

Breaking the chain

Supply networks, not chains,
will power future growth in CPG

Future of supply chains.



Executive summary

Supply chains today are facing unprecedented challenges exposed and accelerated by COVID-19. Seemingly overnight, the global pandemic exposed weak links while simultaneously accelerating trends such as the rise of e-commerce and the role of supply chains as a competitive differentiator.

Consumers who previously may not have thought about how toilet paper arrives on store shelves suddenly found themselves learning about the intricacies of supply chains, manufacturing and distribution. Meanwhile, companies and industries nationwide are still grappling with the impact of new buying patterns, impacted supplier and service provider availability, and worker health and safety precautions.

COVID-19 demanded collaboration among manufacturers, retailers, carriers, government officials and other supply chain stakeholders, while underscoring the need to revisit traditional approaches to production, cost containment and the balance between efficiency and resiliency.

The disruption posed by the pandemic is not an end point. Instead, it marks the beginning of a supply chain future that will be dramatically different, enabled by new technologies and the trial-by-fire learnings of crisis response in 2020. Current challenges always speak to future opportunity.

**"Things are
changing by
the minute."**

**Rodrigo Lance,
Kellogg Company**

Seizing the future opportunity

This report examines the future of supply chain and its potential advantages. Findings are based on interviews with **more than 20 leading consumer packaged goods (CPG) supply chain executives**, as well as additional research from **Accenture** and **Coyote Logistics**. Perhaps no industry is better positioned to speak about supply chain transformation post-COVID than the CPG industry, given its rigorous stress test over the last year.



The stress test of CPG supply chains in 2020 revealed four key lessons:

1. IT IS TIME TO SHIFT FROM SUPPLY CHAIN TO SUPPLY NETWORK

CPG companies can now incorporate their respective ecosystems to operate like a complex, integrated network rather than a linear chain. This shift in mindset from "chain" to "network" is an important way to increase resiliency. As part of this evolution, companies will need to overhaul manufacturing, business operations, investment decisions, network planning, talent acquisition and more to stay competitive and relevant. This mindset shift is also a necessary step to remaining competitive at the intersection of emerging technology, transforming demographics, fast-moving global megatrends, shifting consumer demand and the impact of government action (or inaction).

2. TECHNOLOGY AND DATA MUST UNDERPIN THE NETWORK

Technology and data underpin so much of this future supply network, but it does not replace labor. A strong foundation of technology is complementary and works to enable more seamless production and movement of goods and services. Examples of game-changing technologies include process automation, autonomous vehicles, robotics, drones, artificial intelligence, blockchain, demand planning tools, consumer data sharing platforms, control towers and other integration platforms across the CPG ecosystem. Keeping pace globally will hinge on how well companies incorporate and use new technology, integrating it with irreplaceable human talents.

3. POLICY APPROACHES CAN ACCELERATE SUPPLY CHAIN RESILIENCY

The degree to which the private sector will be able to leverage technology and new tools will also be shaped by policy approaches in Washington and beyond. Questions will remain about how government can enable the use and adoption of new technology while preserving necessary protections across safety, privacy, workforce, trade and other domains.

As policymakers consider influencing the landscape of supply chain, this report identifies areas of opportunity to improve supply chains through smart policy changes:

- Encourage public-private sector collaboration; promote holistic and coordinated government policies to drive supply chain efficiency and resiliency.
- Comprehensively map critical supply chains to enhance visibility into supply chain performance and better assess risks and vulnerabilities.
- Incentivize the acceleration of new technologies and infrastructure that will allow manufacturers to retool their supply networks and make transformative investments, which will equip them to better anticipate future growth and increase national economic competitiveness.

4. SUPPLY NETWORKS WILL DEVELOP NEW ATTRIBUTES TO BE SUCCESSFUL

Supply networks will become collaborative, intelligent, sustainable, adaptive, connected, transparent and customer centric. The future supply network will be vastly more flexible and less static, which is key to being able to adapt during periods of volatility and uncertainty. Capacity might become less fixed, transportation more adaptive, resources more fluid and manufacturing more collaborative as the ability to scale up and scale down quickly becomes essential to survival.

"Supply chain management is evolving because it is not about 'supply' only; it's not about 'chains,' and it goes beyond 'management.'"

Maria Rey-Marston, Accenture

Building a competitive edge

Taken together, the shifts underway in supply chain speak to a dramatically different future. In fact, the evolution of supply chains has reached a critical inflection point which can no longer be seen solely through the lens of efficiency or cost reduction. Supply chains have emerged as key differentiators and part of any company's overall value proposition.

Supply networks will separate winners and losers in this new era. In making this case, this report is structured in three parts:

1. Defining the future of supply chain – the CPG industry's collective vision, articulated through key operating principles and key enablers.
2. A discussion of the consequences of not pivoting supply chains to more adaptive supply networks, where consequences are estimated both in financial and non-financial terms.
3. An approach to embark on this transformation, validated by some of the most trusted voices in the industry, academia and consulting.

