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Dear Reader,

Welcome to the digital logistics and order fulfillment compendium from SAP, a compilation of value collateral, customer success stories, business transformation studies, solution videos, brochures, and press articles.

Our intention throughout this e-book is to provide a single digital experience for our readers. We trust it will inspire you and your teams to see how SAP solutions can help make the work of experts in supply chain execution easier so they can focus on creativity.

With this compendium, we also showcase the power of SAP teams working together with customers and partners to develop customer value in global deployments.

We hope you gain a fresh sense of enthusiasm using this e-book, which is updated regularly. More than ever, making innovation adoption an empowering experience for our customers is our mission. We look forward to our continued collaboration and to receiving your valuable feedback and suggestions.

Best regards,

Till Dengel
Vice President, Digital Logistics Solution Management, Digital Supply Chain, SAP SE
Move products and materials quickly and efficiently with software for supply chain logistics and order fulfillment from SAP.
Digital Logistics from SAP
Within the Intelligent Enterprise

SAP Overview Video

How do you streamline logistic processes to balance shipment costs with the service levels customers expect? It’s all about managing the storage, movement, and tracking and tracing of your products.
SAP Extended Warehouse Management
Digitalize and accelerate your warehouse operations. Manage a high volume of goods with a modern, flexible warehouse management system.
SAP Extended Warehouse Management

Optimize your storage and warehousing processes with a cutting-edge warehouse management system.

**Inbound process management**
Validate data for advanced shipping notifications, optimize receipt processes, and support put-away activities.

**Storage and operations management**
Manage shared stock ownership, track physical inventory, improve yard visibility, and monitor material-handling equipment.

**Outbound process management**
Schedule and optimize pick-pack-ship activities, and use augmented reality and voice picking to increase productivity.
SAP Extended Warehouse Management

Manage high-volume warehouse operations and integrate complex supply chain logistics with your warehouse and distribution processes – delivering the ultimate in visibility and control. Optimize inventory tracking, cross-docking, distribution operations, multichannel fulfillment, and more – all in real time.

- On-premise and cloud deployment
- Comprehensive warehouse solution
- Fully integrated quality, production, and track-and-trace processes
- Direct control of warehouse automation equipment
Harness Global, End-to-End Logistics: Optimize Warehouse and Distribution Center Operations

SAP Solution Brief

Explore how the SAP Extended Warehouse Management application can help enhance your inventory and storage management processes and support goods movement by all modes of transportation.
Key Benefits

**Reduce warehouse costs**
Maximize the use of resources – such as equipment, space, time, and people – and realize new savings.

**Improve service**
Reduce order cycle times and offer modern, value-added services to customers.

**Increase productivity and accuracy**
Standardize processes and procedures, reducing error rates and increasing inventory accuracy.

Continued
Key Benefits

Enhance flexibility and scalability
Make processes more malleable and use automation to handle high-volume transactions seamlessly.

Boost transparency
Gain new visibility into stock, processes, labor use, and warehouse automation.

Help ensure compliance
Help ensure multinational regulatory compliance for international trade processing and sustainability requirements.

Read about additional benefits
Key Capabilities

Inbound processes
- Advanced shipment notification
- Yard management
- Inbound optimization
- Quality management

Storage and operations
- Physical inventory
- Replenishment
- Slotting and rearrangement
- Kitting and value-added services

Outbound processes
- Warehouse order optimization
- Wave management
- Packing control
- Process monitoring

View capabilities and use cases
What is **SAP Warehouse Insights**?

- **SAP Warehouse Insights** is an advanced planning cloud solution for modern warehouses to optimize warehouse operations. With algorithms, it visualizes a warehouse layout, analyzes warehouse operation KPIs, simulates optimization scenarios, and monitors warehouse operations in real time.

- **SAP Warehouse Insights** complements the functions and capabilities of SAP Extended Warehouse Management, which creates and executes warehouse tasks such as picking, packing, and shipping. SAP Warehouse Insights leverages cloud computing and scalability.

- **SAP Warehouse Insights** is built and delivered on SAP Cloud Platform (Cloud Foundry environment).
What’s New in SAP Extended Warehouse Management?

