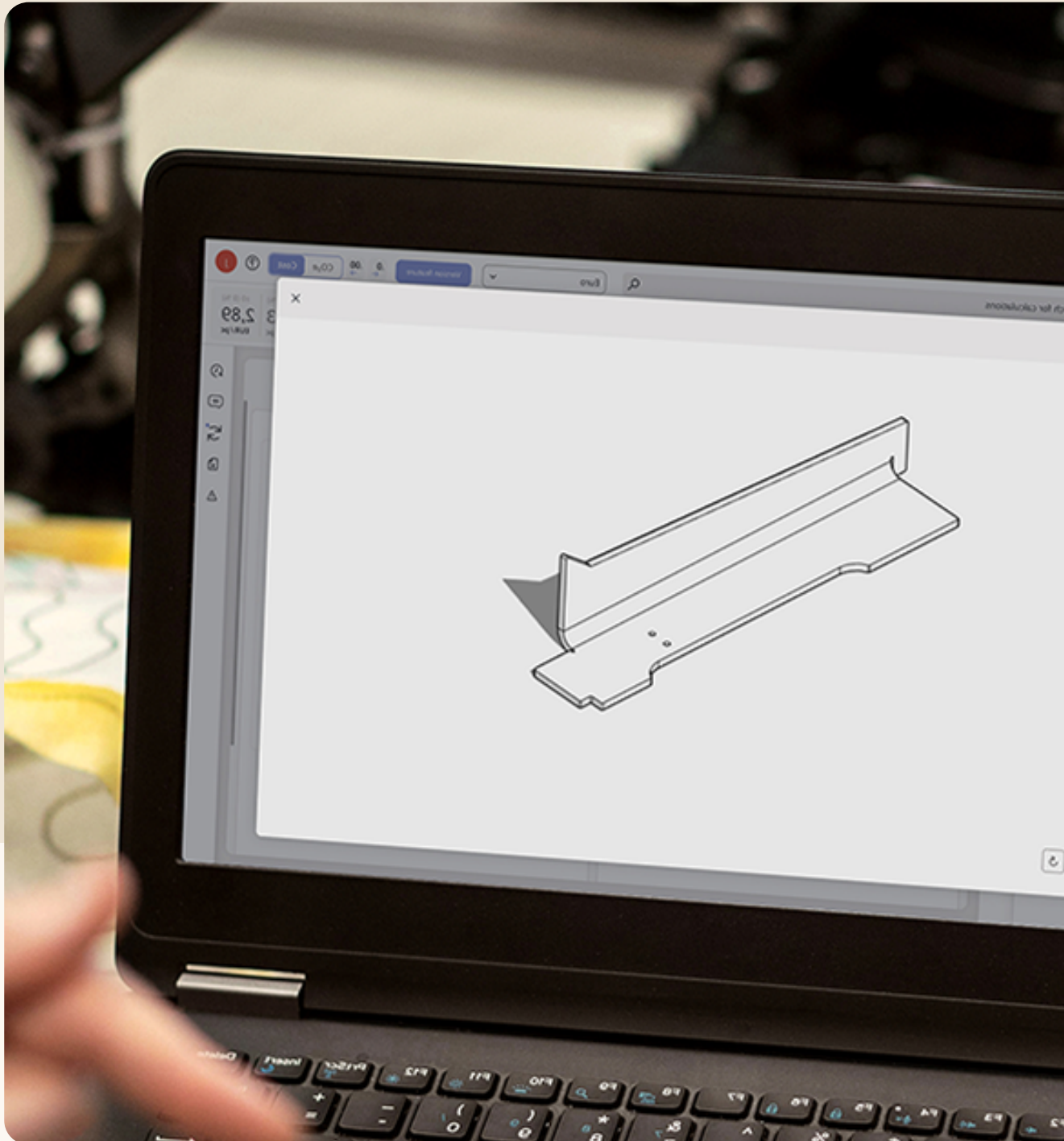


Design-to-Cost for Engineers

Should Costing and Competitive Benchmarking in One Workflow



Contents

Introduction	03
Why Cost Engineering Can't Keep Up	04
Tset Studio and A2MAC1: Calculation Meets Benchmarking	05
How It Works: From Competitor Teardown to Your Own Should Cost	06
Why It Holds Up: From One Calculation to Every Design Review	08
Technology Module Framework: The Engine Behind Every Should Cost	08
AI Features	09
The Window to Act Is Early	10

01 Introduction

Most product cost decisions are made before cost engineering ever gets involved.

