

Supply Chain Decision Velocity Starts with Data Agility

Supply Chain Experts Weigh In on Building a Strategic
Data Capability that Creates Faster, Better Decisions
—and Separates Reactive Organizations from
Resilient Ones

Contributed by



Contributors



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Greg Mueller is VP of Customer Strategy at Optilogic. He has spent over 22 years leading global supply chain strategy and transformation in retail and food/ag sectors, most recently at Cargill. Over the past 8 years he stood up a global supply chain function and COE that helped deliver \$1.2B to the bottom line by driving global value through planning, customer service, warehouse, and network design capabilities. His focus at Optilogic is helping companies find areas of unrealized value and creating solutions to capture value at scale.



Gavin Schwarzenbach

Executive Advisor & Industry Expert, Optilogic

Gavin brings 34 years of supply chain leadership experience in FMCG/CPG industries to his role with Optilogic. He combines senior leadership experience across global, regional, and local operations with deep technical expertise in operations research, mathematical modeling and supply chain systems. He has led global network optimization and logistics efficiency programs as well as decades of experience leading planning teams, developing and implementing planning systems, S&OP, IBP.

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Vikram leads Solution Architecture at Optilogic, focusing on democratizing supply chain design through reusable, shareable data workflows. He brings over a decade of experience in supply chain analytics and product leadership. Vikram holds a Master of Science in Operations Research from The Ohio State University. His work centers on breaking down data silos and enabling self-service capabilities that transform supply chain decision-making from episodic projects to continuous, collaborative processes.



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Laurie leads Customer Strategy and Success at Optilogic, where she talks with customers to understand their business challenges and helps them develop roadmaps of value to get the most from their technology investments. Prior to joining Optilogic in May 2024, she worked in supply chain on both the software vendor side and at a chemical company's supply chain center of excellence, where she built capabilities and implemented tools to achieve success for the business. Laurie was recognized as a recipient of *Supply & Demand Chain Executive's* 2021 Women in Supply Chain Award.



Joris Wijkema

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Joris brings over 20 years of supply-chain expertise from McKinsey & Company where he served as a partner in Manufacturing & Supply Chain. At Optilogic, he drives tailored decision-making solutions, the professional services capability, and deployment-focused strategies that help clients translate advanced AI, optimization, and simulation technology into measurable business impact.



Introduction

Supply chain executives face a paradox: their organizations generate more data than ever, yet business questions arrive faster than teams can answer them. Teams spend months preparing information that becomes outdated before analysis concludes. By the time leadership sees results, market conditions have shifted and opportunities have disappeared.

The constraint isn't technology, talent, or investment—it's how organizations prepare data for decision-making. This bottleneck limits speed and optionality: the ability to evaluate alternatives, test scenarios, and respond to disruption.

This white paper examines how data impacts the challenges supply chain executives face daily: balancing cost control with commercial growth, navigating geopolitical disruption, managing inflation pressures, and making faster decisions across every dimension of supply chain strategy. The insights that follow reveal what separates organizations that respond quickly from those that rebuild constantly, and how leading companies are fundamentally changing their approach to supply chain data.



When Functions Use Different Data

Joris Wijpkema, EVP of Solutions & Strategy at Optilogic, describes a structural problem:

"Multiple stakeholders, multiple functions—they're in their own part of the organization, they have their own way of doing things, their own view on reality, and oftentimes their own data sets and their own metrics."

Joris Wijpkema
EVP of Solutions & Strategy, Optilogic

Teams build Excel models in isolation using different extracts, assumptions, and time periods. Reconciling these versions consumes meeting time and delays decisions.

Operational Disruptions: When Speed Determines Outcomes

Strategic decisions can wait months. Operational disruptions cannot.

Mueller describes a polar vortex at Cargill's Chicago operations. Extreme cold threatened liquid products in rail cars—industrial oils were beginning to freeze. Without a model for rapid analysis, Cargill analyzed options manually. Several rail cars froze solid, ruining the oil.

"In disruptions, speed gets real because someone else is going to take up that capacity you needed. You're further back in line each hour you wait to make the call."