Learn how to take advantage of new enhancements in the latest version of the SAP Extended Warehouse Management application.
Explore the SAP Ecosystem

Extend product capabilities by using APIs and applications from SAP and our ecosystem to build sample apps, extensions, and open integration with SAP.

ShipERP
Perform real-time carrier rate quoting, shipment creation, shipment tracking, proof of delivery, and label printing.

BCCD TranASAP
Increase inventory accuracy by mobilizing SAP transactions for RF scanning.

mInventory – Mobile Inventory and Warehouse Management
Perform day-to-day inventory transactions on mobile devices to improve operational productivity and reduce costs.
SAP Transportation Management
With transportation and logistics management software, you can reduce transportation complexity dramatically by integrating fleet and logistics management throughout your network.
SAP Transportation Management

Increase on-time deliveries and get real-time visibility into global and domestic shipping across all transportation modes.

**Strategic freight management**
Optimize freight procurement for multiple modes, lower spending, and monitor shipper- and trade-agreement compliance.

**Order management**
Streamline order management processes and generate optimized, rules-based routing proposals dynamically.

**Transportation planning**
Enhance resource usage and carrier selection with automated planning processes and integrated local business views.

**Transportation execution**
Reduce shipping costs and improve cargo handling to run your logistics faster, more dynamically, and more responsively.
SAP Transportation Management

Consolidate orders and maximize the return on your transportation spend. Forecast demand and shipment volumes accurately to fine-tune transportation planning. Enhance freight, fleet, and logistics management to gain real-time visibility into global transportation and domestic shipping across all transportation modes and industries.

- On-premise and cloud deployment
- Transportation and demand planning
- Interactive freight tendering
- Collaboration portal
Introduction

SAP Extended Warehouse Management

SAP Transportation Management

SAP Logistics Business Network

SAP Yard Logistics

SAP Transportation Resource Planning

Related Solutions for Logistics

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Key Benefits

Increase business productivity
Manage transportation requirements with more efficiency and less redundancy through automation and electronic collaboration – from order entry to settlement.

Improve end-to-end visibility and service
Lower spend on expedited orders and overhead with electronic tracking and tracing, cross-system document flow, freight consolidation, and data-driven rate negotiation.

Improve cash flow for freight transportation
Reduce unplanned overcharges and eliminate invoice errors by settling costs accurately and automating accrual generation, auditing, and charge tracking.

Continued
Key Benefits

**Standardize logistics processes and operations**
Deliver a consistent logistics experience. Centralize rate and data management with a common platform that is simple to integrate, extend, deploy, and access.

**Accelerate decision-making with real-time insight**
Deliver flexible reporting to assess all freight costs. Evaluate transportation intelligence with graphical and interactive dashboards running on the SAP HANA® platform.
Key Capabilities

Strategic freight management
Optimize freight procurement for multiple modes. Use a sophisticated transportation management system to lower spending and measure shipper- and trade-agreement compliance.

Order management
Minimize freight costs and enhance customer service. Improve the efficiency of order and process management and generate optimized, rules-based routing proposals dynamically.

Transportation planning
Lower transportation costs and achieve on-time delivery. Enhance resource use and carrier selection with automated planning processes and integrated local business views.

Continued
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**Key Capabilities**

**Transportation execution**

Improve cargo handling to run your logistics faster, more dynamically, and more responsively. Reduce shipping costs with a streamlined process and maximized efficiency.

**Freight costing and settlement**

Improve the accuracy and transparency of your transportation costing and invoicing. Automate freight calculations and integrate transportation management and billing data.

**Analytics and reporting**

Support real-time, data-driven decision-making with in-depth insight. Lower data complexity while enabling efficient collaboration among your logistics business partners.

View capabilities and use cases
See the Future of Transportation Management

What’s new in the 1909 release of the SAP Transportation Management application, and what is of greatest value to our customers? Find out from Peter Flensberg, head of transportation management, as he discusses the release highlights with Matthias Koch, chief product owner of SAP Transportation Management.
Simplify and Optimize Transportation Management
SAP Brochure

Optimize logistics processes and improve service while increasing visibility and control with SAP Transportation Management. Learn how the software helps streamline end-to-end processes for goods movement across all transportation modes.
Ignite Future Expansion into Emerging Markets
SAP Business Case Video

See how Vestel achieves better visibility in its supply chain while using SAP Transportation Management along with the SAP Event Management and SAP Supply Network Collaboration applications. And Vestel’s SAP story has not come to an end: the company is currently implementing SAP Extended Warehouse Management.
SAP Logistics Business Network
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Ease intercompany logistics with collaboration and insights.
SAP Logistics Business Network

Enable intercompany collaboration with an open, secure logistics network that connects business partners.

