



AGILITY BEATS PLANNING

SCM execution as competitive
differentiator in the 2020's

by Jim Kofalt ❖ DX4 Research ❖ September 10, 2020



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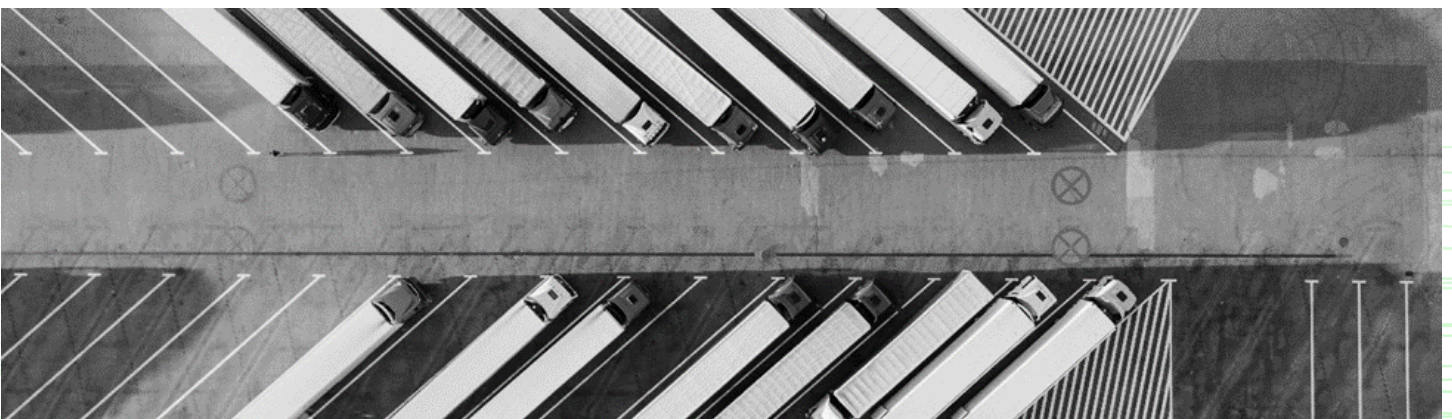
The game has changed

The events of 2020 have prompted an increased focus on business agility. The capacity to assess situations quickly and respond intelligently is no longer merely important. In the so-called “new normal”, agility has become an essential ingredient to business success.

In the world of supply chain management, agility requires a shift in focus. While planning remains important, execution is where agility manifests itself most saliently, with major consequences to the bottom line. This signifies a fundamental change in the competitive landscape, wherein companies that excel in supply chain execution will increasingly find themselves at an advantage.

Businesses that neglect this fundamental shift, or who arrive late to the game, risk being marginalized by supply-chain innovators who will increasingly deliver better fill rates, lower costs, and higher margins as a result of innovative supply chain execution.

DX4 Research recommends that business leaders aggressively adopt supply chain agility as a strategic priority, leveraging real-time monitoring, artificial intelligence (including machine learning), and robotic process automation (RPA) to drive excellence in supply chain execution.



Supply Chain Resiliency in an Age of Uncertainty

The COVID-19 crisis has changed the world in some fundamental ways. For the supply chain community the pandemic has not so much altered reality as it has cast a bright light on all of the existing weak points. Dramatic swings in demand are not new; they have simply occurred on a scale we have never seen before. Supply-side fluctuations, likewise, are not new; we are simply seeing more of them. The coronavirus pandemic has highlighted risk and shifted many of our assumptions about what is most important.

The pandemic is not the only factor contributing to a shift in priorities, though. Trade uncertainty has served as a motivation to reduce dependency on China and seek lower-risk alternatives for sourcing and manufacturing. In addition, contentious and fluid political climate has contributed to further economic uncertainty and shifting priorities among consumers.

When it comes to the relative importance of planning versus execution, the events of 2020 have spoken loudly and clearly; ***agile, responsive, adaptable supply chains yield significantly better results to the bottom line.***

From a consumer's perspective, supply chains have performed remarkably well, considering the unprecedented stress that has been placed on them. Plant closures, raw material shortages, and drastic swings in demand have combined to create a perfect storm of disruption for supply chains around the world.

