

Delivery Schedule: The Binding Timetable for Material Requirements and Supplies

The delivery schedule is a quantity- and date-oriented instruction transmitted from the customer to the supplier specifying which parts are to be delivered in which periods. It forms the central control instrument of procurement logistics and translates production and material requirements into concrete delivery calls and forecast horizons. Those who master delivery scheduling reduce inventory, stabilise supply and create reliable planning certainty for suppliers.

Key facts

- A delivery schedule typically contains firm quantities with binding dates as well as forecast quantities for later periods.
- It is based on materials management and is frequently updated and transmitted on a weekly or daily basis.
- In a just-in-time environment, the delivery schedule replaces or complements the classic purchase order and may contain legally binding calls.
- Key criteria for the quality of a delivery schedule are adherence to dates, planning accuracy and plannability for the supplier.
- Electronic transmission via EDI, portal or API is the standard in series production and enables exceptions to be detected automatically.
- The delivery schedule is closely interlinked with supply planning, purchase order proposal management and risk management across the entire supply chain.

Definition: delivery schedule

A delivery schedule is a structured, time-phased document or data record that tells the supplier which items are to be delivered in which quantities and on which dates. In practice, it distinguishes between short-term binding firm dates and medium- to long-term forecasts. It is thus the operational link between materials management at the customer and production control at the supplier.

Distinction from the purchase order

While a purchase order is a one-off, completed purchasing document with quantity, price and date, the delivery schedule is a rolling control instrument that is continuously updated. In series production, the delivery schedule is frequently managed as an automatic order or delivery call: the framework agreement governs price and terms, while the delivery schedule handles quantity and date execution. Individual orders are then typically reserved for the replenishment of C-class parts, custom-made items or zero-series procurement.

Structure and typical contents

A practical delivery schedule contains, in addition to the item number and revision status, the zones for firm requirements, forecast and, where applicable, withdrawal/consumption figures. These are

supplemented by the delivery address, packaging specifications (see packaging management), delivery time windows, conversion onto transport units and the data status. For complex assemblies, calls relating to tool-based processes are also included, so that the supplier can align its tool rotation planning and capacity scheduling accordingly.

- Item number, revision, quantity per time slot
- Firm date versus forecast zone
- Delivery windows, packaging and transport specifications
- Data status and transmission channel

Methods and approach: from requirement to delivery schedule

Creating a delivery schedule follows a clear process: requirements determination, replenishment planning, scheduling, release and transmission. Depending on material class and demand structure, different replenishment methods are used.

Consumption-controlled versus order-based replenishment

Consumption-controlled replenishment (including reorder point, Kanban or SLP) is suitable for serial material with stable consumption and often automatically continues delivery schedules as long as consumption and coverage remain on track. Order-based replenishment dominates in project business, one-off parts and cases of high change frequency; here the delivery schedule is derived directly from customer orders and production-specific dates. In practice, both methods are combined, coordinated via the material classes of procurement and logistics.

Horizons and zones

A rolling horizon is a proven approach, typically divided into three zones: a firm zone of roughly one to four weeks, in which quantities and dates are binding; a forecast zone of roughly three to six months for advance procurement and capacity planning; and a rough twelve-month outlook for strategic provisions such as tooling or upstream products. The further out the zone, the greater the planning tolerance for the supplier – a clear rule on which changes are permitted should be included in the supply agreement.

Transmission and level of integration

The transmission route to the supplier ranges from PDF attachments through portals and EDI formats (in practice frequently EDIFACT DELFOR or VDA 4905, or VDA 4915) to API integration in the digital supply chain environment. What matters is not the medium but the closed control loop: acknowledgement of receipt, automatic date comparisons, exception management in the event of deviations and a defined reporting procedure for the supplier when it cannot meet a date.

Key KPIs and metrics around the delivery schedule

A delivery schedule is only as good as its compliance is made measurable. Key metrics relate to adherence to dates, planning quality and the strain on the planning process itself.

Adherence to dates and delivery reliability

On-time-in-full delivery performance (OTIF) measures the proportion of deliveries that arrive complete and within the agreed time window. In the series production industry, values of typically over 98 per cent are regarded as the target level; anyone falling below this causes costly parts shortage situations in sequence-dependent processes. In addition, parts per million (PPM) provides the quality dimension of

the delivered parts and, together with adherence to dates, forms the supplier ranking.

Planning accuracy and planning stability

Forecast accuracy compares the quantities reported in the forecast zone with actual demand. Planning stability is also frequently measured: how often and how strongly are dates and quantities still changed within the firm window? Every change in the firm zone causes replanning, warehousing or ramp-up costs for the supplier, which are usually passed back to the customer via the terms or price negotiations (including in bidder conferences).

Control metrics for buyers

In addition, metrics such as the dual sourcing share – the dual sourcing quota for critical material classes – coverage and inventory metrics, and the number of open exceptions provide the control basis. The early payment discount rate and compliance with payment terms also indicate how reliably the entire commercial control loop around the delivery schedule functions.

Risks and controls: what disrupts the delivery schedule

The most common mistake in delivery schedule management is not incorrect planning but a lack of alignment with the realities of the supply chain. Clear responsibilities, defined escalation paths and targeted controls mitigate the typical risks.

Change and communication risks

Short-term changes to quantities and dates, late engineering changes or unclear revision statuses lead to parts shortages, incorrect deliveries and stoppages. Countermeasures include documented change management, fixed freeze deadlines in the firm zone and a supplier ESG improvement plan or an open issues format when delivery performance and quality deviate permanently. It is important to clearly define who at the supplier receives and confirms the schedule.

