

Delivery concepts: systematically planning and implementing delivery concepts

Delivery concepts describe the structured definition of how materials, components and assemblies are delivered to a company, both physically and in terms of data. They cover mode of transport, packaging, quantity units, schedule adherence, docking points, data transfer and the organisational handling at goods receipt. In DACH industry, they are a central element of procurement logistics because they directly influence supply reliability, inventory levels and internal processes.

Key facts

- Delivery concepts define in binding terms how suppliers deliver goods physically and in terms of data: mode of transport, packaging, quantity units, schedules and docking point.
- Common concepts include Just-in-Time, Just-in-Sequence, consignment stock, consolidated deliveries and delivery via an external logistics centre.
- The delivery concept is typically set out in the framework agreement or terms and conditions of purchase and interacts closely with Incoterms such as DAP.
- Key metrics are on-time delivery, inbound quality, processing time at goods receipt and inventory coverage.
- A sensible concept depends on value density, demand pattern, criticality and proximity of the supplier, and is defined separately for each material group.
- Without clear delivery concepts, in practice ship-and-deliver errors, duplicate freight shipments and production disruptions increase.

Definition: delivery concepts

Delivery concepts are established sets of rules describing how suppliers deliver goods to the recipient: from the means of transport through packaging and labelling to schedule coordination and data transfer. They form part of the logistics agreements between customer and supplier and are usually documented in supplier manuals or delivery provisions. A good concept reduces friction at goods receipt and secures the supply of production.

Distinction from procurement logistics and Incoterms

Procurement logistics describes the entire material flow from supplier to point of consumption; the delivery concept is a concrete implementation element of it. The Incoterms, in turn, govern the transfer of costs, risks and responsibility, for example under DAP (Delivered At Place). A delivery concept builds on this and specifies which collection, which transport route and which docking time apply in practice – it does not replace Incoterms, but operationalises them.

Elements of a delivery concept

In practice, a complete concept comprises several components that should be documented in binding form.

- Mode of transport, route design and collection frequency (e.g. milk run or direct shipment)
- Packaging requirements: container type, pallet format, labelling, RFID or barcode identification
- Quantity control: carton contents, combined packaging, call-off and order quantities
- Time slots and docking scheduling at goods receipt
- Data exchange: requirements for advance shipping notifications, delivery notes and order references
- Conduct in the event of disruptions, over- and under-deliveries and blocked stock

Methods and approach for selecting a concept

The choice of the appropriate delivery concept follows no fixed formula, but rather a structured analysis of the material group, the supplier environment and the production requirements. Differentiation by value density, demand consistency and criticality has proven effective. A prepared supplier landscape analysis provides the basis for this, as does data from supply chain analytics for evaluating delivery reliability and variability.

Just-in-Time and Just-in-Sequence

Just-in-Time (JIT) means that material is delivered shortly before consumption, often several times a day for high-volume parts. Just-in-Sequence (JIS) goes further: the parts arrive already in assembly sequence, which is common especially in the automotive and commercial vehicle industries. Both concepts significantly reduce inventories, but shift risks onto the supplier and require a highly available material availability check (ATP) and reliable call-off processes.

Consignment stock and external logistics centre

With consignment stock, the material remains in the supplier's ownership until it is drawn, and is stored at the customer's premises or nearby. An external logistics centre, frequently operated as a consolidation point, bundles goods from several suppliers and provides consolidated, sort-clean deliveries. Both models are suitable when many small suppliers have to be served or goods receipt capacity is limited. However, they require clear agreements on inventory responsibility and stocktaking.

Consolidated delivery and standard delivery

For C-parts and materials of low criticality, a weekly consolidated delivery is often sufficient, possibly supplemented by a lean small-order process for demands below a defined threshold. Standard delivery with fixed time slots represents the normal case for most material groups and can be combined with a clear preferred supplier policy to keep the number and profile of suppliers stable for each concept.

Key KPIs for steering delivery concepts

Without measurable metrics, the suitability of a delivery concept cannot be assessed. A small number of consistently tracked KPIs, derived from goods receipt data, quality feedback and inventory data, has proven effective. An inventory health dashboard can support the consolidation of different data sources here.

On-time delivery and inbound quality

Schedule adherence (OTD) measures how many deliveries arrive complete and on time within the agreed time window. Inbound quality captures defects such as incorrect labels, incomplete ASN data or damage. Both figures typically feed into the supplier evaluation system and should be contractually underpinned with clear escalation levels, including possible liquidated damages in the event of repeated

violations.

Processing time and inventory impact

Processing time at goods receipt – from arrival to availability in the system – shows how well the delivery concept supports internal processes. On the inventory side, the choice of concept affects inventory coverage and Days Inventory Outstanding (DIO): JIS and JIT concepts significantly reduce DIO, but increase susceptibility to disruptions. Both effects must be considered together.

Risks and controls in the delivery concept

Every delivery concept entails specific risks. JIT and JIS models increase susceptibility to disruption, consignment models create boundary questions regarding ownership and liability, and undifferentiated standard deliveries burden goods receipt and production with unnecessary peaks. Controls should therefore combine concept-spanning and concept-specific measures.

Contractual safeguards

Delivery concepts should be contractually anchored: in the framework agreement, in a Master Service Agreement (MSA) for logistics services, or in the terms and conditions of purchase. Key points are packaging and labelling requirements, time slots, the advance shipping notification obligation, liability for incorrect deliveries and reaction times in the event of disruptions. Legal details, in particular regarding transfer of ownership and risk, should be reviewed by legal counsel on a case-by-case basis.

