

Capable to Promise (CTP): Reliable delivery commitments based on real manufacturing capacity

Capable to Promise (CTP) is a date-checking method in which a delivery commitment is based not only on free stock but on the actually available manufacturing and procurement capacities. Unlike Available to Promise (ATP), CTP answers the question of by when and in what quantity a product can be newly manufactured or procured. For buyers, CTP is a central criterion for assessing the delivery capability of suppliers, especially for customised products, long procurement lead times and bottleneck situations.

Key facts

- CTP checks delivery commitments on the basis of available manufacturing, material and procurement capacities rather than just stock levels.
- The approach is typically relevant for make-to-order production, customised configurations and long lead times.
- CTP requires up-to-date master data, realistic routings and reliable capacity planning, usually in an ERP or APS system.
- In procurement, CTP statements provide an objective basis for supplier evaluation and the selection of reliable partners.
- The validity of CTP depends heavily on data quality; outdated set-up times or missing capacity data distort commitments.
- CTP is more complex than ATP and is therefore often used only for bottleneck materials, A-items or critical customer orders.

Definition: Capable to Promise (CTP)

Capable to Promise refers to the ability of a supplier or manufacturer to give a binding delivery commitment for a concrete customer enquiry by combining available production capacities, material stocks and procurement lead times. The method answers the question 'When can we actually manufacture this quantity?' and thus goes beyond a mere stock check.

Distinction from Available to Promise (ATP)

ATP checks which demand can be covered from existing or already planned stock. CTP extends this view to include the option of newly manufacturing or procuring missing quantities, taking into account set-up times, routing capacities and replenishment lead times. In practice, many companies combine both methods: ATP for standard items, CTP for configured or customised products.

Role in day-to-day procurement

For technical buyers, CTP is a quality feature of supplier communication: a supplier who provides

reliable CTP responses reduces planning uncertainty in the buyer's own delivery date monitoring and in materials planning. CTP statements are frequently incorporated into supplier evaluation, for example when assessing date adherence and responsiveness during the tendering phase.

Methods and procedure: how the CTP check works

A robust CTP check requires access to several data sources: current stock levels, open purchase orders, production orders, routings with set-up and processing times, and capacity utilisation of bottleneck resources. From these data, a realistic availability date is determined backwards from the desired date or forwards from today.

Data basis and master data

The quality of any CTP statement stands or falls with the master data. Routings must contain realistic set-up times, bills of materials must be complete and procurement lead times for externally sourced materials must be kept up to date. In practice, weaknesses frequently appear here: outdated set-up times or missing alternative routings lead to optimistic commitments that later result in date deviations and customer complaints.

Bottleneck-oriented scheduling

Modern CTP calculations focus on bottleneck resources, i.e. machines or workstations with the highest utilisation. Only if the bottleneck can absorb the required quantity within the desired period is the commitment sustainable. This approach is closely related to finite capacity planning logic in Advanced Planning Systems and complements classic methods such as the Andler lot size formula in economic order quantity planning.

CTP in interaction with the demand specification

The more precise the customer's demand specification, the more reliable the CTP response. Unclear specifications require queries and clarification rounds, which extend lead times. A clean enquiry with an unambiguous demand specification enables the supplier to carry out the CTP check in a single pass and quickly give a binding commitment.

Significance for procurement and the supply chain

CTP is more than an IT feature: it changes the way suppliers and customers negotiate dates. Instead of estimates, data-based, traceable commitments emerge that can be translated into contracts, framework orders and delivery concepts.

CTP as a criterion in supplier selection

When awarding new parts, for example as part of a Request for Proposal (RFP), buyers can explicitly request CTP capability: how quickly can the supplier respond to a quantity change? What lead times do they plan with? In practice, suppliers with system-supported CTP checks often demonstrate higher delivery reliability. Such criteria complement classic award criteria and a structured commodity strategy.

Framework orders and call-off processes

For framework orders with call-off character, CTP helps to check future call-offs for feasibility before they are communicated as binding. The supplier can signal capacity conflicts at an early stage instead of breaking dates at short notice. This is particularly relevant in delivery concepts with just-in-time or

just-in-sequence supply, where a broken commitment can trigger immediate production stoppages at the customer.

Global sourcing and long transport routes

In global sourcing, replenishment lead times are extended by transport, customs clearance and quality inspection. A CTP check must also include logistics lead times here, such as the agreed Incoterms and their impact on transport responsibility and delivery date. Unaccounted transit times are a common cause of overly optimistic delivery commitments in overseas procurement.

Key KPIs for assessing CTP quality

Whether a supplier's CTP responses are reliable is reflected in metrics that buyers should systematically track. These values can be consolidated in regular supplier evaluations and business reviews.

Delivery date and quantity reliability

Delivery reliability measures how many commitments were met on time and in the promised quantity. It is the direct test mark for the reliability of earlier CTP responses. In practice, values above 95 per cent for series parts are considered a good benchmark, with deviations depending on industry and product complexity.

Response time to enquiries and changes

How long does it take for a supplier to respond to a quantity change or an urgent request with a reliable new delivery date commitment? Short response times to changes are an indicator of functioning CTP processes. Response times of a few working days are often regarded as realistic and competitive; longer for complex manufactured products.

Planning and inventory metrics

CTP has a direct impact on materials planning: reliable commitments allow lower safety stocks and improve inventory turns. Likewise, on-time delivery data feeds into the ABC-XYZ analysis, which determines for which items close date coordination with CTP-capable suppliers is particularly worthwhile – especially for high-value items with high demand volatility.

Risks, limitations and controls

CTP is not an end in itself and is no guarantee of schedule certainty. The method has systematic limitations that buyers should be aware of and mitigate through suitable controls.