Greg Mueller

Organizations that analyze alternatives and act within days secure resources that slower competitors miss.

Chapter 1: The New Decision Imperative in Supply Chains

Most teams spend 70-90% of their time on data preparation rather than analysis. In its *Hype Cycle for Supply Chain Strategy*, Gartner identifies poor data availability and quality as a primary obstacle to advanced analytics adoption, noting that "the timeliness and accuracy of the data correlate to the accuracy and usefulness of the output."

Time Allocation: Where Modeling Effort Actually Goes

Greg Mueller, VP of Customer Strategy at Optilogic, spent 14 years at Cargill building the company's global supply chain capabilities. His experience quantifies a common problem.

"When we were lower on the supply chain design maturity scale, the amount of time spent on data wrangling was in the 80-90% range. I remember trying to spin up the first of the larger supply chain models, and we were getting to the four-month time frame just on the data and thinking, 'Is this even possible?'"

Greg Mueller
VP of Customer Strategy, Optilogic

Through systematic improvement, even high-performing business units with clean data still spend 60-70% of their time on data preparation.



Business Impact: The Cost of Slow Analysis

In 2020, Cargill's commercial teams used spreadsheets to prepare investment analysis for a \$350-400 million renewable diesel facility. Mueller negotiated five months to build a proper network model. The analysis revealed the optimal location was 550 miles from the original proposal. Cargill delayed the investment, later purchasing and converting an acquisition near the optimal location instead.

"We ultimately avoided a mistake that would have resulted in \$2 billion in out-of-position transportation costs over the course of the plant's life. I nearly wasn't able to convince leadership to wait."

Greg Mueller

Chapter 2: Why Data Is Still the Bottleneck

The technology exists. The talent exists. Yet the problem persists. Even organizations with sophisticated data capabilities find their modeling teams bottlenecked by data preparation. The issue isn't talent—it's structural.

The Upstream Problem: Where Data Originates

Vikram Srinivasan, Vice President of Solution Architecture at Optilogic, describes the core challenge:

"Data sets from ERP systems and planning systems were built to help folks run planning and execution for specific problems. They're not built for the ability to quickly get more data sets, have that cleansed, and be able to do more dynamic things with it."

Vikram Srinivasan
VP of Solution Architecture, Optilogic

Each system serves its intended purpose well. The problem emerges when organizations combine these sources to answer business questions spanning multiple domains—questions like "What happens to our network costs if tariffs increase 25%?"

The Context Gap

Data lakes promised to solve consolidation challenges by centralizing organizational data. The reality proved more complex.

"A data lake is good at consolidating various data sets, but it doesn't have any context to the problem you're trying to solve. Business users in supply chain aren't just looking for clean data—they're looking for data that has supply chain context."

Vikram Srinivasan

Supply chain decisions require understanding dependencies—how demand flows through facilities, how costs interact, how constraints affect service levels. Raw data provides facts. Decision-making requires context.



The Self-Service Imperative

Organizations that respond quickly have enabled business users to access and transform data without depending on technical intermediaries for routine tasks.

Requirements for Effective Self-Service:

- Initial data connections established
- Reusable pipelines that multiple users can leverage
- Tools that don't require SQL or Python expertise
- Collaborative environments where teams share data sources
- Supply chain context embedded in transformation logic

Srinivasan describes the concept: "You want to have one or two folks who can help you with heavy lifting one-time connections for Snowflake and so on. Then you can have other business users using it, and they can be fully self-serve to be able to make those decisions."

This doesn't eliminate technical teams—it changes their role from building each analysis to building reusable infrastructure that business users can leverage repeatedly.

Organizations that solve the data bottleneck don't just move faster—they fundamentally change what questions they can answer and how quickly they can respond to change.



Chapter 3: Building Agility through Connection & Repeatability

Data preparation consumes enormous resources—time, talent, and organizational patience. Yet the real cost isn't just the work itself. It's what organizations cannot do while teams rebuild the same connections over and over.

According to Accenture's 2024 study *Next stop, next-gen*, companies with the most mature supply chains achieve 23% higher profitability than their peers. These leaders connect data once and leverage it repeatedly.

