

# BAMBOO SUPPLY CHAIN:

RESILIENCY IN THE TIME OF COVID-19



### About Digital Supply Chain Institute

The Center for Global Enterprise's (CGE) Digital Supply Chain Institute (DSCI) is a research institute focused on the evolution of enterprise supply chains in the digital economy, and the creation and application of supply chain management best practices.

### How DSCI Can Help

The Digital Supply Chain Institute is a membership-based not-for-profit institute whose members are focused on executing the supply chain of the future. We perform research, conduct pilots, communicate the Digital Supply Chain story and link members with companies that are going through similar journeys. DSCI is a program of The Center for Global Enterprise. Visit our website [dscinstitute.org](https://dscinstitute.org) to learn more or reach out to Vivek Ghelani, Project Manager, DSCI at [vghelani@thecge.net](mailto:vghelani@thecge.net).



THE CENTER FOR  
GLOBAL ENTERPRISE

### About The Center For Global Enterprise

CGE is a New York-based nonprofit, nonpartisan research institution devoted to the study of global management best practices, the contemporary corporation, economic integration, and their impact on society.

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# INTRODUCTION

**“It is time for a re-think of our supply chains given the current environment. We must make supply chains more customer-present, resilient, less expensive and have characteristics that reduce risk.”**

**SAM PALMISANO**  
**Co-Chair, DSCI and Chairman,**  
**Center for Global Enterprise**

Bamboo is stronger than steel. Bamboo has 28,000 pounds of tensile strength; steel has “only” 23,000 pounds. Bamboo can withstand gale-force winds because it flexes and shifts as the wind blows. Bamboo is much, much lighter than steel, and yet is resilient and fast-growing; some varieties of Bamboo grow up to 91 centimeters/35 inches a day! What does this have to do with supply chains? Everything.

We have been designing supply chains out of steel, but the COVID-19 pandemic has shown us that a rigid chain is vulnerable to disruption. We must build supply chains with Bamboo, which means implementing strong, agile, resilient supply chains that can help our companies grow.

Resiliency has been a characteristic of the world’s supply chains for a long time, but it has only recently become a top priority for most companies. For example, it is no longer acceptable to source all your supplies from one distant country because the risk of disruption due to trade wars, natural disasters, political unrest, and pandemics has never been more significant. Companies now recognize that true resiliency requires a supply chain that has the processes and systems to respond rapidly to change. We call it the Bamboo Supply Chain because our target is a strong and flexible supply chain that operates well in diverse conditions.

This paper will outline the unprecedented impact of COVID-19 on supply chains, discuss the new prioritization of resiliency, and lay out the immediate actions business leaders need to take to develop a Bamboo Supply Chain that will improve performance in good times and bad.

**Agile Partner Network**    **Customer happiness**    **Visibility**  
**Geographic variety**    **Flexible supply chain**  
**Cost increase**  
**Minimize disruption**    **Savings**    **Cash flow**  
**Future prediction**    **Supplier capacity**



## CHAPTER 1:

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# 2020: THE YEAR OF THE SUPPLY CHAIN

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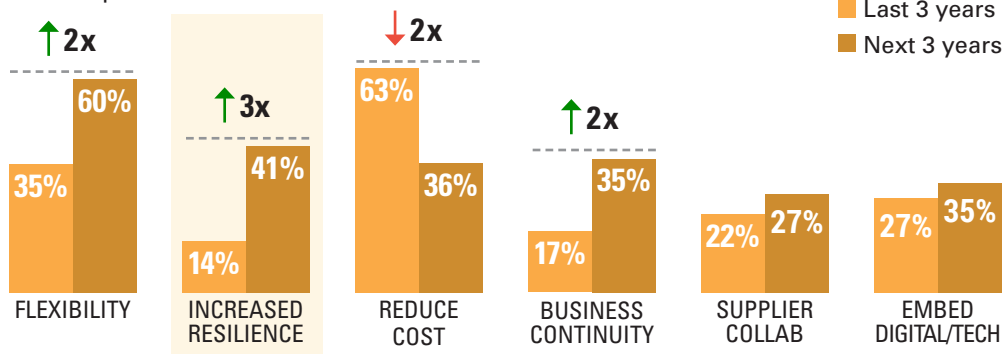
Supply chains have regularly been driven by extraordinary events. For example, in 2011, the great earthquake (9.1 Richter scale) in Japan caused massive disruption in almost everything produced by Japanese companies. Industries around the world discovered their ability to meet their customers' needs was hampered by an inability to get products — or components of products — from Japan. Companies started moving away from “putting all eggs in one basket” and began diversifying their supply chain footprint.

