

Maximizing Returns through Digital Transformation

A Practical Guide to ROI-Driven
CNC Workflow Optimization

TOOL MANAGEMENT | JOB PLANNING | DATA INTEGRATION

THE DIGITAL TRANSFORMATION IMPERATIVE

Why CNC Shops Can't Afford to Stay Analog

- **Rising Labor Costs**

Skilled machinists are harder to find and more expensive to retain.

- **Competitive Pressure**

Shops leveraging digital workflows quote faster, cut faster, and win more bids.

- **Increasing Complexity**

Multi-axis machines and advanced materials require precise, data-driven programming.

- **Knowledge Risk**

Relying on tribal knowledge means losing capabilities when senior staff retire.





SMART 4.0
INDUSTRY



Job & Process Planning

Data Integration

Seamless integration for a single source of truth. CAM system integration, TMS & ERP connections, and ISO 13399 compliance.

TOOL MANAGEMENT

Building Your Digital Tool Library

Unified Catalog

Access 65+ manufacturers in a single, searchable interface.

Standardized Data

Clean, consistent tool data across all brands and systems.

Procurement Integration

Connect directly to purchasing systems to eliminate duplicate inventory.

Performance Tracking

Monitor tool life and usage patterns to optimize spend.





JOB & PROCESS PLANNING

From Tribal Knowledge to Documented Process

Tool Advisor

Expert recommendations based on material and operation.

Assembly Builder

Create accurate 3D tool assemblies in minutes.

Automated Documentation

Generate setup sheets and tool lists instantly.

Feeds & Speeds

Validated cutting data directly from manufacturers.



DATA INTEGRATION

Seamless Integration for a Single Source of Truth

CAM System Integration

Direct export to any CAM software including ESPRIT EDGE, Mastercam, hyperMILL, and Siemens NX. Zero re-entry.

ISO 13399 Compliance

Standardized tool data across all manufacturers ensures system-wide consistency.

TMS & ERP Connections

Tooling data flows automatically to tracking and inventory systems for procurement.

Single Source of Truth

One entry, used everywhere. Manufacturer updates propagate automatically.



Quantifying the Impact: Where the \$79,600 Comes From

\$21,600

OFFICE SAVINGS

200 jobs × 8 hrs × 30% × \$45/hr.
Reduction in planning and CNC
programming time through
Pillars 1 & 2.

\$48,000

SHOP FLOOR SAVINGS

200 jobs × 8 hrs × 30% × \$100/hr.
Setup time reduction through
accurate shop floor
documentation (Pillar 2).

\$10,000

PROCUREMENT SAVINGS

\$50,000 spend × 20% savings.
Consolidated purchasing and
elimination of duplicate inventory
(Pillar 1).

Total Annual Savings: \$79,600 + 480 Hours Capacity Returned

BEYOND THE NUMBERS

Capturing Unquantified Upside

Crash Prevention

A single crash can cost \$10K–\$50K in repairs and weeks of downtime. Accurate 3D models virtually eliminate this risk through trusted simulation.



Knowledge Preservation

Capture decades of expertise in a shared digital system before experienced machinists retire, ensuring process continuity for the next generation.



Faster Onboarding

New programmers ramp up faster with Tool Advisor recommendations and a shared tool library instead of relying solely on one-on-one mentorship.



Competitive Speed

Faster job planning and shorter setups mean more competitive quotes, shorter lead times, and the ability to win more high-margin work.



The \$79,600 annual savings is a conservative floor. Each of these qualitative benefits can individually exceed the total quantified savings.



THE BOTTOM LINE

A 22x Return on Investment

\$79,600

ANNUAL SAVINGS

< 30 Days

PAYBACK PERIOD

22x

ANNUAL RETURN

“MachiningCloud significantly reduces both financial and operational disruptions, providing a clear return on investment through improved machine reliability and uptime.”

Paul Ricard

President, MachiningCloud

SANDVIK

coromant

Sandvik Coromant

hyperMILL®

hyperMILL



INTERACTIVE ROI CALCULATOR

Calculate Your Shop's Potential Savings

Number of CNC machines

Jobs per year

Avg. job planning hours/job

Programmer hourly rate

Avg. setup hours/job

Machine hourly rate

Ready to Find Your 30%?
MachiningCloud.com