September/October 2026

SUPPLY CHAIN XCHANGE

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Why everyone needs supply chain microfoundations

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Supply chain performance is shaped by decisions across the entire organization, from sales to procurement. However, many of these decisions are made by colleagues with no or little expertise in supply chain management. A small set of supply chain microfoundations can help non-supply chain colleagues recognize the broader consequences of their decisions, ask better questions, and involve supply chain teams before creating system-wide problems.

For many supply chain leaders, the biggest challenges are often not inside their supply chain organization, but outside of it, where 95% of employees of a company work and make decisions (see Figure 1 on page 20). Sales may promise a delivery date without understanding available production capacity or inventory constraints, finance may push for inventory reduction without recognizing service-level implications, and R&D may change a product specification without seeing supplier or lead-time effects.

The point is not that these functions make "bad" decisions. The point is that they make locally rational decisions with limited visibility of supply chain consequences. They are domain experts in other fields and never had the chance to really learn supply chain management (SCM). They make decisions that are locally right but are wrong for the end-to-end organization.

This is where supply chain microfoundations come in. By microfoundations, we mean a small set of simple, memorable SCM principles that help colleagues outside the supply chain function understand how their decisions interact with typical supply chain topics like demand, supply, inventory, lead times, or trade-offs. The aim is not to turn sales, finance, R&D, or quality colleagues into supply chain experts. They do not need to master forecasting algorithms, learn inventory formulas, or memorize a long list of SCM acronyms. What they need is enough supply chain literacy to recognize when a local decision may create broader consequences, which assumptions should be questioned, and when supply chain colleagues should be involved before decisions are finalized.

Supply chains are LUNA

To identify the supply chain microfoundations, we start with a simple question: What makes supply chains so difficult for colleagues outside the supply chain function to understand? Many may mistakenly perceive supply chains as simple execution systems in which a decision leads to a predictable outcome. In reality, supply chains are *linked, uncertain, nonlinear,* and *ambiguous*—or, in short, LUNA. These four characteristics explain why well-intended decisions can trigger unexpected consequences elsewhere, often visible only later as shortages, cost overruns, or service problems. LUNA therefore provides a practical structure for defining what non-supply chain colleagues need to understand.

Let's take a closer look at the four LUNA attributes (See Figure 2).

First, supply chains are **linked.** Decisions rarely stay within one function, site, or company. A sales promise can affect production planning, supplier orders, logistics capacity, inventory availability, and customer service. For example, promising an unusually short delivery time for an important cus-



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KEY TAKEAWAYS

- A small set of simple, memorable principles (or microfoundations) can help your colleagues outside of the function better understand how their decisions affect supply chain operations.
- Non-supply chain colleagues need to understand that supply chains are linked, uncertain, nonlinear, and ambiguous. Local decisions will have an impact up and down the supply chain, and factors such as demand, supply, and lead times can all vary.
- To gain the attention of colleagues outside of the supply chain, microfoundation lessons should be short, start with a recent pain point, link to their own objectives, use their own language, and come from a respected manager within their own function.

tomer may look like a commercial decision, but it might trigger expediting, production rescheduling, and allocation conflicts with other customers. A simple question colleagues should learn to ask is: Who else will be impacted by my short lead-time promise, upstream and downstream?

Second, supply chains are **uncertain.** Demand, supply, lead times, quality, capacity, and customer behavior can all vary. This means that plans are not facts, but assumptions that often turn out to be wrong. For example, a demand forecast at the product launch may look precise, but customers might buy way more than planned, making all plans obsolete. A simple question is: What could vary, and what happens if our assumptions are wrong?

Third, supply chains are **nonlinear.** When capacity, inventory, or lead-time buffers are already stretched, even modest changes can trigger overtime, expediting, shortages, or service failures. For example, a small increase in demand may be harmless when production capacity is available but highly disruptive when a plant or supplier is working

FIGURE 1: WHO MAKES SCM DECISIONS?



Many decisions that affect supply chain operations—such as production plans, inventory levels, and how to structure the supply network—are being made by supply chain leaders. But far more—such as sales promotions, channel strategy, and new market entry—are being made by other functions.

close to full utilization. A simple question is: Could a small change trigger a large effect?

Fourth, supply chains are **ambiguous.** The same decision can look very different depending on where someone sits in the organization. Finance may focus on working capital, sales on customer reliability, procurement on purchase price, and supply chain on service and responsiveness. For example, an inventory reduction may look attractive in a budget review but prove problematic when it reduces product availability for key customers. A simple question is: What trade-off are we making, and who should be part of that discussion?

LUNA becomes useful when it changes how colleagues approach everyday decisions. A sales team promising a short delivery time should not only ask whether the customer wants it but also who will be affected upstream, what assumptions about inventory and capacity are being made, and whether the promise could create conflicts with other customers. A finance team pushing for lower inventory should not only ask how much working capital can be released but also how much uncertainty the remaining inventory buffer can still absorb. An R&D team changing the product specification should not only ask whether the new design improves the product but also whether it changes supplier requirements, quality risks, lead times, or ramp-ups complexity.

