Modern Cost Engineering in 2026: Smarter, Faster, AI-Ready

Proven practices and AI Dos & Don'ts for a cost engineering process that delivers

tset

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Introduction

Manufacturing decisions are moving faster than ever, and cost engineers are under pressure to keep pace with tighter deadlines, shifting supply chains, and increasing sustainability demands. Outdated tools and manual workarounds can't keep up. They don't just waste time, but hold you back.

This guide is for cost engineers who need a setup that works under real-world pressure. It should keep calculations consistent, make results easy to explain, and help you move faster without sacrificing accuracy.

And yes, AI is part of that equation. In 2026, ignoring it makes about as much sense as pricing parts with a fax machine. You already use AI in your daily life, and it's becoming part of nearly every business function. Cost engineering is no exception. The real question is how to make AI work for you and your team - without losing control over the logic that matters most.

Inside, you'll learn:

- Where **AI actually adds value in cost engineering, and where it doesn't**
- The **must-have capabilities** a future-proof costing software
- How to improve **accuracy, speed, and collaboration across your organization – without losing control**

01 AI in Costing: Do This, Not That

Dealing with cost engineering challenges of our customers daily, we are often asked: how far can AI go in cost engineering today? Our work with manufacturers shows a clear pattern. AI can speed up discovery, surface explanations, and catch errors early. It cannot replace deterministic, auditable calculation logic or expert judgment. The right approach uses AI to remove friction while keeping engineers in control.

Remember these principles for using AI in costing:

1. **Deterministic models stay in charge:** Calculation logic must be transparent, editable, and auditable.
2. **AI augments, it does not replace:** Use it to classify, search, summarize, and flag issues.
3. **Traceability is non-negotiable:** Every result needs a clear path from input to output.

Used well, AI removes busywork and surfaces the "why" behind results. But AI is only one part of the equation. To deliver reliable results at scale, a modern cost engineering software in 2026 must combine flexible workflows, centralized and transparent data, and the ability to embed expert knowledge across the organization. Meeting these demands requires a platform that is configurable, collaborative, and built on an AI-ready data architecture.

Do with AI	Don't Do with AI
Automate categorization and search Auto-tag parts, match similar components, use natural language filters.	**Replace calculation logic** Keep deterministic, auditable models at the core.
Extract insights Generate clear explanations of cost, carbon, and margin drivers.	**Accept black-box outputs** Avoid results that cannot be traced or verified.
Detect outliers Flag suspicious or illogical inputs to improve data quality.	**Assume accuracy** AI can hallucinate or misinterpret data. Always validate.
Suggest process routing Propose a routing chain of processes based on comparable projects.	**Skip expert review** Results still require interpretation and sign-off.

Do's and Don'ts for the use of AI in costing

02 Why You Need an Automated, Transparent Calculation Tool

The following capabilities are the foundation of a **modern, future-proof cost engineering system**, designed to help teams adapt quickly, collaborate effectively, and make every decision based on trusted, up-to-date information.

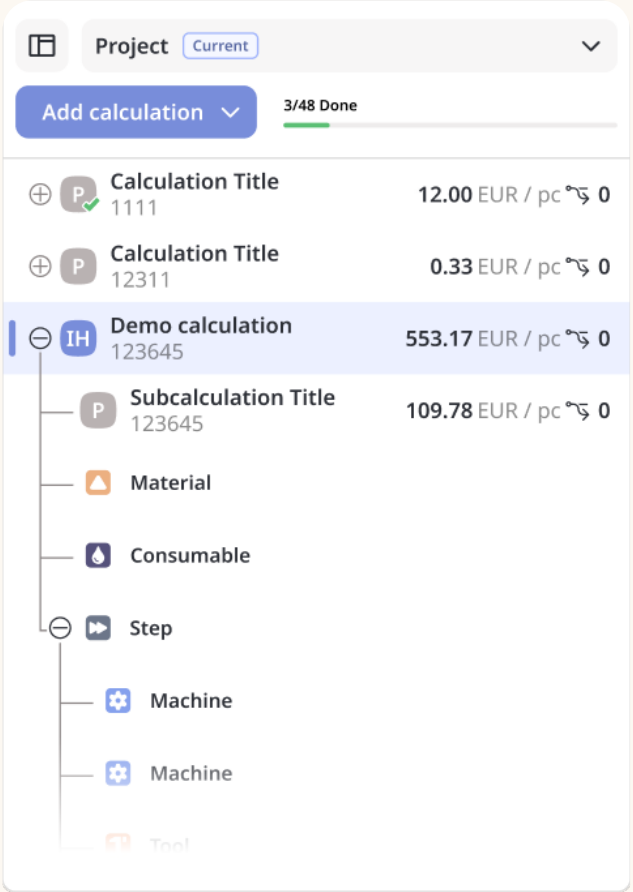
In the Tset Software, they come together in a single tool.