**Freight logistics collaboration**
Support third-party logistics providers, oversee the freight order lifecycle, and share insights across the value chain.

**Tracking and tracing**
View the status of goods in transit and handle deviations to plans during purchase, sales, and freight order fulfillment.

**Real-time alerts and notifications**
Gain insights from analytics and benchmarking based on real-time alerts and notifications.
SAP Logistics Business Network

Benefit from an open, secure logistics network that connects business partners for intercompany collaboration and insights. SAP Logistics Business Network provides a central entry point to manage logistics transactions, exchange documents with key business partners, and gain transparency across the complete value chain.

- Cloud deployment
- Access to a single business partner directory
- Integration of logistics management processes
- Role-based access based on specific needs
Key Benefits

Break up siloed business operations
Onboard once and collaborate with many stakeholders on an open, secure network that tightly integrates with your logistics business processes.

Improve efficiency of logistics processes
Use real-time information and situational insights to ease decision-making for every role and find the best way to automate logistics collaboration.

Cut the cost of integrating your value chain
Apply common communication standards and digitalize them across your complete network of logistics processes.

Related Solutions for Logistics

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Key Capabilities

Freight logistics collaboration
- Support third-party logistics providers and their business partners
- Manage transactions jointly and share insights across the value chain
- Oversee the complete freight order lifecycle, from contracting to reporting and invoicing

Tracking and tracing
- Get visibility into your goods in transit to optimize your logistics supply chain
- Avoid costly firefighting by notifying relevant stakeholders about deviations from the plan
- Handle deviations from the plan during purchase, sales, and freight order fulfillment

View all capabilities
SAP and Uber Freight Join Forces to Deliver On-Demand Logistics

Shippers can now access transportation rates from Uber’s digitally activated carrier network. With the integration of Uber Freight into SAP Logistics Business Network, shippers can get real-time quotes and guaranteed freight capacity, greatly simplifying load management and execution.
The material traceability option for SAP Logistics Business Network, is a blockchain application that allows food companies to trace multi-ingredient products across company boundaries and from farm to consumer. This software-as-a-service offering from SAP supports end-to-end product traceability and recall management for the food industry. It aims to improve transparency, visibility, sustainability, and efficiency by connecting the entire supply chain.
SAP Yard Logistics
Prepare your logistics for the future with integrated yard management.
SAP Yard Logistics

Simplify truck, ocean container, and rail yard management.

Order and appointment planning
Improve resource use to reduce idle time and plan incoming and outgoing transport in collaboration with carriers.

Yard execution and processing
Increase visibility and control of yard processing and accelerate activity execution to increase the throughput of the yard.

Integration capabilities
Support end-to-end logistics processes in the cloud and gain insights using graphical monitoring features.
SAP Yard Logistics

Run more-efficient and profitable supply chain logistics with the SAP Yard Logistics application. Maximize your visibility into all yard processes and preview planned workloads with a range of visualization and reporting tools so you can optimize resource use and support planning, execution, and billing with a single system.

- On-premise deployment
- Integrated, comprehensive yard logistics management
- Real-time visibility into order status
- Support for connected devices in the yard
SAP Yard Logistics
SAP Overview Video

Simplify and streamline truck, container, and rail yard operations with SAP Yard Logistics. This yard management application maximizes visibility into all yard processes and lets you preview incoming workloads.
Key Benefits

**Improve visibility into your processes**
Get products and services to market faster and improve customer service by identifying, avoiding, and solving potential issues with greater insight and control.

**Accelerate gate-in and gate-out processes**
Achieve a significant reduction in processing time and staffing needs by supporting capabilities for executing activities faster and increasing yard throughput.

