# SupplyChain
## MANAGEMENT™

# Integrated
# Transport Management
# with SupplyOn

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## Summary

In transport management substantial savings can be achieved by intelligently integrating demand data with transport data. Many companies have not yet implemented this kind of integration. Data is held in separate systems of the companies involved in the transport process and cannot be combined in an integrated view. The SupplyOn collaboration platform supports intelligent transportation planning and enables freight operations to be optimized in terms of costs and resources:

- Integration of order and transport processes
- Consolidation of requirements, shipments and transportation requests
- Simplification of freight invoice verification
- Allocation of freight costs to the originating cost center
- Basis for establishing a supply chain control tower

The SupplyOn transport management solution is offered as Software as a Service. There are no associated costs for hardware, software, hotline, maintenance and IT-management. Essential value added is created by the community of users. Around 11,000 companies are part of our network worldwide. More than 2,600 transport service providers are already members of the community and do therefore not require a customer specific system connection.

## Initial Situation and Challenges

Shipping accounts for a large portion of procurement costs: at a rough estimate, industrial companies spend seven percent of their annual revenue on logistics. If a company's revenue is one billion dollars, logistics costs would total 70 million dollars each year. By introducing intelligent transport management – in particular by optimizing shipment and transport consolidation and documenting all transport activities – up to 12 percent of those costs could be saved (Fig. 1). Consequently, at a conservative estimate, companies of this size
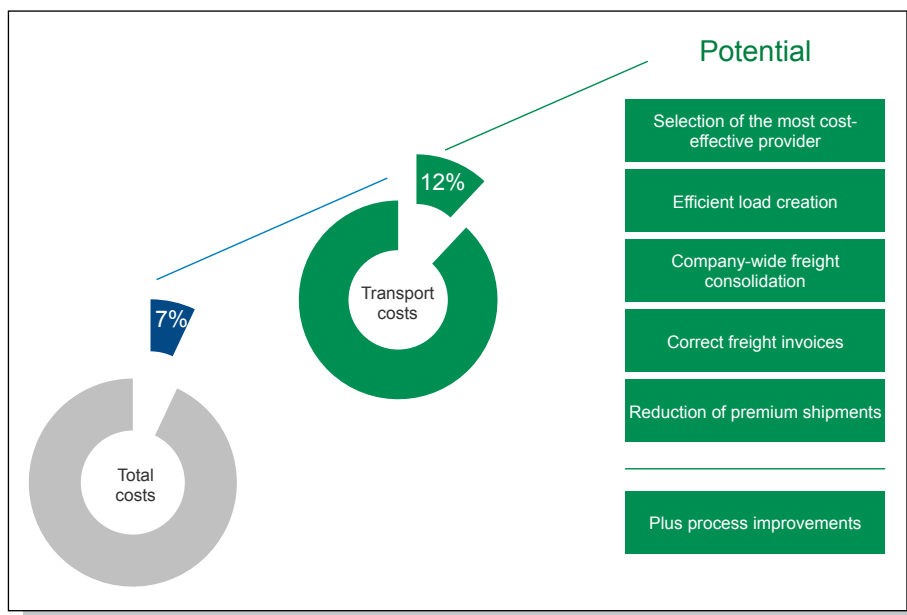
could achieve 7-digit savings, a figure that could even be increased by further process optimization.

In addition, ongoing globalization continues to open up new markets and causes production sites to be relocated, resulting in a further increase in freight volumes.

**In transport management substantial savings can be achieved by intelligently integrating demand data with transport data.**

Further aspects of growing significance are $CO_2$ footprints and the sustainable use of resources. Due to intelligent transport optimization such as saving fuel and reducing carbon dioxide emissions, complete trips can be reduced. In view of rising raw material prices and ambitious corporate $CO_2$ targets, these aspects are destined to play an increasingly important role in the future.

### Lack of process integration and transparency

Intelligent transport control often fails since the underlying processes are not integrated and transport-relevant data is generally held in isolated systems (Fig. 2).

The supplier's system contains no reference as to how time-critical a shipment is: the supplier is totally unaware



**Fig. 1: Transport costs savings potential**

of the risk that the customer may face an inventory shortage. If the customer orders transport services, no information is available in his systems regarding the weight and volume of the goods to be moved. Planning must therefore be left to the carriers who optimize transports to suit their needs. Moreover, there is no guarantee that the ordering parties are fully aware of all valid freight rates and that they apply them correctly.

Since the transport process is not transparent from end to end, planners are only able to intervene manually in individual cases, e.g. to bundle requirements and shipments or to plan transportation so that the most cost efficient mode and carrier is selected for each leg.