By the time a design reaches a formal cost review, the geometry is set, the material is chosen, the manufacturing process is locked. Industry data puts it plainly: 70–80% of a product's cost is determined during early design stages, well before a supplier quote arrives or cost engineering delivers an analysis. The feedback loop exists, but it closes too late to change anything.

This isn't a process failure; it's a capacity and tooling problem, one the industry has largely accepted as the norm.

In this whitepaper, we explore why that gap exists and introduce the first integration between Tset Studio and A2MAC1, built specifically to address it.

70–80%
of total cost.

Decided before the design is even reviewed.

02 Why Cost Engineering Can't Keep Up

Cost engineering teams are structurally understaffed relative to the volume of requests they receive. An R&D department generating dozens of design iterations a month cannot realistically expect a detailed should cost for each one in time to act on it. Scenario comparisons that should be routine (die casting versus injection molding, one material against another, one region against another) rarely happen in practice. Getting even one answer takes longer than the design has time to wait.

The result is predictable: **engineers design without a cost signal**. Cost decisions get deferred to later lifecycle stages (series development, supplier negotiation, or, worse, post-launch cost-down programs), where reversing a design decision costs orders of magnitude more than catching it early would have. Make-or-buy calls, in particular, end up resting on experience and last year's numbers instead of current cost reality.

Design-to-cost is well understood as a discipline, and the industry is aligned on its value. The hard part is applying it: cost engineering embedded in the design process from day one has never been scalable with traditional tools and team sizes.

Until now, that constraint has been treated as a given; it doesn't have to be.

03 Tset Studio and A2MAC1: Calculation Meets Benchmarking

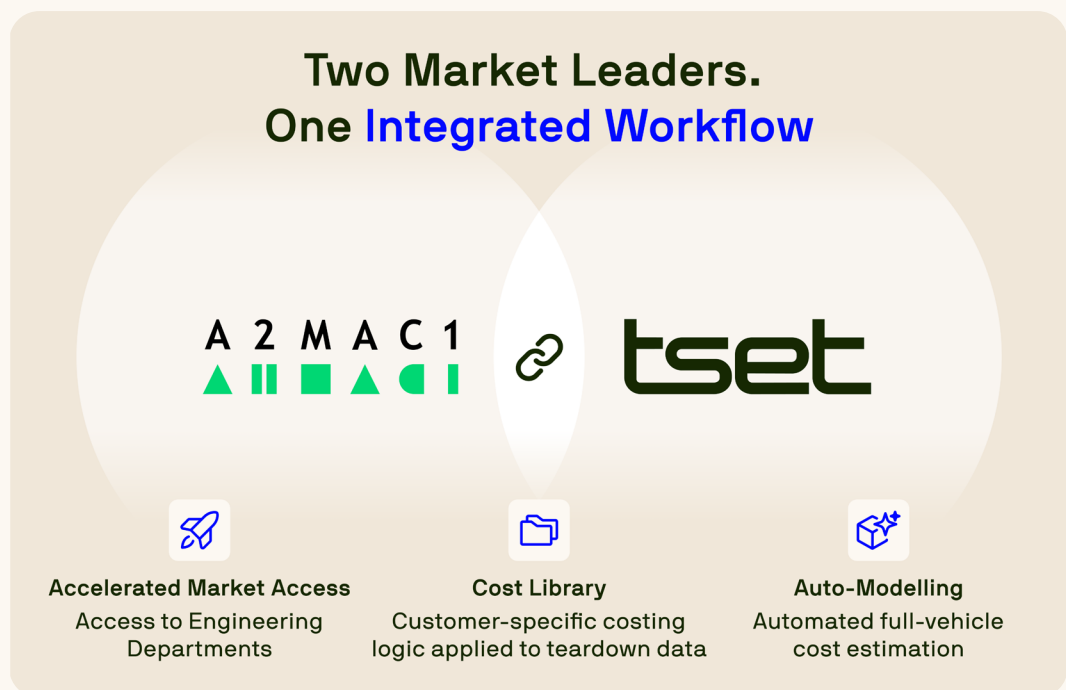
For the first time, should costing and competitive benchmarking run as a single workflow, instead of two separate tools bridged by manual work. The integration starts with two market leaders that approached the same gap from opposite directions: one built the calculation infrastructure, the other built the benchmarking data.