Process controls

Effective controls already begin before the first delivery and accompany ongoing operations.

- Onboarding of the supplier with documented initial sampling and a defined delivery concept
- Regular verification of the traceability of materials down to delivery level
- Supplier certificates and updated approvals as a precondition for acceptance
- Escalation process for repeated violations, where applicable with a supplier ESG improvement plan for sustainability aspects
- Regular review meetings on capacity and route planning

Current developments in delivery concepts

Delivery concepts are currently changing in three directions: greater digitalisation, higher sustainability requirements and flexible steering in volatile markets. Buyers and supply chain managers should incorporate these trends into the regular review of existing concepts.

Digitalisation and data foundation

Modern delivery concepts thrive on clean data: digital advance shipping notifications, uniform data models and robust order prioritisation at goods receipt. In the background, data lake approaches are gaining importance, in which transport, inventory and quality data converge and are evaluated. This makes it possible, for example, to identify whether a concept still fits changed demand or whether a switch to another delivery format would be sensible.

Sustainability and local sourcing

Transport routes and load factors are increasingly becoming a sustainability issue. Milk run concepts

with high utilisation, consolidated deliveries and the examination of localisation – i.e. sourcing from closer regions – typically reduce emissions and delivery times at the same time. Suppliers showing deficiencies here can be systematically developed via a supplier ESG improvement plan.

Flexibility in the event of disruptions

Volatile markets call for concepts with built-in flexibility. Instruments such as the freeze fence – a fixed time corridor within which call-offs can no longer be changed – create planning certainty for suppliers without completely blocking short-term adjustments. Modular sourcing additionally reduces the number of direct delivery points by delivering more complete pre-assembled modules instead of many individual parts.

Typical metrics

On-Time Delivery (OTD): > 98 %

Proportion of punctual and complete deliveries within the agreed time window

Inbound quality: > 99 % error-free

Proportion of deliveries without labelling, ASN or packaging errors

Goods receipt processing time: < 4 hours

From arrival to system availability; benchmark depends on concept and automation

Adherence to time slots: > 95 %

Deliveries within the defined docking window

Practical example

A mid-sized mechanical engineering company with around 350 active suppliers suffered from volatile goods receipt peaks and frequent incorrect advance shipping notifications. The company carried out a supplier landscape analysis and divided its supplier base into three delivery concepts: JIT delivery for high-volume sheet metal parts, consolidated deliveries twice a week for standard parts, and an external logistics centre for small suppliers. In parallel, packaging and ASN requirements were laid down in binding form in a supplier manual and anchored in the terms and conditions of purchase.

- Introduction of binding time slots and digital advance shipping notifications for all A and B suppliers
- Establishment of a milk run for six regional suppliers with consolidated routes
- Linking inbound quality to the supplier evaluation system with quarterly reviews
- Supplementing the concept with a lean small-order process for C-parts below a defined order threshold

Conclusion

Delivery concepts link strategic procurement decisions with practical logistics at the factory gate. They have a direct impact on inventories, delivery reliability and the workload of goods receipt, and should therefore be defined separately for each material group and contractually in binding form. A functioning concept lives on clean data, clear requirements and regular review against changed demand and supplier conditions. Those who treat delivery concepts as a distinct field of design reduce both logistics costs and the susceptibility of production to disruption in practice. A typical starting point is an analysis of the existing supplier structure followed by the gradual conversion of the most critical material groups.

Frequently asked questions

What is meant by a delivery concept?

A delivery concept defines in binding terms how a supplier delivers goods to the recipient: mode of transport, packaging, quantity units, schedules, docking point and data transfer. It is part of procurement logistics and is usually documented in the framework agreement or supplier manual. The aim is a low-friction goods receipt process and a stable supply of production.

Which delivery concepts exist in industry?

Common concepts include Just-in-Time, Just-in-Sequence, consignment stock, consolidated deliveries, standard delivery with time slots, and delivery via an external logistics centre or consolidation point. The choice depends on value density, demand pattern and the criticality of the material. In practice, several concepts are operated in parallel for different material groups.

How do you select the appropriate delivery concept?

The starting point is an analysis of the material group in terms of consumption volume, value density, demand consistency and criticality for production. Added to this are the distance from and capability of the supplier, as well as the capacity of the company's own goods receipt. Critical, high-volume parts are suited to JIT or JIS, while C-parts are better handled via consolidated deliveries or consignment models.

What role do Incoterms play in the delivery concept?

Incoterms govern the transfer of costs, risk and responsibility between seller and buyer, for example under DAP or FAS. The delivery concept operationalises these provisions by defining practical details such as collection, routing and time slots. Both levels should be contractually aligned with each other on a consistent basis.

Which KPIs are relevant for delivery concepts?

Key metrics are on-time delivery (OTD), inbound quality, processing time at goods receipt, and inventory metrics such as inventory coverage and Days Inventory Outstanding (DIO). They show whether the concept meets supply security and efficiency in equal measure. The figures should be reviewed regularly and incorporated into the supplier evaluation system.

What belongs in the delivery provisions of a supplier manual?

Typical content includes packaging and labelling requirements, required advance shipping notifications with order reference, time slots and docking rules, quantity tolerances, and conduct in the event of incorrect or subsequent deliveries. Requirements relating to certificates and the traceability of materials also belong in it. The provision should be referenced contractually so that violations are actionable.