UPRIGHT
COMMUNICATIONS

The Manufacturer's AI Playbook

A practical guide to using AI where it helps—without the hype or the headaches.

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A Note to Manufacturing Owners and Operators

If you run a manufacturing business, you've probably already encountered AI in some form.

Maybe someone on your team used it to summarize a document. Maybe you've seen it draft an email or answer a technical question. Maybe you're wondering if you should be doing more—or if you're already behind.

Here's what we've learned from working with manufacturers over the past two years:

The companies getting value from AI aren't the ones doing the most with it.

They're the ones who started with clarity, focused on real problems, and avoided the mistakes that waste time and create more work.

This playbook exists to help you do the same.

It's not about being early. It's not about transformation. And it's definitely not about replacing people.

It's about:

- Knowing where AI actually helps.
- Knowing what needs to be in place first.
- Avoiding the predictable mistakes that slow you down.

The manufacturers who succeed with AI don't treat it like a trend. They treat it like any other tool: useful in the right context, risky in the wrong one.

That's the approach this guide follows.

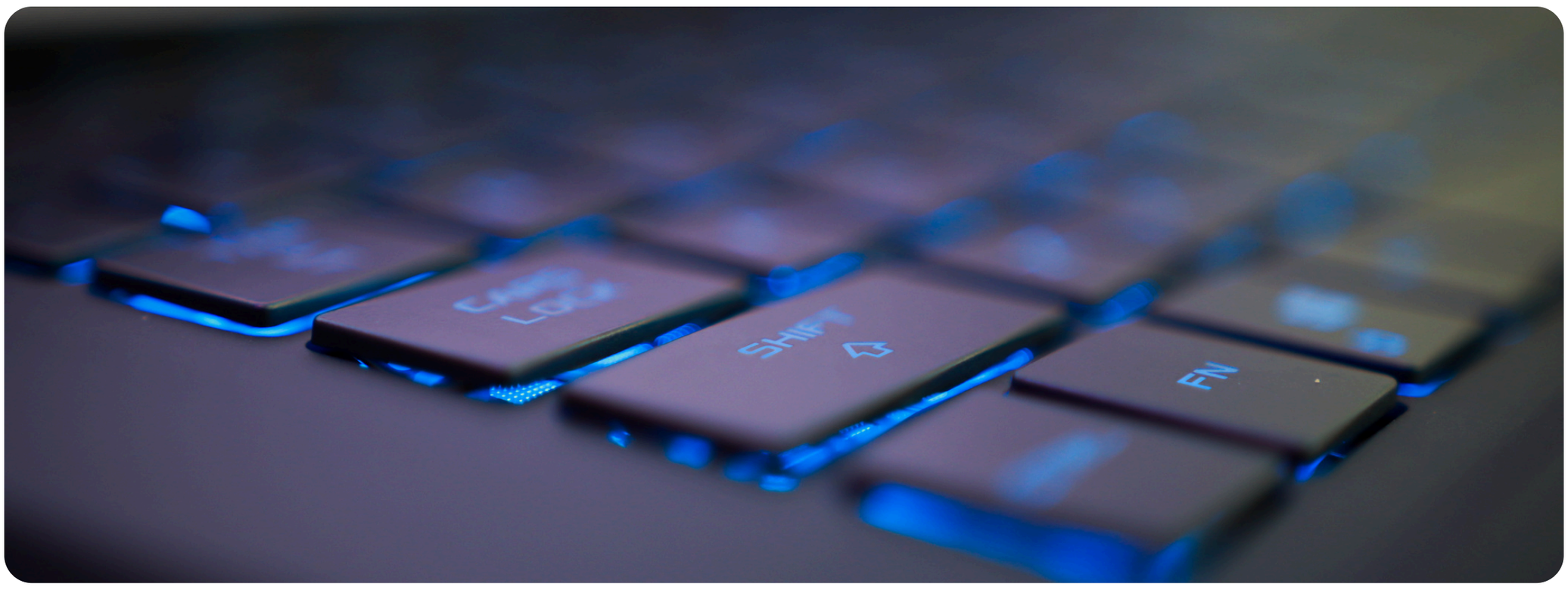
How to Use This Guide

This playbook has two sections:

Section 1: Getting Ready to Use AI
What needs to be clear before AI helps, instead of creating new problems

Section 2: AI in Action
Where manufacturers are using AI to save time, reduce friction, and improve consistency

You don't need to read this cover to cover. If you're already experimenting with AI, skip to Section 2 and see if your use cases match what's working elsewhere. If you're just getting started, Section 1 will save you from common mistakes.



