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FREE GUIDE

The Supply Chain Visibility Playbook

Know What's Coming Before It's a Problem

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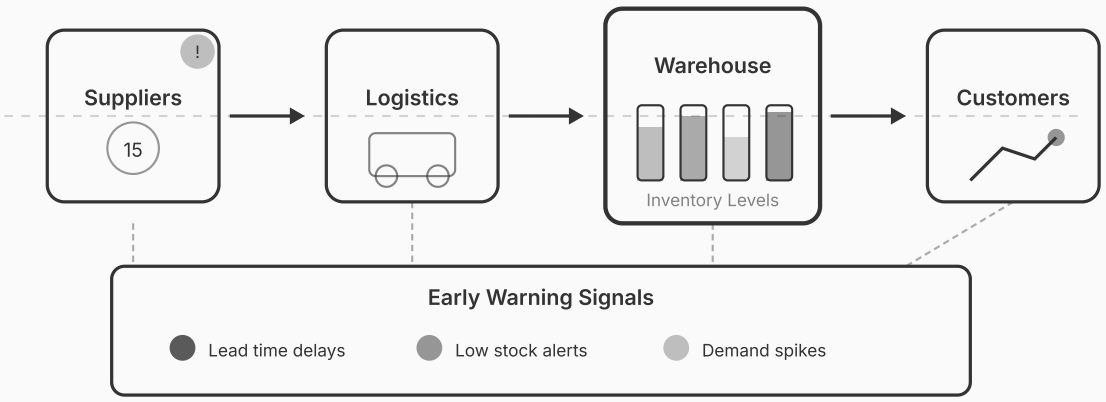
2 Weeks

Early Warning

Get 2+ weeks early warning on supply chain disruptions.

Supply Chain Early Warning System



The call came at 7 AM. Your biggest customer needed their order shipped today. When you checked the floor, the components weren't there. When you called the supplier, you learned the shipment was stuck at port. It had been stuck for five days. Nobody told you.

Now you're scrambling. Premium freight to air-ship an alternative. Production overtime to make up lost time. A customer relationship taking damage because you couldn't deliver what you promised.

This story plays out at mid-sized manufacturers every week. The information existed. Someone somewhere knew the shipment was delayed. But the information didn't flow to the people who needed it, in time to do something about it.

Supply chain visibility isn't about eliminating problems. Problems happen. Suppliers miss deadlines. Carriers have delays. Materials arrive damaged. The goal is knowing about problems early enough to respond instead of react.

What Visibility Actually Means

Real supply chain visibility has three layers.

Order visibility: Where is my stuff right now? Is it manufactured? Shipped? In transit? At customs? In the warehouse? This is the basic question that shouldn't require phone calls to answer.

Risk visibility: What might go wrong? Which shipments are at risk of being late? Which suppliers have patterns of delays? Which materials have lead times that create exposure? This layer predicts problems before they happen.

Impact visibility: What does this problem mean for my customers? If a component is delayed, which orders are affected? How much revenue is at risk? Who needs to know? This layer connects supply chain events to business consequences.

Most manufacturers have partial order visibility. They can track shipments once they're moving. But the other layers don't exist. They discover risks when they become problems and figure out impact while firefighting.

Building all three layers changes how you operate.

Connecting Supplier Data Without Their Cooperation

Here's the frustrating reality: your suppliers aren't going to give you real-time data feeds. They don't have the systems. They don't have the incentive. And even if they agreed, implementation would take longer than the problem can wait.

So you build visibility with what you can actually get.

Purchase order acknowledgments. Most suppliers confirm orders with expected ship dates. Capture these. Even a spreadsheet that tracks promised dates against actual deliveries creates visibility that didn't exist before.

Carrier tracking. Once something ships, the carrier usually provides tracking. FedEx, UPS, ocean freight, LTL carriers all have tracking APIs or websites. Pull this data automatically instead of manually checking.

Email parsing. Suppliers send shipping confirmations, delay notifications, invoice copies. These emails contain information that currently sits in someone's inbox. AI tools can now extract structured data from unstructured emails and file it automatically.

Periodic check-ins. For critical materials from suppliers who won't automate, schedule regular status calls. Tuesday at 10 AM, you ask about every open order. Formalize the process that currently happens randomly.

One industrial distributor we worked with had 70 suppliers. Only four had anything resembling automated data sharing. For the other 66, we built a hybrid system: automatic carrier tracking once items shipped, parsed confirmation emails for ship dates, and a structured weekly check-in process for the suppliers responsible for 80% of the volume.

It wasn't perfect. But it was dramatically better than the previous approach of discovering delays when production ran out of parts.

Early Warning Systems That Actually Work

The goal of early warning is simple: know about problems before they become emergencies.

The challenge is calibration. Too many warnings and people ignore them. Too few and you miss real issues. The sweet spot differs for every organization.

Start with the math. How long does it take to respond to a problem once you know about it? If you need five days to arrange alternative sourcing, your warning system needs to alert you at least five days before the deadline. If you can expedite in 48 hours, your threshold can be shorter.

Layer the warnings. Yellow alerts for "this might become a problem." Red alerts for "this is a problem now." Different urgency levels trigger different responses. Yellow means review tomorrow. Red means drop everything.

Include context. "PO 12345 is late" isn't useful. "PO 12345 from Supplier X is 3 days late, affecting Order 67890 for Customer ABC, with $42,000 at risk" tells you what to do about it.

A precision manufacturer we work with runs three alert levels:

- **Watch:** Expected delivery within 5 days of need date (no action required, just awareness)
- **Caution:** Expected delivery within 2 days of need date (review alternatives, prepare contingencies)
- **Critical:** Expected delivery after need date (immediate escalation, activate alternatives)

The thresholds took months to calibrate. They started conservative (alerts too early, too often) and gradually tightened as they learned what actually required action.

