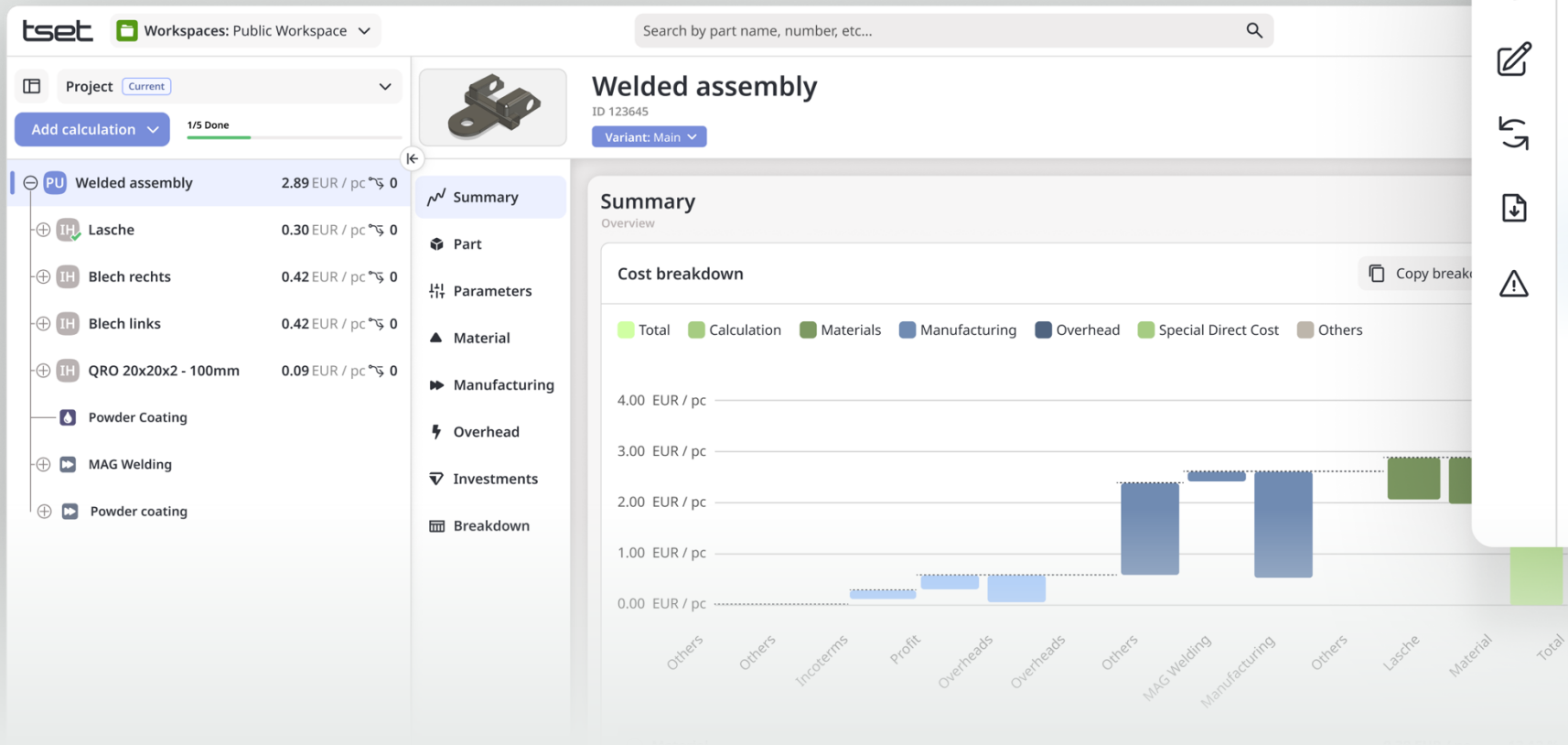


The Model is the New Client

Designing Systems for AI-Agents



 AI Assistant 



What can I help you with?

SUGGESTED SKILLS

 Show cost drivers  Find unusual values

 Suggest cost reduction options

Ask anything... 

Clever isn't consistent

Why an AI-only model falls short for cost engineers

01

IN THIS PART

What AI must
not own

Context is
the budget

Things need
names

Feedback, or it's
a one-shot

Don't re-derive
the method

What AI is for, and what it must not own

AI supplies the inputs

- Reads drawings, specs, quotes
- Infers what isn't stated
- Picks which model applies
- Cross-checks assumptions

Judgement under ambiguity

The system supplies the method

- How this technology is costed
- What the cost structure is
- The number itself

Identical every time

Versioned · explainable · owned

Some will sell you both in one box.