In fact, it's a testament to existing supply chain systems (and the people who manage them) that things have gone as smoothly as they have. Most of us have never faced this level of disruption at any point in our lifetimes. Surprisingly though, the public has rarely seen empty store shelves for more than a day or two at a time, even during the worst of the panic-buying.

"Agility does trump forecast[ing]. At the end of the day, every dollar we spent on agility has probably got a 10x return on every dollar spent on forecasting or scenario planning."

Unilever Chief Supply
Chain Officer Marc Engel



Where the system as a whole has functioned well, however, winners and losers have emerged as some companies (and supply chains) have weathered the storm better than others. The difference has centered around supply chain execution. Companies that identified potential problems early and acted quickly have been able to preserve margin and win new customers.

The COVID-19 pandemic has prompted many business leaders to evaluate the status quo and seek new ways to protect the business from high levels of volatility in the outside world. As uncertainty continues, the next two years will determine which companies emerge as long-term winners. Supply chain agility – driven by excellence in execution – will be a key deciding factor in those outcomes.



**“Agile sounded good before.
Now it’s an imperative.”**

- McKinsey & Company, August 2020

Defining Agility

Popular wisdom right now says that we all need to be more agile. McKinsey recently declared that “agile sounded good before. Now it’s an imperative.” We agree. But what exactly does it mean to be agile in the world of supply chain management?

Let’s consider the meaning of the word in terms of its opposite. Open your web browser and search for an antonym for “agility”. You’ll find a lot of suggestions, but none that adequately describes a complex system that lacks agility. You’ll find words like “clumsy”, “rigid”, “intractable”, “slow”, and “un-malleable”. You might also come across some commonly used metaphors; like dinosaurs, elephants, and aircraft carriers.



Still nothing that really describes a non-agile supply chain.

Let's consider an example from history: In the 1930s, French leaders anticipating the possibility of a German invasion built what became known as the Maginot Line – a series of concrete fortifications and weapons installations intended to prevent (hopefully) or fend off (if necessary) an attack from their eastern neighbor.

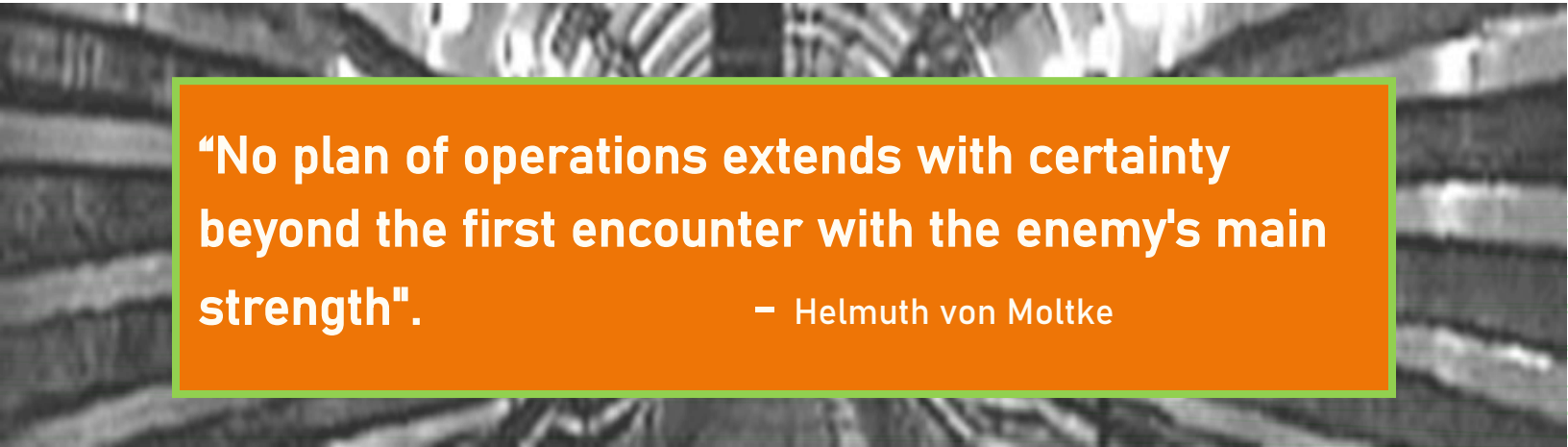
Technically speaking, the Maginot Line was phenomenal. It was impervious to aerial bombings and tank fire. It had a system of underground rail cars to transport people and supplies. The troops' quarters were even air-conditioned. In the 1930s, that was cutting-edge stuff.

