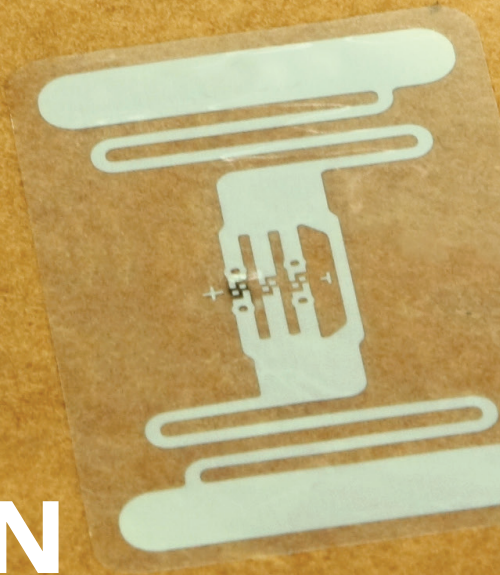


Grayway



LEAD STORY

SUPPLY CHAIN MANAGEMENT IN THE DIGITAL AGE

How Ever-Evolving Technology is Transforming
the Supply Chain Function

page 2



WELCOME



Stephen Gray
President &
Chief Executive Officer

Remember when the mad dash to buy last-minute gifts meant a trip to a crowded store, waiting in long lines and lots of frustration? Today—in the Digital Age—a quick Google search offers consumers a mountain of product options, delivered to their doorsteps in record time.

This issue of the GrayWay takes a look at the profound impact the Digital Age has had on consumer expectations and demands, and how supply-chain professionals are responding to satisfy this demand. We also offer expert advice to manufacturers and distributors on best practices for competing in the Digital Age.

*Gray practices methods
which protect our environment.*



21ST-CENTURY SUPPLY CHAIN SOLUTIONS



INSIDE THIS ISSUE



SUPPLY CHAIN MANAGEMENT IN THE DIGITAL AGE

How Ever-Evolving Technology is Transforming the Supply Chain Function



COMPETING FOR E-COMMERCE IN THE GLOBAL MARKETPLACE

What Manufacturers Should Do Today to Prepare for the Demands of Tomorrow



SUPPLYING THE FIELD OF SUPPLY CHAIN

One Organization's Effort to Attract More Professionals to Supply Chain Jobs



GRAY... WE'RE BUILDING

Kubota Manufacturing of America
Gainesville, Ga.

SUPPLY CHAIN MANAGEMENT IN THE DIGITAL AGE

How Ever-Evolving Technology is Transforming the Supply Chain Function

There is no question the Digital Age has had a profound impact on the way manufacturers do business. Shop floors have been transformed into high-tech production centers; product designers have cutting-edge design technology at their fingertips; and operations are leaner and more streamlined. But perhaps no manufacturing department has felt the impact of the Digital Age quite like supply chain.



Abe Eshkenazi
Chief Executive Officer
APICS

The introduction of online shopping as a fulfillment method has created a lucrative revenue stream for manufacturers of consumer products, but has also transformed today's consumer into a highly demanding shopper who expects high-quality products on their doorstep in record time.

"Twenty years ago, supply chain was relegated to a corner of the business," said Abe Eshkenazi, chief executive officer for APICS—the premier professional association for supply chain, operations and logistics management. "Now, supply chain touches every element of a business and supply chain managers have to understand how all the different functions—marketing, sales, finance—of the business work together and navigate those waters."

A supply chain operation in the '90s looked nothing like it does today. Then, parts of warehouses and product distribution centers were focused on mechanization and material handling equipment—getting parts and products

from point A to point B and storing them effectively utilizing equipment and human labor. The phrase "warehouse management system," or WMS, was not yet in the supply chain vernacular, and the efficiency of a supply chain was largely based on human innovation and productivity.

Today, manufacturers and their distribution centers rely heavily on integrated information systems to move parts and products through the supply chain. Innovations like global positioning systems give companies a quick and easy way to view inventory in real time—where it is and how it's moving through the supply chain. And that is a tremendous benefit in being able to make commitments to customers, according to Sedlak Management Consultants' Lou Cerny.

