

Forecast management: systematically controlling forecasts in procurement

Forecast management refers to the systematic planning, creation and continuous updating of demand and sales forecasts as the basis for operational and strategic procurement decisions. For technical buyers, forecast quality determines how reliably suppliers can plan capacity, materials and lead times. Structured forecast management reduces procurement risks, lowers inventory costs and improves the delivery capability of one's own production.

Key facts

- Forecast management encompasses the creation, reconciliation and ongoing updating of demand forecasts across the entire planning horizon.
- Forecast quality is typically measured using metrics such as forecast accuracy and MAPE; in practice, good values often range between 80 and 95 per cent depending on the industry.
- Short forecast horizons are typically more accurate than long ones; a distinction is therefore made between rolling short-, medium- and long-term forecasts.
- A forecast is not an order: demand only becomes legally binding through a call-off or order placement.
- Supplier information on expected volumes serves capacity planning but is frequently not to be understood as a commitment to purchase quantities.
- Digital planning tools and AI-supported methods increase forecast quality but do not replace reconciliation with sales and production.

Definition: forecast management

Forecast management is the totality of processes, methods and systems for creating, communicating and updating demand forecasts. It links sales planning, material requirements planning and procurement into a consistent planning picture.

Distinction from demand requirements planning

Demand requirements planning derives the specific material usage from bills of materials and orders, whereas forecast management estimates future quantities that are not yet fixed by orders. In customer-specific manufacturing based on the engineered-to-order principle, forecasts are naturally less precise than in series production. In practice, the two levels complement each other: the forecast provides the framework, and demand requirements planning provides the order-specific concretisation.

Forecast types and horizons

It is usual to differentiate between short-term forecasts for call-offs and disposition, medium-term forecasts for capacity and framework agreements, and long-term trends for strategic decisions such as dual sourcing or tooling investments. Rolling forecasts updated monthly or weekly have proven more robust than rigid annual plans. The forecast horizon should match the replenishment lead time of the

critical materials.

Methods and procedures in forecast management

The process typically runs from sales planning via demand conversion through to supplier communication. What matters is a clearly defined forecast cycle with fixed dates and responsibilities.

Statistical and judgemental methods

Statistical methods such as moving averages, trend and seasonality models are suitable for stable, repeatable demand. For long-lived capital goods or project business, heuristic methods dominate, in which sales, product management and engineering contribute their assessments. The combination of both approaches has proven effective: the statistical value serves as an anchor, while expert corrections are documented and justified in a traceable manner.

Reconciliation with sales and production

Within sales and operations planning processes, the forecast is reconciled with feasibility and resources. Procurement contributes delivery dates, minimum order quantities and supplier capacity limits. Where critical components are sourced from only one source, single-source management requires particularly early and binding forecast communication.

Communication to suppliers

Forecast data is frequently transmitted in the form of supplier forecasts, call-off schedules or EDI messages. What is important is the clear identification of which quantities are bindingly committed and which are merely expected, for example according to the classic differentiation between firm quantities and flexible corridors. This transparency enables the supplier to plan capacity proactively and shortens bottleneck discussions in the short term.

Key KPIs in forecast management

Forecasts can only be controlled if their quality is measured regularly. The metrics should be recorded at production order level and not only at aggregate level.

Forecast quality and deviation measures

Forecast accuracy indicates how close the forecast and actual demand are, while MAPE (mean absolute percentage error) measures the average percentage deviation. In practice, values of 80 to 95 per cent are considered good depending on the item group; considerably lower values are normal for sporadic demand. What is decisive is regular evaluation in order to identify systematic over- or under-forecasting.

Impact metrics

Beyond pure quality, the business consequences matter: inventory coverage, repeated capacity bottlenecks, expediting and residual quantities. The goods receipt lead time also provides indications of whether forecast-driven deliveries arrive on time. A spend analysis across several periods shows which item groups are particularly forecast-driven and where process improvements pay off the most.

Risks and controls in forecast management

Faulty forecasts affect the entire supply chain: they create either overstock or supply failures. Controls and safeguarding mechanisms keep these risks manageable.

Typical sources of error

Common causes of poor forecasts are a lack of feedback on order changes, late change orders and silo thinking between sales and procurement. Cut-off effects, for example when sales pushes through or postpones orders at month-end, also distort the picture. A documented risk analysis and review process uncovers such systematic distortions.

Contractual safeguards

Framework agreements should stipulate how far call-offs may deviate from the forecast and which adjustment deadlines apply. A change order clause clarifies how quantity and schedule changes are to be settled. For critical components, a risk mitigation plan with defined alternatives is recommended, such as a validated alternative source of supply or agreed safety capacity at the supplier.