We intend this document to serve as a roadmap for industry efforts, illuminating the path forward at a time of significant disruption. In its comprehensive assessment of the future state, we hope it will inform new discussions around how to approach key investment decisions, shape new policies, respond to opportunity and grow the business in a sustainable way for decades to come.

"Understanding what transformational activities require activation will be the key differentiator in determining future success."

Paul Gallagher, General Mills

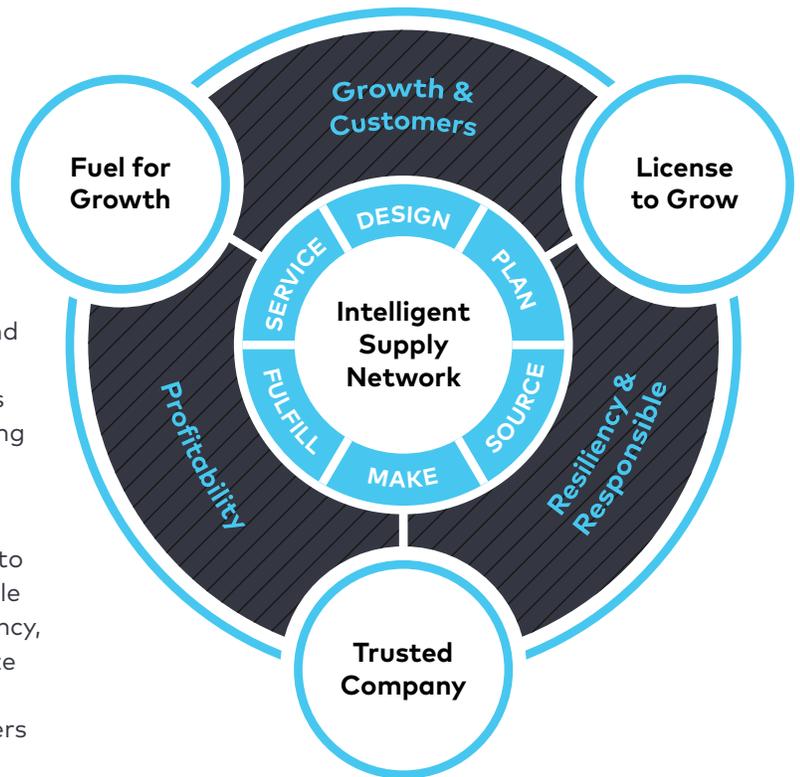
Shaping the Future Supply Network

The COVID-19 era has shown businesses that the future belongs to those that can efficiently offer and deliver innovative products and services that solve fundamental human needs. Growth in new markets and across the consumer base will come from serving consumers across channels—providing tailored recommendations and a greater variety of choices.

Leaders will have the agility to match and respond to today's shifting supply and demand. They will be able to deliver on escalating requirements for transparency, sustainability and social responsibility. They will seize the golden opportunity that technology advances have created for the supply chain. Ultimately, winners will be those that can offer unique experiences for consumers powered by the competitive advantage of their digitally enabled supply networks.

The explosion of data and powerful analytics has helped supply chain leaders automate decisions and, more importantly, improve them over time by using machine learning and artificial intelligence (AI). Companies are now able to interconnect business nodes in a given ecosystem to operate more like a complex network than a linear chain (Figure 1).

Figure 1: The Intelligent Supply Network



Source: Accenture

"We don't need more data. We need better data mining tools."

Pascal Montilus, Colgate-Palmolive

Supply networks of tomorrow have new attributes:

Connected.

Digital operations and new technologies make it possible for CPG companies to design and run operations in new ways that keep up with consumer requirements. A connected supply network will sense and respond to demand signals, persistently optimize itself and continuously adapt cost structures, leveraging capacity in the ecosystem (either manufacturing and/or new methods of distribution).¹ For supply networks to exist, visibility is a prerequisite to the transformation of current supply chains.

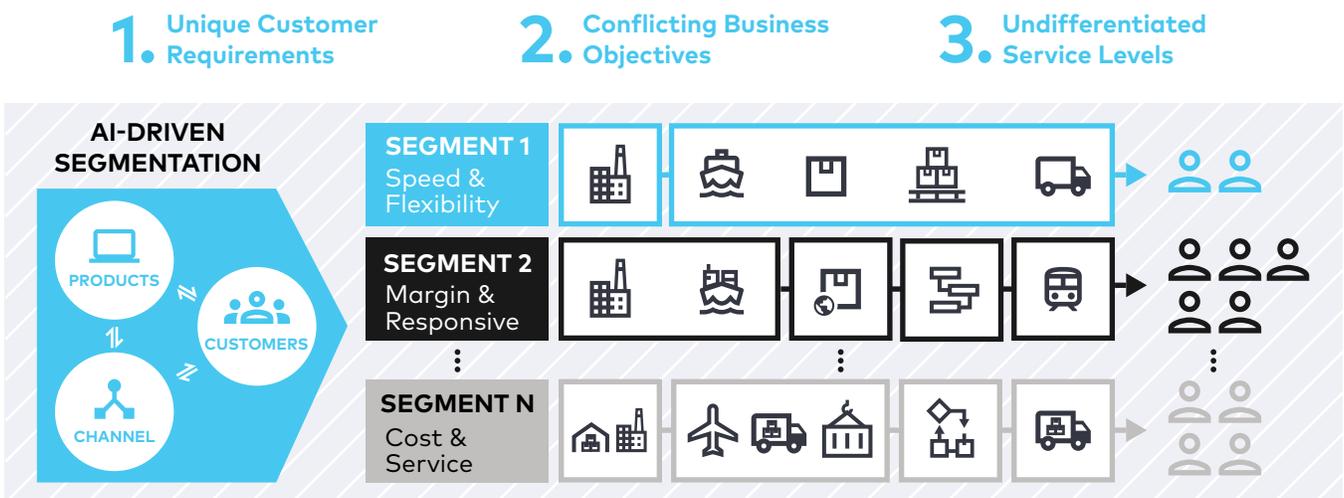
Intelligent.