Section 1:

Getting Ready to Use AI

Most manufacturers don't struggle with AI because they chose the wrong tool.

They struggle because they started without clarity on:

- What information AI should—and shouldn't—access
- Who's responsible for checking AI's output
- Where critical knowledge actually lives
- What problem they are trying to solve first

This section addresses all four.

1.1 What Information AI Can Access—and What It Can't

Not all information should be fed into AI tools. Before anyone in your company starts using AI regularly, you need clear boundaries:

Information **AI should NOT** access includes:

- Customer-specific pricing or contracts (unless you control the tool completely).
- Proprietary designs, drawings, or processes (especially in public AI tools).
- Sensitive employee or financial information.
- Safety procedures requiring formal approval.

Information **AI CAN** access safely includes:

- General procedures and documentation.
- Past project summaries (with identifying details removed).
- Internal knowledge bases and manuals.
- Standard templates and frequently asked questions.

Key Question:

If this information left the building,
would it create a competitive risk or legal problem?

If yes, don't put it in AI.
If no, it's probably fine.

1.2 Know Your Human in the Loop

AI doesn't replace judgment. It provides starting points that humans verify.

Someone needs to be responsible for reviewing AI's work before it goes anywhere.

What this prevents:

- Incorrect information sent to customers
- Inconsistent internal messaging
- AI "hallucinations" (made up information) slipping through
- Confusion about what's "approved" vs. "AI-generated"

The rule in practice:

- **Sales and quoting:** A salesperson or engineer reviews before anything goes to a customer.
- **Operations and training:** Supervisors verify accuracy before it becomes "how we do things."
- **Admin and communication:** A human reads and approves before sending.

If you wouldn't let a new hire do it unsupervised, don't let AI do it unsupervised either.

1.3 Where Your Most Valuable Knowledge Actually Lives

AI can only help you access knowledge if that knowledge exists somewhere AI can reach.

In most manufacturing businesses, critical knowledge is scattered across:

- People's heads (especially veterans and key supervisors).
- Old emails and file shares.
- Informal notes and tribal knowledge.
- Outdated or inconsistent documentation.

Before AI can help, ask:

- If a key person left tomorrow, what knowledge would leave with them?
- Is that knowledge written down anywhere?
- If it is written down, is it current and accessible?

What To Do About It:

Start small. Pick one area where knowledge bottlenecks exist—quoting, training, troubleshooting—and capture the "how we actually do this" knowledge in simple written form.

Store it somewhere consistent. Have AI help you make it searchable.

If your knowledge is locked in people's heads, AI can't help yet. Fix that first.

1.4 Now, Where to Begin?

Your first AI project should meet four criteria:

1. **Solves a real, recurring problem** (not just "interesting")
2. **Internal only** (nothing customer-facing yet)
3. **Reversible** (easy to stop or correct if it doesn't work)
4. **Clearly measurable** (you'll know if it helped or not)

Good first use cases:

Sales & Quoting:

- Summarizing long RFQs or specs into key requirements
- Flagging gaps or unclear sections before quoting starts
- Searching past quotes for similar jobs

Operations & Knowledge:

- Making standard procedures searchable
- Answering common "how do we handle this?" questions
- Summarizing corrective actions or past job notes

Admin & Back Office:

- Summarizing long email threads
- Drafting routine internal updates
- Extracting key information from contracts or invoices

Bad first use cases:

- Anything that sets final pricing
- Anything customer-facing without review
- Anything involving safety or compliance decisions
- Anything where failure would cause real damage

The goal of the first project: Prove AI can save time without creating new problems.

1.5 How to Tell If AI Is Actually Helping

Before you start, define what success looks like.

AI should perform specific tasks:

- **Faster** (less time on repetitive work).
- **Easier** (fewer interruptions, less rework).
- **More consistent** (same quality regardless of who's doing it).

Metrics that matter:

For sales & quoting:

- Time to first-pass quote
- Number of back-and-forth questions
- RFQs reviewed per day

For operations & knowledge:

- Fewer interruptions to key people
- Faster ramp time for new hires
- Reduction in repeated mistakes

For admin & back office:

- Less time catching up after hours
- Faster internal response times
- Fewer dropped tasks

Reality Check:

If none of these improve after 30-60 days, AI isn't helping yet.