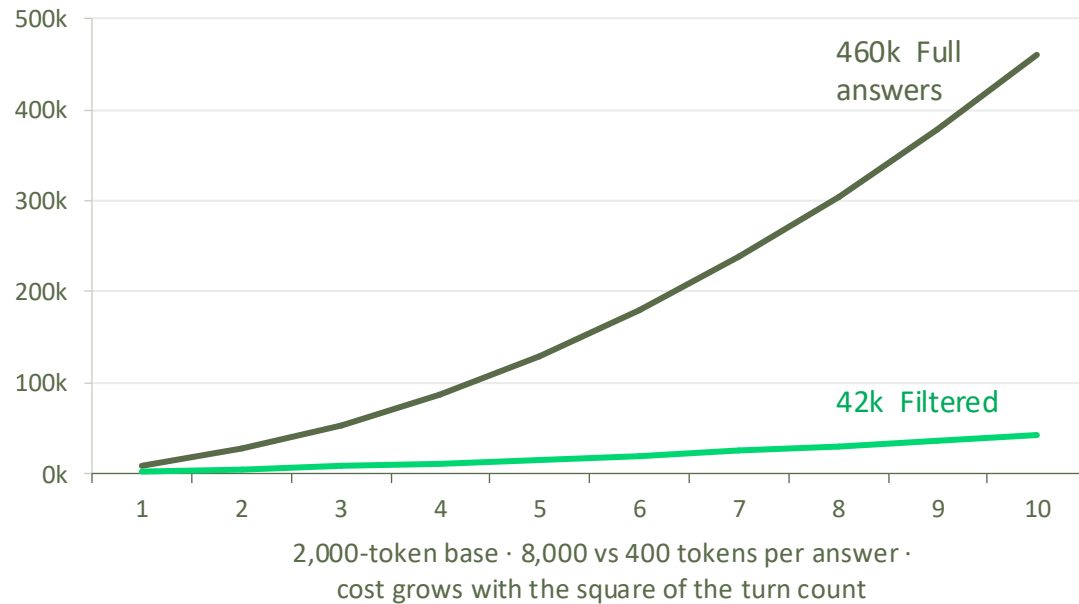
The trade-off is reproducibility – and it doesn't show up in the demo.

Context is the budget

Every turn re-sends everything before it

What it costs

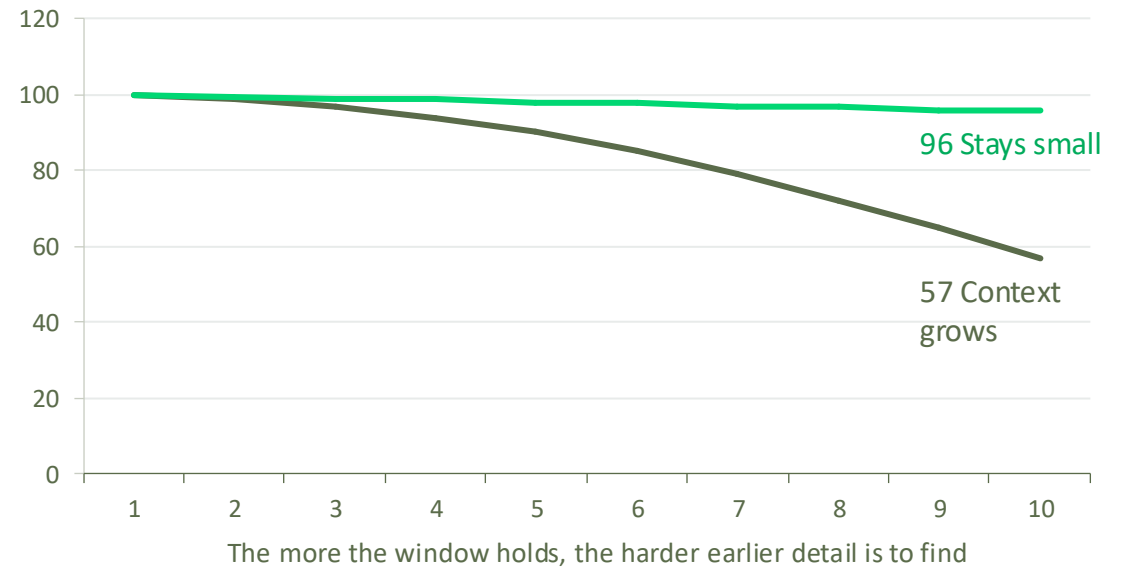
Cumulative input tokens, thousands, by agent turn