Supply chain leaders in consumer goods will take advantage of the benefits that technology affords. Right now, more than half (57%) of supply chain professionals are challenged with identifying ROI from their technology investments and another 50% struggle with integrating new technology with their legacy systems.² New technologies are what will enable the flexibility, responsiveness, transparency and speed needed in today's environment. Leaders are taking note. In a recent Accenture survey of CPG supply chain executives, 5G and IoT and connected devices were identified as the top digital technologies they were focused on to realize customer-centric growth.³

Customer-Centric.

Customers and shoppers today have an expectation for more connected, seamless, customized and secure experiences. Companies with supply chain strategies that are based on customer values perform better. Many are leveraging the power of analytics and implementing segmentation strategies to service different customer and channel needs to fulfill unique customer and consumer demand profiles (Figure 2). A customer-centric supply chain can drive 60% improvement in forecast accuracy⁴ and power profitable exponential growth.

Figure 2: Segmentation tailors the supply network to fulfill unique demand profiles



Source: Accenture

¹ Relevance @ Scale in Consumer Packaged Goods, February 18, 2020, Accenture
² "Technology + Humanity: 3 Steps to Increase Your Digital Supply Chain Advantage;" Coyote; <https://resources.coyote.com/technology-humanity/3-steps-to-increase-advantage>

³ Accenture 2020 Supply Chain Research Survey, Accenture, July 2020.
⁴ Drive Your Own Disruption, 2019, Accenture

Collaborative.

Consumer goods companies will work with retailers, suppliers and other ecosystem partners (carriers, competitors, customers) to collaborate on challenges, share capacity and align decision-making. By leveraging extensive ecosystems, companies will not depend totally on internal resources, and their decision-making can be improved. Cooperation will increase, with companies that were previously competitors working together to deliver value that they cannot create and deliver on their own. A real evolution towards "co-opetition" is possible today. Sophisticated ecosystems with agile and global coordination will position companies to be able to endure future crises.

Sustainable.

Managing the supply network with an environmental, social and governance (ESG) focus will help reduce impacts while driving operational excellence and bottom-line growth. Traceability and transparency of responsibly sourced materials drove an additional \$750 million in retail value per year and the decision for brands to source from 100% sustainable and certified suppliers helped secure contracts with distributors and increased sales by 5-12%.⁵ Sustainability is also important to consumers. 1 in 3 rank sustainability among their top 3 factors in making purchase decisions.⁶

Resilient.

COVID-19 proved that many CPG companies did not have the strength and flexibility to weather the storm. For instance, companies face a significant gap when it comes to having systems that are able to withstand the disruption caused by adverse events and conditions. Only the top 10% of 8,000+ companies surveyed have cracked the code on systems resilience. The bottom 15% could miss out on 46% of annual revenue if they do not change their supply chain and operations strategy to become more resilient.⁷ CPG companies need a risk-sensitive setup of the supply chain that leverages multiple sourcing and flexible manufacturing strategies balancing cost, service, risk, trust and profitability. The new supply network will provide end-to-end visibility to allow real-time decisions, be able to shift production to other geographies and have advanced ecosystem relationships that are globally coordinated and agile.

"As a structure, networks are inherently **better equipped** to manage disruption than chains. Networks distribute '**stress**' in multiple nodes, which means leveraging external capacity and greater visibility to anticipate and manage disruption."

Chris McDivitt, Accenture

⁵ Ibid.

⁶ Accenture COVID-19 Consumer Pulse Research: Wave 7, conducted 16th – 22nd June, Accenture, 2020.

⁷ *Full Value. Full Stop. How to Scale Innovation and Achieve Full Value with Future Systems*, 2019, Bhaskar Ghosh

"COVID will force trading partners to analyze joint business processes in the future. The current disruption will drive permanent change."

Rodrigo Lance, Kellogg Company

As former supply chains become smarter, connected, customer-centric, collaborative, sustainable and more resilient, **consumer goods leaders must evolve their thinking** on how to redesign their operating model. The evolution to supply networks is not just semantics.