**Fig. 2: Demand and transport processes are not linked**

### Time-consuming invoice verification and cost allocation

Invoice verification represents a further challenge. Invoices are checked against orders but often it's the supplier who has commissioned the carrier and not until weeks later, the customer receives the freight invoice. Using merely the information of the freight invoice, after several weeks, it is almost impossible to check whether services were provided as ordered and billed as contractually agreed. Even in a best-case scenario, the sheer volume of freight invoices only permits a random check of individual invoices.

Finally, transport costs must be allocated internally and assigned to the correct cost center. In the same matter it also requires considerable manual effort. In practice, transport costs are often allocated using non-specific distribution keys, distorting subsequent analysis and optimization of profitability.

### Considerable effort, high costs

Consequently, a non-integrated transport order process leads to a range of direct and indirect follow-up costs:
- High direct transport costs
  - The most cost efficient transport mode and carrier is not immediately visible
  - Transport capacity cannot be fully utilized
  - Shipments cannot be consolidated on a company-wide basis.
- Time consuming, manual evaluations due to missing hard facts in terms of incorrect invoices
- There's a feeling that freight invoices are incorrect but this cannot be substantiated conclusively
- Considerable effort is required to correctly allocate freight costs internally
- Frequent, time-consuming shipment status requests to suppliers and carriers
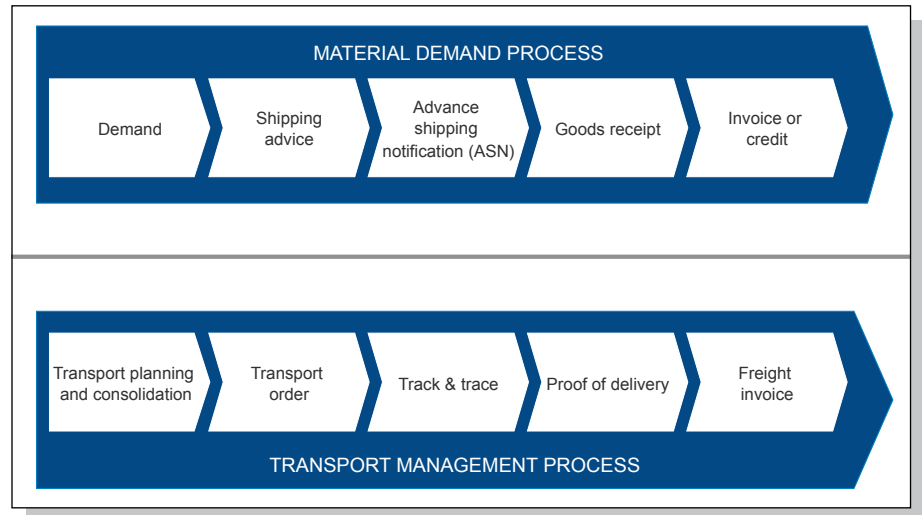
- Poor delivery performance
- Lack of inbound delivery and goods receipt planning causes peak loads in goods receiving and associated-waiting times for trucks to be unloaded

It's therefore crucially important to determine how companies can play a more active and leading role in the transport management process.

## Solution

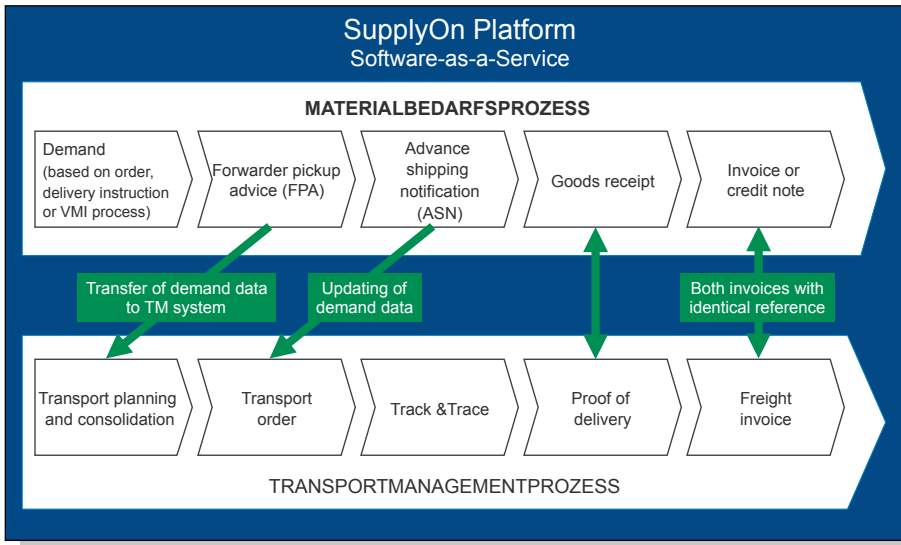### Transport planning with SupplyOn's Transport Order Management System

Intelligent transport management starts with an integrated order processing. The first step is to integrate all suppliers and to create an end-to-end order process – extending from order placement to delivery instruction, delivery notification, goods receipt and payment.