**Use assets and areas more efficiently**
Increase the productivity of your existing equipment – such as shag trucks and shunting locomotives – to lower your overall need for additional resources.
Key Capabilities

Order and appointment planning and check-in

- Improve resource use to reduce idle time and avoid intermediate storage and wasteful movement
- Plan incoming and outgoing transport with more system support and collaboration with carriers
- Manage gate-in and gate-out processes more efficiently with integrated and automated processes

Yard execution and processing

- Deliver products and services faster and improve customer service with visibility and control
- Accelerate activity execution to increase the throughput of the yard
- Manage processes and employees efficiently with mobile and comprehensive planning capabilities

Continued
Key Capabilities

Integration capabilities and monitoring

• Use comprehensive graphical monitoring to identify, avoid, and solve potential issues with insight
• Manage the end-to-end processes by integrating supply chain management software in the cloud
• Reduce manual efforts in yard operations with automated capture and analysis of high-quality data

Read the information sheet
SAP Transportation Resource Planning
Our transportation resource planning software provides visualization, simulation, planning, monitoring, and analysis tools to help you ensure the right resources are available at the right place and time at a minimal cost.
SAP Transportation Resource Planning Product Tour

Learn how the SAP Transportation Resource Planning application can help you increase visibility and insight across transportation resources so you can optimize utilization, drive down costs, and serve your customers better.
SAP Transportation Resource Planning 3.0

SAP improved and extended the usage of SAP Transportation Resource Planning significantly by adding new functionality and leveraging the latest capabilities of SAP HANA, no matter whether:

- You are a carrier or shipper
- You use railcars, containers, or other transportation resources
- SAP Transportation Resource Planning is connected with SAP Transportation Management or used as a stand-alone solution
- You want to balance your resources, optimize costs for repositioning of empties, or support triangulation decisions

With SAP Transportation Resource Planning, you can optimize the usage of your transportation resources, reduce costs, and at the same time increase service levels.

SAP Transportation Resource Planning makes sure the right resources are available when and where you need them at minimal cost.
Key Benefits

Accurately forecast and monitor resource supply and demand

Integrate with a central logistics system, such as SAP Transportation Management

Optimize the locations and dates for resource pickup and return

Access detailed data and KPIs about ocean containers, railcars, trailers, and other transportation resources

Avoid or optimize the repositioning of empty resources
Track and monitor transportation resources
Keep track of the current stock and status of your transportation resources according to type and location. Monitor resource-relevant KPIs.

Forecast supply and demand
Use enhanced models to generate accurate forecasts of your resource supply and demand situation.

Improve transportation resource planning
Simulate scenarios to correct and prevent imbalances in the supply and demand of transportation resources – and help your planners make more-informed decisions.
**Functional Capabilities**

**Optimize empty resource movement**
Find the optimal locations and dates for the pickup and return of your empty transportation resources.

**Set up event-triggered alerts**
Receive detailed alert information and timely warnings about critical resource situations.
SAP Transportation Resource Planning delivers support to provide the right resource at the right time and right location to fulfill customer demand at minimal cost, allowing you to:

- Increase the visibility of transportation resources
- Monitor the current stock and status of your resources according to type and location
- Determine the supply and demand of empty transportation resources
- Obtain forecasts of your supply and demand situation
- Make decisions to avoid or optimize resource repositioning based on calculated provisioning and return locations
- Support and enable triangulation decisions
- Balance the stock of empty resources at minimal cost in the network
- Trigger plan execution in the transportation management system
- Monitor resource-related KPIs
Relevant Business Processes

Transportation Resource Lifecycle Example: Ocean Container

- Acquisition or on-hire resource
- Disposal or off-hire resource
- Balance (reposition) resource
- Maintain and repair resource

- Move empty resource to shipper or shipping point
- Move full resource to terminal or yard
- Move empty resource to depot or yard or demand
- Move full resource to consignee or stock receiving point
- Move full resource to terminal or yard
- Move full resource to connecting train, vessel, or truck
- Move full resource terminal or yard to train, vessel, or truck
- Cargo flow
- Empty flow
Relevant Business Processes

Transportation Resource Lifecycle Example: Railcar

- **Acquisition or on-hire resource**
- **Disposal or off-hire resource**
- **Balance (reposition) resource**
- **Maintain and repair resource**
- **SAP® Transportation Resource Planning**