What it costs you

ILLUSTRATIVE · shape only, not measured

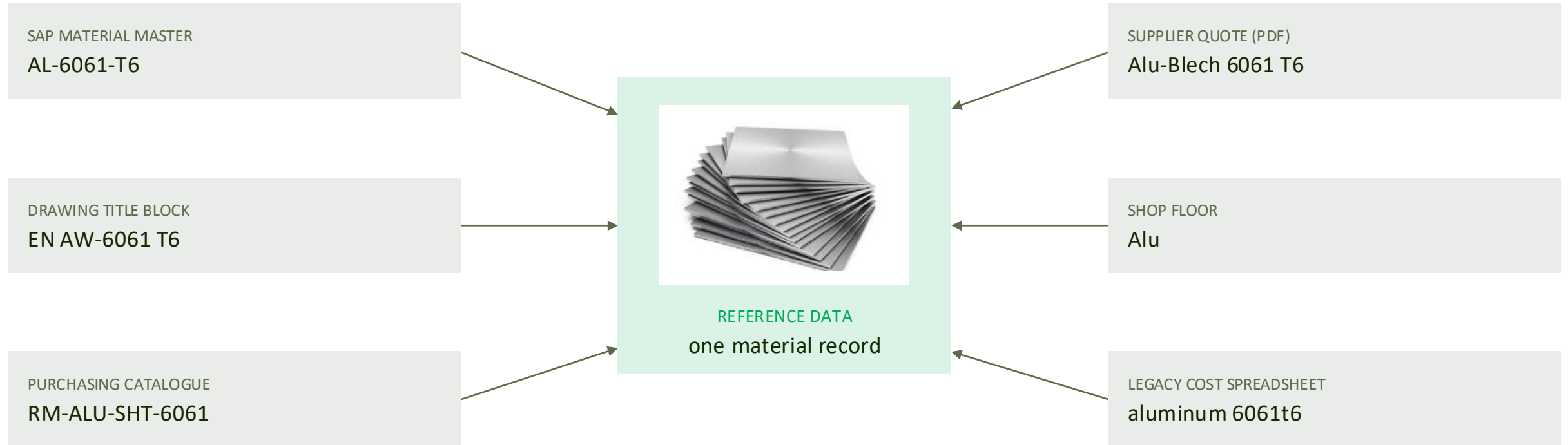
Retrieval of relevant detail, index (turn 1 = 100)



One change moves both curves: **return less.**

Things need names

Every system names it differently. None of them is wrong. And none of them is going to change.



⊘ **Al 6061-T651** one character apart, a different material record

Moving data is easy. Agreeing what it means is the work.

Feedback, or it's a one-shot

An agent can only fix what something tells it is wrong

	What systems say today	What a usable correction looks like	What the agent can then do
Missing	400 Bad Request, or no cost and no reason given.	lifeTime missing on Manufacturing. Needed for cost per part; expected years, e.g. 5. Also missing: annual volume.	Asks once instead of three times
Implausible	Agent misreads the drawing: 0.4 mm wall. The calculation runs. Nobody notices. Silent wrong number	wallThickness 0.4 mm is below the sand-casting minimum of 3.0 mm.	Re-reads the drawing, corrects to 4.0 mm, carries on
Contradictory	Three inputs disagree. The calculation picks one and proceeds.	weight 2.4 kg does not match geometry × density (0.91 kg). One of these three is wrong.	Re-checks those three inputs, not the whole drawing

| names the **field** · names the **entity** · names the **expected value**

A silent wrong number is the worst outcome in costing.
Missing inputs announce themselves. Implausible ones only get caught if the system knows the process limits.

The method must not be re-derived

The part didn't change. The method did.

50,000 pieces per year · three-year programme
· 150,000 total

Each week the AI picks its own method



The part
Bracket, 3 mm aluminium

Week 1 · Tue 09:14

What does this bracket
cost at 50,000 a year?

€1.00

*Laser cut plus one bend.
No tooling, no volume
commitment.*

Week 2 · Thu 16:40

What does this bracket
cost at 50,000 a year?

