



**LANDING THE
FRONTSIDE
FLIP:** THE “NEW CUSTOMER” IS FRONT
& CENTER TO YOUR SUPPLY CHAIN





About Digital Supply Chain Institute

The Digital Supply Chain Institute (DSCI) is a leading-edge 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

DSCI is a membership-based institute whose members are focused on envisioning and 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 (CGE). Visit our website dscinstitute.org to learn more or reach out to Vivek Ghelani, Director of Research at vghelani@thecge.net.



THE CENTER FOR
GLOBAL ENTERPRISE

About The Center for Global Enterprise

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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CHAPTER 1:

EXECUTIVE SUMMARY

“Recent disruptions in global supply chains have put the spotlight on them where every business needs to think about improving the resiliency and agility of their supply chain to meet the customer’s demands. Companies must transform their operations to be customer-present, and the Frontside Flip is a way to achieve this.”

■ Sam Palmisano, Chairman, The Center for Global Enterprise

In 2016, DSCI collaborated with a team of 23 C-suite executives on the future of the digital supply chain. The most important conclusion of this collaboration was that the digital supply chain would do more than just improve the percentage of perfect orders. The most important thing was transforming the supply chain digitally into a process that attracted customers and grew revenue.

These supply chain leaders called this change a “Frontside Flip” (FSF). The supply chain should flip from focusing on the back end of the business to the front side – the customer side – to be **“customer-present.”** Imagine an Olympic snowboarder rocketing off the front side of their board on a white-fast half-pipe. The name captures the energy, power, and audacious change in the way we must run our supply chains.

But something that we did not anticipate happened. From our research and discussions with supply chain leaders, we noticed that the most significant change is not new technology but the emergence of the New Customer. This is true whether you are operating a Business-to-Business (B2B) or a Business-to-Consumer (B2C) model. We now have a New Customer with different expectations and requirements. Today’s customers want their products and services to be delivered 50% faster than five years ago, according to a [DSCI survey](#). The supply chains that we built for our legacy customers will no longer meet the needs of the New Customer.

This New Customer presents supply chain leaders with new business opportunities to increase revenue and efficiencies by making their traditional supply chain into a customer-present digital supply chain. When supply chain leaders transform their supply chain to meet these new requirements and expectations, they will unlock more growth opportunities. In 2016, DSCI concluded that the average financial benefit from completing the Frontside Flip was revenue growth of 10% and cost reduction of 20%. That is still true, but the supply chain can achieve more by dramatically improving customer happiness and loyalty. Other benefits to landing the Frontside Flip are improved resiliency, agility, visibility, and productivity, as well as enabling a shift to a direct-to-consumer (DTC) business model.

How should companies operate their supply chains to capture the needs of the New Customer? How can companies perform a Frontside Flip and face this new and vastly different customer? Answers to these questions require careful thinking.

It is now more urgent than ever for business leaders to transform their supply chains as the world grapples with geopolitical conflicts, economic decoupling, global pandemics, interrupted supply chains, and government sanctions. These new challenges will test supply chain resilience and capability to deliver customer promises. Landing the Frontside Flip will help business leaders deal with these challenges.

This paper presents an accelerated approach to executing a Frontside Flip where the New Customer is front and center.



CHAPTER 2:

SEIZING THE FRONTSIDE FLIP

“Customers have rapidly changed demand around services and expectations. The Frontside Flip shifts focus from the back-end of the cost-saving business to the front revenue-generating business. The Frontside Flip is enabled by advances in data analytics and the use of real-time customer insights to improve demand forecasting and ultimately improve margins. Now is the time to execute and land a Frontside Flip!”

■ Colin Browne, Chief Operating Office, Under Armour

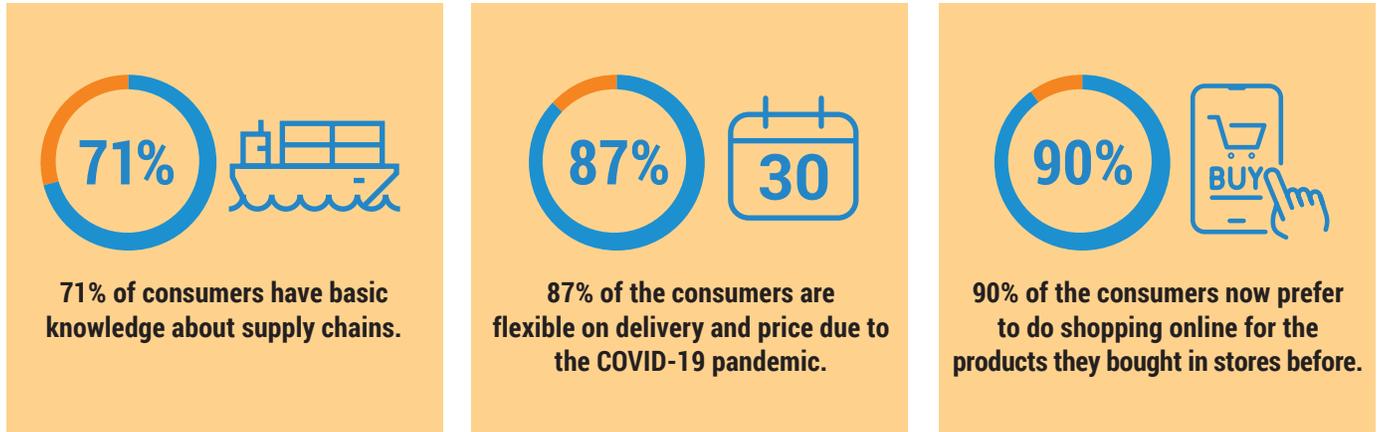
Across the world, a digital transformation is underway across all industries and corporate functions. The Frontside Flip is a specific customer-centric approach to implementing the transition to a digital supply chain.

The digital transformation of the supply chain is one of the most critical areas of organizational change and success. The supply chain has gone from an unheralded “back-office” function to a mainstream media focus. The pandemic has spotlighted the critical nature of supply chain resiliency and predictability. The growing emphasis on new supply chain risks, like cybersecurity and data protection, requires companies to use digital technology to gain increased visibility into the risks posed to and by suppliers.

For every company seeking to maximize its value in the marketplace, the digital supply chain transformation must be a top priority. We have learned since 2016 that companies that truly embrace the digital transformation of their supply chain will gain enormous benefits in reducing costs-but more importantly—supply chain actions will directly generate revenue growth. Instead of just being a back-office function, the supply chain becomes focused on the customer and links with marketing and product development to expand the base of happy and loyal customers.

