



The Trusted Platform for
Business Spend Management

Propel Your Supply Chain Design Maturity:

*A framework for designing a center of excellence
that delivers value across your business*

Supply Chain Design & Planning

Executive Summary

As organizations face elevated levels of change and disruption, supply chain design is now more important than ever. By evaluating and evolving their supply chain, organizations can reduce risk, improve resilience, and turn many of their challenges into a competitive advantage.

While many organizations still rely on a handful of one or two modelers to support decisions, the next evolution is a custom-designed Center of Excellence (COE) that houses the key personnel and creates an infrastructure for continuous supply chain design with sustainable and repeatable efforts. A COE brings together the best of people, processes, technology, and strategy to accomplish the core business objectives that the company is looking to achieve.

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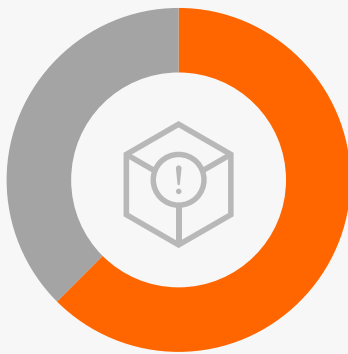
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I. Introduction

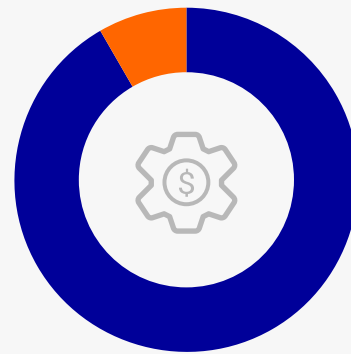
Today's supply chains are facing pressures and complexities more so than ever before. Organizations are now dealing with everything from supply shortages, unreliable lead times, labor shortages, capacity constraints, and unpredictable consumer behaviors. And inflation and tightening monetary policies have become especially concerning in the last year. On top of all this, the pace of change is only accelerating.

As labor and material shortages still linger from the pandemic, rapid shifts in some industries are disrupting everything from materials to manufacturing and distribution. Meanwhile, changing consumer expectations around rapid fulfillment means everything needs to move faster. This is all happening at a time when growing regulations and compliance requirements are also pressuring supply chains. For example, the Inflation Reduction Act has several environmental justice components that address diesel and port emissions. And in Europe, new legislation designed to reach "net-zero" emissions by 2050 will profoundly impact every industry, including shipping, transportation, and cross-border commerce.¹

Many supply chains are not designed to manage this level of disruption



60% of supply chain executives say their supply chains are designed for cost-efficiency, not resilience



87% plan to invest in supply chain resiliency in the next two years.²

We are now in an environment where supply chains must be more flexible, efficient, and agile. Organizations can no longer plan on long-held assumptions and must put supply chain design at the forefront to adapt to these challenges.

Supply chain design is now a must-have capability to keep up with the pace of change and to sustain a competitive advantage. But developing a Supply Chain Design competency is a task that goes beyond being able to run a network optimization project. Developing a sustainable supply chain design competency has to do with setting up an organization, a path to drive speed to

¹ Global Regulatory Changed: Shifting to Green Supply Chains, Coupa, December 2, 2021, <https://www.coupa.com/blog/supply-chain/global-regulatory-changes-shifting-green-supply-chains>

² Gartner Survey Finds 87% of Supply Chain Professionals Plan to Invest in Resilience Within the Next 2 Years, Gartner, February 10, 2021, <https://www.gartner.com/en/newsroom/2021-02-10-gartner-survey-finds-87-of-supply-chain-professionals-plan-to-invest-in-resilience-within-the-next-2-years>

value, to be able to deliver recurring value for the business, and a way to track this value through time. Building such a competency involves the emergence of **four key pillars: people, process, technology, and strategy**. And developing each pillar is vital to the success of the endeavor as a whole.

Market-leading organizations have embraced this and have created **centers of excellence (COEs)**, putting in place integrated supply chain design practices centered on continuous design; reducing risk, improving resilience, and turning supply chain challenges into a competitive advantage.³

II. Building a supply chain design and planning competency implies an evolution

Many organizations have supply chain design capabilities, but the maturity and ultimate success of a practice can range significantly. At the lower end of the spectrum, the approach is episodic, where design work is periodic and ad hoc in nature, and the function represents an unskilled competency.

