

E-Auction: Digital auctions as an instrument for price optimisation in procurement

The e-auction, also known as an online auction or reverse auction, is a digital process in which suppliers compete in real time for a contract within a defined time window. In industrial procurement, it typically serves to transparently determine the best possible market price level for standardised goods and services. Careful preparation is a prerequisite: only when the specification, contract terms and participant field have been clarified in advance can the auction unleash its full leverage.

Key facts

- In an e-auction, suppliers compete in real time, usually bidding downwards (reverse auction), for a firmly defined contract.
- Suitability exists above all for standardised, specifiable goods with a sufficient number of qualified bidders – often from three participants upwards.
- Preparation is crucial: precise specification, a clear auction mechanism and binding offers from participants.
- Common success measures are savings versus the reference price, the number of active bidders and bid dynamics over time.
- Key risks are quality losses, bidder cartels and damage to long-term supplier relationships.
- E-auctions are one building block of the savings pipeline, not a substitute for strategic negotiation.

Definition: e-auction

The e-auction is an electronically supported procurement process in which several suppliers submit bids alternately or continuously within a closed online room for a fixed duration. In the procurement context, the reverse auction dominates, in which bidders bid step by step downwards and the buyer maps the most efficient price in the market. Legally, the process is generally a form of negotiation or tendering and should be reviewed in individual cases with regard to competition and procurement law aspects.

Distinction from the classic tender

Unlike in a conventional request for quotation (RFQ), suppliers in an e-auction do not submit an offer only once, but can respond in several rounds and frequently see aggregated feedback on their own position. This creates a dynamic price-finding process with genuine competitive pressure. However, the substantive basis – specification, terms, deadlines – must be prepared with the same care as for any enquiry; an imprecise tender becomes immediately visible in the auction.

Variants of the e-auction

Alongside the classic reverse auction with suppliers bidding downwards, there are several formats for special cases. The choice of format should be guided by the market structure and the objective, not the other way round.

Areas of application: when an e-auction fits – and when it does not

E-auctions unfold their strengths for volume-relevant, clearly specifiable line items with functioning competition. The more complex, performance-bound or relationship-dependent the purchased good, the more critical its use becomes.

Suitable categories

Typical candidates are raw and input materials with exchange-like characteristics, commercially standard C-parts, standardised contract manufacturing, transport and logistics services and services with a clearly defined scope of performance. A prerequisite is a clean basket analysis that reveals consolidation potential and the competitive volumes per line item. Downstream processes should also be in place: when catalogue content management and ordering policy are established, the auction result can be seamlessly transferred into catalogue prices or framework agreements.

Unsuitable constellations

For highly complex components, long development partnerships or in the context of modular sourcing, the value shifts from the price to the performance level; here, the auction risks a mere reduction to the purchase price. The same applies when only one or two qualified suppliers exist or a supplier location risk limits the diversity of sources. In such cases, structured negotiations, total cost of ownership analyses or joint innovation topics in innovation management in procurement are usually the better route.

Preparation as a success factor

In practice, e-auctions rarely fail because of the mechanism, but because of inadequate preparation. The foundations are a precise specification including relevant evidence documents (e.g. certificate of analysis for materials), defined Incoterms such as Incoterms EXW or DDP as a comparison basis, a uniform cost surcharge calculation for manufactured parts and binding offers. A risk analysis and pre-qualification of participants carried out in advance ensures that only capable bidders are admitted.

Methods and approach: the course of an e-auction

A successful e-auction follows a structured phase model from market preparation through to contract award. The transaction itself typically takes between 30 minutes and several hours; the real effort lies in the preparation and follow-up phases.

Phase 1: Market and event preparation

First, the category is analysed, the volume to be awarded is defined and the reference price is established – for example the current contract, stock or last order price. The auction rules are then fixed: bid increment, extension logic for bids shortly before expiry, bid visibility (complete, aggregated or only own ranking position) and action parameters such as price update and lot structure. Communication to bidders should take place early and in writing, including test access and a clear blanket rule: anyone who does not bid will not receive an award in this round.

Phase 2: Execution

During the auction, the buyer moderates the event, monitors bid development and intervenes in the event of technical problems or rule violations. It is sensible to keep a parallel data record of bid history and bidder activity, which can later be used for documentation and the savings pipeline. In lot auctions,

multiple line items can be awarded simultaneously, so that suppliers bid with bundle optimisation in mind and the buyer achieves an overall cost minimisation rather than individual best prices.

Phase 3: Evaluation and award

After the auction ends, the result is evaluated in full – not necessarily to the lowest bid, but according to criteria defined in advance including delivery performance, quality and risk profile. The award decision should be documented and communicated to the bidders promptly. This is followed by operational anchoring: framework contract management, price updating in the systems and, where applicable, the establishment of no-touch order processes for standard line items in order to permanently reduce transaction costs.

Key KPIs and success assessment of e-auctions

The success of an e-auction can only be assessed if target figures are defined in advance. In practice, a few metrics have become established that serve as typical benchmarks and vary greatly depending on the category.

Key metrics

The central measure is the relative saving versus the reference price, usually measured as the percentage difference between the start and end price. In addition, the number of qualified bidders, the active participation ratio, the number of bids per bidder and the distribution of final bids show how intense the competition actually was. A high bid density with narrow final prices indicates an efficient market; a wide spread may indicate information asymmetries or quality differences.

Classification and follow-up

E-auction savings should be booked realistically: if the reference price exaggerates the market level, an inflationary phantom saving arises. A conservative, comprehensible reference value is better. In the long term, what counts is not the one-off saving but the stability of the result over the contract horizon – here, KPIs such as on-time delivery or first pass yield (FPY) for the auction winner follow on. Overarching financial metrics such as accounts payable days optimisation can also be addressed in the contract negotiations after the auction.