DSCI surveyed 1441 people from around the world in October 2021 to gain insight into the expectations of today's customers. Although the survey was principally focused on B2C, our research shows that B2B customers are also changing their expectations.

Insights from B2C Survey:



We also learned that consumers are willing to pay more for:

- Sustainable packaging
- Supply chain transparency
- Better privacy

Customer Happiness, not Customer Satisfaction, is the Key Driver

The Frontside Flip is needed to meet the New Customers' needs and demands. The goal of a successful Frontside Flip is to create a happy and loyal customer. The New Customer has different expectations that current supply chain models cannot meet. Customers – including consumers and businesses – demand more customization and better products, services, and experiences. Understanding these customer preferences is a huge game-changer. Supply chains must transform to meet these expectations or risk their company being left behind by the marketplace.

New Customer: Customer with evolving expectations that companies must meet.

Happy Customer: Customer that are so pleased with their overall experience that they will pay full-price or a premium for your product/service, and share their experience with others.

Loyal Customer: Customer that always think of you first for what they have been buying and come to you first to purchase any related product/service.



In our work with DSCI member organizations, we have held numerous conversations about the meaning of customer satisfaction in the realm of the digital supply chain. Traditional metrics such as on-time-in-full (OTIF) orders, lead-times, out-of-stock, net promoter score (a surrogate measure of customer satisfaction), volume, and frequency of returns all play a central role in measuring supply chain performance. Customer satisfaction is often considered an aggregate measure of these metrics and seeing customers returning to order again and again certainly speaks to the role of the supply chain in growing the ranks of satisfied customers. Profitable growth is a primary organizational goal that supply chains leaders must be serious about and the Frontside Flip embraces their role in contributing to that goal.

One DSCI member company focused on FSF actions made a bold statement that speaks to the higher goals of the digital supply chain. Rather than focus on customer satisfaction, they proposed to deliver customer happiness. Satisfaction is the simple delivery of goods and services as expected. Customer happiness is the fulfillment of a brand promise. A happy customer is delighted beyond expectations; they are surprised, excited, and as a result, become loyal champions of a company's brand. What can supply chain leaders do to help grow the ranks of happy customers? Simply delivering on operational efficiencies will not be enough; new "happiness" and "loyalty" performance metrics need to supersede traditional metrics.



CHAPTER 3:

HOW A DIGITAL SUPPLY CHAIN ENABLES THE FRONTSIDE FLIP

“COVID-19 disrupted global supply chains, which tended to reveal many risks, structural weaknesses across supply chains, and a lack of intelligence about how it’s all holding together. Managing and monitoring the risks coming from different parts of the supply chain is critical for building a source of truth, which can provide visibility throughout the supply chain to drive resiliency.”

■ Ilya Levto, co-founder and CEO of Craft

In the past five years, many of the fundamentals of the digital supply chain remain the same, but the world has changed significantly, and accordingly, there are dramatic changes that supply chain leaders must execute. Due to the various pandemic waves and the increasing decoupling of global supply chains between China and the U.S., the need for agility, visibility and resiliency in the supply chain is more critical, and corporations are racing to find ways to accelerate their transformation.

Our original paper sought to establish a clear definition of the digital supply chain. Frontside Flip 2.0 represents an update following the new vectors of change confronting supply chains around the globe. Understanding and embracing this new definition sets the stage for understanding the power of the Frontside Flip and ultimately learning how to execute it. Here is a side-by-side look at the digital supply chain of 2016 and the digital supply chain of 2022 and beyond.

dig·i·tal sup·ply chain (dsc):

2016

...is a customer-centric platform model that captures and maximizes utilization of real-time data coming from a variety of sources. It enables demand stimulation, matching, sensing and management to optimize performance and minimize risk.

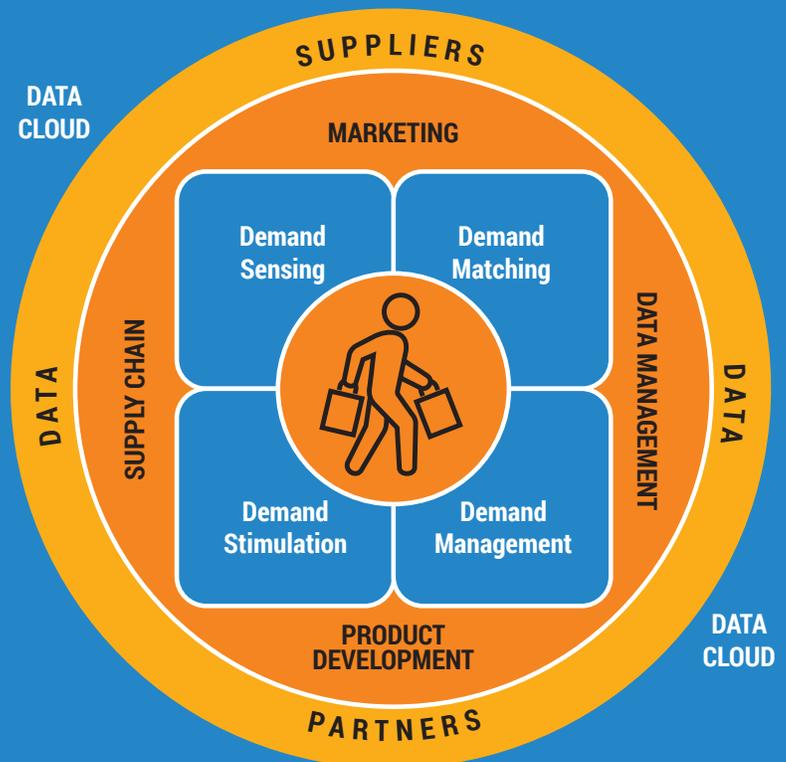
2022+

...is a customer-centric model that integrates supply and demand by breaking down the silos between the supply chain, marketing, product development and data/IT functions. The Digital Supply Chain incorporates data from all sources, including suppliers and customers, into new data models to meet the evolving needs of customers and optimize value creation for the organization. The Digital Supply Chain drives demand stimulation and improves demand management to create happy and loyal customers, while providing increased visibility to minimize supply chain risks. Given technology and marketplace changes, implementing the Frontside Flip enables companies to go direct-to-customers to satisfy the needs of the New Customer.