For this purpose, SupplyOn offers web-based solutions with various connection options to support integration of all types of suppliers, be they micro-enterprises or large corporations. Once this first step has been taken, all information as to what needs to be shipped, when, from where and to where, is available in a single web solution accessible to all process participants.

Order and delivery data available from Advance Shipping Notification or Delivery Note are then used to optimize transport planning. SupplyOn uses this data and ensures that the entire process from transport planning to freight invoicing is transparent and manageable (Fig. 3).

The basis for such an optimized transport management solution is a freight rate database containing all customer-specific transport rates. These rates are the basis for both the optimal creation of shipments and transports and for an automated, rule-based billing on completion of delivery (Fig.4).

Carriers receive an electronic transport order containing all relevant information required for their internal planning. Manual effort is thereby reduced, often allowing carriers to lower their freight rates by a single-digit percentage.

**Fig. 3: Integration of demand and transport processes**

### ‚Originator pays' billing on material number level

SupplyOn's Transport Order Management System enables transport costs to be allocated correctly to the internal cost originator. In the past, this was difficult since transport orders themselves elf did not contain any reference to either the material number or the source of demand. Costs are now transparent and can be allocated automatically (Fig. 4). Internal processing effort and the need for clarification are reduced substantially.

### Track & trace and billing of transport services

Full documentation is a key feature for a robust transport management solution. All events, ranging from goods pick-up to the carrier's proof of delivery, are logged in the system. With all transport activities being documented, the total spend for each service provider becomes fully transparent. This information can be used to strengthen the negotiating position vis-à-vis the carriers. Simple and reliable invoice verification is also supported, allowing a further step of process automation: implementing a credit memo procedure with carriers.

### Empties management – combining empty and full container transports

The Empties Management function allows further savings potential in container management by taking control over all movements of load carriers and reusable packaging.

The ability to track container movements has multiple benefits. Container availability is improved, shortages are prevented, and less capital is tied up in unneeded containers. The full traceability of containers reduces losses and streamlines maintenance activities because maintenance intervals can be better planned and managed.

An additional consolidation effect is achieved when using Empties Management to plan transport operations. Unused freight capacity can be filled by returning empty containers.

### Supply chain monitoring on material number level

SupplyOn offers a monitoring solution based on material demand information and supplier order confirmations. The solution automatically generates alerts to warn planners of future material shortages allowing them to focus on ensuring availability rather than checking demand-supply balances manually (exception-based management).
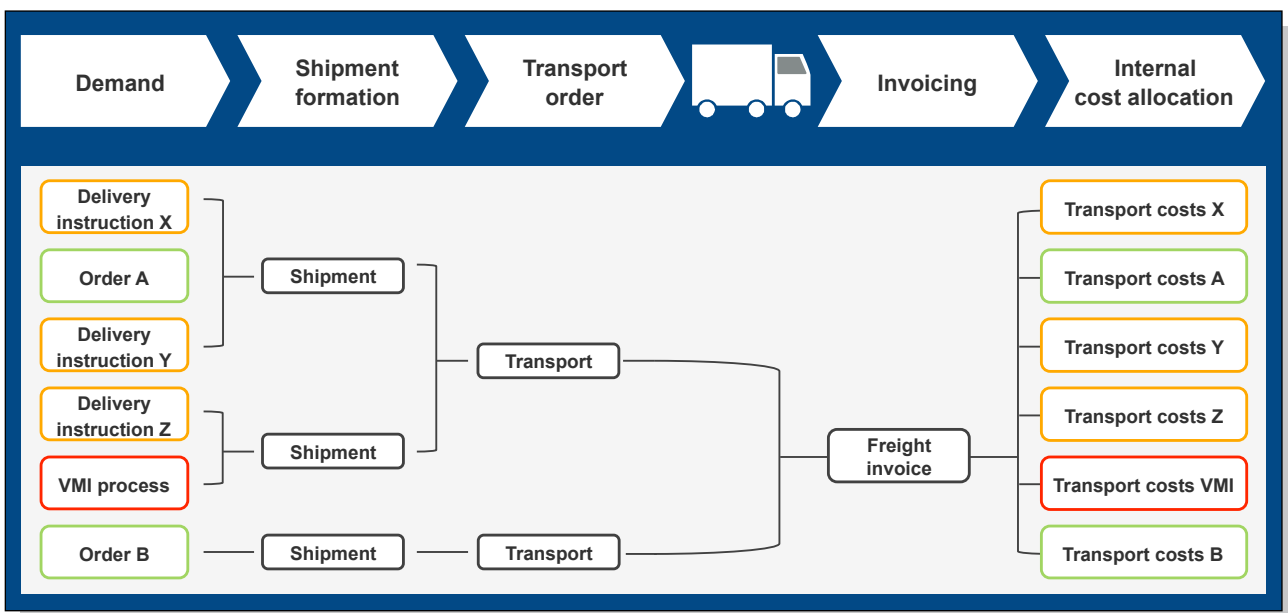