The Rebuild Problem

Gavin Schwarzenbach, Executive Advisor & Industry Expert at Optilogic, describes the pattern:

"Every company I talk to—it takes an inordinate amount of time, both human effort and elapsed time, to build a model, load data, and adapt the model. People really create quite complex data flows that are hard for somebody else to understand."

Gavin Schwarzenbach
Executive Advisor & Industry Expert, Optilogic

The Foundation Matters

Schwarzenbach emphasizes a critical but often overlooked principle: "No company's master data is good enough. No matter how much effort you put into it, there are always issues and errors with it."

Rather than pursuing perfect source data—a goal that remains elusive despite decades of investment—effective organizations build infrastructure that aggregates intelligently, cleanses systematically, validates visibly, and documents automatically.

From Strategic to Tactical

Reusable infrastructure changes what's economically feasible to analyze.

- **Traditional Model:**
Build model manually → Use once → File away → Rebuild from scratch three years later
- **Repeatable Model:**
Build reusable data pipeline → Strategic analysis completed → Same infrastructure supports tactical questions → Quarterly refreshes become routine → New scenarios answered in days

The shift: Organizations move from "Can we afford to do this analysis?" to "What questions should we answer this week?"



The ROI of Repeatability

Schwarzenbach provides concrete estimates: "With today's functionality, we should be able to half the time it takes to get data into a model. And hopefully within a few months, we should be able to achieve an 80% reduction in the time."

Three Ways Organizations Capture Value:

- **More Frequent Refresh** — You can refresh far more frequently, so you can find opportunities that you can implement quicker and deliver savings in the short term.
- **Broader Coverage** — You can cover all businesses, all factories, all regions if you're a retailer. You can do the breadth as well as the depth.
- **New Use Cases** — You can start bringing in new use cases—cost to serve, risk analysis, upstream supply optimization, inventory optimization—things you've never had time for.

The Human Factor

The efficiency gains matter. But Schwarzenbach identifies another benefit organizations often overlook:

"It's much more beneficial for the business to have many more models being refreshed far more frequently. It's also far better for the team because it's much more motivating to be finding and presenting improvement opportunities than getting lost in manually refreshing Excel sheets."

Gavin Schwarzenbach

Anticipating Rather Than Reacting

Repeatable infrastructure enables a different approach to risk management.

Schwarzenbach describes his experience at Nestlé in Malaysia: "We anticipated that when Ramadan and Chinese New Year were fairly close together, we'd have a double peak of demand. So, we produced far more in advance. We were able to fill the stores with our products when others were struggling because they were not looking ahead."

"Those are the scenarios where you can really turn the what ifs into a business benefit, into a competitive advantage," Schwarzenbach notes.



Chapter 4: The Role of AI in Data-Backed Decisions

AI's explosive growth in supply chain has created both excitement and confusion. Industry data reveals the gap: while AI adoption is accelerating, only 9% of companies have fully deployed an AI use case due to scaling challenges, according to Accenture's *Next stop, next-gen* report.

The answer lies not in replacing human expertise but in strategically amplifying it—removing technical barriers while preserving the judgment, context, and business acumen that only experienced professionals can provide.

Lowering the Barrier to Entry

The most immediate impact of AI in data transformation is accessibility. Natural language interfaces eliminate the friction of task configuration, sequencing, and technical setup.

"You don't need to be a SQL expert. You don't even need to be an expert in the tool. You could be an expert in your data and the transforms you need, and the tool is just a conduit."

Steve Sommer
Chief Technology Officer, Optilogic

Rather than funneling all transformation requests through a single technical expert—creating the inevitable bottleneck—teams can directly express what they need. The analyst who understands supply chain data intimately but lacks SQL expertise can now transform that data themselves.

Time to Value: The Core Advantage

Speed remains AI's most tangible benefit in data preparation. Complex queries that previously required multiple low-code tasks, careful configuration, and troubleshooting can now be expressed in a single natural language instruction.

The business impact manifests in two ways:

- 1. Increased analytical capacity.** If a team addresses twelve strategic questions annually because each requires a month of data preparation, cutting preparation time in half enables twenty-four analyses.
- 2. Better decisions through expanded alternative analysis.** Evaluating more alternatives produces better outcomes. Faster data preparation creates space to evaluate alternatives comprehensively.