- **Move empty resource to shipper or shipping point**
- **Move full resource to terminal or yard**
- **Move full resource terminal or yard to train, vessel, or truck**
- **Move full resource to connecting train, vessel, or truck**
- **Move empty resource to depot or yard or demand**
- **Move full resource to consignee or stock receiving point**
- **Cargo flow**
- **Empty flow**
Process Flows

**Visibility**
- Resource
- Stock
- Moving stock
- Change history
- Lease contracts
- Movement demands

**Supply and Demand**
- Flexible definition of supply and demand plan
- Supply and demand responds to data from transportation management system
- Granular forecast of supply and demand
- Availability check
- Business rule driven alerts
- Tactical resource inventory

**Resource Planning**
- Scoring based planning algorithms
- Configure planning scenarios
- Pickup location determination for resource provisioning
- Determination of return location
- Trangulation
- Manual and automated depot balancing
- Response repositioning

Continued
**Process Flows**

**Plan Execution**
- Integration into transactional data in transportation management system: update location and time
- Creation of repositioning orders in transportation management system
- Tracking of plan execution in supply and demand
- Respond to disruptions and changes

**KPI Monitoring**
- Resource utilization
- Idle rate (by percentage)
- Import and export amount
- Stock levels
Related Solutions for Logistics

SAP Advanced Track and Trace for Pharmaceuticals

SAP Solutions for Auto-ID and Item Serialization

SAP Event Management

SAP Global Batch Traceability
Ensure Global Compliance with SAP Advanced Track and Trace for Pharmaceuticals

Comply with drug serialization and reporting requirements – and fight counterfeiting and illicit trade – with the SAP Advanced Track and Trace for Pharmaceuticals application. This track-and-trace software integrates serialization with your processes and provides country-ready reporting packages. Minimize the cost of compliance, manage a secure pharma supply chain, and improve patient safety.
Act in Real Time, with Real-World Awareness, with **SAP Solutions for Auto-ID and Item Serialization**

Reduce cost and enable real-world awareness in your supply chain with SAP solutions for auto-ID and item serialization.
SAP Event Management: Proactively Manage Business Process Events with End-to-End Supply Chain Visibility

Get the supply chain visibility you need to monitor and manage events across distributed processes, inventories, and assets. The SAP Event Management application captures events from your system and your partners’ systems, analyzes them against their predefined plans, and triggers alerts or automated follow-up activities if deviations are found.
Get Real-Time Insight into Batch Genealogy with Our Product Traceability Software

Establish a complete product genealogy by tracing batch-managed products and components across your supply network – using the SAP Global Batch Traceability application. This real-time product traceability system links tracked objects to business activities such as deliveries and purchase orders – and makes it easier to find the root cause of product defects and trigger targeted holds, withdrawals, or recalls.

Learn more
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Get Maximum Value from SAP Logistics Business Network

Jump-start your SAP solution implementation and drive ROI by collaborating with industry experts, consultants, and support engineers throughout your journey.

Services
Transform your business quickly and effectively by taking advantage of our holistic service and support plans, expert consulting services, custom application development, best-practice support, and deep industry and technical knowledge.

Support
Get the support you need to keep your SAP solutions running at peak performance with our IT experts and support services, including long-term plans, embedded teams, remote technology support, a self-service portal, and innovation strategies.

Explore our services
See our support plans
Security and Compliance
Focus on your business and customer relationships while knowing that your data is safe and reliable, with a proactive, predictive approach that helps ensure compliance and data security in the cloud and within an on-premise data center.

Learn about security at SAP
SAP Digital Business Services: How Do You Become an Intelligent Enterprise?

Jump-start your SAP solutions and drive ROI by collaborating with industry experts, consultants, and support engineers to receive guidance, best-practice support, and expertise – no matter where you are on your journey.
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Leading the Way in the Digital Economy

Follow this link and relive key moments of events.
About SAP

As a market leader in enterprise application software, SAP helps companies of all sizes and in all industries run better. Founded in 1972, SAP (which stands for “Systems, Applications, and Products in Data Processing”) has a rich history of innovation and growth as a true industry leader. SAP applications and services enable more than 437,000 customers worldwide to operate profitably, adapt continuously, and grow sustainably.

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