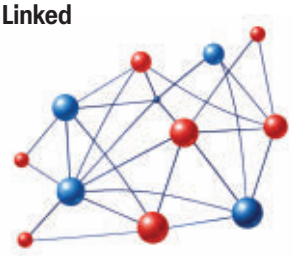
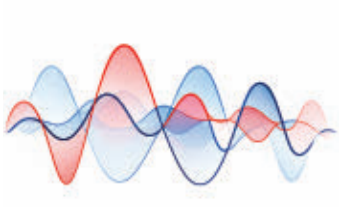
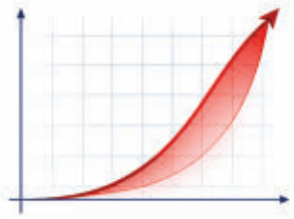
In each case, LUNA shifts the conversation from "Is this a good decision for my function?" to "What broader supply chain consequences could this decision create?" This is the practical value of supply chain microfoundations. However, these ideas will only matter if colleagues outside of supply chain see them as relevant to their own goals. The next

question, therefore, is how to convince non-SCM colleagues that these microfoundations are worth learning.

Making microfoundations matter

Convincing non-SCM colleagues to learn supply chain microfoundations requires careful framing. To gain the attention of non-SCM colleagues, the argument should not start with supply chain. It should start with their own objectives in their own language. Sales has a strong interest in revenues and keeping customers happy, while finance aims to reduce working capital and contain costs, and product development wants competitive products that attract market share. They all want to avoid firefighting and reduce conflicts. Microfoundations become relevant when colleagues see that these concepts help them make better decisions in their

FIGURE 2: LUNA ATTRIBUTES

Microfoundation	Key challenge	Simple questions non-SCM colleagues should ask
Linked 	Decisions rarely stay within one function, site, or company. A local choice can create consequences upstream with suppliers, internally in operations, or downstream with customers.	• Who else will this affect? • Which upstream or downstream processes will be impacted? • Who should be involved before we decide?
Uncertain 	Plans are based on assumptions that may not hold as predicted. Many key factors like demand, supply, lead times, quality, and capacity are affected by randomness and vary.	• What could vary? • What assumptions are we making? • What happens if our forecast or plan is wrong?
Nonlinear 	Small changes can create disproportionate effects. A minor demand increase, product change, or delay can trigger stockouts, expediting, overtime, or service failures.	• Could a small change trigger a large effect? • Are we close to a capacity, inventory, or lead-time threshold? • Could this decision create a bottleneck or ripple effect?
Ambiguous 	There is often no single "right" answer. The same decision can look good for one function but be problematic for another because service, cost, inventory, resilience, and sustainability interact.	• What trade-offs are we making? • What looks good locally but may hurt the overall business? • Which performance dimension are we prioritizing and which are we sacrificing?

own roles, allowing them to meet their own targets.

This framing is important because most non-SCM colleagues will not have time for or interest in an in-depth supply chain training program. They do not need another technical language or another functional agenda. They need a few practical questions that help them avoid rework, delays, local optimization, and decisions that look good on paper but fail in execution. The message is therefore not "learn SCM to help the supply chain function," but "use supply chain microfoundations to make your own decisions better."

One effective way to create this relevance is to start from recent pain points rather than abstract principles. A missed launch date, a customer escalation, or an inventory write-off can be used to show how prior decisions created consequences that were only visible later. This makes microfoundations tangible: They are not theoretical SCM concepts but a way to understand why familiar problems occurred and how similar problems can be avoided next time. In other words, the persuasion challenge is not to make colleagues interested in supply chain but to help them see supply chain literacy as a practical tool for reducing friction in their own work.

Sharing microfoundations

Once non-SCM colleagues understand why supply chain microfoundations matter, the next question is how to introduce and embed them in everyday

Online training: SCM for everyone

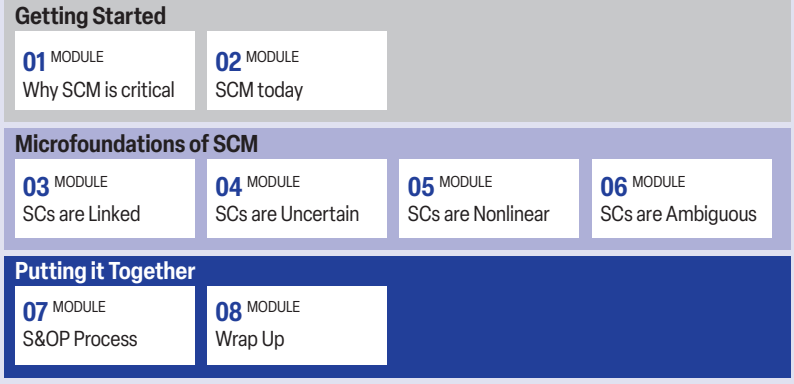
Supply chain microfoundations only create value when they become accessible to everyone and are translated into everyday decision practice. A useful design principle is to make them simple, spicy, and sticky.