"Wouldn't it be nice if I can evaluate 10 different tariff alternatives and six different transportation cost alternatives and 12 different demand alternatives because I've given myself the time—rather than having to sprint at the last minute and look at one or two because that's all I have time for?"

Steve Sommer

In uncertainty-driven environments, this expanded analytical capacity translates directly to resilience. Organizations that can model more futures make more informed commitments.



Amplifying Rather Than Replacing Human Judgment

AI's role isn't solely autonomous decision-making but rather extending human capabilities in specific ways:

What AI Does Well	What Humans Provide
Speed and parallel processing—execute transformations 24/7	Validation and accountability—verify output matches intent
Pattern recognition at scale—identify anomalies and outliers	Business context integration—consider unmeasurable factors like relationships and strategy
Consistent execution—apply rules without fatigue	The art of supply chain design—judgment about which uncertainties to model and alternatives to explore

The most effective approach combines AI's computational power with human expertise and judgment—creating a partnership where each contributes what it does best.

Building Capabilities Before Perfect Data

Organizations often delay AI adoption while pursuing perfect data quality. This approach misses AI's potential to improve data quality iteratively. The threshold for starting isn't as high as many assume.

The decisive factor isn't the sophistication of the AI but rather how organizations deploy it—amplifying human capability while respecting the irreplaceable value of experience, context, and judgment.

"It's curiosity and experimentation and the willingness to go try. The people that are going to be most successful are the ones that are just continuously learning and trying the tech by experimentation and by doing."

Steve Sommer

Chapter 5: From Ad-Hoc to Always-On Decision-Making

The traditional approach to supply chain network design—assembling a team for a six-month study, building scenarios, presenting recommendations, then disbanding—no longer matches the pace at which business conditions change.

According to a [2025 brief by Bain & Company](#), around 75% of executives are juggling at least six or more competing supply chain priorities. Organizations cannot afford months-long analysis cycles.

From Reactive Response to Proactive Playbooks

The shift to continuous decision-making enables something more valuable than faster reaction times: the ability to model scenarios before they occur and develop response playbooks in advance.

Consider tariff changes—a persistent uncertainty for organizations with global supply chains. Rather than scrambling after new tariffs are announced, teams can model various scenarios ahead of time: 10% increases on specific materials, complete removal of certain tariffs, shifts in country-of-origin rules.

"It's not even just responding immediately when something changes—but the ability to do that ahead of time so that you're really ready when it does occur. You've already got these proactive plans in place."

Laurie Tuschen
Head of Customer Strategy and Success, Optilogic

When changes occur, the organization isn't starting from scratch. They're executing a prepared playbook. The disruption becomes "which playbook do we execute?" rather than "how do we respond to this unprecedented situation?"

Building Confidence through Continuity

When analytical cycles compress from months to days, teams gain something beyond speed: genuine confidence in their recommendations.

In traditional project-based work, analysis often concludes with lingering questions. Did we explore enough alternatives? What if demand assumptions shift? Time pressure forces decisions before teams feel fully ready.

Continuous analytical capability changes this dynamic. When teams know they can rapidly test additional scenarios, validate edge cases, or explore alternative assumptions, they approach recommendations differently.

"They can build and analyze what-if scenarios with confidence in the data driving those decisions and confidence in the tooling. When they go to recommend an action to their leadership team, they've got the right data and analytics to make those recommendations with confidence."

Laurie Tuschen

This isn't about achieving perfection. It's about knowing you've explored the decision space adequately to stand behind the recommendation—a qualitative difference that affects how decisively organizations can act.

Organizational Shifts: From Projects to Capabilities

Moving from periodic projects to continuous analysis requires rethinking team structures and skill combinations.

Traditional project-based work concentrated specialized skills—the two or three modelers who understood optimization tools, worked on long-range studies, and delivered results when projects concluded. This structure worked when projects were infrequent.