Japan worked hard and restored its ability to deliver necessities over an astoundingly short period of time, and within 12 months, supply chains were operating efficiently. The discussions about resiliency were soon overcome by a focus on low-cost suppliers, and fewer of them, so that you could leverage your spending to create supplier loyalty and qualify for a volume-induced lower cost. We also continued to move much of our production to low-cost countries, especially China.

But 2011's impact on global supply chains was limited compared to the effects we experienced in 2020. This time, we have strong indications that people are changing their supply chains to make them more resilient. Supply chain executives are also increasingly aware of the need to protect IP (Intellectual Property) and understand that the supply chain has been a cause of significant IP loss. According to a recent survey of 200 supply chain executives, 41% of the executives have increased supply chain resiliency on their investment goals for the next three years.<sup>1</sup> The Japanese earthquake disaster in 2011 cost an estimated \$200 billion in global economic damage, whereas the [global economy in 2020 is projected to shrink by 5.2%](#) — \$4.8 trillion — due to COVID-19.<sup>2</sup>

## Supply chain investments goals, last 3 years vs next 3 years

% of respondents



Q. Thinking about supply chain investments over the last 3 years, please rank your top 3 primary objectives.

Q. Thinking about supply chain investments over the next 3 years, please rank your top 3 primary objectives.






Source: DSCI / Bain survey on Supply chain industry resiliency (July 2020) N=200

The supply chains' inadequate response to the pandemic has signaled a need for change. Companies worldwide had to use "Microsoft ERP" to estimate the areas where supply and demand were not matching up. What is "Microsoft ERP"? Excel! Companies with well structured ERP ecosystem and tools still use Excel for data analysis.

This year started with a serious trade dispute between the USA and China. Tariffs were levied, and companies redoubled their efforts to diversify their supply chains so that a smaller percentage of their products were based on China-sourced parts and products. We also marked the beginning of the implementation phase of Brexit. On January 31, 2020, the UK began to exit the European Union, and Europe began to work through the details of how supply chains would be affected. The impact of trade and political processes on our global supply chains was high.

But the trade war and Brexit were minor compared to the impact of the COVID-19 pandemic. Within a few weeks, global demand slumped as people lost their jobs, worked from home, and experienced various quarantine levels. It was dramatically reduced for many companies and dramatically increased for select others. Now we have an even greater sense of urgency. And we know that going digital helps us withstand a Black Swan event like a pandemic or trade war.

## Global Impact of COVID-19

Total # of People Infected <sup>3</sup>	65,870,030
Total # of Deaths <sup>3</sup>	1,523,583
Total Global GDP Loss <sup>4</sup>	4.4% decrease ~ \$4 trillion in loss
 Economic Impact on the USA GDP <sup>4</sup>	4.3% decrease ~ \$970 billion in loss
 Economic Impact on Japan GDP <sup>4</sup>	6% decrease ~ \$300 billion in loss
 Economic Impact on India GDP <sup>4</sup>	10.3% decrease ~ \$298 billion in loss
 Economic Impact on Germany GDP <sup>4</sup>	5.4% decrease ~ \$226.8 billion in loss
 Economic Impact on China GDP <sup>4</sup>	1.9% increase ~ \$270 billion increase

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**“Supply chain has always been an important function for organizations. The pandemic has put the spotlight on the supply chain and made it clear that this is a central function of the company and an important way to get value to the customer. This is the right time to continue work on digital supply chain transformations, becoming more flexible and agile to create even more value.”**

**MICHAEL CROWE**  
**CIO, Colgate-Palmolive**

We call 2020 the Year of the Supply Chain. For the first time, the supply chain has become a continuous topic on prime-time news. In fact, on April 27, 2020, “supply chain” searches hit a peak on Google. To the extent that we have never experienced, customers, board members, shareholders, and employees understand how vital supply chains are to their companies and lives. Just ask anyone who tried to buy toilet paper in the USA in April. Supply chains did not deliver what people wanted; consumers know it was a supply chain problem.