Supply risks and safeguards

Single sources, geopolitical disruptions, raw material shortages or the failure of a sub-supplier can break the schedule. In risk management, the following help: a risk heatmap across the critical material classes, safety stocks with defined target stock levels, dual sourcing with a targeted dual sourcing quota, and a prepared crisis team with escalation levels. Pooling with other buyers of the same upstream products can also increase the reliability of lead times.

Data quality and master data

Incorrect bills of material, duplicates in the item range (see duplicate detection), outdated lead times or inconsistent units of measure distort every plan. Regular master data cleansing, a defined customs tariff classification for cross-border deliveries and verification of the supplier's economic identity (in practice frequently via a VAT ID check) are part of the basic hygiene of the delivery schedule process.

Current developments: automation, resilience and sustainability

The classic delivery schedule is increasingly becoming a data-driven control logic. Three developments in particular have shaped the picture in recent years.

Automated planning and AI support

Modern systems combine consumption data, order backlogs and external signals into automated schedule proposals; the planner only reviews deviations and edge cases. Such approaches from supply planning and exception management significantly reduce manual effort and increase responsiveness to disruptions – a core aspect of the digital supply chain.

Resilience and shorts management

The experience of recent supply chain disruptions has firmly established shorts management, i.e. the structured handling of impending parts shortages. Delivery schedules are enriched with risk indicators: depending on parts shortage exposure, lead time, individual acceleration and financial impact. This is closely interlinked with risk management and a clearly staffed crisis team that decides on alternative procurement, air freight or short-term quantity allocation in the event of acute shortages.

Sustainability requirements in the planning environment

Increasingly, ESG and sustainability requirements are flowing into the planning and procurement process: packaging specifications, recyclability assessments for components, emissions data and social standards in the supply chain. The delivery schedule itself is a logistics document, but it exists in a context in which sustainability requirements are increasingly becoming part of contracts. Such requirements should be agreed with the supplier at an early stage and supported within supplier management through a supplier ESG improvement plan – with a view to case-by-case review.

Typical metrics

On-time-in-full delivery performance (OTIF): > 98%

Target level in series production; lower values indicate control or capacity problems.

Planning accuracy (forecast accuracy): typically 80–95%

Depends on time horizon and material class; the further into the future, the lower the value.

Planning stability: > 95%

Proportion of unchanged lines in the firm zone; a high rate of change causes costs for the supplier.

PPM quality of incoming goods: < 50 PPM

Benchmark for critical A-class material; complements the delivery performance view with the quality dimension.

Practical example

A medium-sized mechanical engineering company with a highly fluctuating order situation had high inventories and yet delivery date problems in assembly. Following an analysis, it switched its material planning to a rolling delivery schedule logic: a fixed weekly delivery schedule system with EDI connection was introduced for A-class parts, and consumption-controlled replenishment with Kanban for B- and C-class parts. In addition, a daily exception meeting was set up in which only deviations from the schedule were addressed.

- Introduction of a rolling delivery schedule with firm and forecast zones for all series parts
- Comprehensive master data cleansing including duplicate detection in the item range
- Establishment of a daily exception process with defined escalation levels
- Increase in the dual sourcing quota for critical upstream products as a safeguard

Conclusion

The delivery schedule is more than a note of dates: it is the operational heart of procurement logistics and determines whether production, inventory and delivery performance run in harmony. This requires a clean process with clear zones, reliable master data and a functioning control loop with the supplier. Those who combine delivery scheduling with risk management, automated exception handling and measurable KPIs such as adherence to dates and planning accuracy create planning certainty for both sides. In practice, this approach pays off several times over through lower inventories, fewer parts shortages and more stable supply.

Frequently asked questions

What is a delivery schedule?

A delivery schedule is a rolling, time-phased control instrument that tells the supplier which items are to be delivered in which quantities and on which dates. It usually distinguishes between binding firm dates and forecast horizons. In series production, it often performs the function of an automatic order within the framework of a supply agreement.

What is the difference between a delivery schedule and a purchase order?

A purchase order is a one-off purchasing document with quantity, price and date. A delivery schedule is a continuously updated control document that handles execution within the framework of a framework agreement. The price terms are governed by the contract, while quantities and dates are communicated via the delivery schedule.

Which KPIs are relevant for delivery schedules?

Central measures are on-time-in-full delivery performance (OTIF), the planning accuracy of the forecast and planning stability within the firm zone. In addition, PPM quality figures, inventory and coverage metrics as well as the number of open exceptions provide a comprehensive control overview.

How often is a delivery schedule updated?

In series production, daily or weekly updates are customary, frequently via EDI or portal. For project business with a longer horizon, a monthly update may also be sufficient. What is decisive is that the update frequency and change rules are contractually defined.

What do firm zone and forecast zone mean in a delivery schedule?

The firm zone covers the short-term period in which quantities and dates are binding – typically one to four weeks. The forecast zone extends further into the future and serves the supplier as a planning basis for capacity, staffing and material procurement. Changes in the forecast zone are possible with greater tolerance than in the firm zone.

Who creates the delivery schedule?

As a rule, the customer's materials management or supply planning function, based on orders, consumption figures and bills of material. In complex structures, procurement, logistics and production work closely together. The supplier confirms the schedule and reports deviations back via a defined procedure.