A digital supply chain starts with the customer and integrates demand and supply. It horizontally connects functional silos and draws data from all sources, including customers and suppliers, to meet the dynamic needs of customers. It optimizes value creation by being customer-present. The digital supply chain increases revenue and stimulates demand to create happy and loyal customers while maximizing resiliency and visibility to minimize risks.

Digital Supply Chain: Constellation of Value

“Constellation of Value” is a network of suppliers, comprised of suppliers to suppliers, manufacturing and service partners, logistics service providers, and all the other supply chain partners. It is more like a three-dimensional network that resembles a 3-D constellation map of value partners’ operations.



As you can see from the updated digital supply chain diagram, data flow connects the components in the digital supply chain. The explosive growth in data collection, analysis, and real-time operating usage have changed the competitive landscape in industry after industry. It has enabled some companies to leap ahead of their competition. All departments collaborate to have an acute focus on creating happy and loyal customers. Performance metrics between the departments evolve to drive collaboration with a purpose. The internal data flow eliminates data silos and reduces the friction that so many experience in getting data from other departments.

Data from external sources, including customers and suppliers, is routinely integrated into new data models that maximize demand and visibility and minimize risk.

“In a globalized world today, the logistics and shipping industry faces many challenges and disruptions, including ever-changing customer’s expectation, geo-economic volatility, congestions and demand-supply imbalances. To overcome these challenges, logistics companies and businesses should partner to create a “Community of Value” that enables effective network and seamless logistics.”

■ **Ramesh Ramakrishnan, Chairman, Transworld Group**

Intelligent data sourcing and utilization is one of the critical enablers of the digital supply chain. Winning companies realize that getting the correct data, making it accessible, and trusting it are all vital. The digital supply chain requires new data models that synthesize internal, public, and strategic data obtained from suppliers and customers. To accelerate their transformation, companies need to start with the problem to solve or the performance metric to improve and then focus on what data is required and how often it is needed. The digital supply chain demands that the supply chain joins with marketing and product development to become customer-facing in partnership with the enterprise data management (EDM) function. The supply chain needs to be an equal partner in identifying the right problems to solve, accessing the right data, and developing the enterprise data model.

Demand, People Technology & Risk

In 2016, we developed a framework for the Frontside Flip to provide companies with a way to assess their digital supply chain transformation. It consists of four interrelated pillars: **Demand, People, Technology, and Risk.**

- **Demand:** As the Frontside Flip makes the supply chain customer-facing, the supply chain now plays a role in stimulating and managing demand.
- **People:** New skills and behaviors are needed as people form transformation teams to accelerate change and learn to trust the data.
- **Technology:** Rapid advancements in technology have enabled much greater supply chain visibility and the growing use of AI/ML seeks to automate specific tasks and push organizations toward fast and accurate data-driven decision-making.
- **Risk:** Traditional supply chain risks are now compounded by new cybersecurity and data protection risks. However, advancements in technology provide new tools for assessing and managing risk.

Over the past five years, we have worked with and interviewed hundreds of supply chain executives worldwide. Our interviews have substantiated our belief that *Demand, People, Technology, and Risk* remain a viable and practical framework for assessing the digital supply chain transformation. Each pillar has evolved, but they remain the best way to develop a roadmap and evaluate change.

Companies that land the Frontside Flip will exponentially accelerate their digital transformation. New data models and workflows will improve supply chain performance against traditional metrics like demand forecast accuracy and on-time in-full. In addition, it will lead to new integrated metrics that tie departments together to achieve aggressive transformational goals and maximize the opportunity for value creation. Ultimately, an advanced digital supply chain will integrate strategic data from suppliers and customers into a digital value chain designed to create more happy and loyal customers.

Frontside Flip is a bold leadership action that shifts the supply chain function to be present with the customer and horizontally integrates the enterprise. Landing the Frontside Flip requires a digital supply chain and maximizes its opportunity and value creation.

Digitally integrating your enterprise leading with the supply chain

Good business strategy acts as a set of guiding principles for actions that allow firms to compete and win in the marketplace. Digital business strategies are based on the principles of utilizing data, processes (workflows), and technology in uniquely competitive and hard-to-replicate ways. For supply chain leaders, digital means designing and implementing a set of strategies that take advantage of non-intuitive, data-driven insights about your customers. A high-performance supply chain delivers products and services to customers when, where, and how they want them without breaking budgets. To competitively meet the needs of the firm's customers, supply chains need to be designed to meet the unique needs of each customer segment.

Supply chain leaders need to pay attention to customer needs and demands when designing their digital supply chain strategies and processes. Better and faster visibility into customer demand would allow supply chain leaders to adapt operations to customer needs dynamically. Adding developments in digital business to the mix expands the portfolio of strategic options available to supply chain leaders to meet customer demands while reducing the inevitable trade-offs of higher costs.

FSF enables the extension of the supply chain beyond the enterprise walls, thus creating a more expansive "Constellation of Value" integrating a more significant number of stakeholders.



CHAPTER 4:

LANDING THE FRONTSIDE FLIP

How Do I Start the Frontside Flip?

Fundamentally, a digital supply chain is about reimagining your business in a way that allows the company to respond to changes in customer buying behavior or other external factors (e.g., a pandemic) far faster and aligns the supply chain with demand changes dynamically. Demand or sales planning must be seamlessly linked to the supply chain. This requires new, more digitally integrated business models, including critical external information, to improve business performance.

The Frontside Flip optimizes a digital supply chain by seamlessly connecting demand sensing to demand planning to supply chain operations to provide an experience that produces happy and loyal customers.

There are a few imperatives for landing the Frontside Flip. These include:

- Functional boundaries must become less of a barrier, and the management system must encourage collaboration across functions and throughout your Constellation of Value.
- Availability of enterprise-wide (and constellation-wide) data that is trusted and consistently shared throughout the constellation and populates the master data model with the right level of data and frequency.
- Customer segments, personas, on-time delivery, loyal customers need to be well defined and the backbone for performance management.
- Standard tools support decision-making using enterprise data and eliminate the need for “proprietary spreadsheets.” Data and analysis need to be shared.
- A comprehensive Talent Strategy to attract and retain the necessary skills required to compete in a digitally integrated environment.
- An Organizational Model that supports digitally integrated enterprise performance.

