

MachiningCloud

The High-Mix Shop's Hidden Margin

When every job is different, the money isn't in the cutting. It's in the quoting, the changeovers, and the tooling you can't keep track of.



WHAT'S AT STAKE

In a Job Shop, the Money Isn't Where You Think It Is.

Ask a job shop owner where the money goes and they'll point at the spindle — machine time, tool cost, the hours a part spends being cut. But in a high-mix, low-volume shop, the cutting is rarely the problem. It's everything that happens before and between the cutting.

- 01** Quoting under uncertainty
- 02** Constant changeover
- 03** Tool sprawl



THREE PAINS THAT ARE PURE JOB SHOP

The Cost of Constant Novelty.

A production shop runs the same part thousands of times. A job shop runs it once, then never again. Its problems are about the cost of novelty — and three pains capture most of it.

01

Quoting under uncertainty

Every quote is a bet on a job you've never run. Bid too high, you lose the work. Bid too low, you win a job that loses money. The hours spent quoting are the visible cost; the margin lost on every mis-priced bid is the larger one.

02

Constant changeover

In a production shop, setup is amortized over a long run. In a job shop, setup is the job — three, five, ten times a day. The machine isn't cutting during any of it. It's the biggest pool of recoverable time, and it's nearly invisible.

03

Tool sprawl across unpredictable work

You can't standardize tooling when you don't know what's coming next week. The crib grows. Duplicates get ordered because nobody could find the originals. The only index of what you own lives in your senior machinist's head — and that index retires.

THE ROOT CAUSE

In a high-mix shop, the tool crib isn't an inventory problem. It's a memory problem — and memory retires.

All three pains share one root cause: a job shop runs on knowledge that is never the same twice and is mostly undocumented. The estimator's feel for a quote, the machinist's memory of a setup, the senior hand's knowledge of the crib — all tribal, all in people's heads, all invisible until the person holding it is gone. The fix is to make that knowledge explicit, fast to reach, and owned by the shop.

MOVEMENT ONE — HOW IT WORKS ON THE FLOOR

For the person who runs the work — the programmer, the lead machinist, the owner who still cuts chips. Does this make the daily job easier, or is it one more system to fight? Here's what changes, pain by pain.

QUOTING

Half-day guess → same-hour answer

Build the job against 1.5M+ certified tool models with real geometry and real feeds & speeds. Tool Advisor grounds the cycle-time estimate in real cutting data. Quotes go out faster and tighter.

CHANGEOVER

Setups that survive the first time

Every planned job generates documented, repeatable setup info — captured once, not rebuilt from memory. A confident 15-minute changeover instead of an uncertain 45.

TOOL SPRAWL

One library the whole shop can see

Every tool you own, with full specs and geometry, searchable by everyone. No more duplicate buys. No more knowledge that retires. The crib becomes a known, searchable asset.

And the integration that makes it stick: plan once, and data flows into Mastercam, Fusion 360, GibbsCAM, hyperMILL, SolidCAM, ESPRIT EDGE, your TMS and ERP — no double entry.

THE DAILY DIFFERENCE

What Changes Between Monday and the Monday After.

The high-mix shop today



-  Quote from memory, padded for safety
-  Every setup rebuilt from scratch
-  Tool crib lives in one person's head
-  Duplicate tools bought, knowledge lost
-  Retype data into CAM, TMS, ERP

With MachiningCloud



-  Quote from real tool data, fast and tight
-  Setups documented once, reused every time
-  One searchable library, owned by the shop
-  Nothing re-bought, nothing forgotten
-  Plan once; clean data flows downstream

MOVEMENT TWO — WHAT IT RETURNS TO THE BUSINESS

For the owner or plant manager. Does it pay for itself, and how fast? The three pains aren't soft costs — they convert directly into dollars, and fast, because the recovered time was being lost every single day.

Where the money comes from

Quoting time saved

Faster, tighter quotes — fewer hours quoting and a higher win rate on profitable work. A revenue lever as much as a cost lever.

Changeover recovered

Documented, reusable setups cut the time between jobs. Recovered minutes compound into machine hours across a year.

Tooling spend reduced

One searchable library ends duplicate purchasing and improves selection, trimming the tooling budget directly.

SMALL SHOP • ~6 MACHINES

\$38,000 / year

MID-SIZE SHOP • ~20 MACHINES

\$120,000 / year

THE RETURN

Two Shops, Two Sets of Numbers.

Illustrative and conservative — assuming only modest recovery of the time high-mix shops lose every day. Both profiles reach payback in well under 30 days.

	SMALL SHOP	MID-SIZE SHOP
Machines	6	20
Jobs per year	~350	~1,000
Quoting time saved	\$14,000	\$42,000
Changeover recovered	\$19,500	\$66,000
Tooling spend reduced	\$4,500	\$12,000
Total annual gain	\$38,000	\$120,000

THE NUMBER THAT DOESN'T SHOW UP IN THE TABLE

Capability That Stops Walking Out the Door.

When quoting logic, setup knowledge, and tool data live in the platform instead of individual heads, a retiring senior machinist or a departing estimator no longer takes a chunk of the shop's competitive edge with them.

For a job shop — where tribal knowledge is often the whole competitive edge — this is the difference between a shop that compounds its expertise over time and one that rebuilds it from scratch every time someone walks out the door.

~30%

Planning &
programming
time saved

~30%

Setup time
reduced

1.5M+

Certified
tool models

75+

Manufacturer
partners

IF YOUR WORK LEANS ONE WAY

Most Job Shops Lean Toward a Few End-Markets.

The high-mix pains don't go away when your work concentrates — they're joined by the specific demands of the end-market. If yours leans one way, MachiningCloud has gone deep on each.

AEROSPACE & DEFENSE

AS9100/NADCAP traceability, ITAR, exotic alloys, audit-ready docs.

MEDICAL & DENTAL

ISO 13485, FDA documentation, implant-grade materials, batch traceability.

ENERGY & POWER

High-temp alloys, long-lead high-value parts, first-time-right.

DIE & MOLD

Complex multi-axis toolpaths, simulation fidelity, costly blocks.

Take whatever comes in the door? You're already in the right place.

NEXT STEP



See It on Your Own Work.

A 20-minute walkthrough against a real job from your shop. Bring an RFQ you're quoting this week — we'll plan it with you, and you'll see the quote, the setup, and the tool list come together in real time.

Book a Walkthrough →

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