[Tset Studio](#) is a product cost calculation software that enables cost engineering teams to build, automate, and scale should costing. It combines bottom-up calculation methodology, proprietary base data, and AI-driven automation in a single platform. Tset customers include manufacturers across automotive, robotics, and mechanical engineering.

[A2MAC1](#) is the world's leading provider of competitive technical benchmarking for the automotive industry and beyond. Over 25 years, it has built the largest teardown and cost database in the industry, used daily by close to 650,000 professionals across OEMs, Tier 1 suppliers, and engineering organizations worldwide.

In June 2025, [A2MAC1 signed an agreement to acquire Tset](#). The acquisition brought both capabilities under one roof and launched a technology partnership to integrate them into a single workflow. The intent: pair A2MAC1's benchmarking data with Tset Studio's calculation and automation infrastructure to give engineers cost visibility at the one stage where it has never existed before, the design stage itself.

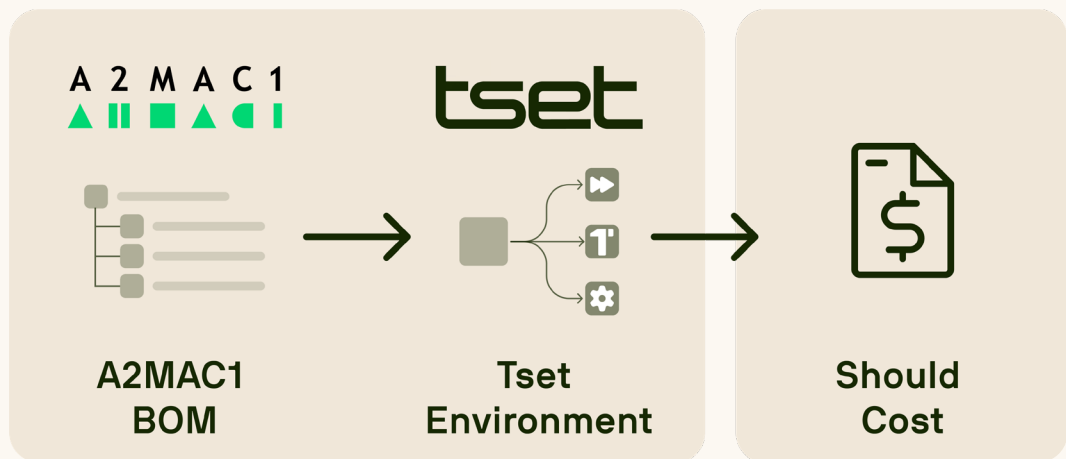
The features described below reflect that shared roadmap. Many of these features are already active development. The direction is set.



04 How It Works:

From Competitor Teardown to Your Should Cost

A2MAC1 provides benchmarking data in two primary formats, and the Tset Studio integration is built to handle both.



IBP: Intelligent Benchmarking Platform (non-costed BOMs)