Some supply chain leaders have explained such shortages as panic buying; others have mentioned the unexpected shift to at-home work. There is truth in what they say. And it is also true that consumers are not tolerant of supply chain shortages caused by unexpected events. We want our supply chains to carry sufficient inventory and adequate production times to meet demand. Customers like that, and so do shareholders.



## CHAPTER 2:

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# READY UP FOR THE NEXT WAVE OF CHANGE

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COVID-19 is challenging to predict. Timing, severity, and the number of people affected are all unknown. The safety and effectiveness of a vaccine are unknown, and our ability to manufacture and distribute a vaccine is uncertain. What is known is that lingering waves are happening at different times and in other regions around the world. For this reason, every supply chain should be examined and judged on its ability to withstand a possibly very negative future — a negative future that could include job losses, economic challenges, suppliers going out of business. Every company needs to be prepared for the potential of an even more severe virus infection rate, a slow-down in back-to-work plans, and economic problems for businesses and people.

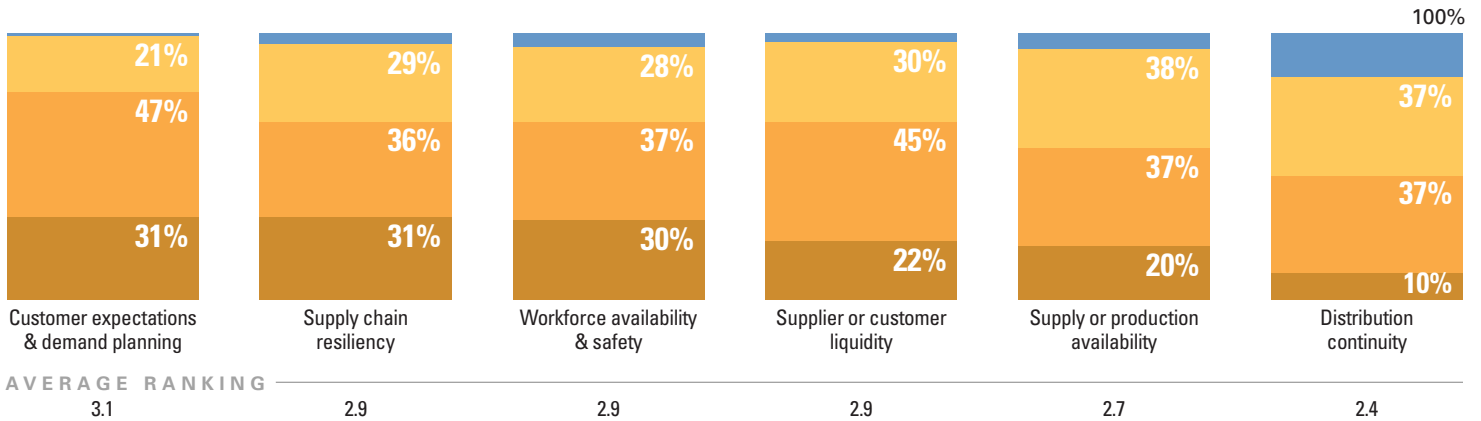
Large companies have spent decades perfecting their supply chain, one engineered out of steel. Basic principles of cost control, high inventory turns, and perfect orders have always been the goal. But priorities are changing because of three reasons:

- Acknowledgment that supply chains can and should boost revenue and build customer loyalty. Amazon is a good supply chain example. Delivery is within two days, purchase decisions are made easier through multiple online reviews, and pricing can be compared. People choose Amazon because their supply chain works. You can learn more about realigning your supply chain with the customer in our [Frontside Flip](#) white paper.
- Recognition that the world will continue to be volatile and that Black Swan events are a certainty, even if we cannot know what they are and when they will occur. Our current struggle is with the first phases of COVID-19. But other phases of the pandemic will follow. It is certain that we will experience market-disrupting problems far different from the pandemic. Uncertainty in the future has created an environment where only Bamboo supply chains will survive and deliver value to the customers. An agile, resilient chain has emerged as the top priority. This means that companies are rethinking everything, from the location of their supply base to greater transparency on the demand and supply side to their inventory of raw materials and finished goods.



## Looking ahead to recovery, executives express highest concern around demand planning, resiliency, and workforce safety

In recovery going forward, concern regarding specific challenges, % of respondents



Q. On a scale from 1 to 4, please rate your level of concern about the following challenges as you think about recovery going forward.