- Governance encouraging collaboration throughout the constellation to foster a high-performance culture and protect against cyber-attacks and data theft.
- A plan that prioritizes transformation starts at the top with enterprise-wide goals and subgoals that begin with the achievable and build on success.
- Building relationships and using technology to gain better visibility to reduce risk.
- Global KPIs that encourage customer (segment) focus throughout the supply chain and enables horizontal integration.

Landing the Frontside Flip requires horizontal integration of processes and workflows not only across the enterprise but throughout the entire constellation of customers, suppliers, and partners. Enterprise boundaries are blurred in a digital supply chain.

The Frontside Flip Leadership Model

As we work with DSCI member companies to help them advance the development of their digital supply chain strategies, the question often comes up, “Where should we start?”

The interconnections of data, technology, risk management, and organizational behaviors needed to make the FSF strategy not only work but deliver transformational business results appear complex. To help break the FSF approach into manageable components, we developed the FSF Leadership Model, an illustrated roadmap for enterprise actions. The roadmap suggests an order of operations: a series of logical interrelated steps for developing effective digital supply chain actions.

Developing the Frontside Flip Leadership Roadmap

The Frontside Flip roadmap is not a checklist or prescription. It is a simple way of orienting digital supply chain strategies that focuses on the customer side of the business. A roadmap allows supply chain leaders to coordinate efforts across functions and drive change throughout the constellation. The roadmap is built on the Demand, People, Technology and Risk (DPTR) framework.

Let’s review the figure below to begin understanding the FSF roadmap.

FRONTSIDE FLIP LEADERSHIP ROADMAP

Leading Your Organization To Transformational Performance





Your Guiding Star: Serving the New Customer

Who are your customers? What are their characteristics? How can we meet/exceed customer expectations?

We all fundamentally recognize that we are serving a New Customer, one that is different from the distant pre-Covid days. They have different expectations in how the product is ordered, the availability of the product, how the marketplace views it, and how the product is delivered. We also have different customers, with different expectations. Nowhere is this more apparent than in the travel industry, where the business traveler is non-existent, and questions exist if they may ever return.

One of the straightforward questions marketing professionals ask is, “Who are your customers?” While marketers should have a good grasp of customers, it may not be the first thing to come to mind for supply chain leaders. Upon being handed a forecast or when called on to execute a manufacturing plan, supply chain leaders may overlook the notion of customer needs driving supply chain decisions.

For digital supply chain transformation, understanding your firm’s customer (even in a B2B world) characteristics, demands, needs, and preferences by category and segment, is key to unlocking transformational FSF performance. When interacting with your marketing team as you seek a better understanding of demand signals, be sure to zero in on specific customer profile characteristics. Do certain customers value quality or price? Speed and convenience? Individualized experiences or anonymity? Control over re-ordering stock or automatic replenishment?

Try to identify a list of characteristics for your most critical current and prospective customers. The characteristics you uncover should be front and center as you design the supply chain to meet or exceed their needs and expectations. A supply chain that is designed for low cost, for example, may frustrate a higher value segment customer that is counting the days until an order arrives. Customers who desire specific packaging and shipping requirements and are not configured to receive off-spec orders may become a flight risk if their needs continue to be unmet.

If you are missing key insights about customers, seeking data and information from internal as well as external sources is vital. While you are at it, you can seek insights about your competitors’ segments, which could be a critical source of information to help you design your supply chain. As we will discuss in the next section, there are insights about customers which may not reside in the data readily available to us. Before fully designing a supply chain for a targeted customer type, you will want to find insights hidden from clear view and incorporate those into your Master Data Model (MDM).

It is essential to identify customer segments, develop a profile for each, and measure their satisfaction with the product or service you provide. In doing this, you will likely find that you need to redefine your business model to be more inclusive of your constellation. This will require data sharing, new data models, and deep analytical data analysis. (Please see Appendix for more details on data sharing/trading.)

2 Your Data Model and Using Analytics to Uncover Customer Opportunities

When organizations are managed vertically, data is also managed and held within silos. Frequently, the business unit has its own data model that manages flow within the silo. It starts with the incoming business components and ends with the hand-off to the next one in the chain. Data provenance and quality are questionable, and visibility beyond the silo is limited at best and non-existent at worst. The New Customer demands more.

As a result, end-to-end workflow management and transparency are required. This requires consistent master data models and definitions across the enterprise. No more proprietary spreadsheets that provide individual job security. An Enterprise Data Management (EDM) function is needed. Data must be cleansed, trusted, and accessible, and all areas must input their requirements.

Enterprise data that is comprehensive and trusted is a journey that must be supported by management and bought into by those on the front line. When the EDM team lacks the required data, the organization in need must be sure that it identifies the needed data and source and that the EDM team has it on its roadmap. There can only be one source of truth, and shadow data repositories must be eliminated.

It is important to note that the EDM team does not own the data but is responsible for the data integrity and repository. This should be viewed as a business function and not IT. IT can provide the technology, e.g., Snowflake, and is a partner, but data models, data sources, and data ownership is a business function.

Tools that provide functional analysis can still be individualized – the demand planning and supply chain planning functions will do functional analysis where different packages may be better adapted for the task. However, they should all use the same trusted data sources.

What “non-intuitive” insights can we develop about our customers and consumers?

The sophisticated use of analytics has become a hallmark of the high-performance digital enterprise, and digital-native companies have primarily built their businesses around this capability. Algorithms, platforms, and customer recommendation engines fueled by real-time consumer clicks are what we think of when we imagine a modern digital business whereby demand is often driven by machines rather than people. The recommendation engine is one clear example. Individual customer product recommendations generated by algorithms and data may produce a high percentage of follow-on revenue increases. The specific recommendations may not always be completely intuitive, yet they often uncover sales opportunities hidden from view. Similarly, marketing professionals and product innovators may use data analytics to discover non-intuitive insights about customers and consumers.



The buyer of a pair of signature athletic shoes may not be a young teenager but a middle-aged mother buying for their child. The tools and techniques of the marketer have focused on finding these prized business insights for many years. How often do supply chain leaders use such insights to develop customer segment designs?