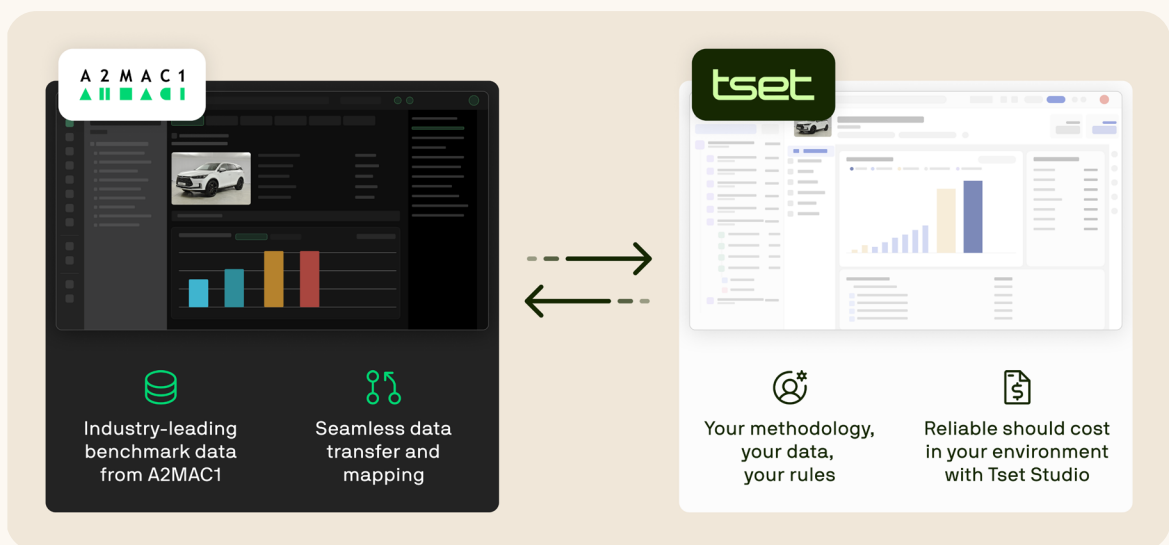
IBP gives engineers and cost engineers access to system- or vehicle-level bills of materials from competitor teardowns, without cost data attached. The BOM is structural: what parts, what materials, what assembly logic.

With Tset Studio, a cost engineer takes an IBP BOM and costs it directly within their own environment: their own methodology, their own base data, their own technology modules. No data export, no manual reformatting. The result is a should cost built on the customer's own assumptions, not a third-party estimate.

CSL: Cost & Sustainability Library (costed BOMs)

CSL goes further: A2MAC1 provides fully costed BOMs for entire vehicles and systems, complete with detailed, bottom-up cost breakdowns built on A2MAC1's own methodology, base data, and assumptions. For a manufacturer who wants to use that data for internal benchmarking or negotiation, that's a problem on its own: the numbers aren't directly comparable to internal calculations without significant manual rework.

Tset Studio solves this with auto-mapping. Because a Tset customer already has their full methodology, base data, and technology modules configured in their environment, CSL data from A2MAC1 can be transformed to match those assumptions at the press of a button. What used to take hours of manual reconciliation becomes one automated step.



05 Why It Holds Up: From One Calculation to Every Design Review

Costing an IBP BOM or auto-mapping a CSL dataset only works because of what's already running underneath it: a library of technology modules built on the customer's own methodology, and the automation that keeps those modules usable at the pace an R&D department actually generates designs. Here's what each one does.

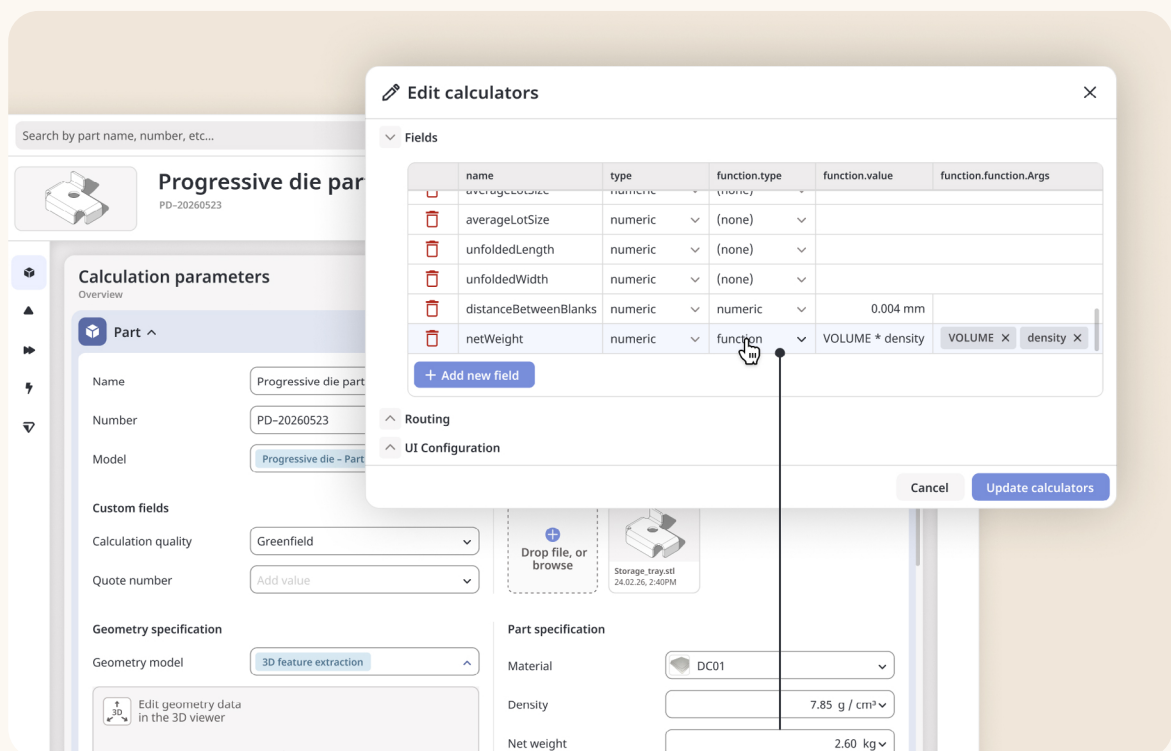
5.1. Technology Module Framework: The Engine Behind Every Should Cost