Unfortunately, French leaders did not foresee the possibility of a German invasion through the Ardennes Forest, so they never extended the line far enough northward to reach the English Channel.

In May of 1940, Hitler's troops rolled through the Ardennes in less than three days, and France's state-of-the-art fortifications were rendered useless. It's a classic illustration of the old military adage "No battle plan ever survives first contact with the enemy".

Dwight D. Eisenhower famously said, "Plans are nothing; planning is everything." Digging a bit deeper, we find another Eisenhower quote that makes the case more clearly: "In preparing for battle, I have always found that plans are useless but planning is indispensable."

Planning is indeed very valuable, but when it's time to execute; individuals, organizations, and systems must be capable of adapting quickly to the new reality.



"No plan of operations extends with certainty beyond the first encounter with the enemy's main strength".

– Helmuth von Moltke



The Maginot Line may be an extreme example of what happens when there's a mismatch between the plan and reality as it unfolds on the ground, but the point is clear; even if leaders could foresee all eventualities, it's impractical to accommodate every conceivable possibility. It's no different with supply chain management.

In 2020, COVID-19 has been the enemy against which supply chain plans have cracked upon first impact.

A Formula for Supply Chain Agility

So, if that is what “not agile” looks like, then what is agility? Let's consider one possible definition:

$$Agility = \frac{[Planning] + Intelligence + Adaptability}{Time}$$

To state that in plain language: agility is a function of in-depth planning that has necessary intelligence infused in it and is adaptable over time. Adaptability is what makes it provide enduring value in the face of changing conditions.

Let's break this down into its constituent parts:

INTELLIGENCE. The convergence of GPS, Internet of Things (IoT) devices, fast and reliable communication, and interconnected systems have resulted in a near instantaneous feedback mechanism. We can know exactly where a shipment has been and where it is currently. We can know the temperature and humidity of a container, whether it has been subject to excessive shocks and whether it has been tampered with. We can get up-to-the-minute information about weather events, including projections and probabilities for the course of storms. We can track geo-political incidents that affect shipping, production, and demand. When a celebrity sends out a tweet praising our product, we can adjust demand forecasts upward. When bad publicity hits, we can adjust things in the other direction and initiate efforts to mitigate the impact.



How many companies are really taking advantage of all this information? Right now, it's a game of catch-up, and the companies that are quick to incorporate real-time intelligence are in a strong competitive position. End-to-end monitoring of the supply chain is essential to SCM agility.

But it's only part of the picture. Analytics without action is meaningless.

ADAPTABILITY. The capacity to think and act quickly in response to changing circumstances can often mean the difference between success and failure. In the world of athletics, that capacity is typically built on muscle memory, which in turn is developed through practice over long periods of time.

To restate that last point a bit differently; experience is a key factor that determines success in circumstances that require rapid adjustment.

What exactly is experience? It is the accumulation of lessons learned over an extended period of time, including the knowledge of which actions are likely to succeed or fail in any given situation.

As an organizational asset, experience may take different forms. It could (and typically does) reside in the people that staff your business. More and more often, however, businesses are tapping into the accumulated wisdom of their data. AI is making that possible.

For a long time, artificial intelligence has been touted as an up-and-coming technology that will significantly change the way we live and work. With the convergence of cloud connectivity, low cost storage, and increased processing power; that is finally starting to become a reality. Businesses are just now beginning to fully utilize data as a well of information about what works and what does not.

This won't replace human experience. But it will certainly augment the human factor in a powerful way, driving competitive advantage for early adopters. Like the athlete who has developed muscle memory through years of training, AI codifies past experience, understands what works and what doesn't, and makes that information accessible in the present. AI makes it possible to respond rapidly (and accurately) to changing conditions on the ground.



PLANNING. Ideally, all of this is preceded by planning. While the current focus should be on increased agility, this is not to say that planning is unimportant. Clearly, it remains highly relevant. A world-class tennis player does not rely purely on quick reflexes aided by muscle memory. They must also prepare for each match by researching their opponent, identifying weak points, and devising a strategy for the match.