That means you need to either adjust where you're using AI, fix underlying clarity issues first, or choose a different starting point.

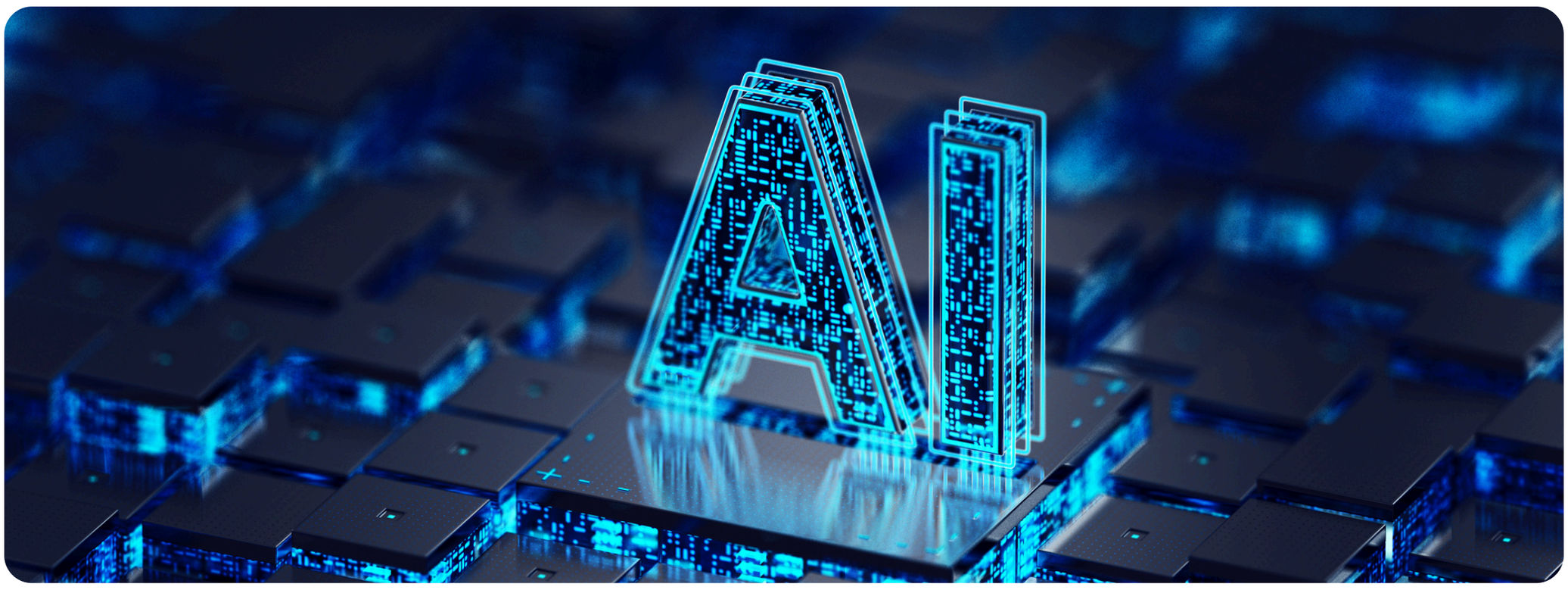
Section 1 Summary: Are You Ready?

Before moving to Section 2, you should be able to answer these questions:

□ We know what information AI can and can't access.
□ We know who's responsible for reviewing AI's output.
□ We know where our critical knowledge lives—and if it's accessible.
□ We've chosen a specific, internal, low-risk first use case.
□ We know how we'll measure if it's working.

If you **can't** answer all five, you need more clarity before AI will help.

If you **can** answer all five, you're ready to see where AI is already working for manufacturers like you.



Section 2:

AI in Action

Where manufacturers are using AI to save time, reduce friction, and improve consistency.

This section shows use cases where AI can prove to be invaluable in manufacturing businesses.

Each section follows the same format:

- **The Challenge:** The problem manufacturers face
- **The AI Approach:** How AI addresses it (and what it doesn't do)
- **How to Measure Success:** What to track

2.1 Sales & Quoting

The Challenge

Most manufacturers don't lose work because they quoted wrong.