€0.60

*Progressive die, EU tool spread
over three years.*

Week 3 · Mon 11:02

What does this bracket
cost at 50,000 a year?

€0.48

*Progressive die, Asian tool spread
over three years.*

deviation of
€0.52 a piece
€26,000 a year

€78,000

over three years,
on one bracket

Same question, method fixed and versioned

Week 1

€0.60

Progressive die · EU tool ·
150,000 pcs

Sheet-metal model v4.2

Week 2

€0.60

Progressive die · EU tool ·
150,000 pcs

Sheet-metal model v4.2

Week 3

€0.60

Progressive die · EU tool ·
150,000 pcs

Sheet-metal model v4.2

0%

spread, every week
and a version to point at

Nothing here is a hallucination. That is the problem.

Every answer is defensible. Only the method changed, and nobody wrote it down.

Built for a non-human caller

Closing the gaps so the number holds every time

02

IN THIS PART

The interface
decides the bill

Tools, not
endpoints

Live: 99% less
payload

Three pillars an
agent leans on

Bounded
authority

The interface decides the bill

Two interfaces, two jobs

HOW IT CONNECTS

MCP — the standard plug for AI assistants

- Tools, not endpoints
- Self-describing at runtime
- One integration, any assistant

WHAT COMES BACK

REST API — ask narrowly, answer narrowly

- fields you asked for, not all of them
- depth you asked for
- read it, change one thing, write it back
- reduced payload (up to 99 %)

Less noise → fewer tokens → less money → and better answers

An endpoint list is not a tool list

Five ways MCP tools relate to REST endpoints

`read_calculation(materialId, select: "costs")`
`POST /v2/projects/{projectKey}/material/{materialId}/calculation + JSONPath filter`

Intent, not resource

`create_calculation(technology, inputs, ...)`
`GET /v1/fields → GET /v1/tech → POST /v2/projects/{key}/material → build UI URL`

Three calls become one verb

`clone_calculation(materialId, overrides)`
`read the whole document → mutate it → POST it back`

The endpoint that should exist

`(deliberately not exposed)`
`DELETE /v2/projects/{key}/material/{materialId}`

Capability is not exposure

`find_project(query)`
`nothing in v2: you must already know the projectKey`

The gap that kills integrations

Three pillars, in agent terms

Three of the four needs from the opening – the fourth was the interface

Technology models

The method isn't in the prompt

→ governed and versioned

Base data

Stable identities,
configurable values

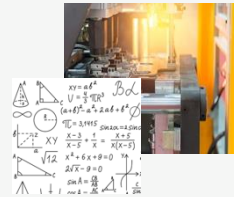
→ reference, don't describe

Validation

What's missing, implausible or
contradictory

→ the loop can close

blow moulding
cooling time =
(thickness *
1000 / 25.4)²
/ thermalDiffusivity



alloy 15Cr3
EUR 0.91/kg · Europe

USD/EUR 1.22



setup time ≥ 1

cleaning must be set
if cleaning needed
= yes



A customer can build missing-field checks themselves.
They cannot build “3 mm is the sand-casting minimum” – that lives in the technology models.

Security

Two problems. Only one of them is interesting.

PROVING IDENTITY

Solved, boring

- OAuth, browser login
- acts as the user who ran it
- their permissions, your tenancy
- audience-validated tokens
- every call audited
- no service accounts. ever.

BOUNDING AUTHORITY

The real work

- minimal tool surface
- read-only by default
- mutations need approval
- authority never a tool argument
- tool results are data, not instructions

The strongest control isn't a guardrail.

It's that the agent cannot invent the method.

AVAILABLE NOW

Build agents in your own ecosystem, connect to Tset

COMING 2027+

Off-the-shelf agents from Tset / A2MAC1 for recurring workflows

You own your agents, your workflows, your pace

We own the method, the data, the connection

You bring the agent. We bring the method.