Source: DSCI / Bain survey on Supply chain industry resiliency (July 2020) N=200

■ Not at all ■ Slightly ■ Moderately ■ Extremely

**In this unprecedented time, supply chains do not have a valid supply chain DEMAND FORECAST model. What this means is that analyst must work through multiple scenarios frequently and adjust the forecast daily. This will help supply chain executives manage demand triggers as tightly as possible.**

- The emergence of a New Customer that buys with different expectations than customers we served in the past. As we discussed in our recent whitepaper, [The New Customer](#), companies and consumers expect much more rapid delivery, and we know that this will increase. We also expect that New Customers want to understand the experiences of other buyers in their market segment with the product they are buying. And we have dramatic evidence that customers (business or consumer) will buy more alongside their main item. That is why Amazon gets almost a third of its revenue from products they sell to customers buying a similar product.<sup>5</sup> If you are a business customer, you will also have different expectations. If a business customer contacts Dell, they will be offered a solution that best fits their needs, rather than a point product. For example, rather than a customer just purchasing 10 servers, Dell will provide additional memory capacity options that many find useful, and a server support plan that offers to repair any problems the customer may experience. Everyone wins. DSCI is conducting additional research on the scope and scale of the New Customer related changes in both the B2B and B2C markets.

Ready up! The game has restarted, and a new set of rules apply.

The background of the page features a close-up, low-angle shot of a bamboo structure, likely a roof or a large-scale construction element, with numerous parallel bamboo poles and cross-braces. The image is partially obscured by a blue curved shape at the top left and a solid orange background for the rest of the page.

## CHAPTER 4:

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# THE CFO DOESN'T WANT TO SPEND MORE ON A RESILIENT SUPPLY CHAIN

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The CFO is not going to like the idea of spending more on the supply chain, increasing operating expenses, or capital costs. But some companies are considering spending more on safety stock, items that are stored until they are needed. They are also considering more warehouses to store items and moving from off-shore to near-shore or on-shore supply chain locations. These actions would help create a more resilient supply chain that can withstand unexpected events better. But taken together, and without any mitigating factors, these actions will also raise supply chain overhead costs. And, given the current state of demand around the world, higher costs will further repress buying, reduce the company's cash flow, and hurt earnings. Many companies are having problems meeting earnings targets, and many people are unemployed. Your CFO is right. You can't spend more to solve the problem. But what can you do?

## CHAPTER 5:

# DAMN THE TORPEDOES, FULL SPEED AHEAD!

The US Admiral Farragut reportedly said, “Damn the torpedoes, full speed ahead,” as he entered dangerous enemy waters during the Civil War. And this is the attitude that Supply Chain leaders need to take during these troubling times. Farragut made this remark in the heat of battle with his original attack plan gone entirely wrong. Supply Chain leaders need to correct course quickly and efficiently to create a resilient supply chain along five dimensions:





## 1. Decide what today's New Customer wants, now and in the future, and rebuild your supply chain to deliver it.

Digital Native companies and traditional companies can create a truly Digital Supply Chain. Traditional companies have embedded costs and facilities, but in the long run, all costs are variable. Take decisive action to exceed industry norms and give people what they want. Do the Frontside Flip and make sure that your supply chain faces the New Customer. The ONLY way to create a resilient supply chain is to align all actions with the customer. This means optimizing everything from design to distribution centers, manufacturing to delivery, around what will make the customer happy.



