous week’s batch job.

The unfortunate results left many companies with escalating costs, inefficient operations, poor customer service, and no visibility of service parts inventory.
Real-Time Supply Chain Value Map

SAP solutions address key requirements for the next-generation real-time supply chain.

- Supply Chain Monitoring
- Supply Chain GPS
- Sales and Operations Planning
- Inventory and Service Level Optimization
- Demand-Driven Supply Chain
- Collaborative Response Management
- Logistics and Order Fulfillment
- Manufacturing and Supply Planning
- Service Supply Chain
- Service Parts Management
- Transportation Management
- Warehouse Management
- Track and Trace

SAP Solutions
Supply Chain Monitoring

Manage by information with real-time analysis and monitoring.

Supply chain monitoring enables real-time analysis, insight into segmented business policies, and visibility to alerts based on KPIs, performance, and current supply chain set-up.

Supply chain monitoring works like a GPS system helping supply chain professionals easily navigate, analyze, and manage the entire supply chain in real time. Executives make better decisions, segment policies to the realities of the business, and effectively manage the supply chain. SAP supply chain monitoring provides:

- **Segmentation** – Defines rules and policies for the supply chain
- **Analytics** – Including real-time access to demand, supply, capacity, and inventory
- **Alerting** – Shows alerts in the context of information being presented

Source: SAP Performance Benchmarking

17% Lower inventory carrying costs where "what-if" scenarios are used extensively to evaluate different problem resolution approaches

Source: SAP Performance Benchmarking
Sales and Operations Business Planning

Incorporate and align demand and operations with financial targets.

Companies must evolve sales and operations planning into sales and operations business planning – in which collaboration, operations, and financial data are effectively managed and the company can simulate impacts in areas such as inventory and service levels.

- Sales and Operations Planning
  - Perform consensus planning, match demand with supply, and align to financial targets through an easy-to-use, multi-organizational, collaborative environment.

- Inventory and Service Level Optimization
  - Determine optimal inventory amounts at each tier within the supply chain based on demand intelligence, business objectives, and lowest cost to serve. Incorporate inventory management into your sales and operations planning process to make better decisions with insight into the impact on inventory and service levels.

- Supply Chain Scenario Planning
  - Easily perform supply chain simulation and what-if analysis and compare the best results for both tactical and strategic decisions. Align these analyses with your sales and operations process.
Demand-Driven Supply Chain

Easily analyze massive amounts of demand information and perform immediate supply chain response.

Connected consumers have even more choices today – and even greater expectations. To stay competitive and achieve business objectives, companies must have detailed demand information and respond quickly.

SAP supports a demand-driven supply chain, allowing you to:

- Capture and sense demand in real time. Incorporate new demand sources, including Web and market research, that provide a holistic picture and allow you to incorporate your planning processes.
- Incorporate demand directly into mechanisms that shape supply chain response. Realign supply and demand as reality unfolds.
- Align inventory with demand intelligence to achieve lowest cost to serve. Synchronize supply and manufacturing planning across internal and external manufacturing sites.
Logistics and Order Fulfillment

Enable best-in-class freight and shipping operations with transparency.

The SAP Transportation Management application supports the complete transportation management lifecycle, including order-to-cash and order-to-pay processes. The SAP Extended Warehouse Management application enables companies to fully automate warehouse and distribution operations. Track and trace solutions from SAP offer product traceability as well as procurement and fulfillment monitoring.

- **Transportation Management**: Combine transportation and warehouse processes with comprehensive supply chain visibility. Plan, consolidate, and optimize freight shipments while considering applicable limitations and constraints, and costs for inbound and outbound shipments.

- **Warehouse Management**: Enables companies to fully automate warehouse and distribution operations including inbound processing and receipt confirmation, cross-docking, outbound processing, and warehouse, storage, and inventory management.

- **Track and Trace**: Monitor the procurement and sales order fulfillment processes and actively track activities. Track assets as well as products to quickly identify and address issues.
Service Supply Chain

Find the right service parts at the right time and place.
Establish an efficient, integrated supply chain for your service parts business. Respond swiftly to meet customer requirements and perform parts fulfillment, planning, procurement, and warehousing using a single, integrated solution.

Companies need a comprehensive, real-time solution for globally managing their service parts. This solution must enable executives to collaborate across all processes including planning, procurement, transportation, warehousing, and fulfillment.

Built-in integration based on industry best practices is key to establishing a solution with the lowest possible total cost of ownership. Without it, a company would need to build and maintain more than 300 complex integration points.

The benefits of comprehensive service parts management are parts inventory visibility across the entire supply chain, increased supply chain efficiency, superior customer service and better planning, warehousing, and fulfillment.

29% Of companies have visibility into spare parts inventory across the organization and can conduct regular inventory analysis to minimize cost.

Source: SAP Performance Benchmarking
SAP Innovations

Breakthrough technology makes it possible to quickly and easily analyze massive amounts of data and provide new levels of flexibility and value through the cloud. Companies also extend their reach with enterprise mobility, allowing more participants in the supply chain through many devices.