They lose work because they quoted late—or because the right information never made it into the quote in the first place.

Common problems:

- RFQs arrive with too much information scattered across emails, PDFs, and drawings
- One or two people are always the bottleneck
- Past quotes exist somewhere, but no one remembers where—or why pricing changed
- Sales and engineering waste time trying to get on the same page

AI doesn't fix pricing judgment. It fixes prep work.

The AI Approach

AI is useful **before decisions are made**, not instead of them.

What AI can do:

- Summarize RFQs and specs into clear, structured requirements
- Pull key dimensions, materials, tolerances, and deadlines into one place
- Highlight gaps or unclear sections that need human review
- Search past quotes and flag similar jobs or pricing patterns

What AI should NOT do:

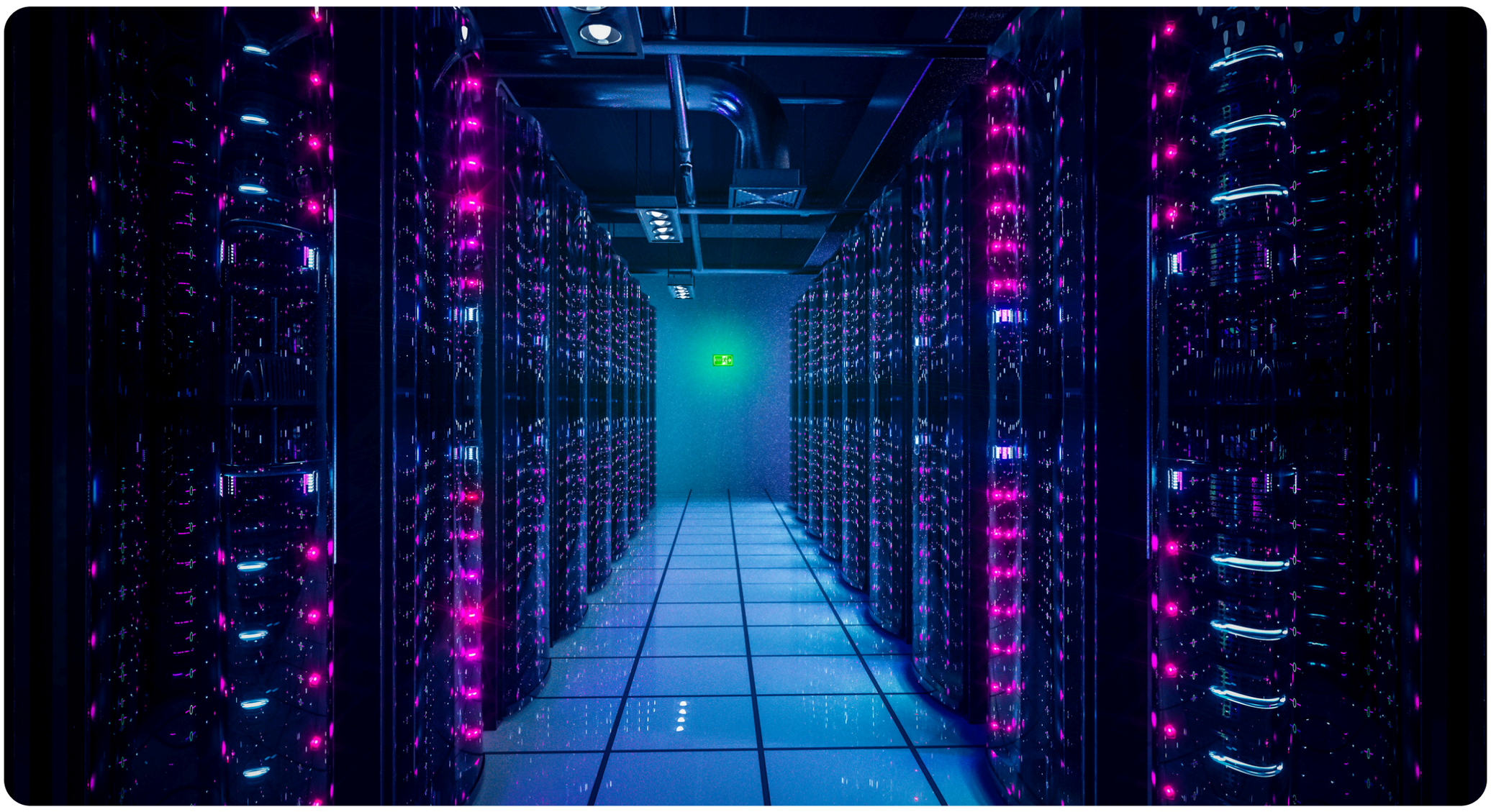
- Set final prices
- Promise delivery dates
- Make margin decisions
- Send quotes directly to customers

If those don't change after 60 days, AI isn't aimed at the right problem yet.