Planning provides a baseline. It prompts us to delve into the various factors that influence outcomes. The process of developing a plan has value in and of itself; hence Eisenhower's assertion that planning is indispensable.

However, virtually no one foresaw the arrival of the COVID-19 pandemic and the profound impact that it would have on supply chains. As important as planning is, its power to mitigate the enormous challenges imposed by a global pandemic (or any other unforeseen globally disruptive event) is limited.

In the new reality, planning is still important, but agility is even more important.

Unilever's Chief Supply Chain Officer Marc Engel recently stated it this way: "Agility does trump forecast[ing]. At the end of the day, every dollar we spent on agility has probably got a 10x return on every dollar spent on forecasting or scenario planning."

TIME. Although the time-factor has been addressed above, it is worth repeating. In most scenarios, early action is preferred over delayed action. The timeframe between



planning and execution has gotten shorter in recent years, and there is a clear mandate to compress the process even further.

Business leaders have long understood the merits of management by exception. Agile models should be built on a process-first approach. Build a process that works; intervene only when necessary. As machines learn more, they will make better decisions and the direct human intervention need not always come into play.

Automation facilitates speed - a key factor in the agility equation.

Plugging the Value Leaks

Enterprises typically experience 10-20% revenue and margin leakage as a result of stockouts or reduced fill rates, penalties, expediting costs, poor vendor performance, and more. For a company with \$500 million in revenue law, that's a \$5 to 10 million hit to the bottom-line.

Much of the untapped value in supply chains lies in opportunities that go un-noticed because they sit outside the parameters of status quo operations.

When the coronavirus first began to show up in headlines in January of 2020, managers at Tillamook Dairy Co-op – a large producer of cheese based in Oregon – began contingency planning. Their initial approach was to increase safety stock, but as the shutdowns started to take effect, it became apparent that the company needed to do more.

The company was able to reconfigure production lines to shift production away from larger 15-pound packages of cheese for restaurants and institutions, and toward smaller packages for consumers. In addition, they convinced customers to take delivery of whole pallets, rather than ordering by the case. This saved considerable time loading and unloading,

57%

of top executives say
that SCM gives them a
competitive advantage.

(Source: GEODIS Supply Chain
Worldwide Survey)

56%

of companies are not
yet using tracking tools
to enable real-time
reporting.

(Source: KPMG)

6%

of companies say they
have achieved supply
chain visibility.

(Source: GEODIS Supply Chain
Worldwide Survey)



saving the company money and enabling them to expedite outbound shipments.

Changes like that arise when someone with the experience and knowledge of the supply chain identifies an opportunity to do things differently, shift priorities, and increase the bottom line.

While such dramatic changes may seem like outliers; they nevertheless illustrate the value of looking for opportunities and adjusting course to extract greater value from the system as a whole.

On a finer-grain level, such opportunities exist everywhere. By suggesting a substitute product, the company can fill an order faster and/or achieve higher margins. By asking for a longer lead time, the company can increase fill rates and thereby increase overall revenue. These kinds of opportunities are relatively routine, but they need to be identified quickly and pro-actively.

Early and pro-active identification of such opportunities is what distinguishes agile supply chains from the rest. It distinguishes supply chains that routinely adjust course from their non-agile counterparts.

SCM Agility & Competitive Advantage

There is an old joke that goes something like this: Two hikers are walking through the woods when they sight a bear on the trail ahead. Cautiously, the first hiker starts to back away slowly. "Don't do anything to startle him," he says. "That bear can run 30 miles per hour, and we'll never outrun him." The second hiker shrugs, looking utterly unconcerned. "I'm not afraid of the bear," he says. "I don't really need to outrun the bear; I just need to run faster than you."

When the COVID pandemic struck, global supply chains were impacted but they bounced back surprisingly well. For those who were successful in navigating that storm, the question shouldn't be "Did we survive?", but rather "Did we pick up market share?" ***"In the race to survive the COVID onslaught, was our organization able to run faster than our competition?"***

If there's a shortage in pressure-treated lumber and delivery times are slow; then you're



losing sales. But so is your competition. If you're better positioned than your competition to anticipate customer needs, re-package product, adjust production, and find alternate sources, you stand to gain market share.

Shutdowns are temporary. ***Market share gained or lost amid that disruption has longer-term consequences.*** Building agility in your supply chain has even longer-term consequences.