## 2. Location should be changed.

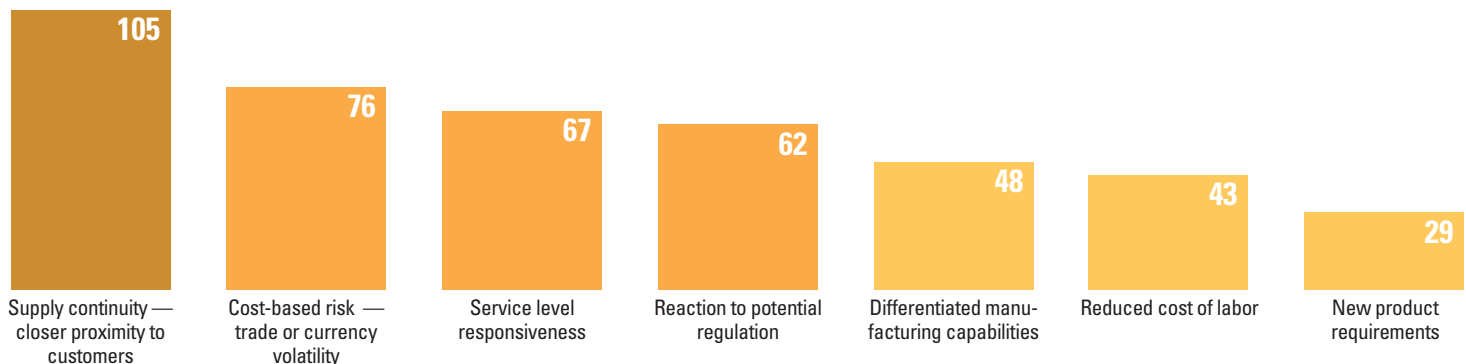
The three most important things for a supply chain? Location, location, location! The New Customer tells us that almost every company must move to less off-shore and more near-shore or on-shore supply chains. This provides operating flexibility, and it means companies will not have products tied up for extended periods as they ship from a remote location to the customer marketplace. But moving to closer locations frequently comes at the price of more expensive labor costs. We know a company in India that runs two plants. The first has a labor force with exceptionally low per hour labor costs. The second plant operates in a mostly automated way. Total labor costs? Lower. Total response time to change requests? Lower. It is time to diversify suppliers and geographies. China will always be very important. But it can no longer be the only supply chain option. Supplier and geographic diversity make resilience possible.

“Corning manages a supply chain that stretches across the globe. We make sure that our manufacturing is done in the right place to minimize the expense but also maximize customer engagement.”

**LAURA BISSMEYER**  
Director – Global Supply Management, Corning Inc.

## Among companies shifting location of supply base, majority are looking to increase proximity to customers

Reasons to shift location of supply base, # of respondents



Q. Which reasons best describe why you are likely to shift the location of your supply base? (select all that apply)

Source: DSCI / Bain survey on Supply chain industry resiliency (July 2020) N=200

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“The pandemic has accelerated many transformational efforts that have been on hold or that have been needing to happen for a long time. Companies are changing their operating model to better align cost and increase capabilities for the new COVID environment. To do that, companies are making decisions to invest in employees to enable them for a new reality where greater flexibility and pace of change is required.”

**RYAN FISHER**  
Partner, Bain & Company

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“We are putting customer-centric in everything we do, but do we really understand what we mean by customer-centric and their needs, especially in the COVID-era? As a supply chain executive, we really need to put in place methods and processes – especially a New Data Model for your customers – that can fully understand the customer’s demand and fulfill it.”

**COLIN BROWNE**  
Chief Operating Officer, Under Armour



### 3. People and their skills matter more than ever.

Yes, there is pressure to reduce headcount when the volume demanded is lower. Yes, finance typically bans training during difficult quarters. BUT there is no doubt that a talented, highly skilled workforce makes the critical difference between success and failure. The right model is to re-skill your workforce and executive team. You simply must have a more data literate and analytically driven team. There is no other option that can make agility and resilience real. Our Institute has set up an online Executive Education Program on [Digital Supply Chain Leadership](#) that is an example of the type of leadership education required. More decisions will be made by algorithms based on new data and a “numbers-smart” team. The culture of making data-driven decisions is a must.



### 4. Create a new data model.

After speaking with supply chain leaders and conducting our applied research, DSCI knows companies do not get full value from their existing data. The quality and timing are not ideal, and sometimes, the data “owned” by marketing/sales is not shared with supply chain/operations. We also know there is data companies would love that they don’t have. This data might be owned by a retail partner, a supplier, or by the customer. Companies need this data and they can’t rely on goodwill to get it. Organizations may have to trade data with their supply chain partners to obtain it. Or companies may have to create a new approach to collect new data. Maybe you should implant sensors to predict failure rates? Or replacement timing? Or usage details? For more guidance, please refer to our [data model](#) white paper. A new data model will signal when changes are required to stay aligned with customers and manage your supply base, even in the face of significant challenges like COVID-19. Once you have this data, you are 80% good. You just need to ensure you have the people and the culture that makes decisions based on data.