At the other end of the spectrum, **best in class organizations are structured to drive continuous design, have an aligned strategy with the broader organization, and represent a highly skilled, developed competency**. As organizations progress up the maturity spectrum, supply chain design transitions from a capability to a competitive advantage.

Common characteristics and risk factors that can threaten sustainability in a supply chain design practice

- Supply chain design represents a part-time function with an ad hoc approach
- Team is untrained on technology; they lack knowledge to fully leverage capabilities
- Lack of employee retention and attraction strategies
- Supply chain design lacks executive sponsorship
- Organization is not educated on supply chain design capability or value proposition
- Business/subject matter experts are not part of the process (including projects and overall governance)
- Identified opportunities do not get implemented
- Implementations are not tracked or measured for success
- Data collection is difficult and time-consuming
- Data quality is inconsistent or laden with assumptions

³ Continuous Design Outsmarts Disruption: An Imperative for Supply Chain Resiliency, Coupa, https://get.coupa.com/21-Continuous-Design-SpCh.html#_ga=2.172313760.228098196.1663081455-227978207.1663081454

World-class COEs are not built overnight. They take careful planning and build on their successes over time with continual improvement. Getting from where you are today to where you want to be implies an evolution, but when done properly, a mature COE will enable continuous design and drive end-to-end connected decision-making that will expand value.

III. Building blocks to drive maturity progression

Successful supply chain design COEs start by creating a vision and blueprint for success revolving around the essential pillars of people, process, technology, and strategy.

Eight Fundamental Drivers of Supply Chain Design Maturity



Collaboration



Accountability



Supply chain integration



COE sustainment



Thought leadership



End-to-end supply chain visibility



Agility



Structure

As organizations embrace these drivers as foundational characteristics of their COE, they reach higher levels of supply chain design excellence and progress up the maturity spectrum.



Collaboration

In organizations with a low level of Supply Chain Design maturity, collaboration is nearly nonexistent. Design is seen as a tactical, ad hoc event, usually conducted in a silo by a modeler. External business engagement is limited throughout the design process. Furthermore, those involved are only concerned with how decisions and outcomes will affect their area of the business instead of how they will improve the business as a whole.

In a mature organization, supply chain design involves the broader enterprise and potentially even external partners (third-party logistics, suppliers, customers). There may be a design team at the center of it all, but that doesn't mean this team owns the process from start to finish.

Rather, they engage with colleagues and subject matter experts across the organization to determine what challenges need to be addressed, and they incorporate their input and insights to drive towards outcomes that can be deployed in the real world to deliver realized value. And the recommendations consider the broader supply chain and collective impacts while aligning to the organization's priorities.

At the higher end of the spectrum, they are evolving towards broader participation and democratized decision support. Solutions are deployed in the form of easy to use interactive apps and intuitive visualizations to enable extended business teams to self-serve and collaborate as part of the design and decision process.

Characteristics of Mature Organizations

- Supply chain design involves the broader enterprise and potentially external partners
- Engages with colleagues and subject matter experts across organization to determine challenges and incorporate input to drive outcomes
- Broader participation and democratized decision support



Accountability

There are many variables involved when measuring the success of your supply chain design COE, not all of which are under your control. The inherent nature of supply chain design can make it difficult to quantify the benefits because the decisions supported may center on long-range plans and strategies that won't be implemented in the immediate term. In other cases, the COE may be defining a playbook of contingency plans and strategies to hedge risk against potential future disruptions; and in the end these disruptions may or may not ever occur. Outside of this dynamic, less mature organizations often don't do a good job of socializing the power of what they are delivering even when they do have a mechanism for defining value.

Mature supply chain design COEs start by setting achievable goals that support the overarching goals of the business. They gain buy-in to these goals from the top levels of the organization and down through the department head and their extended teams. Furthermore, they establish communication plans to socialize their activities to drive awareness across the organization.