Continuous decision-making requires different team dynamics: a centralized group with deep technical expertise partnered with business unit experts who understand operational context. The technical team handles data transformation, model construction, and analytical execution. Business partners provide context that isn't captured in data.

This collaboration enables rapid iteration—technical experts building initial analyses, business partners providing feedback, refinements happening quickly—rather than lengthy requirements-gathering phases.

Building Executive Buy-In

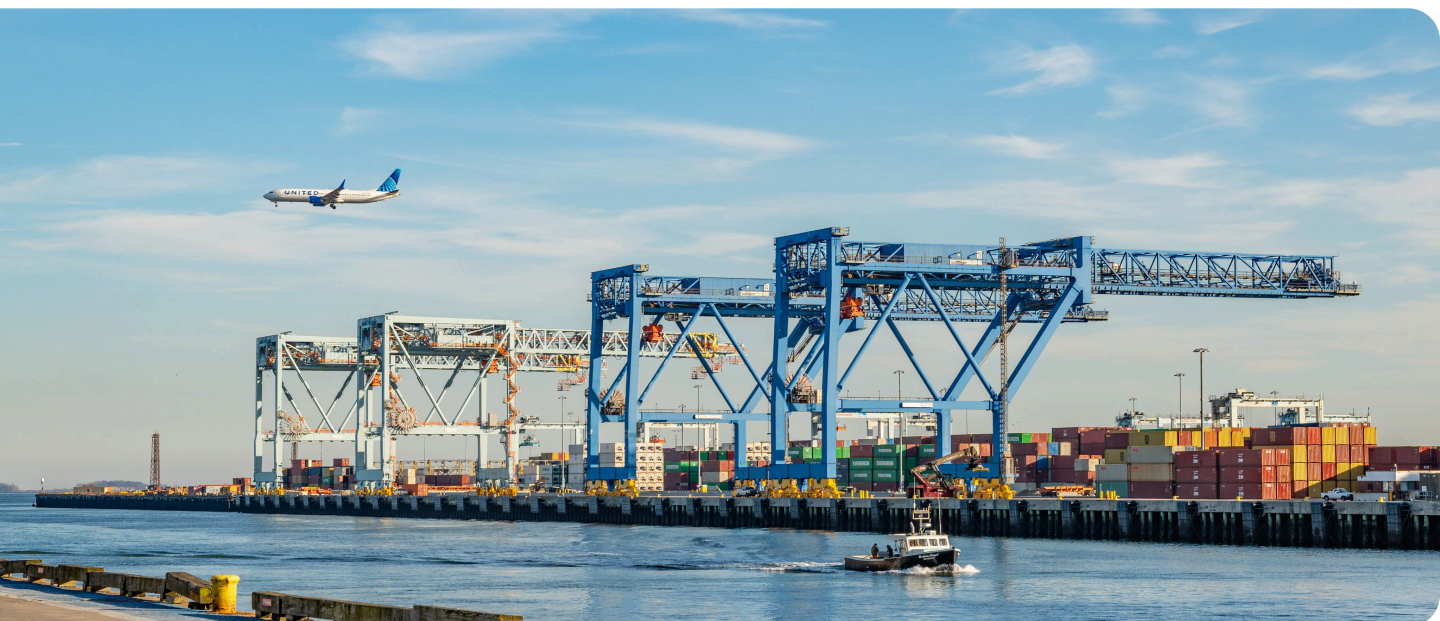
How do you convince leadership to invest in continuous analytical capability when current approaches feel adequate?

"I start out by asking leaders what their biggest business challenges are. They start talking about those biggest challenges, and if it is something like tariffs, they know this is not something that's going away, and it's not something that's stabilizing."

Laurie Tuschen

Whether it's tariff uncertainty, evolving customer expectations, or the "Amazon effect" compressing delivery timeframes, challenges require ongoing response rather than one-time solutions.

The competitive advantage lies not in perfect prediction but in building the capability to rapidly evaluate alternatives and confidently act as conditions evolve.



Chapter 6: Collaboration as the Multiplier

When supply chain decisions fail, the root cause often isn't inadequate data or insufficient analysis. It's misalignment—commercial teams operating with different assumptions than supply chain, operations making commitments without understanding capacity constraints, finance using metrics that don't reflect operational reality.