Gartner Supply Chain Rankings

Masters Category

Apple
P&G



Top 25

- 1 Amazon
- 2 McDonald's
- 3 Unilever
- 4 Intel
- 5 Inditex
- 6 Cisco Systems
- 7 H&M
- 8 Samsung Electronics
- 9 Colgate-Palmolive
- 10 Nike
- 11 Coca-Cola
- 12 Starbucks
- 13 Walmart
- 14 3M
- 15 PepsiCo
- 16 Seagate Technology
- 17 Nestlé
- 18 Lenovo Group
- 19 Qualcomm
- 20 Kimberly-Clark
- 21 Johnson & Johnson
- 22 L'Oréal
- 23 Cummins
- 24 Toyota Motor
- 25 Home Depot



Lou Cerny
Sedlak
Management
Consultants

“Real-time data was not that prevalent in the past,” said Cerny, who is vice president of Sedlak, a leading supply chain management consulting firm. “The more I know about everything that my product is going through, the better able I am to react to things happening in the marketplace. And that carries all the way through to the final interface with the consumer.”

Today’s consumer product manufacturers have the distinct advantage of tracking the sale of a product, including the buying habits

of individual consumers. This knowledge means that product manufacturers can better anticipate the wants and needs of their customers, and create new products accordingly. The result: a more satisfied, but highly demanding customer.

“As the needs of the consumer continue to evolve and become more demanding, manufacturers can’t help but change how things are done,” said Cerny.

Cerny says there has been significant investment in what is called “omni-channel fulfillment”—an approach to product sales aimed at providing customers with seamless shopping experiences via a variety of channels like brick-and-mortar stores, catalogs and online stores. And while consumers are experiencing a whole new level of customer service, the demands of this type of order fulfillment are keeping supply chain departments on their toes.

“The technology and methodology is ever-evolving,” said Cerny. “People are learning on the fly because it’s really only started to evolve over the last handful of years, and the supply chain model’s continually changing. Everyone in supply chain is experimenting to some degree.”

One example, Cerny says, is the evolution of WMS systems from those that strictly provide information on what’s going on in the warehouse—from the inventory through the order flow in the warehouse—to systems that track information throughout all aspects of supply chain management.

“What we’ve seen is that there’s more specialization in WMS software,” said Cerny. “Conveyor suppliers in the past basically got all of their information from the warehouse management system. But, now, they’ve taken it to the next level with warehouse control systems. These are taking much of the overhead workload—all of the data manipulation and how things flow on the floor of the warehouse—and controlling it with the warehouse control system, allowing the warehouse management system to concentrate basically on order control and inventory oversight for what’s in the facility.”

And when demand is high for products during peak seasons like holidays, Cerny says it’s vitally important for supply chain departments to have information systems that are multi-lingual and easy to learn in order for seasonal workers to become productive as quickly as possible.

“We’re seeing a lot more opportunities for voice systems to be able to work with multiple dialects and languages and are very easy to train people on,” he said.

Due to the rapidly changing needs and demands of the marketplace, Cerny says it’s tough to predict what the next best thing in supply chain management will be, but says technology like radio frequency identification (RFID)—a tracking system that uses intelligent bar codes to track items—has potential.

He is also confident that supply chain and distribution centers will continue to see greater integration of information systems—enterprise resource planning, distributed order management, warehouse management, warehouse control, warehouse execution, labor management—with emphasis on mechanization and how it interfaces with fulfillment center operations teams to assure the consumer can have the item they want, when and where they want it.

Amazon.com continues to create new and innovative ways to deliver product to customers in record time. The company recently announced its plans to utilize branded tractor-trailers for shipping packages between fulfillment centers and delivery trucks for distribution of products directly to customers. The move is an effort to own its shipping and distribution services previously contracted out to trucking companies and couriers like FedEx, UPS and the U.S. Postal Service. The result: same-day package delivery to customers instead of days.

APICS’s Eshkenazi says supply chain management can be expected to grow significantly in importance for not just manufacturers of consumer products, but all manufacturing and distribution sectors.