Simple enough to be understood quickly without technical jargon. *Spicy* enough to attract attention through recognizable tensions, surprising consequences, and provocative questions (for example, how an overly optimistic sales forecast can create excess inventory). *Sticky* enough to be remembered and applied in everyday work (for example, by prompting managers to instinctively account for interdependencies and trade-offs whenever they make decisions).

At Kühne Logistics University (KLU), we use this 3S logic in an online learning format for managers outside the supply chain function. The five-hour training is structured around eight concise modules (see figure). The modules provide a brief look at SCM, introduce each attribute of the LUNA framework, and illustrate the common sales and operations planning (S&OP) process to help participants understand why supply chain microfoundations matter. We use S&OP because it illustrates cross-functional interdependencies through familiar business decisions. For example, a promotion agreed upon by sales and marketing may increase demand but also create capacity shortages, costly expediting, or excess inventory. Understanding these consequences helps participants recognize why supply chain thinking matters for decisions made throughout the organization.

In addition to short videos, each module includes micro-tasks that ask participants to apply the learnings to their own work, for example by identifying hidden supply chain consequences, questioning planning assumptions, or reflecting on trade-offs. This can improve "stickiness."

EXAMPLE FOR MAKING SUPPLY CHAIN MICROFOUNDATIONS SIMPLE, SPICY, AND STICKY



Rather than teaching technical SCM tools, the format focuses on very practical decision questions: Who else will be affected? What assumptions could be wrong? Could a small change trigger a large effect? What trade-off are we accepting? For further information see: www.scm-for-everyone.com

work. They should be short, precise, and insightful, while allowing for deep dives in case the learner would like to understand more. Ideally, microfoundations should be taught from the learner's perspective. Instead of offering an "Introduction to Supply Chain Management," the framing should be closer to "What sales teams need to know before promising delivery dates," or "What R&D teams need to know before changing product specifications." This makes the content relevant because it starts with the colleague's decision.

The most effective starting point is a real problem like a missed launch, broken promises, emergency shipments, excess inventory, or customer escalations. These incidents will grab your colleagues' attention because they will recognize the pain. A short story can then show how an earlier assumption, promise, target, or specification created consequences that became visible only later.

Adoption also depends on who is perceived as driving the message. Credibility matters a lot. If the message comes only from the supply chain function, it may sound like another functional agenda. Respected managers from sales, R&D, or marketing should explain in their own language how their understanding of SCM has helped them in their careers. Their examples make the topic feel less like supply chain training and more like general managerial judgment.

The knowledge needs to be easy to access and easy to use (see sidebar). Short ten-minute sessions can lower the entry barrier, especially if they can be completed between meetings, while traveling, or before a decision workshop. Each unit should end with some micro-task: identify one hidden supply chain consequence, challenge one planning assumption, or name one trade-off in a current decision. A small cheat sheet or even sticky-note-style reminder can reinforce the same logic with questions such as: What lead-time assumption are we using? Where is the bottleneck? What buffer absorbs uncertainty? When should SCM be involved?

Finally, microfoundations should be made available where non-SCM colleagues work. SCM leaders can join sales offsites, finance meetings, or marketing planning discussions, but they should avoid using their standard SCM slides. The contribution has to be short, contextual, and connected to the audience at hand. In the future, interactive artificial intelligence-based discussion coaches could support this logic further by acting as an on-demand "SCM guru" that asks LUNA-based questions and helps colleagues test decisions before they are finalized.

> Non-SCM colleagues need a few practical questions that help them avoid rework, delays, local optimization, and decisions that look good on paper but fail in execution.

Act as translator

Supply chain leaders often see the consequences of decisions made elsewhere in the organization: a promise that cannot be fulfilled, an inventory target that removes too much buffer, or a promotion that creates demand the system cannot absorb. It is tempting to conclude that other functions simply need to "understand supply chain better." The more constructive view is that supply chain leaders have an opportunity to shape how colleagues think about the decisions they already make.

The goal is not to control every supply-chain-relevant decision. Nor is it to turn everyone into an SCM expert. The goal is to act as translators: helping colleagues in sales, finance, R&D, procurement, quality, and other functions recognize links, question assumptions, anticipate nonlinear effects, and discuss trade-offs before decisions are locked in.

These microfoundations offer a practical way for non-SCM colleagues to navigate supply chain's LUNA characteristics. They create shared responsibility without requiring shared expertise. If embedded well, they can move organizations from late firefighting to earlier, better, and more supply-chain-aware decision-making. ›



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