



5 Costly Mistakes Manufacturers Make When Connecting Their Shop Floor and How to Avoid Them.

Connecting your shop floor machines is a smart move for any manufacturer. The right setup means less downtime, more data you can use, and a stronger business. But the path is full of avoidable mistakes that can make the project way more expensive, confusing, and frustrating than it has to be. To help you get started on the right foot, here are the top 5 mistakes we see—and the best ways to skip them.



MISTAKE #1:

Connecting Everything at Once—Without a Plan

Why It Happens:

It's tempting to jump in and try to connect every machine right away. You want data fast—but without a clear plan, you can quickly get overwhelmed (and so can your budget).

The Real Cost:

- ▶ Costs spiral
- ▶ Progress stalls
- ▶ Teams get frustrated
- ▶ You struggle to prove ROI to leadership

How to Avoid It:

Start with a professional assessment. Focus first on the equipment most important to your goals: think bottlenecks, critical quality steps, or highly used assets. Get data flowing from those, see what works, then expand—methodically.



MISTAKE #2

Ignoring Older (Legacy) Equipment

Why It Happens:

Many people assume that their older machines are too old to connect, or that it'll be too expensive.

The Real Cost:

- ▶ Valuable production data left "in the dark"
- ▶ Time-consuming manual logging
- ▶ Missed opportunities for improvement

How to Avoid It:

Modern connectivity tech (like adapters, protocol converters, or devices like Rain Engineering's RainDrop) can bring even decades-old machinery online—often with a smaller investment than new equipment. Include these assets in your assessment and prioritize based on business value, not just age.

MISTAKE #3:

Overloading IT Systems with Too Much (Unfiltered) Data

Why It Happens:

Once the connections are up, it's easy to push every signal, every sensor, and every log "just in case." But more isn't always better.

The Real Cost:

- ▶ Systems slow down
- ▶ Important info gets buried
- ▶ IT gets swamped with requests
- ▶ Actual insights are lost in the noise

How to Avoid It:

Work with your tech team—or a partner like Rain—to identify the "vital few" data points for each machine. Focus on the measurements that directly help with quality, uptime, or output. Build from there as your team gets more comfortable.

MISTAKE #4

Locking Yourself Into Proprietary or Closed Technology

Why It Happens:

Some vendors offer "quick fixes" that only work with their hardware or software. It feels easy now, but can tie your hands later.

The Real Cost:

- ▶ Future integration becomes a headache—or impossible
- ▶ Upgrades cost more
- ▶ You get stuck with a limited set of features (and often, higher long-term support fees)

How to Avoid It:

Insist on open standards, like OPC-UA or MTConnect, and make sure your connections are well documented. Open technology now means easier upgrades, add-ons, or changes later—on your own terms.



MISTAKE #5:

Skipping Support and Documentation

Why It Happens:

Once the project is “done,” teams move on. But if you don’t have clear documentation or a plan for support, you’re in trouble the minute something goes wrong, or it’s time to upgrade.

The Real Cost:

- ▶ Costly downtime
- ▶ Frantic troubleshooting
- ▶ Paying outside consultants just to figure out what was done the first time

How to Avoid It:

Choose partners (like Rain Engineering) who provide thorough, easy-to-follow documentation on every connection, address, and data point. Make sure you can get remote and onsite support when you need it, and that your team knows where to go for help.



💡 Final Thoughts

Connecting your shop floor shouldn’t be a hassle—and it shouldn’t waste your time or money. With a little planning, the right partners, and a focus on what matters most to your operation, shop floor connectivity can transform your production.

Want help skipping all these mistakes?

Book your FREE 20-asset Connectivity Assessment with Rain Engineering. We’ll show you exactly how to get connected—the right way, the first time.

BOOK TODAY →

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