They also think more broadly about accountability and the value they are delivering to the organization beyond just quantifiable financial and operational metrics. Outside of capturing financial and operational impacts where they can, they may account for the breadth of end-to-end decision support they are able to bring to the organization, as well as the visibility and proactive insight the COE is bringing across their supply chain. Additionally, they may highlight the agility they enable through improved speed to answer. With this, there is also a culture of continuous learning and improvement. They refine their approach by assessing why they achieved or didn't achieve their desired objectives and make this information visible to the organization.

Characteristics of Mature Organizations

- Defined metrics for success and measurement against; gains top level alignment
- Feedback loop and performance monitoring; drive continuous improvement
- Thinks about value to organization beyond financial and operational metrics
- Communication plan to socialize value delivered and capabilities



Supply chain integration

In an organization with an immature Supply Chain Design COE, the scope usually starts out as a siloed project, or is contained within a singular supply chain function. With this, the decisions become more compartmentalized as well without consideration for the broader supply chain impact. For example, to reduce transportation costs, Logistics managers might look at the impact of relocating a distribution center; but that change impacts more than just the cost of getting goods from the factory to the customer. If the change is made, inventory levels may need to be readjusted to keep service levels acceptable. Contracts with third party logistics may need to be renegotiated. The one-time costs of relocating employees or hiring new employees in the new location will need to be considered.

A mature COE thinks about their supply chain more holistically and considers the impact of changes on the entire organization. One business unit may come to the COE needing answers to a specific question, but the team takes the time to gather the information necessary to provide an answer that reflects an enterprise-wide view. This view also considers the goals of the department or business unit in light of the overarching goals of the organization.

The breadth of their scope also often expands to cover the broader end-to-end supply chain from supplier to customer. Another paradigm of scope that may grow is the decision horizons they are

addressing, including strategic, tactical, and operational support. A mature COE may not cover the entire spectrum of decision support, but they will at least evaluate where they can have the greatest impact across the supply chain as they build out their overarching objectives and plans as a team. And they will revisit the plan overtime to evolve as needed

Characteristics of Mature Organizations

- Scope evolving to cover broader supply chain; driving towards E2E decision support to expand impact on organization
- Decisions consider a holistic view of their supply chain, understand tradeoffs across SC functions
- Building organizational connections across SC functions
- Evolve towards broader participation in design and decision process; decision support spans strategic, tactical, and operational horizons



COE *sustainment*

A successful supply chain design initiative provides answers to important questions, but that isn't enough to turn your Supply Chain Design competency into a sustainable practice.

Design teams focused on one-off initiatives and episodic design are at risk of losing funding because they may not be driving ongoing value. Another risk factor for Supply Chain COEs is turnover and lack of development of the function. Immature organizations may treat Supply Chain Design as a part time function or have no proactive plans to maintain their competency if key resources were to move on. This can create significant risk in sustaining the practice.

Mature Supply Chain Design COEs are driving toward continuous design where design activities represent a repeatable process that is ingrained into the corporate culture and decision making. Continuous improvement and continuous learning are also part of the culture, and each successive initiative builds on the results of and learning from prior work. With the ongoing value being delivered, stakeholders across the organization view the COE as a required function in the organization and it's viewed as core competency providing a competitive advantage. Mature COEs also proactively establish formal engagement plans with business leaders across the organization. This allows them to establish connections to feed their pipeline of initiatives, and drive alignment on objectives by collaborating to approve, prioritize, and enable initiatives.

Established COEs also account for the evolution of the team and the individuals that are part of it. They may proactively establish succession plans connecting the Supply Chain Design function with the broader organization, making it a platform for advancement. They also will often establish a mature recruitment program to actively solicit and build a talent pipeline, resulting in limited risk or impact to the function with turnover.

Characteristics of Mature Organizations

- Alignment with executives across supply chain; driving alignment across corporate objectives
- Driving sustainability of design and decision function through continuous design with repeatable processes
- Focus on improving and learning
- Supply chain design viewed as a required function in the organization and core competency
- Plans for team evolution, establishes succession plans and talent pipeline



Thought leadership

As the journey begins for many supply chain design COEs, the function may feel like anything but leaders in the business. Design functions don't just inherently exist like many operational functions, and they may start out having their very existence challenged by other parts of the organization that haven't yet bought into the benefits of the practice. This perception may be due to the fact that they don't understand supply chain design, or don't trust the outcomes because they may conflict with traditional approaches or historical decisions. Some subject matter experts also may not like the idea of taking direction from a group that doesn't understand the realities of their domain.