SAP HANA
Handle large volumes of highly granular data and perform analysis in-memory to drive better business decisions.

Mobile
Unwire employees, provide accessibility to new supply chain participants, and equip your company’s business processes to make agile, informed decisions closer to the customer.

Analytics
Targeted, relevant insights that matter most to your business and help you focus on essential factors for success.

Cloud
Fast, flexible deployment of business processes transform and optimize global supply networks and provide new levels of collaboration and process monitoring.

Higher business satisfaction rating where the company’s IT performance is linked with business outcomes

Source: SAP Performance Benchmarking
SAP Business Suite Powered by SAP HANA

SAP Business Suite software powered by the SAP HANA platform enables supply chain executives to balance supply to meet demand across complex logistics networks at optimal cost.

Sales and Operations Business Planning

- Enable collaboration across departments to deliver a single, aligned plan using a unified model of demand, supply chain, and financial data to analyze in real time at any level of granularity or dimension. Rapid simulate and compare scenarios on a complete, detailed planning model.

Demand-Driven Supply Chain

- Get complete visibility into demand and enable real-time demand analytics to avoid out-of-stock/out-of-shelf situations to increase revenue.

Logistics and Order Fulfillment

- Real-time access to complex inventory management through an analytical inventory management cockpit.

Service Supply Chain

- Optimize industry best practices to streamline service parts planning processes and transparency.

Supply Chain Monitoring

- Execute decisions in real time through embedded dashboards to drill down into issues and perform ad-hoc analysis.
### SAP HANA

Unprecedented availability of customer and demand data gives promising opportunities to conduct business like never before. Best-run companies can use Big Data to drive competitive advantage.

<table>
<thead>
<tr>
<th>Supply Chain Monitoring</th>
<th>Sales and Operations Planning</th>
<th>Demand Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable supply chain professionals to perform high-speed analysis and KPI tracking against information aligned to the current process.</td>
<td>Integrate high volumes of demand, supply, and financial data to run an effective, detailed global sales and operations plan that quickly allows executives to perform business planning, simulation, and embedded analysis.</td>
<td>Collect, store, manage, and analyze large volumes of highly granular demand data, anticipate demand changes, and accurately react to dynamic customer behavior.</td>
</tr>
</tbody>
</table>
Fewer days in inventory when a high percentage of warehouse/inventory management employees have mobile access

Source: SAP Performance Benchmarking

Mobile

Connect sales, service, and operations teams to back-office processes through convenient and easy-to-use mobile solutions. Perform business functions on the fly and have full accessibility to information at any time.

- **Mobile Supply Chain Analysis**: Access real-time insights into global-planning data and KPIs, and perform root cause analysis using any mobile device.
- **Mobile Planning and Forecasting**: Enable consensus forecasting and planning through mobile data directly into your processes, see key information updates, and be alerted to process requirements.
- **Mobile Demand and Customer Insights**: Access detailed demand signal information for downstream sales, inventory availability, customer process, and promotion performance.
- **Mobile Order Status Tracking and Tendering**: Track orders and fulfillment status online anytime, anywhere to help ensure compliance with service level targets, spot potential exceptions, and respond quickly and profitably to demand dynamics.
Analytics

Provide up-to-the-minute visibility of key performance indicators across every facet of business operations and enable real-time monitoring, root-cause analysis, risk mitigation, predictive modeling, and optimization.

**Supply Chain Monitoring**

Measure the key drivers of supply chain in real time across planning, collaboration, and execution utilizing live operational data. Perform context analysis to complement core supply chain processes.

**Sales and Operations Business Planning**

Analytics embedded in sales and operations planning enables financial target tracking and KPI impact analysis as planning decisions are made.

**Demand-Driven Supply Chains**

Demand signal analytics are highly efficient tools that quickly analyze massive amounts of demand signals for sound decision making.

**Logistics and Order Fulfillment**

Warehouse, transportation management, and track and trace analytics provide operations visibility for efficient performance monitoring and problem resolution.
Cloud

Fast, flexible deployment of critical solutions is essential for on-demand. Best-run supply chains deploy cloud solutions to create global sales and supply networks that quickly scale.

Deploy cloud-based sales and operations planning for fast, flexible inclusion of your entire supply network and global alignment with the most profitable plans. Utilize the cloud for easy access and input to planning data, receive immediate updates on plans with context, and perform cloud-based simulations.

Utilize a cloud-based information hub that enables scalable connection with business partners and securely exchange critical supply chain data based on a common information standard.
Best-Run Customers

SAP is the #1 provider of overall supply chain management solutions (and gaining).

SAP is the #1 supply chain planning solution provider.

17 of the top 25 Gartner supply chains use supply chain solutions from SAP.
Customer Co-Innovation

Co-innovation for the SAP Supply Chain Management application contributes to every new innovation and helps steer the strategic solution road map.

SAP actively performs co-innovation in the areas of new solution definition, in-memory computing, analytics, usability, and enterprise mobility through executive councils and formal co-innovation.