Quick Check: Is This Use Case Right for You?

□ Quoting takes longer than it should.
□ RFQs are hard to parse quickly.
□ Past quotes are hard to search.
□ One or two people are always the bottleneck.

If 2+ apply, this is a good starting point.



2.2 Operations & Knowledge

The Challenge

Every manufacturing business depends on knowledge that isn't written down.

It lives in:

- A foreman's head.
- A veteran machinist's habits.
- Someone who "just knows how this works."

That knowledge is valuable—and fragile.

Common problems:

- New hires interrupt experienced people constantly
- The same questions get answered over and over
- Training takes longer than it should
- Small mistakes repeat because lessons aren't captured
- When someone retires, critical knowledge walks out the door

This isn't a people problem. It's an access problem.

The AI Approach

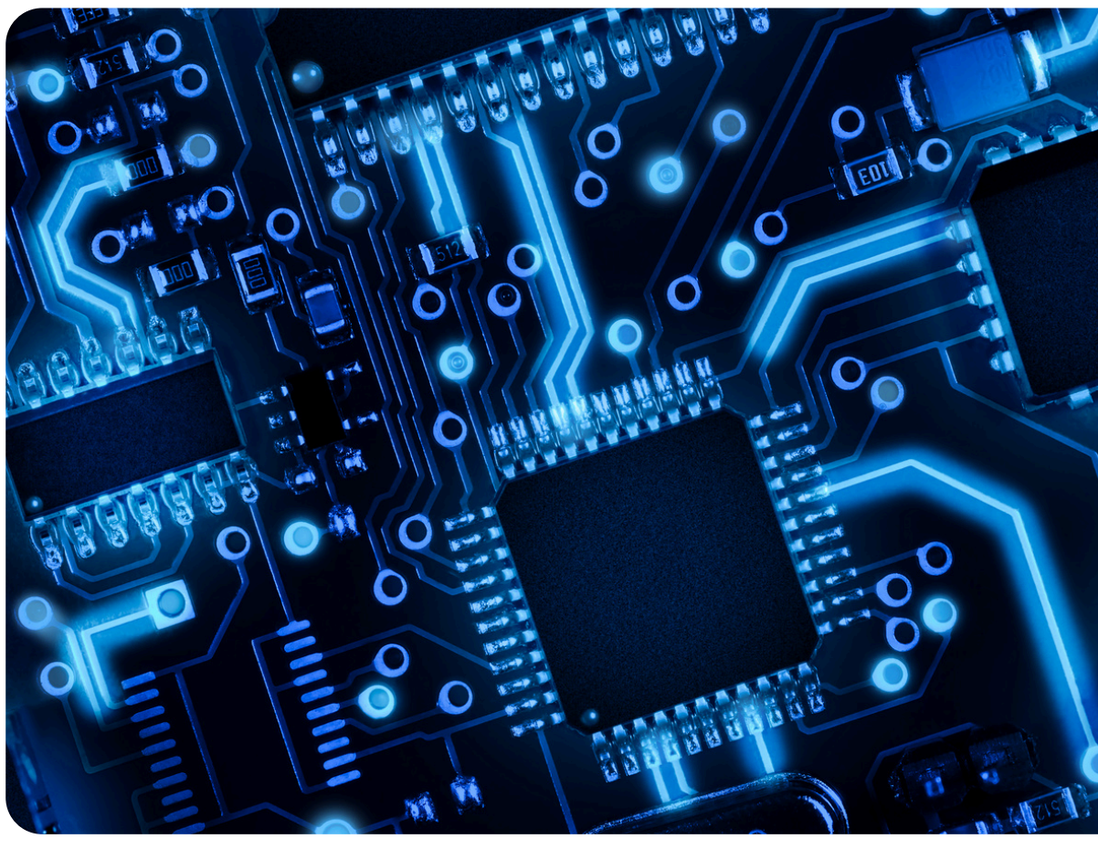
AI doesn't create expertise. It helps people find it.