### 5. Manage Risk to get results.

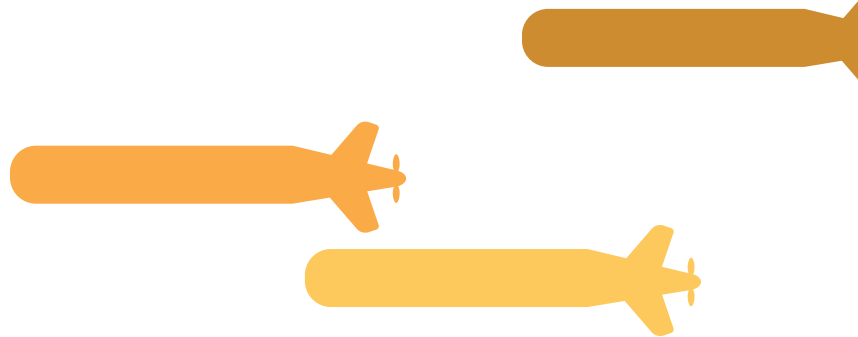
We are in a risk-rich environment. Hackers have never been more talented or hungrier. IP and Brand identity are assets that can be stolen. And once we create a truly connected Digital Supply Chain, we risk even more. What makes managing Risk in a digital environment even more challenging is that you need visibility deep into your supplier base. Tier-1, Tier-2, and other suppliers must be evaluated and judged based on the lowest cost and appropriate Risk. Companies have always rated and assessed suppliers, but we need to go much deeper. Fortunately, new digital tools are emerging. [Craft](#) is a digital company in San Francisco that created its Supply Chain Intelligence portal to help organizations build resilient supply chains. The portal offers comprehensive, in-depth, validated data and analytics on any supplier you are working with and delivers these insights in real-time. But Risk can mean opportunity, and a safer experience for your customers will make them happy and make them like you more than they like your competitors.

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**“The risk environment for business is ever-changing, including significant risks entering businesses through their supply chain, such as cybersecurity, compliance, geographic and financial risks. The good news is far greater visibility into supplier risk is now possible, thanks to digitization and the wide availability of data and signal from multiple sources. Efficiently harnessing this potential is now enabling more secure, resilient, and flexible supply chains.”**

**ILYA LEVTOV**  
CEO, Craft

Admiral Farragut changed tactics during the intense battle. He told his team to “Damn the torpedoes, full speed ahead,” and his focus and resolve carried the day. Similarly, the supply chain team must restructure, re-staff, re-train, and re-focus on the customer. In an environment where finance is demanding lowering costs, marketing wants immediate fulfillment, and the rest of operations wonders why you don’t have visibility into Tier-2 suppliers, it is essential to focus on the goal of resiliency and building a solution that works.





## CHAPTER 6:

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# TALK CHANGE, BUT MEASURE THE SAME?

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“If it does not get measured, it does not happen” is a common management charge. We know that supply chains are the primary driver of customer happiness and loyalty. In fact, a well-run supply chain will increase market share and deliver new revenue. Uber is an excellent B2C example of a supply chain play that delivers revenue. Each customer knows the inventory of available cars, the distance away, and the trip’s cost, all on their mobile device. The supply chain is transparent and superior to any other method of local transportation. In 2017, DSCI completed a study of new digital supply chain performance metrics, summarized in the table below, that should be used to manage the supply chain involvement with customer happiness and revenue growth. There was high interest but low implementation. Why? Because changing metrics is hard to do. Because supply chain people do not want to be measured on something that relates to the sales team.

Now is an excellent time to change the metrics of the key people within the supply chain organization. Include the supply chain that influenced revenue growth as a prominent measure that drives the performance bonus—making this all work will require a level of collaboration that has never been seen before between sales/marketing and operations/supply chain.

The response to COVID-19 has been made so much more effective because “war rooms” of people from across functions have been set up to collaborate and get the job done. What if we always run our business with that level of teamwork and collaboration?

