

Process costing: process-oriented cost management in procurement

Process costing is a cost and performance accounting method that allocates overheads to products, customers or functions on the basis of activities and process quantities. In procurement, it is used to make the costs of procurement processes such as enquiries, orders, goods receipt or supplier selection transparent and to identify weak points. In doing so, it complements pure price analyses with a holistic cost and efficiency perspective across the entire procurement process.

Key facts

- Process costing allocates overheads via process combinations and cost types rather than via flat-rate keys.
- Typical procurement processes include demand identification, enquiry, ordering, goods receipt, quality inspection and invoice processing.
- It shows which products, suppliers or orders make procurement processes particularly resource-intensive.
- As a result, awareness often increases for one-off and micro-quantity processes that remain invisible in unit cost calculations.
- The data basis requires well-maintained master data and consistent Master Data Governance.
- Results typically feed into make-or-buy decisions, supplier consolidation and process standardisation.

Definition: process costing

Process costing (also: process costing according to Kaplan and Cooper, in English Activity-Based Costing) is a cost accounting approach that does not allocate costs according to contribution margin or surcharge schemes, but according to the cause of their origin. It assigns costs to individual processes and allocates these, via process quantities, to cost objects.

Distinction from classical full cost accounting

In classical absorption costing, overheads are often allocated to products using a percentage surcharge on material or production overheads. This works with a homogeneous product portfolio, but distorts results when products trigger processes of very different intensity. Process costing resolves these distortions by allocating costs directly according to the causation principle.

Relevance for procurement

For procurement, process costing makes it visible that purchasing raw materials with a few framework orders and delivery schedule calls causes significantly lower process costs than buying many small line items with manual enquiries. This makes it possible to assess whether standardisation, supplier consolidation or catalogue solutions are economically sensible.

Structure and terminology of process costing

In practice, the methodological structure follows a recurring pattern: identify processes, assign costs, define reference figures and allocate costs via process quantities. The central building blocks are the process category, the process combination and the process quantity.

Process categories and process combinations

Process categories group similar activities, for example according to their repetition characteristics: one-off, variant-related, product-related or order-related. A process combination bundles several individual items into a single chargeable unit, for example the handling of an order including enquiry, supplier communication and goods receipt. A typical benchmark for the risk posed by micro-orders is that cumulative processing and inspection costs frequently exceed the purchase price of the smaller items considerably.

Reference figures and process quantities

Reference figures are the quantity drivers that cause resource consumption, for example the number of orders, the number of quality inspections or the number of delivery notes generated. The process quantity indicates how often a process is carried out in a period. From this, the process cost rate per unit is derived, which is used to transfer costs to products, customers or suppliers.

Main and sub-processes

Main processes are the activities relevant to the results calculation that have their own reference figure. Sub-processes are frequently allocated to main processes using a flat-rate cost rate for simplification. In practice, it is advisable to start with 20 to 40 main processes and not to map the entire company.

Methodological approach in procurement

For procurement, process costing specifically means examining all phases of the procurement process and quantifying their cost drivers. Typically, the project proceeds in six steps.

Process map and activity analysis

First, all procurement activities are recorded, from demand identification through the enquiry stage to goods and invoice receipt. Interviews and records kept by clerical staff provide data on the time and frequency of the individual actions. It is important to also capture unproductive activities such as duplicate checks, follow-up investigations or maverick buying.

Defining cost rates and reference figures

For each process, personnel costs, system costs and a proportionate share of overheads are recorded and combined with the average processing time into a cost rate per transaction. The process quantity is derived from historical transaction data from ordering and ERP systems. Well-maintained master data and functioning Master Data Governance are a prerequisite for reliable results here.

Allocation and interpretation of results

The calculated process costs are allocated to products, suppliers or product categories. This makes it possible to identify the material groups with particularly high process-related effort and address them in a targeted manner. Results feed into procurement portfolio analyses or support a well-founded supplier landscape analysis.

Key KPIs and evaluations

Process costing provides a range of metrics that make procurement effort measurable. These KPIs are suitable for regular evaluations and for plan-actual comparisons across periods.

Process costs per transaction

The process cost rate per order, enquiry or goods receipt is the key metric. In practice, the full processing effort of a classic order typically lies in a range of around 50 to 150 euros, depending on complexity and degree of automation. For enquiries with tender characteristics and reverse auctions, the effort increases significantly.

Process cost ratio and automation rate

The process cost ratio sets procurement process costs in relation to procurement volume or revenue. The automation rate measures the proportion of transactions that run through without manual processing. Both metrics are suitable for plan-actual comparisons and for target agreements within the procurement team.

Process costs by supplier and product category

When process costs are broken down by supplier, it is possible to identify partners who cause additional effort through frequent complaints, incomplete delivery documents or inadequate quality inspections. This insight feeds into a supplier scoring model and supports a structured supplier development plan.

Risks, pitfalls and controls

Process costing is data-intensive and stands or falls with the quality of the underlying information. Without a clear structure and scope, projects risk becoming overloaded, producing results that nobody understands.