Risks and controls in e-auctions

Despite its efficiency advantages, the format entails specific risks that should be made manageable through clear rules and structured controls.

Quality and performance risks

The most visible effect of an auction is price pressure; the most common subsequent mistake is that downstream quality issues were not factored in. Therefore, before the award, it should be checked whether certifications, evidence documents or sample parts have been provided, and whether safety stock or transition inventories are necessary to cushion a supplier changeover. For critical parts, an auction design with quality inspection prior to admission can also be sensible.

Market and competition-law risks

Low bidder numbers, conspicuously uniform bid patterns or recurring withdrawal behaviour can indicate coordinated conduct. Before every event, a risk analysis of the market structure should be carried out.

Competition-law rules apply as a matter of principle: information about fellow bidders may only be disclosed within the framework of the transparently communicated auction rules, and the processing of contract data requires a review in each individual case.

Relationship and reputational damage

Suppliers often perceive auctions as price dictation, particularly if they have invested in development projects or preliminary services. Transparency helps here: clear criteria in advance, no 'auction fishing' without a genuine intention to award, and a willingness to shape long-term partnerships using other instruments such as a joint business plan (JBP). Those who use auctions selectively and fairly protect their reputation in the procurement market in the long term.

Current developments and outlook

E-auctions are evolving from isolated price events into integrated building blocks of digital procurement strategies. The drivers are automation, data availability and the linking with downstream processes.

Integration into digital procurement processes

Modern procurement landscapes link auction results directly to catalogue data, framework agreements and ordering systems. The result of an auction can be transferred into catalogue content management as price information without any manual intermediate step; orders then run through no-touch order processes. At a strategic level, auction results feed into the procurement business plan and the savings pipeline, making the contribution of procurement measurable.

New formats and sustainability

Alongside pure price auctions, multi-criteria auctions are gaining in importance, in which quality, sustainability and delivery scores are evaluated in addition to the purchase price. A rising carbon price shifts the relative attractiveness of suppliers; those who systematically factor emissions data into the evaluation take account of future cost burdens at an early stage. Round-trip concepts, in which old material flows back into second-life use, can also be represented in auction logic as consideration.

Typical metrics

Savings versus reference price: typically 5–15%

heavily dependent on market structure and reference value quality

Active bidder ratio: > 70%

proportion of qualified bidders who actually submit at least one bid

Bids per active bidder: typically > 5

indicator of genuine competitive dynamics

On-time delivery performance of the auction winner: > 95%

sustainability indicator after award

Practical example

A medium-sized mechanical engineering company with around 300 employees previously awarded standard sheet-metal formed parts through annual individual negotiations with five suppliers. After a detailed basket analysis, the head of procurement decided in favour of a multi-stage lot auction: in

advance, all line items were standardised, technical specifications harmonised and four qualified suppliers admitted following pre-qualification. The auction itself ran for two hours with a usable bid history; the final prices were then transferred into a two-year framework agreement.

- Preparation: consolidation of the article master and creation of uniform requirement specifications including evidence documents
- Auction design: lot bundling by material group with extension logic and full price transparency for all bidders
- Contract anchoring: transfer of the result into framework contract management and release for catalogue orders
- Risk mitigation: building up a limited safety stock for the transition to the new main supplier

Conclusion

The e-auction is a powerful instrument for transparent price finding for standardised purchased goods – not a panacea, but an established building block of a structured procurement strategy. Success is decided not during the auction but beforehand: through precise specification, clean market preparation and fair, transparent rules. Those who systematically incorporate quality criteria, risk profiles and supplier relationships achieve sustainable results rather than short-term price effects. Complemented by framework agreements, catalogue processes and clean documentation in the savings pipeline, the e-auction becomes a repeatable, scalable lever in procurement.

Frequently asked questions

What is an e-auction in procurement?

An e-auction is an electronically supported auction process in which several suppliers compete in real time for a procurement contract. In industrial procurement, the reverse auction format dominates, where bidders bid downwards. The aim is to transparently determine the market-appropriate price while reducing negotiation effort.

When is an e-auction worthwhile and when is it not?

It is worthwhile for standardised, clearly specifiable products or services with a sufficient number of qualified bidders, often from three participants upwards. It is unsuitable for highly complex services, close development partnerships or very few suppliers. In these cases, structured negotiations or total cost of ownership analyses are usually more effective.

What types of e-auctions are there?

The best-known form is the reverse auction, with suppliers bidding downwards. In addition, there are lot auctions in which multiple line items are awarded as a bundle, Japanese auctions with price steps predefined by the buying side, and multi-criteria auctions which evaluate quality or sustainability criteria in addition to price.

How do you prepare an e-auction properly?

First, the specification, reference price and contract terms are fixed in a binding manner, including Incoterms and any required evidence documents. This is followed by the pre-qualification of bidders and written communication of all auction rules, including a test access. Only once every detail of the service has been clearly described should the event be released.

How high are typical savings from e-auctions?

In practice, savings of between 5 and 15 per cent versus the reference price are frequently reported, although the range depends heavily on the category, market structure and quality of the reference price. What is crucial is a realistic reference value so that no phantom savings arise. The sustainability of the saving over the contract horizon is usually more important than the auction moment itself.

Are e-auctions legally unproblematic?

For private companies, e-auctions are fundamentally permissible; competition-law aspects are relevant, such as the handling of bidder information and the transparency of the rules. Under public procurement law, e-auctions are subject to specific formal requirements. In individual cases, the design should always be legally reviewed.