

Supplier Feasibility Review: Systematically verifying feasibility before the award

A supplier feasibility review is the structured assessment of whether a potential or existing supplier can execute a specific order technically, in terms of capacity, and economically. In practice, the feasibility analysis is frequently carried out prior to the award of new parts, dual-source designs, changeovers or volume jumps. It reduces the risk of tool addenda, delivery delays and quality problems before binding contracts or tool investments are incurred. For technical buyers, it is a central instrument of supplier selection and risk provision in procurement logistics.

Key facts

- The feasibility review examines technical feasibility, capacity, process capability and economic viability at a supplier before an award is made.
- Typical items examined are manufacturing processes, tolerances, tooling, inspection equipment, material availability, delivery time and logistics concept.
- In practice, feasibility confirmations are frequently documented in writing with assumptions, boundary conditions and period of validity.
- A well-prepared review combines the demand specification, drawing data and requirements specification with a structured questionnaire for the supplier.
- KPIs such as the rate of completed reviews prior to award, the number of subsequent changes and process capability values make its effectiveness measurable.
- In the feed-forward, the results frequently feed into the FMEA, quotation comparison and contract negotiations.

Definition: Supplier Feasibility Review

The supplier feasibility review refers to the systematic evaluation of whether a supplier can actually deliver a defined order in the required quality, quantity, delivery time and cost. It is therefore more than a mere capacity query: technology, process capability, material procurement, inspection equipment and logistics are assessed together. The outcome is a documented feasibility statement with clearly named assumptions and risks.

Distinction from quotation evaluation

The quotation evaluation answers the question of price, terms and economic viability, typically supported by procurement portfolio analysis and comparison criteria. The feasibility review goes further: it examines whether the quoted values are feasible at all, for example whether tolerances lie within a controlled process window or whether the promised delivery time is achievable given the real capacity situation. The two assessments complement each other but do not replace one another.

- Quotation: economic viability and terms
- Feasibility: technical and capacity-related realisability

- Together: a robust basis for decision-making prior to the award

When is a feasibility review worthwhile?

In practice, the review is particularly worthwhile for new parts without a reference, for complex geometries, tight tolerances, critical materials or significant volume jumps. A feasibility assessment is also advisable when the delivery system changes, for example from batch production to order release based on Kanban. For standard catalogue parts with a proven track record, a reduced format may suffice.

Legal character of the feasibility confirmation

A feasibility confirmation is usually not a contract but a technical declaration subject to reservation. Nevertheless, it has an effect if it becomes the basis of the award decision: deviations and assumptions should therefore be fixed in writing. Contractual issues such as liability, escalation levels via an escalation clause or protection of know-how via a non-solicitation clause are subsequently clarified within the framework of due diligence and contract negotiations; in individual cases, a legal review is advisable.

Methods and approach in the feasibility review

A practical feasibility review follows a fixed sequence: preparation with complete documentation, structured review on site or remotely, documentation of results and derivation of actions. The effort is typically measured by the risk and complexity class of the part.

Preparation: A complete demand specification as the basis

The basis is an unambiguous demand specification with drawings, bill of materials, tolerances, inspection plans and, where applicable, standards. Unclear requirements lead to unsound feasibility statements, which is why the buyer should clarify open points with design engineering and quality in advance. Logistics requirements such as packaging specifications, delivery concept and delivery time windows should also be included in the review at an early stage, as they have process and cost implications.

On-site review: process, capacity and competence

In the supplier meeting or audit, manufacturing processes, machine utilisation, bottleneck resources and staff competence are assessed; a procurement competency matrix on the buyer's side helps to ask the right technical questions. Important review points are process capability for critical characteristics, tooling and inspection equipment availability, material availability including upstream suppliers as well as export control topics for controlled goods. The results frequently feed into an FMEA and the action planning for process release.

Documentation and feed-forward

The results are recorded in a review protocol: confirmed feasibility, boundary conditions, open points, risks with probability of occurrence and actions with deadline responsibility. The supplier's assumptions, for example regarding order quantities, batch sizes or material prices, must be documented explicitly, as they may later form the basis of price negotiations using practiced negotiation techniques. The market model and the review also provide lines of argument for the procurement lever of terms and conditions.

Key KPIs and evaluation criteria

To ensure that the feasibility review does not end up as a one-off formality, metrics should reflect its quality and effectiveness. The most important metrics can be derived from award, project and quality data.

Metrics on the process quality of the review

The key figure is the proportion of awards for which a completed feasibility review exists before order release. Supplementary metrics include the number of subsequent tool or design changes after the award as well as adherence to review schedules. A stock plan-actual comparison, or a plan-actual comparison at project level, later shows whether the assumed quantities and deadlines were met.

Supplier-related metrics

On the supplier side, relevant metrics are process capability values for critical characteristics, the backorder rate as an indicator of capacity overload, and the delivery time agreed with the supplier compared with actual adherence. The freight cost breakdown in the logistics concept and the reliability of delivery within the defined time window should also be reviewed. These values typically feed into the supplier rating.

Economic evaluation

Beyond the technology, the review also examines the total cost of ownership logic: unit costs, tool investments, minimum order quantities and risk costs. The expected return on investment of the award as well as possible cost avoidance through problems identified at an early stage justify the review effort. In practice, a structured review frequently pays for itself through avoided addenda and downtime.

Risks and controls in the feasibility review

The greatest risks of the feasibility review arise not from a lack of review but from superficial review: uncritically adopted supplier statements, missing documentation of assumptions or forgotten logistics boundary conditions. Targeted controls mitigate these risks.