**Fig. 4: Transport planning, track & trace and cost allocation**

### Optimized customs management

Product information available in SupplyOn processes can be downloaded for subsequent use in customs processes and systems. Hence, manual effort is reduced and the risk of transcription errors is eliminated.

### Strategic and tactical transport and network planning

Operational transport data gathered during the transport management process via SupplyOn are an excellent resource to help optimize strategic and tactical supply chain planning. Along with sales planning, the transport history builds the foundation for supply chain network optimization: where should we source and manufacture in future? Should an inbound or outbound hub be set up as a cross-dock or interim storage facility? Does an area forwarder or a milk run make better sense?

### Establishing a supply chain control tower

The functions of SupplyOn's Transport Order Management solution provide the basis for establishing a global supply chain control tower. Such an organizational unit controls and monitors all operational supply chain functions such as procurement, distribution, transport ordering and billing. Strategic analyses and optimization tasks can also performed centrally in this unit. The control tower can be expanded to become an internal 4PL responsible for all control and integration functions within the supply chain and for continuously optimizing supply chain efficiency.

## Benefits

The SupplyOn transport management solution enables order and transport processes to be integrated for the first time. It supports end-to-end electronic collaboration with all supply chain partners along the entire value chain. This standardization of technology, data exchange and processes creates the basis for further process optimization and operational excellence. By combining our platform and process solutions with our in-depth experience in supply chain optimization, SupplyOn helps creating measurable effects:

### Quantitative and direct benefits

- Reduced freight and packaging costs
  – Efficient load building
  – Company-wide consolidation of transports
  – Elimination of incorrect freight invoices
  – Selection of most cost efficient transport mode and carrier
  – Fewer extra trips
- Reduced process costs
  – Elimination of manual ordering and verification processes
  – Less need for time-consuming clarifications
  – Real-time availability of shipment status information
  – Automated container inventory management

- Reduced container costs
  – Smaller container pool
  – Less loss and damage (identification of responsible party)
  – Reduced need for „emergency" packaging (material + handling)
  – Fewer extra trips
  – Shorter container waiting and cycle times
- Reduced costs for hardware, software, hotline, maintenance and IT management through use of the Software as a Service model

### Qualitative and indirect benefits

- Standardization
  – Harmonized transport management processes
  – Uniform data exchange with all transport service providers
  – Stabilization and automation of transport management
- Transparency
  – Company-wide transparency of freight rates and conditions
  – Track & trace along the entire supply chain
  – Complete and up-to-date data enables transport network optimization

**The SupplyOn collaboration platform supports intelligent transportation planning and enables freight operations to be optimized in terms of costs and resources.**

- Security of supply
  – Improved transport reliability
  – Timely response to delayed deliveries based on track & trace and alerting functions
- Working capital reduction
  – Reduced inventory due to optimized delivery frequency
  – Reduced inventory due to visibility of in-transit inventory
  – Reduced safety stock due to greater security of supply
- Focus on tactical and strategic tasks thanks to exception-based management

### Authors

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## About SupplyOn

SupplyOn is the supply chain collaboration platform for globally active companies – from Airbus, Bosch and Continental to Yazaki and ZF. They and many other manufacturing firms use SupplyOn as a central online platform to manage business processes with their suppliers and service providers across continents in a structured, transparent and secure manner.

SupplyOn takes up where internal ERP systems leave off, and extends internal business processes seamlessly beyond company borders. The solutions are provided as Software as a Service and aligned with the process requirements of the manufacturing industry. They encompass cross-company processes in supply chain management, supplier risk and performance management, strategic and operational procurement as well as in quality and transport management.

SupplyOn has established a network of companies in the manufacturing industry – with a focus on automotive, aerospace, railway and transport, machine engineering and plant construction, as well as high-tech and electronics – that connects some 11,000 companies in 70 countries.

Among its customers are Airbus Group, BMW Group, BorgWarner, Bosch, Continental, DEUTZ, ITT, Kautex Textron, Liebherr, Safran, Schaeffler, Schindler, Siemens, Thales, Yazaki and ZF.

SupplyOn AG posted revenue of 34 million euros with 140 employees in fiscal year 2013.

SUPPLYON

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