Supplier-side controls

When selecting new suppliers, forecast requirements can be included as award criteria in tenders, for example the willingness to accept quantity corridors or to be flexible at short notice. An ongoing supplier credit check is also part of the safeguards, since forecast errors and delivery volumes can also strain the supplier's financial situation.

Current developments in forecast management

Digitalisation, volatile markets and sustainability requirements are changing the way forecasts are created and used.

AI and integrated planning systems

Modern planning systems link sales, production and procurement data in real time and identify patterns that manual planning overlooks. AI-supported methods can generate forecasts from historical data and external signals, but remain of limited significance for one-off orders and niche products. It is important that system support does not replace reconciliation with the specialist departments but prepares it.

Resilience and sustainability

Supply chain disruptions have sharpened awareness that forecasts are never fully reliable. In addition to contingency plans, scenario planning and tendering processes are gaining importance: structured RFX processes in procurement allow capacity reserves and flexibility options to be systematically explored in the market. The decarbonisation of the supply chain also influences forecast management, as emissions requirements and energy availability feed into planning.

Faster product cycles

Falling time-to-market demands accelerated forecast cycles: if production volumes only become reliable shortly before the start of series production, procurement must plan tooling releases, pre-series material and supplier capacity on the basis of imprecise forecasts. Early demand bundling across product lines helps to reach minimum order quantities and secure prices.

Typical metrics

Forecast Accuracy: typically 80–95%

depending on industry and item type; considerably lower for sporadic demand

MAPE: typically < 20%

average percentage forecast deviation; the lower, the better

Planning cycle: weekly to monthly

rolling update oriented towards replenishment lead time and volatility

On-time delivery of forecast-driven call-offs: > 95%

usual target value for call-off-based deliveries in series production

Practical example

A medium-sized mechanical engineering company with around 400 employees repeatedly had problems with sales forecasts reaching procurement only four weeks late. Critical purchased parts with long replenishment lead times were ordered too late, resulting in expediting and machine downtime. The company introduced a monthly rolling forecast process and agreed quantity corridors with its key suppliers.

- Introduction of a monthly S&OP meeting in which sales, production and procurement jointly reconcile the forecast
- Introduction of a forecast accuracy evaluation at item level for the A-parts
- Adjustment of framework agreements with quantity corridors and defined change deadlines
- Establishment of a risk mitigation plan for three single-source components including qualified second-tier suppliers

Conclusion

In technical procurement, forecast management is more than a planning exercise: it determines whether suppliers build up capacity in good time, whether inventories remain appropriate and whether production can work to schedule. What matters is a clear process with fixed reconciliation dates, measurable forecast quality and contractual provisions for deviations. Statistical methods and digital tools improve accuracy but do not replace reconciliation with sales and production. Those who consistently update forecasts and safeguard risks through alternative sources and safety capacity make their supply chain considerably more robust.

Frequently asked questions

What is forecast management in procurement?

Forecast management encompasses all processes for creating, reconciling and continuously updating demand forecasts. In procurement, it serves to give suppliers reliable quantity information, secure capacity and plan replenishments in good time. It links sales planning, material requirements planning and supplier management.

How do you measure forecast quality?

Common metrics are forecast accuracy and MAPE (mean absolute percentage error). They compare forecast quantities with actual demand quantities over defined periods. In practice, good values often

range between 80 and 95 per cent depending on the industry and item type; lower values are usual for sporadic demand.

Are forecasts legally binding purchase quantities?

No, a forecast or expected volume notification is generally only a capacity information statement without any obligation to purchase. The demand only becomes binding through a call-off, order or framework agreement with corresponding commitments. The contract should set out how quantity corridors and deviations are to be assessed; in individual cases, legal advice is advisable.

What role do suppliers play in the forecast process?

Suppliers use the forecast for their own capacity, staffing and procurement planning. Good suppliers report early when forecast quantities approach their capacity limits or upstream products are becoming scarce. Regular exchange, for example in supplier evaluations or quarterly business reviews, is therefore part of forecast management.

How often should a forecast be updated?

In practice, rolling forecasts updated monthly or weekly have proven their worth. The frequency depends on the replenishment lead time, the volatility of demand and the criticality of the parts. Quarterly cycles are often sufficient for long-lived capital goods, while shorter intervals are usual for series material.

What can be done when forecast uncertainty is high?

Helpful measures include quantity corridors in contracts, safety capacity at the supplier, latest change deadlines and a risk mitigation plan for critical parts. For one-off products, scenarios and early supplier coordination help rather than exact quantities. Staged procurement with options for follow-up orders also reduces the risk.