“The focus in supply chain management today is squarely on the application of e-business and its impact on manufacturers and distributors,” he said. “Omni-channel and multi-channel distribution will be the focus as companies seek to provide goods and services from anywhere within the supply chain. Continued automation and rudimentary artificial intelligence has the potential to reduce both time and cost in the supply chain. In addition, 3-D printing will eventually become ubiquitous; this technology has the potential to reduce overall inventory and inventory costs in the supply chain.”



Amazon.com boasts over 50 U.S. fulfillment centers which use robotics, vision systems, and software and mechanical innovations that the company has developed over its 20 years in business.

COMPETING FOR E-COMMERCE IN THE GLOBAL MARKETPLACE

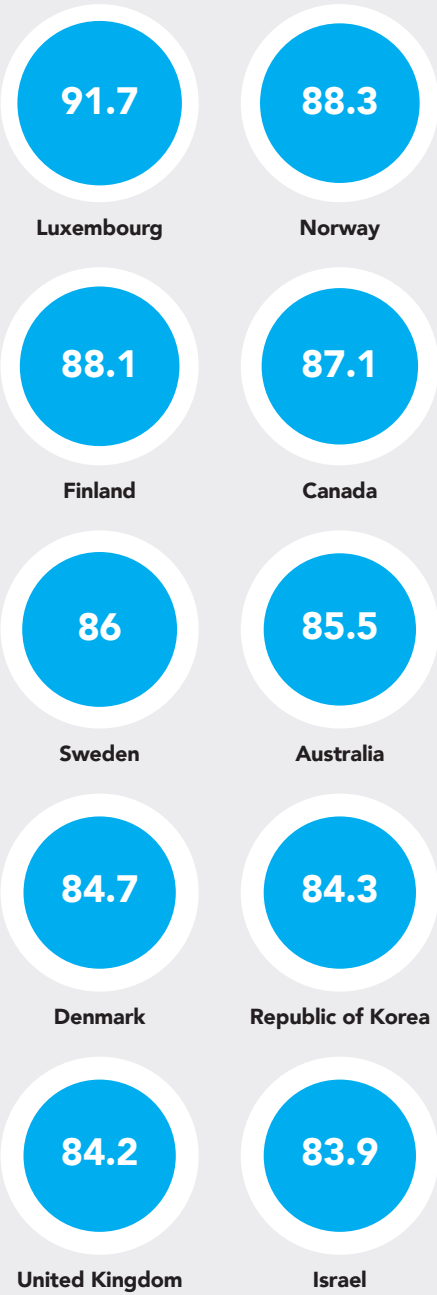
What Manufacturers Should Do Today to Prepare for the Demands of Tomorrow



According to the United Nations Conference on Trade and Development (UNCTAD), the number of global online shoppers is expected to grow by 50 percent by 2018. A positive projection, indeed, but are U.S. product manufacturers and distributors ready for this growth? The UNCTAD business-to-consumer (B2C) index suggests maybe not, as the majority of the top performers in B2C e-commerce hail from Europe. In fact, the U.S. doesn't even crack the top ten on this index, coming in at No. 15.

TOP 10 PERFORMERS IN THE WORLD

The majority of Top 10 performers in the B2C e-Commerce Index are in Europe



The size of the circles reflects the Index value (from 1 to 100) of UNCTAD B2C E-Commerce Index value.



Brian Beaulieu
CEO and chief
economist,
ITR Economics

Brian Beaulieu, CEO and chief economist for ITR Economics, says in order to compete for B2C e-commerce, it's imperative manufacturers and distributors make investments to improve efficiency in their supply chain today to prepare for the demands of tomorrow.

"The consumers are demanding almost instant gratification because we live in

the Digital Age," said Beaulieu. "Manufacturers have to be able to accommodate that within reasonable expectations, which means faster throughputs within the manufacturing environment, whether you are making big widgets or small widgets."

And if companies don't have the resources to stock inventory, Beaulieu says other more aggressive supply-chain strategies will be necessary to meet demand.

"Manufacturers will need to level-load their facilities more than they used to with seasonal items," said Beaulieu.