Artificial intelligence and machine learning are core resources used to drive e-commerce sales on company-owned websites and social media platforms. The skill sets required to go beyond what is apparent in segmented customer data can be daunting as we enter the realm of data architecture, data cleansing, alignment, predictive analytics, and forecasting algorithms. The point is that analytic muscle can be flexed in designing your supply chain and more operational demand forecasts and fulfillment networks. Supply chain leaders can and should be involved in decisions based on upstream business insights, just as the more predominantly customer-facing functions of the firm are. **Leaving the analytic data value on the table is not a viable business option in the face of digital competition.**



3 Creating your Constellation of Value: Designing the New Digital Supply Chain

What is the best digital value chain for each customer type? - Is there a business model innovation needed or possible?

What choices make up a digital supply chain design? Given a particular set of customer and consumer needs, preferences, and expectations, we are now set to design a digital value chain for them. The list will be unique for the industry and targeted customers to be developed, but ideas for discussion include:

- **Channel preferences** – online, brick and mortar, distributor, specialty retailer, big-box retailer, volume and replenishment schedules, inventory monitoring methods, inventory holding preferences, warehousing, and transportation network services
- **Product preferences** – packaging, service, and support needs, customization levels, follow-on product extensions, substitutes, warranty and repair processes, product design choices, product quality, interoperability with 3rd party products
- **Brand preferences** – exclusivity and availability, channel decisions (high-end retail vs. big box), inventory holding levels (safety stock levels), marketing and promotional strategies

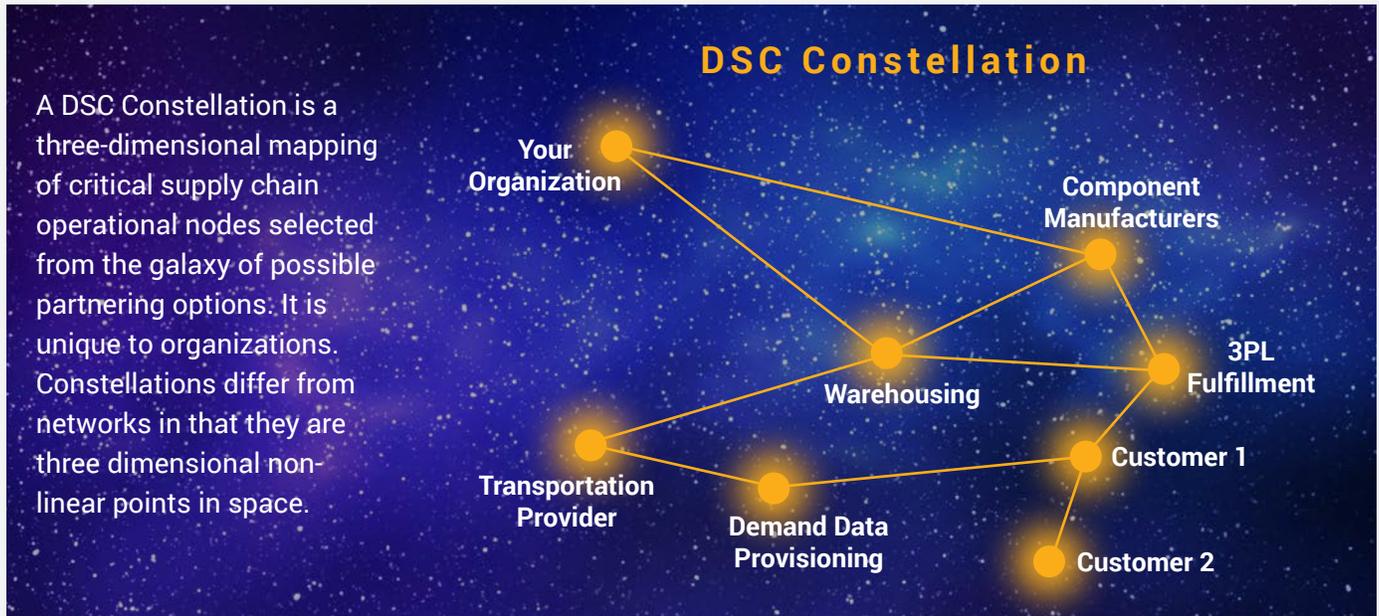
This list is not exclusive but demonstrates what your team should consider as they develop customer FSF designs. While we have been advocating the idea that supply chain designs are unique to customer profiles, it does not exclude the sharing or reusing of technologies, data or processes across segments if there are opportunities for efficiencies. However, design decisions cannot be made based on efficiency alone; they must be made based on the customer impact. For example, while the idea of holding inventories, and the costs of doing so, may seem antithetical to driving down supply chain cost, the customer impacts of a stock-out may be significantly higher in the long run. Stock-out costs are not just limited to a single lost sale but may create opportunities for customers to consider substitutes, potentially resulting in the loss of future revenue and market share.

While a new master data model is needed to support digital transformation, sourcing the data required to populate the model and measure business results, enters uncharted territory for many enterprises. Sharing data externally, across enterprise boundaries, to gain end-to-end visibility is new and challenging for most. While companies commonly share transaction data, many are reluctant or not prepared to share strategic data. One option is to participate in data-sharing networks. These networks may be private networks with known suppliers, customers, and competitors where access can be reasonably controlled and participants are known. Alternatively, you may participate in public networks where data access is open, and there is less control over who has access and how the data is used. Examples of public networks may be shipping container information or traffic at shopping malls. In both these cases, the data you access can also be accessed by your competitors. Much thought needs to go into designing and governing your constellation.