As the supply chain design COE matures, resistance transforms to endorsement as supply chain leaders and department heads are dependent on the COE for answers to their most challenging questions. At this level the COE is no longer just answering focused questions brought to them, but the function has developed advanced knowledge of use cases and industry expertise enabling them to expand opportunities across the organization and drive transformative business impact. They establish themselves as thought leaders in the organization and proactively recommend opportunities for the business to achieve better results.

Characteristics of Mature Organizations

- Supply chain leaders rely on COE for answers to their most challenging questions
- Leverage advanced knowledge and industry expertise to expand opportunities across organization and drive transformative business impact
- Establish themselves as thought leaders in the organization and proactively recommend opportunities



End-to-end supply chain visibility

One of the biggest challenges for many organizations is a lack of visibility of their supply chain. Within operational silos, there may be an understanding of the state of things through their execution systems, but with this, it's still difficult to connect the dots across the end-to-end supply chain. The visibility they do have also is often representative of what has occurred in the past, or the as-is of what is occurring at this moment. But it's difficult to gain insight to predict and prescribe. For immature supply chain design COEs, enhancing this visibility can be a challenge. They don't have the infrastructure and processes established to enable a current view of the holistic supply chain. And although the models they've built may have provided good insights before, they are often stale and outdated without the ongoing continuous approach deployed.

Conversely, mature supply chain design COEs have built out the infrastructure and associated processes to drive connected decisioning through a digital representation of their supply chains in the form of a digital twin. They build out a catalog of models allowing them to maintain a holistic view of what is happening in the supply chain, and in turn can run simulations to drive insights around various business questions. Mature COEs are able to leverage a supply chain digital twin representing current financials and supply chain configurations, allowing them to merge descriptive, diagnostic, predictive, and prescriptive analytics to detect, summarize, and present anomalies and risks, and prescribe solutions across their supply chains.

Characteristics of Mature Organizations

- Builds out infrastructure and processes to drive connected decisioning through a digital representation of their supply chains in the form of a digital twin
- Can run simulations to drive insights around various business questions
- Maintains catalog of models to maintain a holistic view of supply chain



Agility

As discussed in the introduction, supply chains are anything but stagnant. Mergers and acquisitions can change the entire nature of an organization's supply chain. Fluctuating fuel prices change cost structures. Weather patterns make some routes and transportation modes unavailable. Regulation and deregulation can create new challenges or provide new opportunities. New players enter the

market every day. A disaster, either man-made or natural, can take players out of the market just as quickly.

Less mature Supply Chain Design COEs lack the infrastructure to be agile and responsive in this dynamic environment. They often have no defined data management standards and limited data refresh capabilities. This results in extensive efforts to refresh models and a lack of synergies across initiatives. The ultimate impact are initiatives that take too long to complete and involve too many resources. By the time they develop recommendations and land on an answer, the opportunity has passed, or the market and supply chain dynamics have changed, making the solutions obsolete. Mature COEs adapt to the rapidly changing landscape of the modern supply chain. The tools and processes they use are designed to be flexible, and they follow a proven, repeatable process that helps them guide the organization, whether the change is planned or unforeseen. The speed at which they can adapt and provide answers greatly influences the agility of the entire organization.

Refresh plans are established and implemented for holistic supply chain visibility and to enable a real-time view of the supply chain and proactive decision support. On a regular cadence, or when triggered by recommendations from monitoring performance and trends, models can be rapidly refreshed to re-evaluate/re-optimize plans. Best in class COEs may also deploy applications to enable a collaborative process with stakeholders to streamline the overall feedback loop further expediting decisioning across the organization.

Characteristics of Mature Organizations

- Able to respond to the rapidly changing landscape of the modern supply chain; can quickly adapt and provide insights
- Data management and refresh plan in place allowing for current view of supply chain and agile decision support
- Enable a collaborative process with stakeholders; streamline and expedite feedback loop



Structure

With no structure in place, the immature Supply Chain Design COE often initiates projects on a first come, first serve basis; unless the next person in line outranks the one who got there first. Then, as each new supply chain initiative is initiated, the immature supply chain COE needs to spend time creating a plan for how they will tackle the work. It's an ineffective way of working that takes too long and consumes too many resources to add much value to the organization.