Everything Is Changing in the Supply Chain — Why Not Change With It?

Market dynamics have dramatically accelerated because of the pandemic, eliciting changes on the demand, supply and product sides of the network. Consumption patterns shifted rapidly, driving unprecedented volatility on the supply side (shippers) and in product portfolios. Amid the disruption in a once stable sector, traditional, well-defined supply chain processes may not deliver the consumer experiences and the business performance required to succeed in the current environment and upcoming decades.

Business forces driving the sea change include:

ON THE DEMAND SIDE

The role of the consumer has evolved, forcing CPGs to think about demand in new ways

Consumers want choices across channels

Consumer preferences and behaviors have changed overnight. People are shopping and consuming differently — from stocking up on groceries in larger quantities to signing up for subscription services to shopping online for home delivery. U.S. e-commerce remains almost doubled versus a year ago.⁸

Technology and data provide choices and people are taking advantage of these options. In response, future supply chains must serve a wider range of consumption occasions and shopping experiences in true omni-channel fashion. Out-of-stocks from CPG suppliers in the U.S. cost retailers \$47.4 billion annually⁹ and yet COVID-19 has exacerbated this disruption in service with many changes in demand patterns both in online and offline commerce. This reality points to supply chain processes that cannot understand or adapt to changes in consumer behavior, store operations, big data or anticipate upcoming disruptions in the network.

What people buy — and why they buy it — has changed

COVID-19 sparked demand surges for certain products. For instance, essentials (e.g. food and home care) have been on the rise while discretionary products (e.g. beauty) have declined in the short-term. Most, if not all, supply chain executives could not have prepared for this shift, even with the most sophisticated forecasting models. But worse, supply chains are not equipped to respond to shifts. They don't have the flexibility needed to pivot as demands change. Imagine if CPG companies could shift in real time to prioritize premiumization as people begin to want small luxuries and treats, or affordability as some will continue to shop for value during this financial downturn.

To respond, supply networks need efficient processes, better integration, more collaboration and a keen understanding of consumer behavior. These improvements add up to greater adaptability.

⁸ Bank of America, US Commerce and ShowSpring Research

⁹ Cited by IRI On-Shelf Availability report January 2019. Last accessed June 15, 2020 https://www.iriworldwide.com/IRI/media/Library/pdf/2019_IRI_OSA_POV.pdf



More personalized – yet curated – products and experiences

Consumers want choices, but they also want companies to do some of the work for them by curating products and experiences. For instance, a consumer's preferences about beauty and personal care products may open the door to customized products (e.g. consumer-specific shampoo), personalized experiences (e.g. online beauty consultations) and tailored recommendations (e.g. "if you bought the shampoo, you may want the conditioner").

There is an art and a science to translating consumer expectations into manageable portfolios. CPG companies can segment to markets-of-one, but they'll need to tailor products to individuals while preserving scale in production and distribution.

Focus on health, sustainability, safety and transparency

The pandemic affected what consumers want out of products – and the companies that make them. People have placed greater importance on sustainability, environmental and social responsibility. Sixty-two percent of consumers say the pandemic will increase their focus on the environment.¹⁰ As such, they expect transparency and traceability of each product, enforced by regulation. Some CPG companies are responding: in a recent survey of CPG supply chain executives, sustainable products and services and sustainable (green) supply chain and manufacturing were both in the top five customer value propositions driving their supply chain investment over the next three years.¹¹

The virus also intensified consumers' focus on products that support better mental and physical health. One in two consumers plan to spend more time on self-care and mental wellbeing.¹² CPG companies may not be able to develop products and services that address a variety of social, environmental, health and wellness needs on their own, so this is a time to call on ecosystem partners who can help fill in gaps in capabilities or talent and provide scale at speed.

¹⁰ Ibid
¹¹ Ibid
¹² Ibid



Cost of Goods can be **2%-4%** higher if portfolios have not been rationalized in a consumer-centric world and digital efficiencies have not been improved.

Source: Accenture analysis

"It's challenging to become more responsive to niche opportunities (e.g., direct-to-consumer, ecommerce) while maintaining the value proposition of scale."

Pascal Montilus, Colgate-Palmolive

Consumer demand is knowable

Demand forecasting has been the key to supply chain and inventory planning for decades, yet great forecast accuracy has eluded most CPG organizations. Issues with sales data availability and quality, and the ability to understand the impact of new events on the historical forecast, are the most common hindrances to great accuracy in forecasting. COVID-19 brought a historical halt to companies' abilities to forecast the immediate future and exposed the limitations of traditional time series demand predictions. For instance, throughout most of Q2, truckload market activity cycled ferociously from one week to the next.¹³

Leaders in consumer goods have quickly pivoted to an approach in which demand sensing, based on current demand signals, is replacing forecasting. Companies are capitalizing on access to third-party data from mobile devices, urban mobility data from connected cities, accurate weather-based demand models and a multitude of sources that build a company's capability to predict future demand in the supply network. Data is the lifeblood of shaping the future of knowing demand.