Vendor Scorecards That Drive Conversations

Tracking supplier performance isn't about punishment. It's about having data for conversations.

Without data, vendor discussions devolve into feelings. "It seems like you've been late a lot." "No, we haven't." Nobody wins.

With data, conversations become specific. "Of your last 47 shipments, 12 arrived after the promised date. That's a 25% on-time rate. Let's figure out why."

Effective vendor scorecards track a few things well rather than many things poorly:

On-time delivery rate. The percentage of orders that arrived on or before the promised date. Simple and hard to argue with.

Lead time accuracy. When they quote two weeks, do they actually ship in two weeks? Some suppliers consistently under-promise and over-deliver. Others consistently miss their own estimates. Knowing the pattern lets you adjust.

Quality acceptance rate. What percentage of received shipments pass inspection without issues? Quality problems are delivery problems with extra steps.

Communication responsiveness. When you ask for status, how long until you get an answer? Suppliers who respond slowly are suppliers who will surprise you with problems.

The scorecard isn't for internal use only. Share it with suppliers. The good ones appreciate the feedback. The bad ones either improve or reveal themselves as suppliers you should replace.

One building products company started sharing monthly scorecards with their top 20 suppliers. Within six months, average on-time delivery across those suppliers improved from 73% to 86%. The suppliers had always been capable of better performance. They just hadn't prioritized it until someone was measuring.

What to Track (And What's Noise)

Every supply chain metric is a distraction from the metrics that matter. The temptation is to track everything. Resist it.

Track what drives decisions. If you wouldn't change your behavior based on the number, don't track it. Metrics exist to inform action. Data that doesn't drive action is noise that consumes attention.

Leading indicators over lagging indicators. On-time delivery rate tells you what already happened. Purchase order acknowledgment lag tells you what might happen. The latter is more valuable for avoiding problems.

Exceptions over summaries. A dashboard showing "supply chain health: 94%" tells you almost nothing. A list of "these 6 orders are at risk" tells you exactly what to do.

Essential metrics for most manufacturers:

- Open orders by expected delivery date (what's coming when)
- At-risk orders (deliveries that might miss customer commitments)
- Supplier response time (who's hard to get updates from)
- Lead time trends by category (what's getting harder to source)

Optional metrics that add value for some organizations:

- Inventory days by component (how long you can survive a disruption)
- Single-source exposure (which materials have no alternative suppliers)
- Geographic concentration (how much comes from one region)

The right set depends on your business. A company with 20 critical suppliers needs different visibility than one with 200 commodity suppliers. Build for your situation, not for some theoretical best practice.

Building the System

Supply chain visibility systems don't require massive investments. They require thoughtful connections.

Step 1: Centralize what you have. Purchase orders live somewhere. Probably the ERP. Carrier tracking information exists. Probably in multiple places. Supplier communications happen. Mostly in email. Start by bringing these together into one view, even if it's manual.

Step 2: Automate the easy stuff. Carrier tracking APIs are standardized. Connecting to them takes days, not months. Email parsing for shipping confirmations has become straightforward with modern AI tools. Start with the data sources that don't require supplier cooperation.

Step 3: Build the exception logic. Once data flows, add the rules that identify problems. When expected delivery date is within X days of need date, flag it. When a supplier hasn't confirmed an order within Y days, escalate. The rules encode your supply chain expertise into the system.

Step 4: Create the action triggers. Flags and escalations need to go somewhere. Email alerts. Slack messages. Mobile notifications. Dashboard highlights. Connect the exception detection to the people who need to act.

Step 5: Add intelligence gradually. Pattern recognition comes after the basics work. Which suppliers have seasonal reliability problems? Which components have lengthening lead times? Which carriers are consistently slow on certain routes? This intelligence layer builds on the foundation.

A practical starting point: an integrated view that shows every open purchase order, its expected delivery date, the carrier tracking status, and the customer orders that depend on it. Just that single view, updated daily, is more visibility than most manufacturers have.

What Changes When Visibility Improves

The obvious improvement is fewer surprises. When you see problems coming, you can plan responses instead of improvising them.

The less obvious improvements matter more.

Customer conversations change. Instead of apologizing for delays, you're warning customers proactively and offering alternatives. "Your order will be two days late, and here's what we're doing about it" is a completely different conversation than "Yeah, we don't know where your order is."

Negotiating position improves. When you have data on supplier performance, contract renewals become fact-based discussions. Suppliers who know you're tracking their metrics behave differently than suppliers who think nobody's watching.

Inventory decisions get smarter. When you can see lead time trends, you can adjust safety stock intelligently. Materials with lengthening lead times need more buffer. Materials with reliable supply need less. Data replaces guessing.

Premium freight costs drop. Emergency air shipments happen because of surprise delays. Fewer surprises mean fewer emergencies. One manufacturer tracked a 40% reduction in expedited freight costs in the year after building supply chain visibility.

Starting Tomorrow

You don't need a technology project to improve visibility. Start with process.

Create a daily supply chain review. Fifteen minutes every morning. Look at everything arriving in the next two weeks. Identify anything at risk. Assign someone to follow up on the risks.

That simple process, executed consistently, will surface problems earlier than whatever you're doing now. It's not automated. It's not elegant. But it works.

As you learn what matters, automate. The manual process reveals which data sources are valuable, which alerts are worth triggering, which metrics actually drive decisions. Build the technology around the proven process, not the other way around.

Supply chain visibility isn't a destination. It's a capability that compounds. Every problem caught early prevents downstream chaos. Every pattern identified prevents future problems. The investment in visibility pays dividends long after the initial work is done.

Ready to see what's coming before it becomes a problem? Talk to us about building supply chain visibility for your operation, or explore our full manufacturing solutions.