Co-Innovation Partners

Nestlé entered into a partnership with SAP when using the SAP Transportation Management application. The partnership involved traditional implementation and cooperatively developing new functionality in the areas of tendering, charge management, and planning.

Panalpina, a global leader in the logistics service provider industry, partnered with SAP to enhance SAP Transportation Management for air and sea freight management.
Amanco Brasil Ltda is fast-growing PVC pipe and pipe fitting producer that employs 1,600 workers and has an annual revenue of $340 million. The company is aggressively increasing its sales and share in the Brazilian market.

The company chose the SAP Advanced Planning & Optimization component and the SAP Event Management application to integrate its demand management, supply planning and sales operations. As a result, Amanco Brasil has dramatically improved its demand forecasting and on-time, accurate order delivery while reducing inventory levels and operating cost.

Key Benefits

- Achieved 95% total sales planning accuracy
- Improved on-time-in-full order delivery
- Quickly react to competitor challenges
- Adjusted inventory to changes in demand

“The sales and operations planning project was fundamental for the growth of the Amanco market share in the Brazilian market.”

Humberto Zalewski Dominoni, Supply Chain Director, Amanco Brasil Ltda.
Artoni is a family business that processes more than 700,000 shipments per month. Headquartered in Northern Italy, Artoni employs about 600 direct employees and 3,000 subcontractors and has an annual revenue of €217 million.

Artoni has decided to re-engineered its business processes and replaced its legacy system with the SAP Transportation and Warehouse Management application to transform itself from a regional transportation provider to an international logistics company. As a result, Artoni managed to boost its operational efficiencies and cut cost.

Key Benefits

- Reduced CO₂ emissions through optimized transportation routes
- Increased operational efficiencies
- Reduced operational costs through closer planning between logistics and transportation

“The SAP solutions helped us realize a 10% savings on the cost of goods transported. In addition, our warehouse worker productivity increased by 30%, as measured in hours spent per 100 kilos transported.”

Norberto Delendati, Organization and IT Director, Artoni
V&M do BRASIL, owner of one of the world’s most modern integrated steel plants and also a leading Brazilian producer of seamless hot-rolled steel tubes, has an annual revenue of $1.4 billion.

The company has decided to implement the SAP Extended Warehouse Management application in order to streamline its shipping area and to gain greater visibility over its warehouse processes. As a result, V&M do BRASIL was able to optimize shipment of finished goods and increase customer satisfaction, while reducing costs and risks related to inventory inconsistencies.

Key Benefits

- Improved warehouse throughput due to reduced loading time
- Increased customer satisfaction due to increased order accuracy
- Greater visibility and control over inventory and warehouse performance
- Reduced costs and risks related to inventory inconsistencies

“The main benefits of implementing the warehouse management functionality in our shipping area were a greater reliability of the information storage, real-time synchronization of movement of products and information, and better logistic processes.”

Vinícius Cotta Gomes, Logistics Coordinator, V&M do BRASIL
Why SAP?

SAP solutions empower today’s supply chain professionals by enabling demand-driven approaches, fast response to market dynamics, real-time visibility to customer demand, and low-cost yet flexible deployment options, all while leveraging the latest innovations.

Tightly Integrated, End-to-End Solutions
SAP offers the most comprehensive portfolio of solutions for supply chain management, enabling a responsive network from strategic supply chain planning to tactical fulfillment and efficient execution.

Leveraging Key Innovations
SAP solutions are based on the industry’s most innovative technologies which combine functionality for database and technology, mobile, analytics, and cloud-based deployment to optimize the supply chain at the lowest possible cost.

Proven Time to Value in Global Implementations
The world’s leading consumer products companies across every major segment of the industry around the world continue to rely on SAP to build a real-time supply chain.
Find Out More About How Your Organization Can Become Best-Run

Benchmark Your Performance

Position your organization for dominance in this new economy with the business performance benchmarking program from SAP – available free to SAP customers and select prospects. The SAP benchmarking program has helped more than 3,000 organizations assess their strengths, uncover areas for improvement, and identify best practices and IT strategies that generate clear, tangible value – not someday, but today.

Go Live in Weeks

Here’s the fastest way to run your business better: our rapid-deployment solutions. In one package, you get everything you need to be up and running quickly – including preconfigured software and implementation services – in just weeks. With a defined scope and predictable costs, there are no surprises.

Join Your Community of Practices

Every day, SAP Community Network (SCN) changes the way that thousands of SAP users work. It lets members help one another solve problems, learn, and invent new ways to get things done – faster. Find out how to connect with people, content, and resources.

Visit valuemanagement.sap.com >>

Visit sap.com/solutions/rds >>

Visit scn.sap.com >>
Solution Overview
Supply Chain Management

Executive Summary
Sense, Plan, Execute

SAP Solutions
SAP Innovations
References
Contact Us

Go for a test-drive; visit us online at www.sap.com/SCM
Also, visit us at our community pages to learn more:
www.sap.com/scm
http://scn.sap.com/community/scm
www.twitter.com/SAPI2D