2.1 Flexible Input Options: Build Calculations Your Way

Every project starts differently. Some begin with a 3D model, others with a Bill of Materials, and some with only a rough concept or existing cost model. In many tools, these starting points require separate workflows or extra software.

With Tset, you can:

- **Start from 3D models** and **use the scalable shape library** to generate geometry-based calculations.
- **Upload a Bill of Materials** and link it wdirectly to material, process, and cost data.
- **Import existing cost models** or begin with **manual inputs** when needed.
- **Integrate with ERP, PLM, and other enterprise systems** through the open API architecture.
- **Adapt to your workflow** without being locked into rigid input formats.



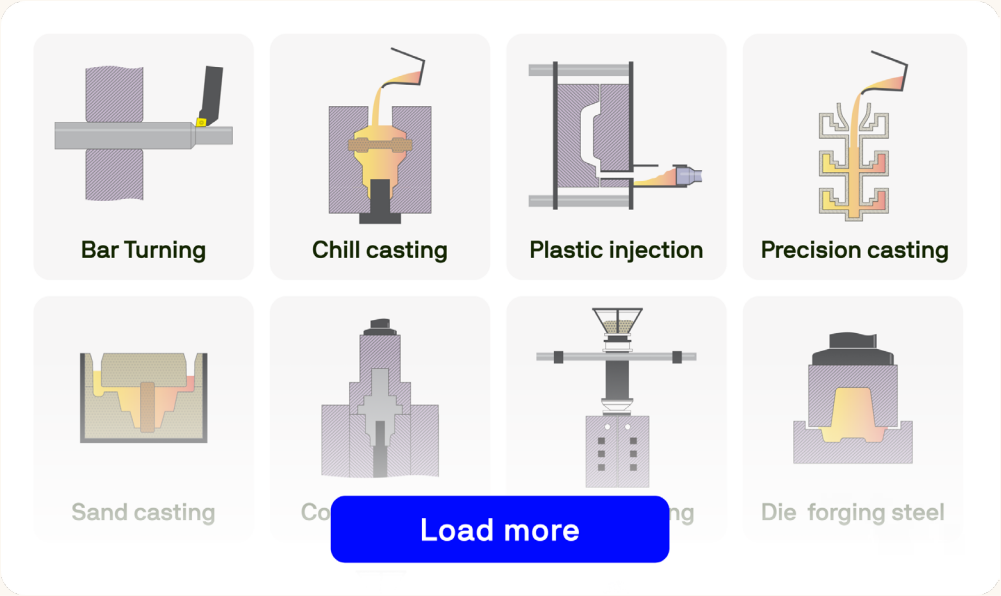
Bill of Material (BOM) explorer in the Tset Software

2.2 Reusable Cost Modules: Faster Cost and CO_2 Results

Cost engineers should not have to build every calculation from scratch. Validating supplier quotes should take seconds, and cost estimates should always reflect the most current market data. Manual calculations slow down development, increase the risk of errors, and make it harder to maintain consistent logic across projects.

With Tset's semi-automated, reusable cost modules:

- **Semi-automated, reusable cost modules** streamline repetitive tasks and capture your organization's cost engineering knowledge.
- **Built-in logic** applies consistent methodologies to every calculation, improving traceability and comparability.
- **Cost and carbon footprint outputs** are generated together by default, giving decision-makers the full picture for both profitability and sustainability.
- Automated updates ensure calculations always reflect the latest data, removing bottlenecks caused by outdated information.



Ready-to-use calculation modules

2.3 AI-Ready Data: A Single Source of Truth

Cost-related data often lives in multiple places such as supplier quotes in emails, material prices in spreadsheets, and process data in separate tools. Without a single source of truth, decisions may be based on outdated or incomplete information.