Typical weaknesses of the method

CTP responses are only as good as the data behind them. Disruptions such as machine breakdowns, scrap or short-notice absences due to illness are usually not taken into account or only in a blanket manner. Multiple buffers held or double booking of capacities across several orders can also invalidate commitments. Anyone who trusts CTP responses uncritically only seemingly shifts the schedule risk to the supplier.

Contractual safeguards

Buyers should make CTP commitments contractually enforceable, for example through fixed response

times to change requests, documented lead times and defined escalation routes. In the event of non-performance, depending on the contract design, instruments such as retention or set-off against payment claims may come into consideration; their admissibility and design must be examined legally on a case-by-case basis. A notification to credit insurers may also become relevant in the event of persistent date crises.

Process controls and compliance

Organisational controls complement contractual ones: clear internal responsibilities for date tracking, regular supplier reviews and a functioning whistleblowing system through which indications of capacity overselling or quality problems can be reported increase early-warning capability. If there is suspicion of documented false statements by the supplier, checking possible deviation approvals and documented date agreements is part of the duty of care.

Current developments: digitalisation and AI in the CTP check

CTP was long a functional promise of ERP systems that often went unused in practice due to data problems. Recent developments in planning systems and AI-supported tools are making reliable capacity commitments available more broadly for the first time.

Advanced planning and real-time data

Modern Advanced Planning Systems bring together sales, production and procurement data in real time and enable simulation-accurate CTP checks within minutes. Sensor data from manufacturing and digital twins of machines improve the mapping of real capacities. Disciplined master data maintenance remains a prerequisite – technology does not replace it.

AI-supported delivery date forecasting

Machine learning methods supplement rule-based CTP calculation with forecasting components: realistic distributions of lead times can be derived from historical order data instead of fixed values. This produces a probabilistic commitment ('80 per cent within four weeks'), which is more honest and plannable for buyers than a single-point commitment.

Digital interfaces in the supplier network

Via supplier portals and electronic connections, CTP queries can be issued and answered automatically. This accelerates tendering phases and makes supplier performance comparable. However, the prerequisite is that the receiving side also processes the commitments systematically and reports back deviations – otherwise the data loop remains closed and unused. Spend analytics subsequently helps to translate insights from CTP and schedule data into strategic procurement.

Typical metrics

Delivery reliability (on-time delivery): > 95%

usual benchmark for series parts; may vary depending on industry and complexity

Quantity reliability: > 97%

proportion of promised quantities delivered in full

Response time to change requests: ≤ 3 working days

typical target value in practice for reliable new delivery date information

Inventory Turns: industry-dependent

reliable CTP commitments reduce safety stock and increase inventory turnover

Practical example

A medium-sized mechanical engineering company with a strongly fluctuating order book repeatedly received short-notice postponements from a supplier of custom assemblies, even though the commitments had initially seemed binding. The procurement team introduced a structured CTP process with the supplier.

- Agreement that every commitment is made following a documented capacity check of the bottleneck machine rather than based on experience values
- Contractually fixed response time of three working days for quantity changes with a binding new delivery date statement
- Inclusion of date reliability in the quarterly supplier evaluation with defined thresholds
- Introduction of a shared supplier portal through which call-offs and capacity reservations are coordinated

Conclusion

Capable to Promise shifts the schedule question from the inventory level to the capacity level, thereby creating a far more honest basis for delivery commitments. For buyers, CTP capability is a meaningful indicator of a supplier's process maturity and planning quality. However, the method places high demands on master data, bottleneck planning and process discipline on both sides. Those who systematically demand, evaluate and contractually safeguard CTP responses durably reduce schedule risks. Companies that integrate CTP into their supplier evaluation and digital processes gain a genuine planning advantage in tight procurement markets.

Frequently asked questions

What does Capable to Promise (CTP) mean?

Capable to Promise is a date-checking method in which delivery commitments are calculated on the basis of available manufacturing and procurement capacities. It checks when a requested quantity can be newly manufactured or procured, rather than only looking at existing stock levels. CTP is therefore the capacity-oriented extension of Available to Promise (ATP).

What is the difference between ATP and CTP?

ATP checks whether demand can be covered from existing or already planned stock. CTP additionally takes into account whether missing quantities can be produced through new manufacturing or procurement orders and calculates realistic dates for this. In practice, ATP is used for standard items from stock and CTP for customised or complex products.

For which companies is CTP worthwhile?

CTP is particularly relevant for manufacturers with make-to-order or engineer-to-order production, long lead times and high order volatility, for example in mechanical engineering, special-purpose vehicle manufacturing or electronics manufacturing. Buyers also benefit because CTP-capable suppliers provide more reliable delivery dates. In pure series production with constant demand, the effort is often not justified.

What data is needed for a CTP check?

Required are up-to-date stock levels, open purchase orders and production orders, complete bills of materials, routings with realistic set-up and processing times, and capacity utilisation of bottleneck resources. Replenishment lead times for externally sourced materials and, for imports, transport times are also part of this. Outdated or incomplete master data is the most common cause of unreliable CTP responses.

How can procurement verify the CTP capability of suppliers?

During the tendering process, CTP capability can be specifically requested, for example in a Request for Proposal (RFP), or through test enquiries with concrete quantity and date scenarios. It is then important to monitor delivery reliability: are promised dates and quantities actually met? These findings are incorporated into regular supplier evaluations.

What are the limitations of Capable to Promise?

CTP usually only represents disruptions such as machine breakdowns, scrap or staff absences in a blanket manner and assumes error-free master data. Moreover, commitments can lose their validity if capacities are reserved multiple times. CTP should therefore not be understood as a guarantee but as a well-founded planning statement, underpinned by buffer measures and regular date tracking.