Typical sources of error

Assumptions such as 'series parts like sample parts', 'material permanently available' or 'capacity freely bookable' are often adopted uncritically. The view of sub-suppliers and raw material markets is also frequently missing, even though availability risks lie there. A missing export control review for controlled goods can moreover result in trade law consequences; in such cases a case-by-case review by the competent authorities is advisable.

Controls and anchoring in the process

Effective controls are a checklist with mandatory questions per part class, a four-eyes review of the feasibility confirmation and a no-go principle: no award without a completed review. In the case of automatic contract renewal of existing framework agreements, the feasibility of the running products should be periodically revalidated, as processes and capacities can change.

Incorporating sustainability and compliance

Modern reviews increasingly also examine sustainability and compliance aspects, such as relevance for the EU Taxonomy, CO2 data of pre-manufacturing and packaging reduction as an optimisation potential.

These topics are frequently already queried during due diligence prior to the award and later fixed contractually. In this way, procurement avoids compliance gaps arising subsequently.

Current developments: digitalisation and resilience

Feasibility reviews are increasingly shifting into digital workflows and are supported by data from ERP and supplier portals. At the same time, the topic has gained in importance due to supply chain disruptions.

Digital feasibility assessment

Digital twins, simulation data and structured supplier portals now enable remote reviews to some extent, in which process data and capacity reports are queried online. Order management and the quotation process are thus interlinked with feasibility data. Automated capacity queries reduce effort, but for critical parts they do not replace the personal review on site.

Resilience and dual sourcing

In view of supply chain risks, many companies use the feasibility review to also examine the robustness of the second source. Of interest here, alongside pure feasibility, are the restart time after failures and the robustness of the procurement logistics. Results from several reviews can be used for a procurement portfolio analysis in order to define risk classes per commodity group.

Early involvement in development projects

The trend is towards early involvement: suppliers are queried about feasibility during the design phase, before the drawing is final. This reduces costly design loops and shortens the overall delivery time up to the ramp-up to series production. At the same time, the demands on buyers increase to assess technical questions jointly with design engineering and quality.

Typical metrics

Review rate prior to award: > 95 %

Proportion of awards with a completed feasibility review before order release

Process capability for critical characteristics (Cpk): ≥ 1.33

customary benchmark for stable series processes

Supplier backorder rate: < 2 %

indicator of capacity overload and delivery reliability

Subsequent changes after award: < 5 %

Proportion of projects with tool or design changes after completion of the review

Practical example

A medium-sized mechanical engineering company awarded a newly designed cast gearbox housing. Without a feasibility review, the quotation from a new supplier would have been based on optimistic capacity assumptions. The on-site review revealed a bottleneck in heat treatment, open questions regarding process capability on two critical dimensions and a packaging concept that did not fit the automated goods-in process.

- Mandatory questionnaire with 40 items per part class, including capacity and sub-supplier queries

- Four-eyes review of the written feasibility confirmation with documented assumptions and period of validity
- Inclusion of critical characteristics in the FMEA and agreement on process capability evidence before start of series production
- Derivation of a corrected logistics concept including packaging reduction and quotation comparison on a comparable basis

Conclusion

The supplier feasibility review ensures that supplier commitments are technically and economically sound before capital is committed. It combines demand specification, supplier evaluation and contract preparation into an end-to-end process and creates a documented basis for decision-making. With clear KPIs, its effectiveness can be measured, for example through avoided addenda and stable delivery times. The investment in a structured review usually pays off quickly in practice through greater planning certainty. Those who develop reviews further in digital and sustainability-related terms also strengthen the resilience of their own supply chain.

Frequently asked questions

What is a feasibility review at a supplier?

A feasibility review is the structured assessment of whether a supplier can execute an order technically, in terms of capacity, and economically. It covers manufacturing processes, process capability, material and tool availability as well as logistics. The outcome is a documented feasibility statement with assumptions and risks, which serves as the basis for decision-making prior to the award.

When should a feasibility review be carried out?

Typically prior to the award of new parts, for complex geometries, tight tolerances or significant volume changes. A revalidation is also advisable in the event of a supplier change, a change to the delivery system or after longer supply pauses. As a rule of thumb: the higher the risk and complexity, the earlier and more intensive the review.

What content belongs in a feasibility review?

Core contents are technical feasibility, process capability, capacity situation, material availability including upstream suppliers, inspection equipment, logistics concept and cost assumptions. In addition, compliance topics such as export control and, where applicable, sustainability requirements should be reviewed. All assumptions and open points are recorded in writing with deadlines and responsible persons.

Is a supplier's feasibility confirmation legally binding?

As a rule, it is a technical declaration subject to reservation and not a supply contract. However, it can have an indirect effect if the award is based on its assumptions; for this reason, boundary conditions should be documented. Binding provisions on liability and escalation only follow in the contract, whose drafting should be legally reviewed on a case-by-case basis.

What is the difference between a feasibility review and a supplier audit?

The supplier audit evaluates the management system and the generic process quality of a supplier. The feasibility review is order-specific and examines whether a specific part is feasible in the defined quality,

quantity and time frame. In practice, both are combined: the audit provides the framework, the review the order-specific assessment.

How long does a supplier feasibility review take?

In practice, the effort ranges from half a day for simple standard parts to several days including an on-site visit for complex components. Decisive factors are the completeness of the documentation provided in advance and the structure of the questionnaire. Good preparation significantly reduces the follow-up effort involved in clarifying open points.