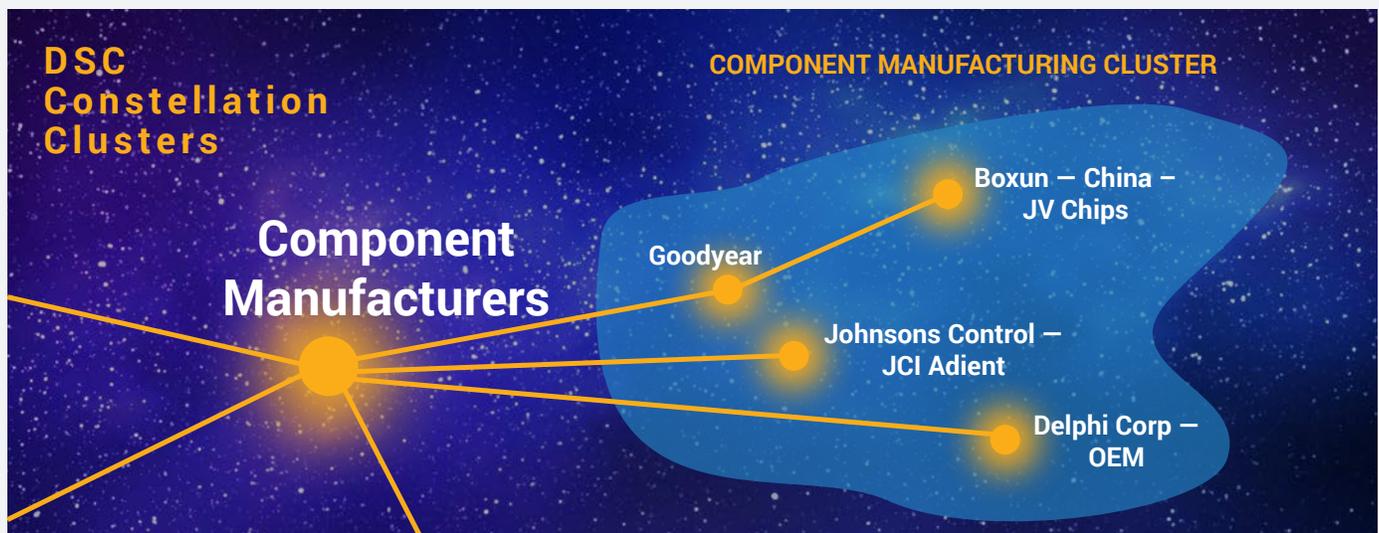
Forward-thinking companies are starting to realize that sharing or trading critical data with key customers or suppliers can unlock their competitive advantage. A new approach is to 'think small' and identify specific data filling a crucial gap in your data model. You can learn more about DSCI's research into Data Models at <https://www.dscinstitute.org/applied-research/big-data-analytics> and more about Data Trading in the Appendix section.

Digital supply chain: It's moving from linear connections to Constellations of Value

Even though we still refer to the “supply chain” when we are focusing on the operational efforts to bring products and services to customers, most advanced supply chain leaders more likely think of a “Constellation of Value,” that is, clusters that form constellations of suppliers, suppliers to suppliers, manufacturing and service partners, and logistics service providers. Rarely is the process a simple linear connection between upstream and downstream partners. It is more like a three-dimensional network, a 3-D constellation map of value partners’ operations as you can see in the following two charts.



Connecting the nodes in a constellation orchestrating them into a high-performance digital supply chain often requires complex negotiations and relationships and sharing critical pieces of data and information inside and outside the organization. The FSF digital supply chain integrates these orchestrated collections of partners to meet customer needs effectively. Bringing together the elements of these value chains is not always easy, but the business benefits of successful integration have the potential to activate new competitively advantaged business models that are hard to replicate. Being hard to replicate creates the opportunity for firms to grow their businesses while managing costs.





Business Model Review Cycle

The Customer-Present Supply Chain: Connecting Supply with Demand

As business models are rethought, many companies find that they do not have the data and end-to-end visibility required to understand today's customers and delight them with products or services delivered when they want them. Supply chains need to be more resilient and flexible, and that requires data to ensure transparency throughout the value chain. Data needs to be trusted and accessible in the right level of detail and frequency to adjust dynamically to changes in demand and supply.

Demand or sales planning must be seamlessly linked to the supply chain. New, more digitally integrated business models must include key external information to improve business performance. Demand and supply chain planning can now make decisions based on the same inputs and simultaneously see changes in the market. Sales can see supply chain bottlenecks in real-time and stay in front of the curve by pushing alternative products.

This connection between the front-end and back-end enables new ways to serve the New Customer. With distribution networks closer to the customer, inventories can be adjusted. However, the New Customer expectations will drive new business models, which will require new data models and trusted data sources.

New Customer First

Once there is an understanding of the desired business model, which incorporates direct to the customer (DTC) aspects, a data model must be developed. New metrics need to be identified that reflect performance both within and external to the enterprise and are true success measures. It is no longer good enough to say we shipped on time if the customer received it late. **Metrics need to reflect the customer's point of view, and this is a radical shift for most supply chain organizations.**

“Understanding the demand forecast and achieving a balance between supply and demand is critical to going to Direct-to-Customer. To accurately predict demand, the supply chain needs automated tools to syndicate trusted data from supply chain, marketing and customer sources.”

■ Paula Dart, VP Global E-Commerce, Diageo

Before we finalize our digital supply chain design, a review of the attributes of the customer segments and testing for possible changes to our business models is in order. A competitive review should be included to gather intelligence on what other firms are doing to address the customer profiles under evaluation. By framing our evaluation by profile and then designing the supply chain according to insights about their needs, including possibilities revealed by new technologies, we should be open to new ways of delivering value to the targeted customers. A shift to a more direct-to-consumer business model enabled by e-commerce is a dramatic example whereby the supply chain function could play an integral role. To a lesser degree, a supply chain strategy more open to direct customer service support after-market is a contemporary example. Initially, Amazon may be a retail channel for my customer, but customers could be captured using a new business model for after-sales support and follow-on sales with the right integration of services.

Sensor-based technologies, customer loyalty data and programs, social media interactions post-sale (such as product posts comments) are examples of new forms of digital information which allow a unique business model opportunity to have the potential to be transformational. The key for this leadership roadmap process is to ensure that you do not simply automate the old processes using new technologies as you redesign the segment for the digital supply chain. It is crucial to look for ways to increase value by improving customer happiness, increasing revenues, and improving efficiencies. We suggest iterating this loop of customer segment, analytic insights, profile design, and business model several times before proceeding to the stages of implementing a new digital supply chain workflow.

From a leadership perspective, this requires a new way of working compared to traditional business models. The digital supply chain leader will need to be comfortable transcending functional barriers in the firm to participate in the business modeling process effectively. The digital redesign of business models will require the support of senior leadership across several functions to be effective. New skills will be required.



5 What Organization, Talent, Skills, and Capabilities Do I Need to Execute This Design?

Rethinking Functional Boundaries

Digitalization fundamentally changes the way work flows and how an organization operates. For decades enterprises have organized along functional boundaries creating vertical organizational structures with well-defined responsibilities and measurements. Vertical silos become inhibitors to digital exploitation, and organization and workflow need to be rethought for competitive advantage.

The FSF requires **horizontal workflow** and a management system that focuses on understanding the customer expectations and measuring how you achieve those seamlessly and transparently.