From a people development perspective, less mature COEs may take a “learn as you go” approach. There is no formal plan in place to develop the skill set, resulting in self-teaching with no vision to progress beyond the immediate needs. The lack of structure creates risk for the survival of the overarching function.

Effective, repeatable processes form the backbone of the mature supply chain design COEs. They have well-defined processes for everything from how they prioritize projects to how they will share results. There is a transparency into what they do that has come to be expected by the organization, as the team regularly communicates the progress of their activities. Mature COEs have structured communication plans to inform the organization on value delivered as well as capabilities; the latter promotes ideation for ongoing opportunity identification.

Mature organizations have structured plans at the individual and team levels to develop and maintain the required skill mix to support the larger organization and both short term and longterm objectives. This may involve a mix of internal mentorship within the team and external learning to drive continuous improvement industry awareness.

Characteristics of Mature Organizations

- Defined processes supporting project delivery and decision support
- Established connections with business functions to feed pipeline and prioritization of initiatives
- Established connections with business to operationalize decisions
- Regular, structured communication with broader organization
- Plans to develop team in order to maintain skill mix to support short term and long-term organization objectives

IV. COE Organizational Structures & Journey to Success

Whether a COE is just beginning the supply chain design journey or they’ve been at it for years, they may ask the following questions: how should we set up our COE structure? Is our current COE structure correct?

The reality is, there is no single best structure for a supply chain design COE. Various factors will help shape the decision, which requires thinking through the organization’s set-up and overall design objectives. In most cases, there are going to be some risks and drawbacks with any set-up, but the key is to account for the risks as you define your overall processes and governance.

Points for consideration when thinking about COE structures:

- Where do skills reside across businesses and geographies?
- What level of skill is required given supply chain design objectives?
- What are the cost/benefit tradeoffs for building skills?
- Who drives decisions on project pipeline and prioritization?
- What strategic, tactical, and operational questions does the COE need to answer?
- Who is accountable for implementing recommendations?
- Who owns budget/funding for supply chain design?
- What level of synergies exist across businesses and geographies?

Scope of design – The types of questions and decisions you are looking to support through design will help you form key criteria when defining your COE structure. Design can influence and drive decisions spanning end-to-end supply chain functions covering long-term strategic, mid-short-term tactical, to operational.

In addition to the business questions, other aspects that may define scope are the geographical support and breadth of business coverage (i.e. does design support a single business unit, or multiple). Typically, as you move closer to tactical and operational, or “running the business” type decisions, a more local or dedicated presence of design is required, given the need for tighter integration with the business and increased frequency of activity. However, this is evolving as organizations leverage more self-serving modeling tools, such as purpose-built applications deployed on top of modeling technology that allows non-modelers to interact with models.

Integrating the supply chain – In organizations where design scope covers multiple geographies or business units, the level of integration across those groupings comes into play when thinking about your COE structure. If you have an integrated supply chain where synergies can be leveraged across geographies or business units, a centralized model works well to help bring things together, whereas a decentralized approach makes it much more difficult to drive these connections.

Business structure – The underlying business structure can impact your approach to setting up a Design organization. The reality is many people’s decisions will be based on how they are incentivized, and this becomes a key aspect with how design priorities are driven. A benefit to one group may be a hindrance to another. This should not be a barrier in defining your COE setup if there is true opportunity for supply chain integration, but it does require strong governance definition and alignment at senior levels to drive towards what is best for the holistic organization.

Budget and funding – Where the budget sits is definitely a factor when thinking about your design set-up. The budget decision should be more of an output or recommendation coming from the overall organization structure decision. In other words, look to define the appropriate budget to allow you to achieve your design vision. A centralized budget may help to drive towards accomplishing broader, global objectives, while a decentralized budget can lead to more local prioritization and achievement of local goals.