The Road Ahead: Building Agility In Supply Chain Execution

To foster agility in your supply chain:

- ♦ **Identify recurring opportunities** for plugging value leaks in your supply chain. Based on the dynamics of your industry and the competitive environment, where is the largest ROI to be found? Target a well-defined set of opportunities and establish measurable parameters for desired bottom-line results.
- ♦ **Assess your organization's data assets.** What sources of real-time information are currently available and are informing supply-chain decisions? Which additional data sources are not being utilized to support SCM execution processes, but could be incorporated relatively easily? Finally, what additional data would provide high value and ought to be part of your supply-chain execution roadmap?
- ♦ **Use commercially available software/SaaS products to provide end-to-end monitoring** ("continuous intelligence") of the supply chain **AND decision automation/management-by-exception.** Agility requires the combination of real-time intelligence, pro-active identification of value-creating opportunities, and rapid response. Look for solutions that incorporate both real-time intelligence *and* decision-support.





“Great companies create supply chains that respond to sudden and unexpected changes in markets. Agility is critical, because in most industries, both demand and supply fluctuate more rapidly and widely than they used to. Most supply chains cope by playing speed against costs, but agile ones respond both quickly and cost-efficiently.”

**- Hau L. Lee, “The Triple-A Supply Chain”,
Harvard Business Review**



The Platform for Agile Supply Chain Execution

OpsVeda, a provider of innovative supply chain execution solutions, addresses these core requirements, linking real-time information about the supply chain to actionable recommendations that drive value to the bottom-line.

OpsVeda helps enterprises achieve agility by integrating end-to-end real-time monitoring with a machine learning platform that identifies value opportunities and risks, and then makes recommendations for corrective action.

- ♦ The **OpsVeda Platform** consumes data from internal systems such as ERP, from external trading partners, and from real-time data sources such as in-transit IoT sensors, weather updates, carrier status; or any other data source available. As a cloud-based SaaS product, the OpsVeda Platform scales easily to address the needs of lower-midmarket to very large enterprises.
- ♦ **OpsVeda Opportunity Apps** are a set of tools that prioritize actionable recommendations based on dollar-value impact and make concrete suggestions to staff. Role-specific “storyboards” provide a simple and intuitive interface for various roles, including sourcing, manufacturing, logistics, sales reps, sales operations, customer service, and management.
- ♦ **OpsVeda Mobile** supports anywhere/anytime notifications and information access for end-users, and the ability to respond quickly.
- ♦ **JUNI** is OpsVeda’s AI-powered assistant. It provides a natural language interface and machine learning algorithms that learn more about your specific business domain over the course of time.



To learn more about **OpsVeda**, visit them on the web at www.opsveda.com.

Just what is the “new normal”, anyway???

Implications for SCM in the 2020s

Real-time analytics have arrived.

Enterprises that succeed in leveraging real-time analytics will gain long-term advantage.

Digital transformation is here.

5G connectivity, cloud computing, mobility, and big data have started a wave of innovation that will continue for years to come. Competency in managing and leveraging technology will determine strategic advantage. Companies that understand this will be the winners in the turbulent 2020s.

Expect the unexpected.

In the new normal, supply chains must be more responsive than ever. The capacity to cope with rapid shifts in demand will be a defining factor in competitive outcomes.

Agility beats planning.

Companies that can identify problems early and react quickly will have the edge. Dollar-for-dollar, businesses that invest in agility will achieve a 10x better return over money spent on forecasting or scenario planning.

ABOUT DX4 RESEARCH

DX4 is an independent research and advisory firm that specializes in core business applications and digital transformation. We provide deep domain expertise in ERP, SCM, data analytics, and the emerging technologies that are transforming the way we do business. DX4 offers expert guidance to help you make strategic software investments and achieve competitive advantage.

ABOUT THE ANALYST



Jim Kofalt is a software technology expert with over 20 years in the enterprise software space. He has served as a product manager at Microsoft and SAP, and worked in SAP's channel business for 16 years. Jim attended Georgetown University and got his MBA from Syracuse's Whitman School of Management. He currently lives in Wilton, New Hampshire.

"The only sustainable advantage you can have over others is agility, that's it."

– Jeff Bezos

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