Level-loading is a production planning method that maintains a stable production rate over a set period of time while allowing inventory levels to fluctuate regardless of demand. This technique can be utilized to optimize manufacturing efficiency and supply chain processes. It is a technique that is used when spikes in demand exceeds the capacity to produce product.

"Level-loading is necessary to maintain a reasonable cost structure. The final component to that is, if the consumers want it overnight, figuratively if not literally, we as manufacturers, we as distributors need to figure out a way that we can price that luxury into our product."

Beaulieu says level-loading might be a tough strategy to sell to the C-suite who tend to focus on lean manufacturing techniques, but it's important to weigh the pros and cons given that the trajectory of the economy could change within the very near future.

"Manufacturers will need to level-load their facilities more than they used to with seasonal items."

—Brian Beaulieu

"There is going to be more inflation in the future," he said. "I'm asking all the manufacturers and distributors to be sensitive to that and be ready to make sure that they're getting the margin they deserve for instantaneously satisfying consumer demand."

This is especially important given Beaulieu's expectation that the U.S. economy will experience another recession as early as 2019. Factors he says could contribute to a recession: rising interest rates; a push to curtail government spending due to a burgeoning national debt; and a major oil supply disruption due to higher prices per-barrel in the Middle East.

"Companies that are not keeping up with the Digital Age will be bought up or shuttered," he said. "There's time to get ready, there's time to build up a war chest, there's time to get really good at something. But it's not a long time. Two years goes by in the blink of an eye in economic terms if you're trying to change your business strategies."

How does one prepare for a potential recession in the Digital Age? Beaulieu offers some insight:

"Our advice is to invest in yourself and, by that, we mean use technology, use capitol-intensive processes and equipment to the greatest possible extent so you can control your cost," he said. "And, if you're going to be hiring people, hire leaders, hire salespeople who can take you into new markets where you can be selling to people you've never sold to before, or selling a part or service you've never sold to before. Gaining market share in that sort of an environment come 2019 is going to be very helpful for protecting your company. But you have to be willing to make these investments rather than just continue on with the status quo."

SUPPLYING THE FIELD OF SUPPLY CHAIN

One Organization's Effort to Attract More Professionals to Supply Chain Jobs

According to a study by MHI—a national material handling, logistics and supply chain association—the supply chain industry will need to fill some 1.4 million new jobs between 2014 and 2018 but will fall short as Baby Boomers continue their mass exodus out of the workforce.

This is a big problem for manufacturers and distributors desperate to fill these positions, but it's a golden opportunity for people interested in entering the supply chain field.

In response to this demand, MHI recently launched an awareness campaign called #iWorkInTheSupplyChain, designed to promote manufacturing and supply chain as innovative and rewarding career choices, and to change the perception of

jobs in the industry. The campaign was launched with a video featuring success stories of manufacturing and supply chain professionals currently in the field. The video can be viewed on the campaign's new website iWorkInTheSupplyChain.com.

Manufacturing and supply chain professionals are encouraged to tweet and post their own success stories using the hashtag.

"Because supply chains work behind the scenes, you only hear about them when there is a disruption," said George Prest, MHI CEO. "We, as an industry, have to do a better job communicating the amazing and rewarding career opportunities available. That's the goal of this campaign."





GRAY... WE'RE BUILDING

KUBOTA MANUFACTURING OF AMERICA

GAINESVILLE, GA.

Gray was selected by Kubota Manufacturing of America Corporation (KMA) to design and build a 502,000 s.f. manufacturing facility at Gateway Industrial Centre in Gainesville, Ga. The plant will be located just three miles from KMA's existing facilities on a 180-acre site, and is expected to become operational in the spring of 2017.

Kubota's RTV series utility vehicles will be manufactured at the plant, with the capacity to produce 50,000 units annually. This expansion is estimated to increase production capacity by some 60 percent over the next five years. KMA's existing facility will also undergo enhancements to increase its production capacity to support the company's growing turf business.

KMA, a subsidiary of Osaka, Japan-based Kubota Corporation, was formed in 1988 as Kubota's North American manufacturing base.



10 Quality Street
Lexington, KY 40507-1450, USA
T 859.281.5000

Alabama, California, Kentucky,
North Carolina and Tokyo, Japan

www.gray.com