## New Digital Supply Chain Performance Metrics

	Output	Process
<b>DEMAND</b>	<ul style="list-style-type: none"> <li>• Revenue Change from Digital Supply Chain Actions</li> <li>• Revenue Increase from Platform Utilization</li> <li>• Percentage Growth in Demand due to DSC Actions</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of Perfect Orders from Automation</li> <li>• Number of Days Latency in Demand Shaping/Management</li> <li>• Net Promoter Score® for DSC</li> </ul>
<b>PEOPLE</b>	<ul style="list-style-type: none"> <li>• Total DSC People Cost/ Percentage of Sales</li> <li>• Revenue Balance between Peak and Non-Peak Demand</li> <li>• Revenue Size of DSC Enabled Business Models Created</li> <li>• Revenue Increase per Supply Chain Employee due to DSC Actions</li> </ul>	<ul style="list-style-type: none"> <li>• Total FTEs of Data Scientists/ Stewards</li> <li>• Total Headcount with Sales/ Marketing Expertise</li> <li>• Percentage Increase in Nerds/ Snipers (numbers geeks and execution experts)</li> </ul>
<b>TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>• Total DSC Technology Spending</li> <li>• Percentage of Sales Through Direct Channels</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage of Revenue Facilitated by Advanced Digital Technologies</li> <li>• Percentage of Time on Manual Tasks</li> <li>• Percentage of Manufacturing and Delivery Handled by Technology</li> </ul>
<b>RISK</b>	<ul style="list-style-type: none"> <li>• Percentage Change in Value of Counterfeit Goods in the Legitimate Supply Chain</li> <li>• Loss from Supply Chain Disruption as a percentage of a Gross Revenue</li> <li>• Incremental Revenue Generated from Addressing Risk</li> </ul>	<ul style="list-style-type: none"> <li>• Time Lag between Capture of Critical Risk-related Data and its Inclusion in Decision Making</li> <li>• Percentage of Cyber-Assessed Connected” Suppliers</li> <li>• Percentage of Suppliers Classified in a Comprehensive Overall Risk Assessment</li> </ul>





## CHAPTER 7:

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# THREE THINGS YOU MUST GET RIGHT

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Traditional supply chains have always been siloed and less digitally connected. Companies also need to be more digitally connected, internally and with external supply chain partners. In the COVID-19 era, companies are even thinking about their sourcing strategy and diversifying their sources, so the supply chain does not have to stop if a supplier is unable to deliver. Having these processes will make your supply chain work more efficiently to deliver products on time.

# 1

## Collaboration that pays

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In the classic forecast model, the sales team throws a demand forecast to the supply chain team. The supply chain team knows the sales team is always overly optimistic because they are in sales. The supply chain team is measured on inventory turns and does not want to overproduce. What follows is a political process that does not drive the company to optimal results during regular times and is unsustainable during crisis times. Every company should form a cross-functional team that cares about maximizing sales and minimizing inventory investment to create a truly resilient operation. The team should have members from sales, marketing, finance, HR, operations, and supply chain. The team should fit into your organizational structure at a high level of reporting. For some companies, the team will report to the COO, for others to the management committee or the management board. Pay for the team members should be based on an agreed set of metrics that encourage a resilient supply chain.

Collaborating with a clear purpose, with shared accountability for results is essential. DSCI works with a major producer of men's and women's clothing and shoes. They have weathered the COVID-19 storm better than most in part because they have done an outstanding job of keeping suppliers alive, getting the most important products to market, and staying focused on their customers. Cross-functional teaming has been a key element in making this happen. Cross-functional teams inevitably discover they need better information and more precise controls. They want digital accuracy.

## 2 Digital everything

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Agility and resilience are made possible by quick actions that adjust supply volume and customer support as market conditions change. Automation makes this rapid adjustment possible. This may mean deploying 3D-technology in manufacturing, implementing AI-supported algorithms to drive demand planning, applying Blockchain to make customs processes safer and more efficient, or any number of things that will make the company stronger and better able to withstand ever-changing market conditions. Dell has a program that they call “Digital Everything.” While the intent of this effort is clear, the real challenge comes in setting priorities. You can’t automate everything at the same time and still meet your budget. Andre Soldo, the leader of Operations Strategy, says, “Dell has an aggressive program of automation that will enable us to be even more resilient in the future. We set the priorities for this program at the intersection of customer and operational impact.” Companies that were more digital have done better than those that were further behind during the COVID-19 pandemic. The pandemic was helpful in one way: it showed companies that they must speed up the digital transformation of their supply chains. But being digital is not enough - all supply chain tasks have to change their focus, even the most fundamental supply chain responsibility of all: procurement.