"The circular supply chain is where long-term value unlocks. A new generation of consumers will have different demands, driving different decisions. More agile supply chains will be required to reduce volatility and be more responsive to disruptions. Improved trading partner collaboration via data sharing and transparency is needed to help satisfy consumer demand."

Yone Dewberry, Land O'Lakes

¹³ "Q3 2020 Coyote Curve Market Guide: Where Do We Go from Here?" Coyote; <https://resources.coyote.com/source/us-truckload-market-guide>

ON THE SUPPLY SIDE

During COVID-19, the supply side also experienced volatility.

Most consumer goods companies have seen impacts on:

Raw material availability

Supply volatility increases when CPG leaders experience challenges in sourcing certain products or supply chain assets. Companies, such as Coca-Cola, experienced shortages of Stevia and sweeteners from China for some of their beverages during the pandemic¹⁴ and have been quickly adapting.

Manufacturing capacity constraints

There are imbalances in supply and demand. Manufacturing capacity is down, with (temporary) shutdowns happening regularly, which lead to workforce variability. Safety procedures impact overall line productivity.

Capacity overall today is not flexible. Companies can't simply bring a new facility online overnight at it requires investment and an adequate payback period. The future supply network has the flexibility to rapidly expand or scale back manufacturing. Think of pop-up stores or ghost kitchens. There are many new models for getting products into the hands of consumers more quickly.

The most significant positive and long-term change in the supply side of operations is companies' ability to extend, on-demand, their capacity through extended partnerships in their ecosystem. Technology has enabled CPG companies to have full visibility of their extended capacity with contract manufacturers, third-party logistics companies, and with established and new suppliers (see sidebar Nine Technologies Breaking Chains and Building Networks).

Joint visibility into demand & supply shifts and disruption risks across manufacturer and retail needs (mutual dependency)

- **Retail** requires better visibility on supply and disruption risks
- **CPG** requires better visibility on demand and risks of major shifts
- **Trade** is shifting to encourage the right buying behaviors and avoid peaks and valleys

¹⁴ <https://www.cnn.com/2020/03/24/coronavirus-coca-cola-ceo-says-supply-chain-is-creaking.html> accessed July 30, 2020

Nine Technologies Breaking Chains and Building Networks

For a long time, state-of-the-art technology has determined and constrained the ability to deliver on the vision for the future of supply chains and operations at scale. Optimal processes and execution of operational decisions require complex analyses of trade-offs, calculation of competing priorities involving large data sets and maximizing objectives for multiple echelons of the network.

Today, the state of technology makes it possible to execute the vision of adaptive supply networks, as technology is capable of processing big data at scale, with real-time analytics, provide 360-degree visibility of any global network and immediately convert these outputs into accurate predictions of consumer behaviors.

Technology has enabled the industry to align and execute coordinated business and supply chain plans with internal business functions and ecosystem partners. Fully powered by data, advanced analytics and cloud-based platforms, companies have an opportunity to run a virtual, asset-light, supply capacity by leveraging existing capacity and assets externally. Supply networks of the future will not be asking how to manage a constrained capacity, but how to map and leverage a rich capacity outside of the firm's boundaries.

These demand and supply realities are advancing a new definition and scope of work for traditional supply chains. They will evolve into adaptive supply networks that deliver on rising consumer expectations and enable exponential profitable growth.

"How do we enable supply chains to become growth vehicles? We need to become better at leveraging partnerships with third-parties, co-packers and contract manufacturers. They may have technologies and capabilities we don't own and it's an environment to test new ideas."

Pascal Montilus, Colgate-Palmolive

What we have

What we need

1. Cloud Computing and High-Performance Computing

Computing power and remote access have been long-term constraints to accelerate complex calculations and drive better decision-making at the point of action.

Cloud computing is a game changer to enable real-time, high-performance supply networks. Computing data real-time and providing outputs at the point of decision making will change how operations and processes will be improved and interconnected.

2. Real-Time Simulation for Supply Network

The scope of supply chain visibility today is mostly for internal processes and with a limited set of ecosystem partners. The ability to run real-time scenario planning is limited.

New control tower technologies with the ability to ingest a vast amount of data sets from a variety of types and sources provide 360 visibility of the network, creating digital twins of physical operations and running real-time simulations.

3. Distributed Ledgers

The world of traditional supply chains is architected around databases and populated by duplicate records of transactions that are neither immutable nor secure at the single party level.

These deliver transaction privacy, data security and infinite scalability. Blockchain is an example of distributed ledgers. 'Smart contracts' or transaction protocols automatically execute, control or document legally relevant events and actions according to the business rules in the distributed ledger.

4. Artificial Intelligence/ Machine Learning

Most supply chain systems run on human-defined business rules and computer programs and algorithms that take input data, transform it and generate outputs.