With Tset:

- All cost-related data is **centralized**, ensuring that every department works with the most up-to-date and consistent inputs.
- Cost engineers **save time** by eliminating manual collection and verification of fragmented data.
- **Procurement, R&D, and finance teams access aligned data sets** tailored to their needs, while cost engineers maintain traceability and control over calculation logic.

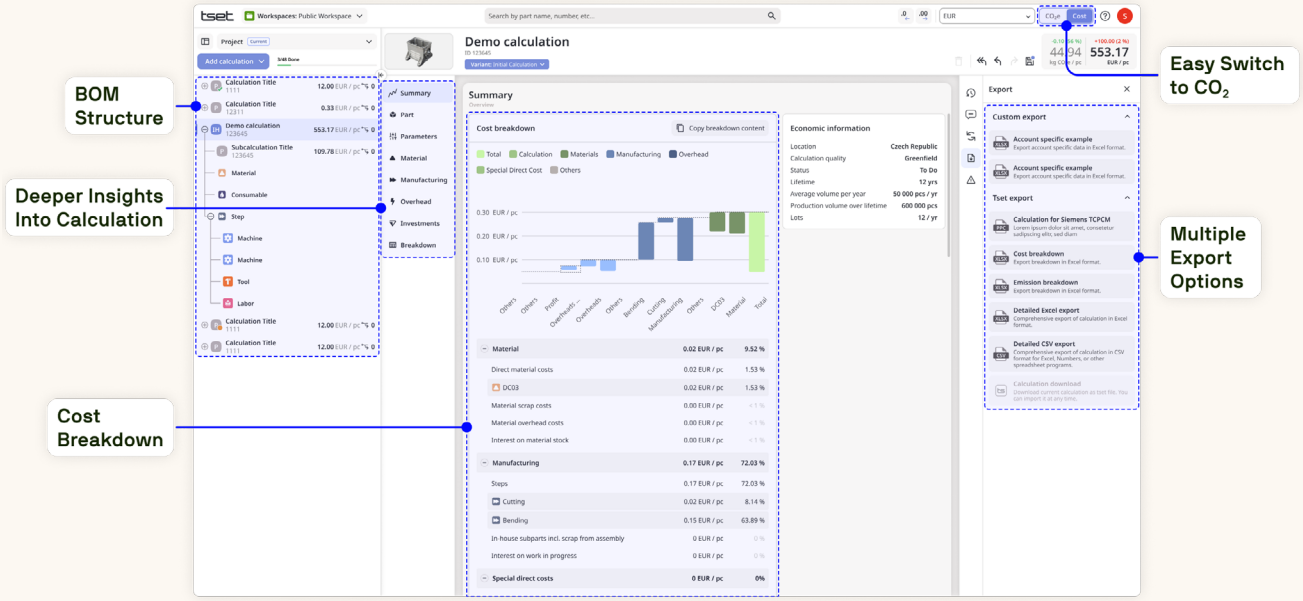
Cross-functional collabotation in Tset

2.4 Scalable Expertise: Standardizing Knowledge Across the Organization

Not every stakeholder has deep cost engineering knowledge. Procurement professionals, design engineers, and financial analysts often lack visibility into cost structures. Even in experienced cost engineering departments, gaps in commodity or process knowledge can slow projects.

Tset closes these gaps by embedding expert knowledge and support into the software:

- An **intuitive interface** allows even non-experts to create reliable cost breakdowns without extensive training.
- **User-defined logic and editable models** ensure results reflect your organization's methodology while remaining transparent and explainable.
- **Built-in market data** and **ready-to-use cost models** expand coverage across more commodities, reducing reliance on external experts.
- **Configurable workflows** and **best-practice templates** can be adapted to your needs, ensuring consistent outputs across teams.
- Access to **Tset's expert support** helps refine complex cost models and validate results when internal know-how is limited.