What AI can do:

- Make manuals, procedures, and past job notes searchable
- Answer "how do we usually handle this?" questions by referencing documented processes
- Summarize corrective actions or troubleshooting steps
- Help new hires find the right information without interrupting supervisors

What AI should NOT do:

- Replace safety decisions
- Override standard operating procedures
- Act as the final authority on process
- Make judgment calls without human review



How to Measure Success

- Fewer interruptions hit the same key people
- New hires ask better questions, sooner
- Mistakes stop repeating quietly
- Experience spreads instead of bottlenecking

If none of that changes, critical knowledge still isn't captured or accessible.

Quick Check: Is This Use Case Right for You?

□ The same people get interrupted constantly.
□ Training takes longer than it should
□ Experience isn't written down.
□ Mistakes repeat because knowledge doesn't spread.

If 2+ apply, this is a good starting point.

2.3 Admin & Back Office

The Challenge

Admin work doesn't feel like a crisis. It just quietly drains time.

Common problems:

- Long email threads that need summarizing
- Contracts and invoices that take too long to review
- Status updates written from scratch every time
- Information copied manually between systems
- People staying late to "catch up"

None of this requires judgment. It just requires attention.

That's where AI fits.

The AI Approach

AI works best when it handles first drafts and summaries, not decisions.

What AI can do:

- Summarize long email threads into key decisions and action items
- Extract key points from contracts, invoices, or purchase orders
- Draft routine customer or vendor updates
- Turn meeting notes into structured action items

What AI should NOT do:

- Send messages without human review
- Interpret legal intent
- Approve payments or commitments
- Make decisions on behalf of the company

Quick Check: Is This Use Case Right for You?

□ People stay late catching up.
□ Email and paperwork feel endless,
□ Important work keeps slipping.
□ Routine tasks take longer than they should.

If 2+ apply, this is a good starting point.

Section 2 Summary: Where AI Actually Helps

AI doesn't replace people. It removes friction.

Sales & Quoting: Faster clarity on RFQs, less back-and-forth, better use of past work

Operations & Knowledge: Fewer interruptions, faster training, accessible expertise

Admin & Back Office: Less late-night catchup, faster responses, more time for high-value work

The manufacturers getting value from AI started small, measured clearly, and expanded only where it worked.

If you've read this section and thought, "*That sounds like us*," you're probably ready to try one of these use cases.

If you thought, "*We're not there yet*," go back to Section 1 and get clarity first.

Who This Guide Is For (and Who It's Not)

This playbook is for manufacturing owners and operators who:

- Care about doing things right, not just fast.
- Are cautious about new tools for good reasons.
- Don't want their business turned into an experiment.
- Prefer proof over promises.

This guide is **NOT** for companies looking to:

- Chase trends.
- Replace people with software.
- Skip the hard thinking.

Where Should You Start First?

If you're still unsure where AI belongs, use this as a starting point.

Start with Sales & Quoting if:

- Quotes take too long to prepare.
- One or two people are always the bottleneck.
- RFQs feel harder than they should be.
- You lose work because you're too slow to respond.

Goal: Faster clarity, not automated pricing

Start with Operations & Knowledge if:

- The same people are constantly interrupted.
- Training takes too long.
- Experience isn't written down.
- Mistakes repeat because knowledge doesn't spread.

Goal: Fewer interruptions, more consistency

Start with Admin & Back Office if:

- People are staying late, catching up.
- Email and paperwork feel endless.
- Important work keeps slipping.
- Routine tasks take longer than they should.

Goal: Give time back without adding systems

Don't start with AI at all if:

- Boundaries aren't clear
- Processes aren't agreed on
- Everyone wants different outcomes
- You don't have time to measure if it's working

In that case, clarity comes first—or AI will just amplify confusion.

One Final Question:

If you could fix just one of these areas in the next 90 days,
which would make your business feel noticeably easier to run?

That answer is where to start.

If You Want Help

“We work with manufacturers to figure out where AI fits—and where it doesn't.

Sometimes that's a 30-minute conversation. Sometimes it's a more structured assessment. Either way, we don't rush it.

If this playbook raised more questions than it answered, reach out.”

Greg Frye | President of [Upright Communications]