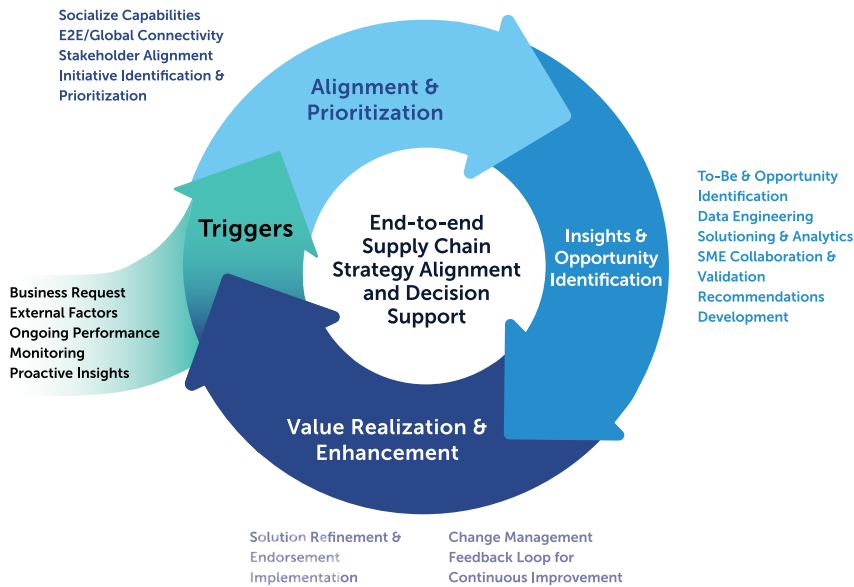
You may ask what you do if you have both global and local objectives; that's when a hybrid approach works well. Even with a hybrid set-up it still requires strong governance definition to drive alignment when needed. Setting up design as a shared service is another approach that exists. Inherently the budget has to be in place to support the development of an overall competency, so if you don't get approval on the vision, it becomes a driver of organizational set-up based on where it exists.

Skill-set development and retention – Having the right people and skills in place is a critical success factor for any design organization. Those who are successful in design have a unique skill-set, blending strong analytics with business savvy. This requirement creates challenges for many organizations with developing and maintaining a strong capability in Design. Because of this, your Design COE set-up may be driven by where you can find and maintain the talent. In theory you should be able to develop the talent anywhere within the organization, but it may take time to build up to a proficient level. When you mix in the reality of turnover and succession within an organization, it becomes increasingly more difficult to retain the right skill set. However, your COE set-up can have a direct impact on your ability to develop and maintain the right blend of talent. In some cases, it may require a structural evolution as you build out the team's skills and capabilities. A COE structure will evolve along with your business, and it may be required as your design objectives grow and expand. Given the multiple factors that impact successful design execution, we recommend evaluating your organizational set-up as part of your normal design planning cycle to ensure ongoing alignment.

V. Conclusion: Ongoing value creation

Successful supply chain design COEs are able to enhance value through connected decision support. By driving maturity progression and instilling continuous design, COEs are able to unlock incremental value by expanding the breadth of their impact across the E2E supply chain and deliver recurring results and benefits.

As mentioned previously, successful Supply Chain Design COEs start by creating a vision and blueprint for success revolving around the pillars of People, Process, Technology, and Strategy.



Ongoing Value Creation

- Alignment with executive decision making
- Balancing E2E near-term tactical and long-term strategic initiatives
- Develop the framework and processes to move forward successfully
- Value creation planning & accountability

Best practice organizations are delivering on the following:

- End-to-end transparency: agile, proactive, and broad decision support
- Developing team and capabilities to deliver on the vision
- Integrating data across network to drive dynamic, consistent information flow
- Merging tools and processes to enable connected and collaborative decisioning
- Growing sponsorship of team as value is realized

Central to any COE's journey is developing an understanding of where they are on the Supply Chain Design maturity spectrum, as well as where they ultimately strive to be. From there, they can establish a roadmap and plan to develop their competency and achieve their objectives.

About Coupa

Coupa is the cloud-based Business Spend Management (BSM) platform that unifies processes across supply chain, procurement, and finance functions. Coupa empowers organizations around the world to maximize value and operationalize purpose through their business spend.

Coupa's community of 2,500+ customers use the platform to maximize the value of nearly \$4T of direct and indirect spend to date.

To learn more about Coupa, visit www.coupa.com and follow us on [LinkedIn](#) or [Twitter](#).