AI makes it possible for future supply networks to be run by algorithms that generate insights (machine learning) and learn from their own experience (AI), adjust their decisions to new inputs and variables (with real-time data) with faster and more comprehensive analytics than humans could process.

5. Data Federation and Blockchains

ETL (extract, transform, load) and ELT have been the norm for data processing in supply chains and the basis of most SC analytics. Both methods are limited by larger-than-ever datasets and concerns about security and privacy.

More powerful in-memory analytics and techniques to perform data visualization, data mining and data analytics without moving data sets from current locations, will revolutionize how we run adaptive supply networks powered by blockchains and smart contracts.

Source: Accenture

What we have

What we need

6. Robotics and Robotic Process Automation (RPA)

Automating physical tasks or computational tasks at the front lines of supply network operations is critical in repetitive physical processes (such as picking in a warehouse or verification of requirements of a given transaction).

Both physical robots and bots, short for RPA technologies, have made a tremendous impact in the operation of supply networks, such as repetitive execution and quality validation tasks. CPGs are deploying thousands of bots, automating routine tasks like scheduling delivery windows.

7. Autonomous Vehicles and Drones

Transportation is the bread and butter of logistics and operations, and for a long time it has been very dependent on the availability, quality and sustainability of human operators.

The promise of self-guided vehicles for transport and drones in last mile delivery are now a real option. CPGs now have flexibility to ship to consumers and customers without the limitations imposed by who is driving.

8. Extended Reality (XR)

Supply networks and operations are some of the most visually rich business processes, e.g., products being made, orders being picked, trucks being loaded and materials being received. Today most supply networks rely on barcode scanning to see real-time updates. Moreover, companies rely on on-the-job training to show employees and operators how the work is done.

CPGs now have access to technologies, including image processing, and user experience (UX) design that allow hybrid reality. This hybrid combines virtual reality with extended reality options, allowing the control centers of the future to be based on accurate digital representations of physical realities.

9. Natural Language Processes / Conversational Computing / Chatbots

Since the 19th century, the default human-machine interface was the keyboard, which constrained complex supply network activities, e.g., from getting needed data inputs and connecting with operations teams. Now, mobile devices, cloud and advanced computing have broadened human-machine interfaces.

Image recognition already plays a big role in areas like shipping quality and inventory counting. Technologies that process intention and content into voice processing, known as Natural Language Processing, will continue to revolutionize how data inputs are entered into systems and how people interact with their favorite apps.

Source: Accenture

ON THE PRODUCT SIDE

COVID-19 caused companies to focus on essential products and pause or retire certain SKUs.

As demand and supply continue to evolve, CPG companies must reshape their product portfolios for growth. We see exciting innovations in product categories that reconfigure product portfolios.

- Width** | i.e. the number of product lines (oral care, personal care, pet nutrition), can help create growth and resilience. A wide portfolio could also help enable direct-to-consumer.
- Length** | i.e. number of categories in the product line (standard toothpaste, whitening benefits, health benefits) provide products in growing categories and those suited for different channels (e.g. on/off trade) and create new products through innovation.
- Depth** | provides variety for each product (flavors, pack sizes) and is how companies can cater to diverse consumer needs across markets, channels and segments by offering more personalized products.
- Optimize** | the assortment to provide high-margin SKUs (considering full complexity costs) and shifting consumer needs.

Growth opportunities are popping up everywhere. Finding a CPG company's right assortment will be easier today when they have a direct relationship with consumers and can more easily learn firsthand about their needs and expectations (along with assortment optimization capabilities to provide high-margin SKUs, considering full complexity costs, and shifting consumer needs).

CPG companies that do not transform will leave value on the table

Transforming to a supply network will lead to benefits on the demand and supply sides:

Joint product traceability from origin to consumer to provide consumer benefits and meet regulatory requirements (mutual dependency)

- Retail needs upstream transparency, e.g. sustainable product origin.
- CPG needs downstream transparency, e.g. to manage product recalls.

Greater fulfillment agility

- Manufacturing and inventory flow are key right now to stay in stock and manage operations.
- Order fulfillment aligned to the channel: more frequent, smaller deliveries and faster replenishment (demands from downstream increasing demands in direct deliveries to next-day delivery).
- Packaging tailored to the channel: e.g. shelf-ready packaging.

Cost reduction to maintain profitability

- Short-term loss of demand creates cost pressure in retail and CPG in certain categories.
- Longer-term cost pressure from consumer price sensitivity moves across the network.

71% of companies did not have a business operations contingency plan for the outbreak lasting more than a few weeks¹⁵

"Tension exists when innovation, SKU complexity (when 50% of the SKUs drive 98% of the volume), customization and the need to be more efficient all collide."

**Rob Haddock,
The Coca-Cola Company**

¹⁵ (Webinar) The Economist: Coronavirus outbreak – economic and business implications, 03-Feb 2020

What Is the Financial Impact of a Future Supply Network?

Supply networks of the future will be responsible, resilient and profitable.