AI and control

A cost engineer's view

03

IN THIS PART

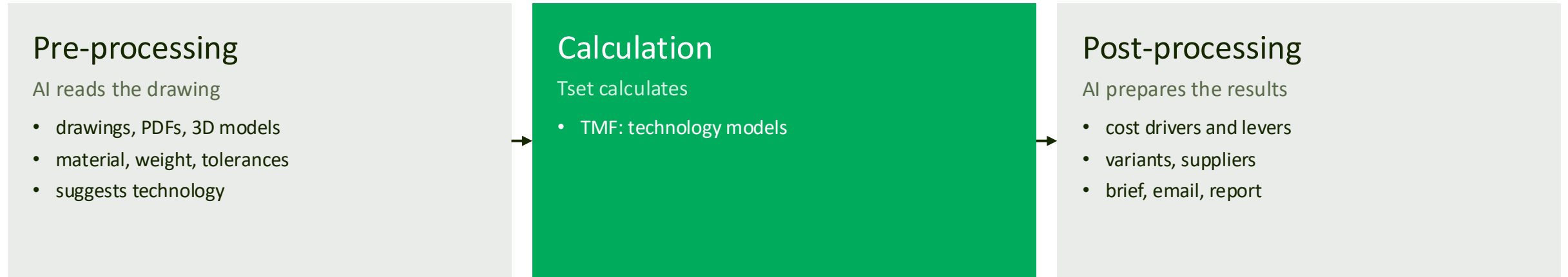
Three
steps

What TMF
does

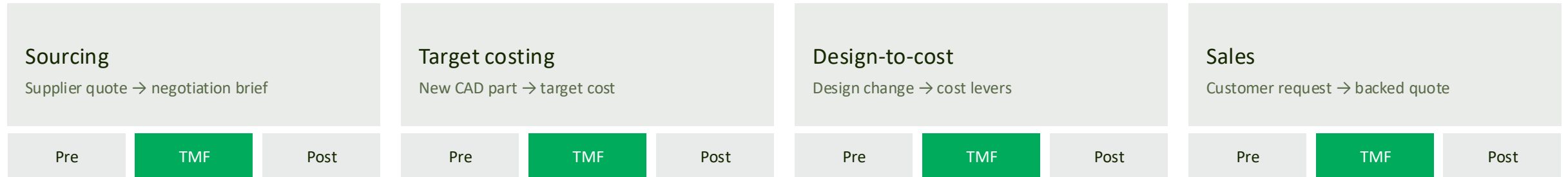
Demo:
Cost Pad

Demo:
One prompt

Three steps, in every workflow



THE SAME THREE STEPS, IN EVERY WORKFLOW



AI at the front and the back. The calculation stays in the software.

TMF: the calculation in the middle

Technology Model Framework

YOUR TECHNOLOGY MODEL

Flexible

build and extend it yourself

Controlled

same inputs, same result, every time

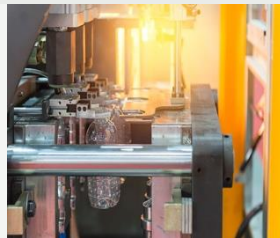
Transparent

every formula visible, no black box

Process

Machine and cycle time

force, bed size
→ best machine
→ cycle time



Material

Weight, scrap, price

net weight + scrap
× material price



A few parameters in, a complete calculation out.
Any technology – using master data and interfaces.

Demo 1 · Cost Pad

Cost Pad 2 Drop it in, start, watch Tenant

1 Files 3D models and drawings together

Drop files here or [browse](#)

3D: STEP, STP, IGES, STL, OBJ, PLY, GLTF, GLB · Drawing: PDF, PNG, JPG, WEBP

2 Your input whatever is on no drawing

For example:
200k/year over 8 years
Material: PA6 GF30
Production in Poland

3 Where the result goes

Save in a project

Project
— loading —

Only a saved calculation can be opened in Tset afterwards.

Start

Drop files on the left, type what you know, then press **Start**.
This is where each step will be reported as it happens.

IN

A drawing or 3D model



OUT

A calculation in Tset

Built by a cost engineer, not a developer.

Demo 2 · Four parts, one prompt

ILLUSTRATION · THE LIVE DEMO FOLLOWS

Here are four 3D models. Calculate them in Tset and compare the cost drivers.

part_1.stp

part_2.stp

part_3.stp

part_4.stp

4 calculations created in Tset

- ✓ Part 1 · technology model chosen · open in Tset
- ✓ Part 2 · technology model chosen · open in Tset
- ✓ Part 3 · technology model chosen · open in Tset
- ✓ Part 4 · technology model chosen · open in Tset

Cost drivers compared side by side

4

Parts
1 prompt

AI doesn't estimate. AI orchestrates.

Every number comes from TMF – the same models as in demo 1.

AI automation or control? Both.

AI prepares
the data and the results

TMF calculates
the values itself

AI automation or control? Both.

AI prepares
the data and the results

TMF calculates
the values itself

Thank you.