The Inevitability of Silos

Silos aren't failures of leadership or culture—they're natural consequences of organizational structure.

"Silos form wherever you draw organizational lines. People are naturally inclined to work in teams. There's limited bandwidth for people to consider and work actively with a lot of different people at the same time."

Joris Wijkema

Single Version of Truth: Connecting Different Views

The phrase "single version of truth" appears frequently in supply chain discussions, usually referring to data consolidation. But the real challenge isn't creating one database—it's enabling different teams to see how their decisions connect.

The disconnect in practice:

- Account executives view sales orders—what customers ordered, when delivery was promised
- Production schedulers see aggregated requirements—1,000 units to ship this week
- Neither sees the connection between the late order and the maintenance issue that shut down production

"Having integrated views across the supply chain that tie the different pieces together helps resolve these things much more quickly and allows people to talk from a more end-to-end fact-based perspective."

Joris Wijkema

This integration becomes critical when teams use different systems—sales orders in one platform, production scheduling in another, inventory tracking in a third.





The S&OP Framework: Forcing Connection through Process

Technology enables collaboration, but process makes it systematic. Organizations that achieve genuine cross-functional alignment typically implement Sales and Operations Planning (S&OP)—structured monthly and weekly rhythms that gather teams to share information and make decisions together.

"Being able to have that one version of the truth that everyone's working from drives collaboration because now everyone is talking the same language."

Greg Mueller

The structured rhythm forces manufacturing sites to share production plans, consolidate into a unified view, and align on product allocations through regular cross-site meetings.

This structure doesn't eliminate silos—sites still operate independently. But it creates connection points where cross-site coordination must occur.

Enabling What-If Analysis at Scale

Collaboration multiplies decision velocity when teams can rapidly test alternatives together. But most organizations struggle to execute what-if analyses at all.

Mueller describes an organization evaluating international shipping routes—testing whether consolidating in Houston and shipping directly to Italy made more sense than routing through Illinois and Virginia. The analysis took three weeks for a single lane. The outcome showed 15-20% cost reduction and 20 days removed from transit time. With thousands of lanes to evaluate, weekly analysis cycles are impossible.

"You can't do that with high frequency if it's going to take you on the order of days or weeks to do one single what-if analysis. You need to be able to do those in minutes."

Greg Mueller

When what-if analysis compresses from weeks to minutes, collaboration transforms: teams test ideas, questions get explored opportunistically, and friction disappears.

Conclusion

Three characteristics separate reactive organizations from resilient ones:

1. **They've empowered business users.** When supply chain analysts can transform data without SQL expertise or IT tickets, the bottleneck disappears. Teams move from waiting weeks for technical resources to answering questions themselves.
2. **They've enabled cloud-native collaboration.** Geographic boundaries dissolve when teams work in shared environments. This model changes the economics of analysis.
3. **They've embedded supply chain context into data.** Generic ETL tools consolidate information. Purpose-built platforms structure data for decision-making—consistent in format, flexible to update, ready to model.

The competitive advantage they've created isn't just speed. It's optionality—evaluating alternatives slower competitors cannot consider. It's confidence—knowing you've explored the decision space thoroughly. It's resilience—responding to disruptions with prepared playbooks rather than improvised reactions.

The path forward isn't waiting for perfect data or pursuing AI as a silver bullet. It's building the capability to transform data rapidly, collaborate effectively, and decide confidently—creating the foundation for supply chain agility in an uncertain world.



About Optilogic

Optilogic turns supply chain design from a three-month project into a one-day breakthrough. We're ending the era of spending 80% of your time on data preparation and delivering AI-powered optimization that enables 80% decision-making instead. Our platform combines agentic AI, advanced optimization, and simulation to solve strategic to tactical supply chain decisions that can't be fully automated—delivering 95% faster modeling, 20-25% cost reductions, and answers in days, not months. We believe so strongly in our platform, we offer **free access** so you'll be convinced before you commit. Stay in touch with Optilogic on [LinkedIn](#), [Twitter](#), [Facebook](#), and [YouTube](#) and visit www.optilogic.com.