Potential results for a \$10 billion consumer goods company, based on Accenture's experience, research and benchmarks:

- Sales increase **1%-3%** (and potentially more) given current rates of 'out-of-stocks.
- Cost of goods reduction **3%-5%** by spec simplification and line efficiencies improvement.
- Indirect labor cost reduction **20%-40%** by increased process simplification.
- Distribution cost reductions **3%-6%** by cost to serve optimization.
- Inventory write-off reduction **10%-20%** by safety stock policy changes.
- **15-30%** inventory reduction.
- Forecast accuracy: **96% achieved**
- On-Time In-Full (OTIF): **98% targets met**
- Carbon emissions: **20-40%** reduction by optimized transport lanes and truck types.
- Energy efficiency: **15-20%** improvement.

How Do Consumer Goods Companies Build New Supply Networks?

Each supply chain executive presented a compelling vision of the future along with a solid case for shifting to a network mindset to meet the needs of consumers going forward. Accenture added their perspectives from multiple projects and on-going research to augment these interviews. The recommendations below outline the path to get there—and deliver bottom-line business results.

LEAD WITH YOUR VISION FIRST

Transforming from a traditional view of the supply chain to an adaptive network requires a clear view of the characteristics that comprise the future supply network and a vision for infusing these capabilities in the supply chain. This vision will guide choices across people, process and technology.

As CPG companies visualize their future supply networks, it is important to understand where they are today. As previously outlined, the two fundamental assumptions of supply chain management have changed. Demand is knowable and capacity is virtually unconstrained. Businesses must account for these changes in current operations and processes. They must determine which trends have affected the business the most. They must understand the experiences that customers and consumers now expect, and then shape a fast response. A clear vision will inspire the organization, its customers and its partners to help in the transformation journey and to allocate the resources and effort to accomplish the transformation.

"The supply chain of the future will be customer-centric and focused on E2E engagement. Technology will be the driver and the value will be on the back end. In Europe, we're driving productivity by E2E value mapping and finding opportunities for improvement and value-add collaboration."

Rodrigo Lance, Kellogg Company

TRANSFORM IN COLLABORATION WITH CONSUMERS AND CUSTOMERS

The digital age has placed new expectations of service and availability of choices at consumers' fingertips. Future supply networks need to deliver on those expectations while also delivering successful business outcomes.

A focus on customer service and consumer experiences will unite everyone around the need to modernize and transform your current product-centric supply chains into customer-centric supply networks that are fit for purpose. This process is called co-creation, and it involves critical players co-designing the journey.

"There's the need for personalization and unique markets but there are manufacturing processes and expenses that run counter to that. Flexibility and customization are required to meet consumer needs."

**Adrienne Beckett, Formerly
Post Holdings**

"The new normal will create new processes addressing consumer demand. It requires the right data, in front of the right people, with the right skill sets. CPGs need to step up and build data-driven capabilities."

**Beverly Bates,
The Procter & Gamble Company**

USE DATA TO GUIDE YOUR JOURNEY

There were times in which past professional successes were a good proxy for future successes. Existing knowledge and benchmarks helped guide the path to the future. Today, the chapters of future supply networks are being written with the help of experimentation, data analytics and direct consumer engagement to co-create the services they need.

Let data guide the transformation journey—data from transactions, from social media, from third-party sources, from internal networks and from external partners. Properly harvested, processed and consumed, data will inform the decisions that make future supply networks fit for purpose. Transformational technologies will be essential to enabling this new future.

MANAGE A BALANCED PORTFOLIO OF TRANSFORMATION PLAYS

CPG companies need to deliver for the NOW and the NEXT.¹⁶ A portfolio of projects that is too focused on short-term results will leave a company disadvantaged for the future because it won't have the innovation needed to stay in the game. A portfolio of supply network transformation projects that does not address immediate needs, but only focuses on the long-term vision, will compromise the resources for the required changes and may put the company at risk.

As companies' supply network leaders pivot to the future¹⁷ they need to craft a well-balanced portfolio of transformational plays that:

- Identifies how to capture residual value in the **KNOWN** areas of traditional supply chains and propose projects that find where value is and how to get it. This will be mostly around continuous improvement initiatives in known processes and functions.
- Defines a portfolio of projects that address current needs of the business in the existing environment. The **NOW** projects should capture new value and build the adaptive capability that future supply networks need.
- Prioritizes a portfolio of transformational plays to address the **NEXT** capabilities and fulfill the promise of digital supply networks.

This portfolio approach to prioritize and balance investments for the supply network transformation has been tested in different industries deeply disrupted by technology where users and consumers have high expectations of service and seamless experiences.

"The value chain must be powered by and for growth. Transformational activities will be driven by customers and consumers. Partnerships, innovation, technology (data accuracy, AI, predictive analytics) and talent will all contribute to the digital supply chain of the future."

Paul Gallagher, General Mills

¹⁶ As described in "Pivot to the Future: Discovering Value and Creating Growth in a Disrupted World" (O. Abbosh, L. Nunes, 2019) successful transformations are delivered by a combination of initiatives and projects that create different portfolios to capture value NOW and to prepare the business in the NEXT.