Data quality and effort

The biggest pitfall is unreliable time records or incomplete transaction data. Estimates provided by clerical staff should be spot-checked against actual measurements. An overly detailed process model increases the effort more than the benefit, which is why a pragmatic restriction to relevant processes makes sense.

Behavioural aspects and acceptance

Process costing makes inefficiencies visible and may meet resistance from employees. Clear communication of the objective, involving those affected and emphasising process improvement rather than individual performance assessment increase acceptance. Results should serve as a basis for decision-making, not as a sanctioning instrument.

Delimitation and consistency

Delimitation issues between processes and double allocations of costs lead to misinterpretations. Clear definitions and regular plausibility checks of cost rates prevent misdirection. Legally relevant aspects such as payment terms or contractual frameworks with suppliers also belong to the cost perspective, but should be legally reviewed on a case-by-case basis.

Current developments and practical relevance

Process costing is gaining importance in many industrial companies because procurement processes are increasingly automated and digitalised, making fine-grained transaction data available. At the same time, pressure is growing to optimise indirect costs and process flows sustainably.

Digitalisation and automation

Electronic order processing, catalogue solutions and automated goods receipt inspections measurably reduce process quantities and manual activities. Process costing makes the benefit of such investments quantifiable and provides the basis for business case arguments. It thus also serves as a controlling instrument for digitalisation projects in procurement.

Integration into planning and management processes

Process costing is increasingly being linked with integrated planning processes such as Sales and Operations Planning, because sales, production and procurement volumes are synchronised there. Volume forecasts from S&OP feed into the planning of process capacities, for example in accounting or in the quality function.

Sustainability and regulatory topics

Requirements such as PPWR declarations of conformity or packaging reduction create new process steps and thus new cost categories. Process costing can be extended to also capture the costs of compliance, documentation and sustainability processes. This makes the effort associated with regulatory topics measurable.

Typical metrics

Process costs per order: typically €50–150

depending on complexity, degree of automation and approval levels

Process cost ratio: often 1–3 % of procurement volume

benchmark for indirect procurement costs; varies considerably by industry

Order process automation rate: > 80 %

proportion of transactions running smoothly in digitalised processes

Proportion of micro-orders: < 10 %

target figure for reducing process-cost-driving micro-transactions

Practical example

A medium-sized mechanical engineering company with around 450 employees introduced process costing for indirect procurement. The analysis showed that around 40 per cent of all orders were below a nominal value of 200 euros but caused a disproportionate share of the processing effort. Based on these findings, process rules were tightened and the supplier structure optimised.

- Introduction of a catalogue and self-service process for C-parts with approval limits
- Supplier consolidation in production materials from over 60 to around 25 strategic partners
- Automated goods receipt inspection and invoice processing for standard items
- Regular plan-actual comparison of volumes and process costs to monitor target achievement

Conclusion

Process costing makes the effort behind procurement activities visible and thus creates a reliable basis for process, supplier and portfolio decisions in procurement. It complements pure price analyses with a causation-based cost perspective and uncovers inefficiencies that remain hidden in classical calculations. The prerequisites are clean master data, a pragmatic selection of processes and the acceptance of those involved. Those who apply the method consistently can reduce process costs, manage supplier quality in measurable terms and justify digitalisation projects economically. In combination with metrics such as the savings pipeline and process KPIs, process costing becomes a central steering instrument of modern procurement.

Frequently asked questions

What is process costing in simple terms?

Process costing is a cost accounting method that allocates overheads to individual processes according to the causation principle. Instead of flat-rate surcharges, specific activities such as ordering, goods receipt or quality inspection are assigned cost rates. This makes visible which products or transactions actually cause high levels of effort.

What is the difference between process costing and absorption costing?

Absorption costing distributes overheads to cost objects via flat-rate percentages. Process costing, by contrast, assigns costs directly to the processes that cause them, using reference figures and process quantities. As a result, cost allocations are considerably more realistic when the product portfolio is heterogeneous.

What are the benefits of process costing in procurement?

In procurement, the method reveals how much processing effort individual orders, suppliers or product categories cause. From this, standardisation potential, automation initiatives and consolidation measures can be derived. It also makes the assessment of supplier quality and complaint-handling effort objectively measurable.

How do you create a process costing system step by step?

Typically in six steps: identify processes, assign cost objects, define reference figures, calculate cost rates, record process quantities and allocate costs to products or customers. The data usually comes from ERP systems and from interviews with staff. A pragmatic start with 20 to 40 main processes has proven effective.

What is a process combination in process costing?

A process combination bundles several thematically related individual activities into a single chargeable process unit. For example, the entire order transaction, including enquiry, order placement and goods receipt, can be combined into one combination. This simplifies cost allocation and improves the readability of results.

Which companies is process costing suitable for?

It is particularly suitable for companies with a high proportion of overheads, a wide range of products or complex procurement and production processes. Typical users include mechanical engineering, automotive, electronics and chemicals. For small businesses with few homogeneous products, the effort involved is often not economically worthwhile.