Optimizing the Organization and Measuring Success

Managing a horizontal enterprise requires new approaches to organizational management and rethinking of key performance measurements. While functional organizations are not going away, when the customer becomes the primary focus throughout the value chain, functional boundaries are blurred.

Key organizational considerations:

- Does the current organizational structure provide sufficient executive focus and understanding of what is required to integrate the digital value chain and meet the demands of the New Customer, or is change required?
- Do you have an enterprise data management function, and where does it reside?
- Do you need a Chief Digital Officer?
- What changes are required to manage horizontally across the entire value chain?
- How should your KPIs and compensation change to encourage cooperation across the enterprise and the value chain?
- Does your change management approach need to change?

Having conceived of a digital supply chain design and perhaps having some aspects of a new or modified business model on the table, you need to tap into the requisite organizational and constellation partner talent to bring the design to life. For this leadership roadmap, the key point is to wait until your supply chain is designed before beginning the process of determining which digital skills are required to execute it. This may be too slow, expensive, or impossible as highly skilled digital talent is scarce and difficult to attract and acquire. You will need to assign or influence talent from the right parts of the organization to develop and deploy them. Leaders may need new organizational designs and influence other functions to execute the new digital actions effectively.



What Technologies are Required to Execute This Design?

We finally come to the technology selection and integration moment in our digital leadership journey! You may be thinking that this is too late in the game for the technology discussion. Technology is part and parcel of the entire design process as it is integral to the discovery of insights used to understand customer needs and is part of the business modeling process in imagining new ways to satisfy customer demand. This point of the digital journey is not the first time we have thought about using technology. However, it is best practice to finalize the selection of the technologies and integration of existing technologies with new technologies after the supply chain workflow has been defined and designed and technology requirements mapped.

Making technology selection and integration a crucial part of the design process runs the risk of the process being made to fit the technology rather than the technology fitting the customer's need. The design process is iterative and needs insights about technology capabilities to take advantage of them. Your IT partners must be part of the design team. However, leadership and discipline are required to delay the investment in technologies until their best use has been determined. There is also the chance you may over-invest in a technology that might be useful in a less-than-critical customer profile. Your highest and best investments in technology should be dedicated to areas where your customer value is highest or where a strategic implementation of technology could become a source of competitive advantage. As mentioned earlier, one of the goals of becoming digital is to create “hard to replicate” supply chain value. This is where strategic technology deployment can mean the difference between automating an existing process and creating a new transformational business outcome.

7 Governance and What New Business Risks Might This Design Create?

At our final waypoint, we come to risk management along our digital leadership journey. The key reason it is deemed a waypoint on the roadmap is that leaders must think through risk implications before scaling-up deployment once the supply chain design is ready for implementation. New business models, new data exchanges, technological innovation, and value chain partner integration require a new take on risk management. Existing or traditional reactive risk models will not be adequate in the face of these new business demands. Achieving transformational performance improvement cannot be considered successful if we put our firm or our value chain partners or customers at material risk.

Governance and Managing Risk

As more data traverses enterprise boundaries, data governance plays a critical role. Responsible data stewardship must be embedded in the operational fabric as more regulations come into effect, like Europe's GDPR data privacy law. Understanding who has access to your data, what data you are accessing, how it was sourced, how it is being used, and controlled once it leaves or enters your corporate walls is important for competitive and compliance reasons. The quality of data stewardship and data practices will reflect directly on your brand and reputation. Establishing corporate data values and policy is essential.

As we saw in many recent incidents, like Solarwinds and Colonial Pipeline, effective cybersecurity risk management is critical. Your company is increasingly digitally connected to every company in your value chain. To secure data across your supply chain requires the effective orchestration of people, workflow process, and technology, including rigorous enforcement of basic cyber hygiene. Today, cybersecurity and data protection are fundamental elements of managing a supply chain to prevent data loss and maintain business continuity. Data protection and cybersecurity must become part of your culture.



The rapid global increase in data privacy regulations makes it more critical than ever that companies are systematic and strategic in determining what data is really needed to achieve their business objectives. In fact, some companies are proactively implementing data minimization programs to limit the amount of data they collect, process, and store. This reinforces the idea that identifying the problem, or opportunity, is the first step in intelligent data utilization and a critical step in digital supply chain transformation.



CHAPTER 5:

A NEW WAY TO ACCELERATE TRANSFORMATION: DIGITAL CHANGE MANAGEMENT

“Between changing customer expectations and digital transformation, a new digital way of change management is critical to your success and to communicate the change within the organization. Multi-player games can teach us adaptability, communication, trust, and management in milliseconds, and these skills are now needed for leaders to respond to challenges they face every day.”

■ Alexander Fernandez, CEO, Streamline Media Group

One of the keys to landing the Frontside Flip is bringing your employees, suppliers, and customers along for the ride. You need to lead the way and engage your employees, suppliers, and customers. But it requires change. New multi-dimensional workflows. New performance metrics and incentives. New relationships with suppliers and customers. Ultimately, it needs a unique culture built around collaboration rather than competition.

Companies must change how they change. Traditional change management approaches need to be updated for the people, technology, and pace of the Digital Era. Companies are undergoing a digital transformation but too often encounter hurdles that make the transformation slower than desired. Generational differences, virtual workplaces, and technology “comfort levels” make team building more challenging than ever.

A new approach is needed for collaboration that will accelerate transformation. Change management in the digital era needs to adapt to the reality of the new employee, the new hybrid workplace, and the new technologies. It must create a transformation process that is adaptable, practical, and cross-generational. It must keep motivation high, progress transparent, and celebrate success along the way.

The most effective way to drive the necessary change is to create a challenging and measurable Frontside Flip goal to achieve something significant for all stakeholders—customers, suppliers, partners, and employees. Break the Frontside Flip goal into sub-goals and force cross-functional collaboration internally. Think of the sub-goals as sprints, catalysts, or rapid response projects. The name does not matter. What does matter is that each sub-goal is quantifiable, time-bound, and explicitly supports the Frontside Flip goal. It must also serve to integrate the supply chain into the marketing effort. If the sub-goals merely reinforce the existing functional silos, you will not land the Frontside Flip.

Successful digital transformation will require people to do things differently. Leaders need to be upfront about this. Sustainable change, like that required by the Frontside Flip, will require you to engage people's hearts and minds.

HURDLES

Setting the right goals is critical, but there are traditional hurdles to change and new digital era hurdles to overcome.