¹⁷ O. Abbosh, P. Nunes, L. Downes, "Pivot to the Future: Discovering Value and Creating Growth in a Disrupted World" 2019

ADOPT A HUMAN AND MACHINE MINDSET

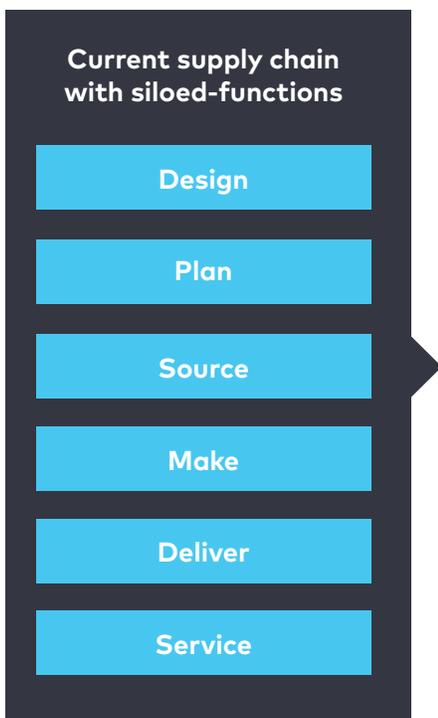
Supply chain practitioners' mindsets have been forged in an age of complexity, lack of connectivity, local optimization, complex tools and in many cases, difficulty explaining to the rest of the organization the forces that govern the operation of new supply networks.

The human and machine mindset acknowledges the experience of planners and managers and clearly articulates the value of technology to improve the quality of decision-making at speed via digitization of many processes. Technology will help elevate planners in their role, enabling them to focus on making complex, strategic and cross-functional decisions while machines can take on repetitive, data-intensive, time-sensitive activities that humans can't complete alone. A survey of supply chain leaders indicated their preference towards a balance of approximately 60:40 between technology/automation and human expertise.¹⁸

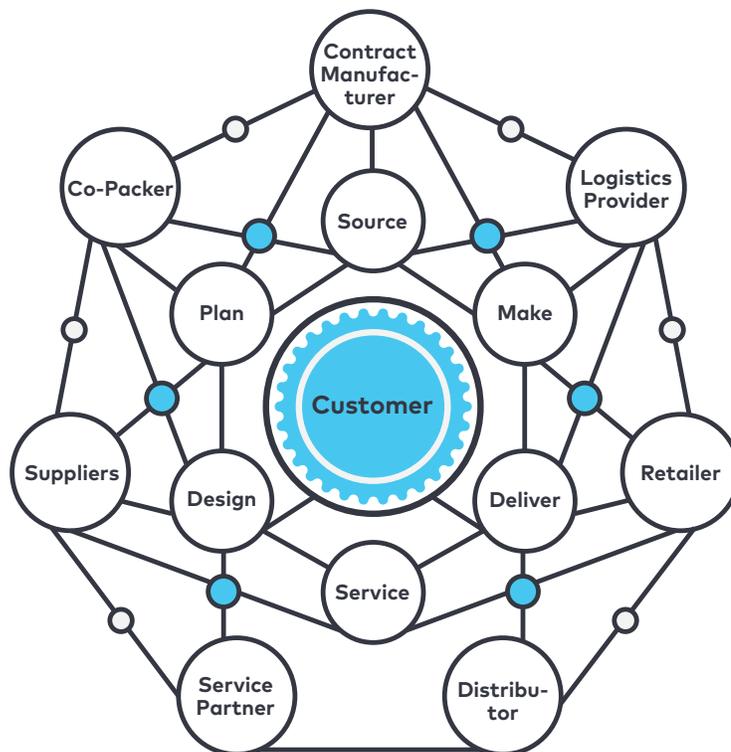
"P&G is innovating with customers. Machines are making more decisions than people. Digital fluency in the work force — coding skills, algorithms that capture disruption — is the new requirement."

**Beverly Bates,
The Procter & Gamble Company**

Figure 3: From chains to networks



...transformed to interconnected, intelligent, customer centric supply networks...



Source: Accenture

¹⁸ <https://resources.coyote.com/technology-humanity/3-steps-to-increase-advantage>

**CREATING A NEW NETWORK FOR
EXPONENTIAL GROWTH**

Perhaps the most dramatic changes we have ever seen are now happening on the supply and demand sides of today's supply chains, and there is no end to volatility in sight. Consumer goods companies must evolve to retain relevance. **They must transform the supply chain into a supply network** that is connected, intelligent, customer-centric, collaborative, sustainable and resilient. To get there, leaders will need to make hard choices that are informed by data.

Portfolios will be reimagined and reconfigured according to personalized preferences and needs. **Customers and consumers will have a seat at the innovation table.** Human + Machine will collaborate to improve the quality and speed of decisions.

Consumer goods leaders will seize the opportunities this **new era** presents. They will break the shackles of legacy supply chain models and create and operate these new networks that power exponential growth.