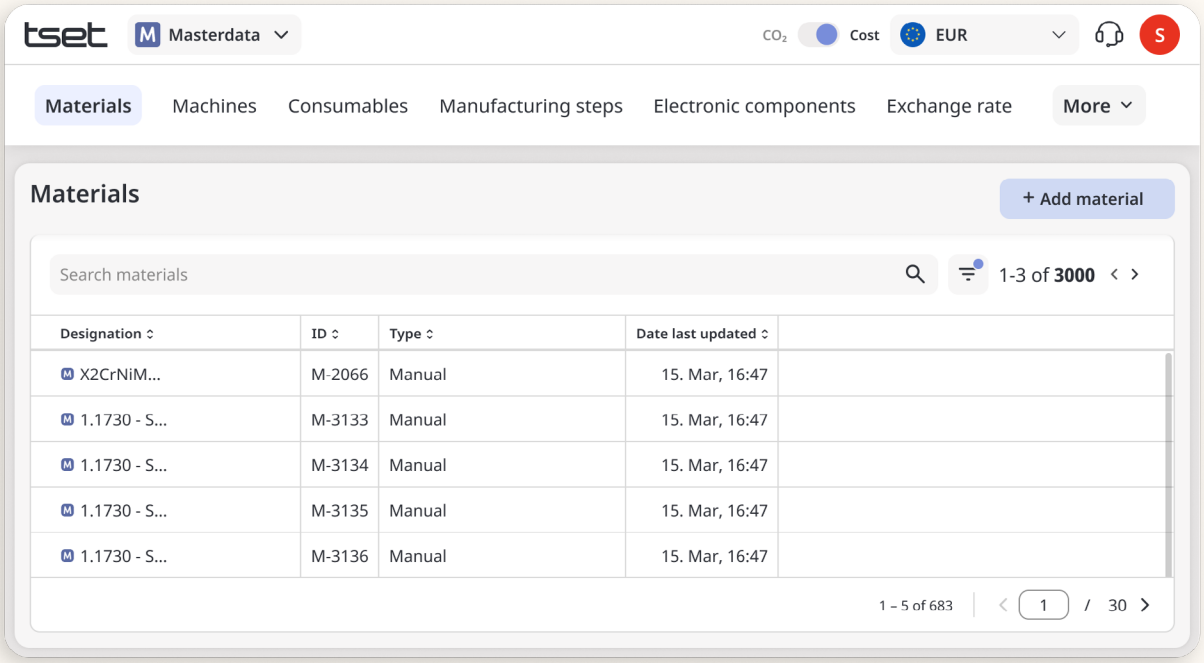
The Tset Software intuituve interface

2.5 Master Data: The Foundation for Reliable Costing

Even the best costing logic fails if it is built on outdated or inconsistent inputs. Reliable master data is the foundation that turns calculations into decisions you can trust.

Tset closes these gaps by embedding expert knowledge and support into the software:

- **Material, process, and cost data** are structured and harmonized, removing inconsistencies across projects and departments.
- **Updates flow automatically into every calculation,** so results always reflect the latest market and supplier information.
- **Different departments work from a common baseline,** ensuring that discussions focus on strategy, not reconciling numbers.
- **Master data is managed once but applied everywhere,** reducing rework and freeing engineers to focus on analysis instead of data collection.



Master data in Tset

03 Turning Cost Engineering into a Scalable Advantage

Cost engineering becomes a competitive strength when it delivers faster decisions, consistent results, and clear impact on the bottom line. Achieving that requires a modern platform that removes bottlenecks, connects teams, and makes every calculation traceable and repeatable.

Tset gives cost engineering that foundation.. With configurable models, centralized data, targeted AI capabilities, and embedded expertise, it equips teams to scale their efforts without losing precision. The result is stronger collaboration, faster execution, and measurable savings that support your business objectives.

With Tset, you can:

- Expand cost coverage without increasing headcount by using automation and AI where it adds real value
- Standardize and scale your costing logic while keeping expert oversight
- Prove the ROI of cost engineering to management with data-backed results

If you want to see how this could work in your organization, book a demo today – and receive an ROI estimate tailored to your business.

About Tset

Tset - Product cost and CO2 analysis across the entire product lifecycle.

Tset Software GmbH, known as Tset, transforms product development and manufacturing with its innovative solution for product costing and CO_2 analysis. Founded in 2018 by Andreas Tsetinis and Sasan Hashemi, Tset empowers manufacturing businesses with advanced, cloud-based analytics for precise cost reporting and impactful cost optimization. Its software seamlessly integrates automation, comprehensive industry data, and expert support, enabling teams in procurement, R&D, cost engineering, and sales to collaborate effectively and make strategic decisions.

Trusted by global manufacturers such as BMW Group, Brose, AGCO, Chiron Group, and Stabilus, Tset serves diverse sectors including automotive, machinery, and medical industries. Headquartered in Vienna and Kuchl, Austria, and supported by over $25 million in funding, Tset's team of more than 70 experts continues to innovate and expand its software capabilities.

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