Here's a quick look at the traditional hurdles to change, which still exist

- Change is hard for individuals that have established ways of getting things done.
- Change is even harder for people in organizations where there is an existing corporate culture.
- People grow weary of new change initiatives.
- People wonder what's in it for them.

The digital era has brought several new hurdles:

- People are “too” busy doing their current job – especially with the repercussions from the pandemic.
- Pace of change is too rapid to use the old decision-making structure.
- Attention spans are shorter than they were even 10 years ago (this is well-documented).
- Generations and cultures communicate differently.
- There is too much data – it is hard to know what data to focus on and what to filter out as “noise.”
- People want to go with their “gut” instead of trusting the data – despite the push to data-driven decision-making.

DSCI has analyzed multi-player video games for insights that can be applied to change management and scalable transformation. One critical element is that the goal is crystal clear in multi-player games. Small squads or teams come together virtually to achieve the goal. There are four key lessons from multi-player video games, like *Fortnite*, that you can apply to accelerate your digital transformation.



- **Dynamic Leadership:** Leadership in the squad changes based on the situation and the needed skills. There is no “boss.” It’s leadership without the title.
- **Rapid Communication:** Real-time communication uses all available channels and does not follow reporting lines. You communicate or you lose.
- **Trust:** The squad members quickly build trust in each other based on results, and they never question the data. Team members have each other’s back no matter what.
- **Data-Filtering:** Each squad member knows exactly what data to look at in each situation (individual and squad performance metrics). It’s about transparency and understanding of data.

In exercises we’ve conducted for our member companies, the DSCI Change Management for the Digital Era approach has unlocked new insights into cross-generational team building. In the game, each squad is given the autonomy and authority to choose their path to reaching the goal. Company managers have told us their company culture would not support this level of autonomy, but they quickly see the need to do so.

Multi-player games reinforce the historical hallmarks of effective change management.

- Urgency drives rapid change
- Clear, quantifiable time-bound goals are critical
- A clear path and small steps are needed

Scaling the Frontside Flip transformation brings additional challenges, but the lessons from multi-player games still apply. Look back at your Frontside Flip goal and the sub-goals to scale the transformation. Build on the success of achieving the initial sub-goal to create and promote a success story. Form a number of transformation squads and give them the authority and flexibility to achieve their goals. Establish real-time communication channels to share progress between the squads. Continue to build and promote success stories as milestones and sub-goals are achieved.

One of our member companies applied the following DSCI Scaling Transformation Playbook to speed the enterprise-wide adoption of a new software solution. There are three steps to Scaling the Transformation to achieve the Frontside Flip Goal:

- **Awareness** – Collaborate to identify the “right” problem, select the solution and make sure you set the right sub-goals and ways to measure it.
- **Commitment** – Launch the initial squad to achieve the first sub-goal and measure their performance. Generate commitment and excitement by creating and communicating success stories around it.
- **Action** – Scale by launching a series of Transformation Squads to build on the pilot success and achieve the additional sub-goals – rapidly build trust and create project “pull” using communication channels. Measure and aggregate to measure performance against the Frontside Flip goal.

Building awareness has always been an essential part of transformation projects. But the digital era adds new elements that are important to be aware of and address in your planning and implementation. It is important to involve the “customer” (internal or external) from the beginning. Employees and external customers have new expectations today.

Gaining commitment has always been critical to successful change. However, it is more important than ever with today’s multiple digital communication channels. Employees can rapidly spread the word about a new project – for better or for worse. You can’t control the communication channels, so you need to create situations that are likely to generate a positive message. That’s why building a “Success Story” based on achieving the first sub-goal is so critical. Jumping into the action phase quickly will maintain momentum. Don’t over plan. Favor action over planning. Giving the squads some autonomy to set their path and milestones is important, but it is your responsibility to make sure that they keep their eye on their sub-goal and see how it supports the Frontside Flip goal.

One thing to watch for is a lack of trust in the data. There is a lot more data available now, and there are expectations for people to make more data-driven decisions. However, many people are resistant to trusting the “data” instead of their “knowledge, experience and instinct” (aka “their gut”). As a leader, you need to build a culture where people instinctively trust the data but feel empowered to use their judgment. Easy to say, but hard to do. But that’s a big part of leadership in the digital era.

It takes courage and experimentation to get the right balance for your company. In the multi-player game, it takes courage to quickly trust your squad members and execute a rapidly evolving plan to achieve the goal. In business, it takes courage to challenge the current way of transforming your supply chain and take a new change management approach to land the Frontside Flip in the digital era. Learn more in DSCI’s latest paper, “Change Leadership in the Digital Era: A New Way to Accelerate Supply Chain Transformation.”

APPENDIX

DATA TRADING

Today's supply chains need to transform to meet the needs of the "New Customer," and having the right data is the only way to do it. One of the significant challenges companies face in transforming to a digital supply chain is the ability to share data internally and gain specific, critical data from customers and suppliers. Everybody talks about "Big Data," but sometimes the secret to success is to get the right "Small Data."

DSCI Data Trading Framework takes the general concept of sharing data between departments or with customers and suppliers down to the specifics of precisely what data you want and what you are willing to give. It provides you with a framework for assigning a value to data and understanding what you are trying to improve with it.

We outline the stages for completing your first data trade, then building and maintaining an effective data trading program. We provide tips and tools to get you and your company started. This section applies to any form of data trading, though it focuses on 1:1 trading. This section can be used in conjunction with the attached DSCI Data Trading Framework Simulator.

The DSCI Data Trading Framework has three interrelated stages:

1. Preparation
2. Negotiation
3. Governance

The [DSCI Data Trading Framework](#) helps you obtain the data you need to unlock the potential benefits of the digital supply chain. It helps to break down silos and facilitate collaboration with a purpose. It will help you build new performance-enhancing relationships with customers and suppliers. It gives you a way to systematically identify, value, and acquire the specific data you need.

You will always need to fill critical data gaps because the business environment and the needs of customers will always be changing. Developing a mature data trading process will give your company a competitive advantage. The right data trades will enhance your supply chain visibility and flexibility.

You can use the [DSCI Data Trading Simulator](#) to experiment with different scenarios or as a guide to data trading. Consider setting up a couple of teams to compete and see how they score on the Simulator. Get in touch to let us know how you're doing and if we can help you accelerate your path to becoming an expert data trader.

Big data is here to stay, but sometimes thinking small is the better approach.

DSCI MEMBERS



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