Technology modules are commodity-specific cost calculators inside Tset Studio. Each one encodes the cost logic for a specific manufacturing technology: stamping, injection molding, wiring harnesses, electronics, and others, built on the customer's own methodology and base data.

Cost engineering teams build and maintain these modules. They adapt them from existing calculators or migrate logic out of Excel, without developer involvement.

The result for an engineer: a should cost for a stamped bracket and one for an injection-molded housing carry the same rigor every time, whether the calculation is triggered manually by a cost engineer or automatically inside a design review.

Want to build calculators from scratch, adapt existing Tset Studio calculators, or bring your Excel logic into Tset Studio? [See it in action.](#)



5.2. AI Features

Automation removes the manual labor from should costing. AI accelerates it further: pattern recognition across historical calculations, automated module selection, faster scenario analysis. Capacity is the real payoff, more than speed.

When cost engineers stop spending most of their time on manual data transformation, reformatting supplier data, or rebuilding calculations from scratch, they get something they don't currently have: bandwidth to engage with engineering during the design phase, while decisions are still open.

The structural shift design-to-cost requires doesn't come from a new process or more headcount. It comes from a different tooling baseline, one where cost intelligence shows up early enough to actually change a decision.

With the Tset Studio and A2MAC1 integration, an engineer working on a new component will be able to pull competitor cost benchmarks, run them through their own company's costing methodology, and get a should cost signal before the design is finalized, not weeks after.

06 The Window to Act is Early

The manufacturers who win on cost over the next decade won't be the ones who negotiate hardest at the end of the process. They'll be the ones who design with cost visibility from the beginning.

That requires cost engineering to move upstream, and it requires tools that make moving upstream scalable. Tset and A2MAC1 are building that infrastructure together.

For the engineer staring at three material options with no cost data to choose between them, that's the gap this partnership is built to close.

"The manufacturers who win on cost won't be the ones who negotiate hardest at the end. They'll be the ones who design with cost visibility from the beginning."

Want cost visibility before your next design review? [Talk to an expert](#) to learn how costing and competitive benchmarking work in one workflow. More case studies and feature details follow as the integration rolls out.

About A2MAC1

A2MAC1 is a global leader in automotive benchmarking and competitive analysis, supporting manufacturers, suppliers, and mobility innovators worldwide. With a unique combination of data-driven insights, technology expertise, and industry knowledge, A2MAC1 empowers organizations to decode the future of mobility and accelerate transformation. Headquartered in Boulogne-Billancourt, France, the company operates internationally with offices in India, Germany, North America, Japan, China and Korea, serving a broad network of partners and customers across the automotive value chain.

For more information, visit a2mac1.com.

About Tset

Tset is a Product Cost Management platform that enables manufacturers to make better decisions across product design, sourcing, quoting, and profitability management. By combining cost engineering expertise, integrated data management, and AI-powered automation, Tset helps organizations create transparency across the full product lifecycle. Founded in 2018, Tset serves enterprise customers worldwide across the automotive and industrial manufacturing sectors.

For more information, visit tset.com.

Tset Software GmbH



Offices

Aspernbrückengasse 2
1020 Vienna
Austria

www.tset.com

Kellau 151
5431 Kuchl
Austria