## 3 Procurement policies predict performance

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Procurement teams battle to lower purchase prices. If the lowest cost is always the winner, the organization may wind up with suppliers that abandon you during tough times. Why? Because their margins are higher when they sell to someone else. Plus, low procurement prices may squeeze the supplier’s margins and make them less able to weather the storm like COVID-19. The trick is to incentivize the procurement team to select suppliers that offer low prices while ensuring the suppliers selected are agile enough to work through difficult drops in demand as well as dramatic increases in sales.

If your procurement team is still working on getting the lowest cost for every item they buy, you may be in trouble. Why? Because the lowest cost supplier may also be the one located the furthest away from the customer, may have weak financials that make it vulnerable to economic shifts, and may be exposed to political, economic, or health risks. Procurement policies should reflect the actual total costs of a supply chain solution, including the Risk of disruption, IP loss, and lead times. Procurement will focus less on individual line-item costs and more on total systems cost.




## CHAPTER 8:

# FASTEST TRANSFORMATION WINS!

One thing we learned from the COVID-19 impact on countries and companies: speed matters. The speed at which some companies moved their white-collar workers to remote work was astounding. The speed IT departments displayed to enable that transition was remarkable. The speed supply chain people displayed to keep the business running when demand was uncertain and supply unreliable was laudable. But now the real race begins.

The race is on to capture the New Customer by building a Digital Supply Chain that manages demand, delights customers, and sources production. It is a supply chain that is strong and fast-growing, like Bamboo. It is a supply chain that has done a “Frontside Flip” and acts as a platform for delivering value to customers. It accomplishes all this while being resilient. For the supply chain to continue to provide customer value even when we face challenging times and uncertainty, it is imperative that we accomplish the transformation to a Digital Supply Chain quickly. Why? Because the New Customer requires that we make these changes, and they will reward us with their business. If we don’t, they will go elsewhere as soon as they can.

Here is a summary of what needs to get done:

- 
- **Dive deep into the New Customer and what they would like**
    - Get the data even if you must trade for it, buy it, or incorporate sensors in your products
    - Understand how you can manage, shape, and stimulate demand
  - **Develop a strategy for a supply chain Frontside Flip that happens now**
    - Ensure that you are building a supply chain that is agile, customer-present, and resilient but not at a higher cost.
    - Going Digital and using new technology will be required (everything from 3D to going direct)

- **Create a Change Leadership program that will speed change more than historical methods**
  - Incorporate the right people (trained or new) to make the transformation happen. (DSCI will soon release a new approach based on Fortnite and other massive multiplayer videogames. Crazy as it sounds, companies that approach change like a pro-gamer will do better than those that follow traditional methods.)
  - Make sure that you include cross-functional working groups that are measured and paid against a common set of performance indicators
- **Execute with an intensity that gives people the courage to take risks and make things happen**
  - Manage the risks associated with cybersecurity, IP theft, trade barriers, pandemics, and every other uncertainty we must expect
  - Nail down a plan that distributes assets across country boundaries so that Risk is mitigated

Our final note is about timing. Almost all companies are changing their supply chains to work better. Supply chain leaders are undertaking major transformational change in everything from where they build things to how they distribute. A large number of companies are increasing the size of their Direct-To-Consumer (DTC) business. Many organizations are recruiting talent with deeper analytical skills. Investments are being made in AI, drones, and other emerging technologies. Many are making these changes at the same time they are reducing headcount and the associated labor expense.

Companies should start on the New Customer research (first element, listed above) immediately. Aim to have the first look at the New Customer done within **10 weeks**. This job should be done by a cross-functional team of sales/marketing and operations/supply chain people. The goal is to clearly understand what would delight the New Customer and the elements that the supply chain can execute that enable customer demand. The second element that calls for a “Frontside Flip” strategy should take no more than **eight weeks** and be based on the New Customer research, among other things. Nothing speaks louder and creates urgency around change than the voice of the customer. Change Leadership, element three above, is not easy but is essential for success. Start the program when you start the New Customer data collection and analysis. Has the change leadership playbook developed in **8 weeks**? Never stop working on it. The final element, execution, should start after the first three elements. Break the many change requirements into smaller, more digestible chunks. Measure and reward as needed. Get as much done as you need to catch up with what the New Customer wants. “Speed is life” is a saying among jet fighter pilots. It should also be the motto of supply chain leaders.



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