

Past Performance is No Guarantee of Future Results: The Case for Innovation in Supply Chain Networks, Processes, and Technology

By Adrian Gonzalez

Summary

“What Got You Here Won’t Get You There”

That is the title of Marshall Goldsmith’s bestseller about how successful people can become even more successful. The same can be said of compa-

The standard disclaimer that appears on all investment literature also holds true for supply chain and logistics: past performance is no guarantee of future results. Simply put, companies will face new and more complex supply chain and logistics challenges in the years ahead and their old ways of doing things, characterized by poor visibility and control of their supply chains, will not work anymore.

nies and their supply chain networks, processes, and technologies. Many companies have achieved success despite having poor visibility and control of their supply chains; despite having outdated and inflexible IT systems; despite not taking a holistic perspective of their end-to-end processes; and so on.

However, the standard disclaimer that appears on all investment literature also holds true for supply chain and logistics: past performance is no guarantee of future results.

This is because companies will face new and more complex challenges in the years ahead. Transportation infrastructures will be more gridlocked; fuel prices will remain volatile; customers will expect faster and more predictable lead times; ageing populations will create labor constraints; mobile commerce will explode; global trade activity will grow, but so will its costs and complexities; there will be more sources of financial and operational risk; sustainability initiatives will have greater influence on supply chain networks; and the list goes on.

Simply put, companies will not be able to “succeed despite” anymore. The old ways of doing things will not work. As Albert Einstein famously said, “The significant problems we face cannot be solved at the same level of



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thinking we were at when we created them.”

What is the “There” that companies need to get to? It is having access to business intelligence information and tools to make smarter decisions faster. It is having the ability to modify and enable new business processes, quickly and cost-effectively, in response to changing market dynamics and customer requirements. It is having flexible logistics networks to exploit new market opportunities and create a competitive advantage. It is taking an end-to-end perspective of business processes – across functional groups and trading partners – instead of a fragmented view. It is all of these things and more.

What actions can companies take today to get there? How will IT enable and facilitate this journey?

This paper will address these questions, as well as highlight the key trends and challenges that will redefine supply chain and logistics success in the 21st century. The paper will also present some of the fundamental attributes that tomorrow’s supply chain and logistics leaders will all share, as well as the actions they are taking today.

Analysis

Are we living and working in a “new normal” environment? That is the question many economists and analysts have been debating over the past couple of years in the midst of this global economic recession. The debate is mostly centered on whether the recession will permanently alter the way companies, consumers, governments, and everybody else linked to the global economy will operate moving forward.

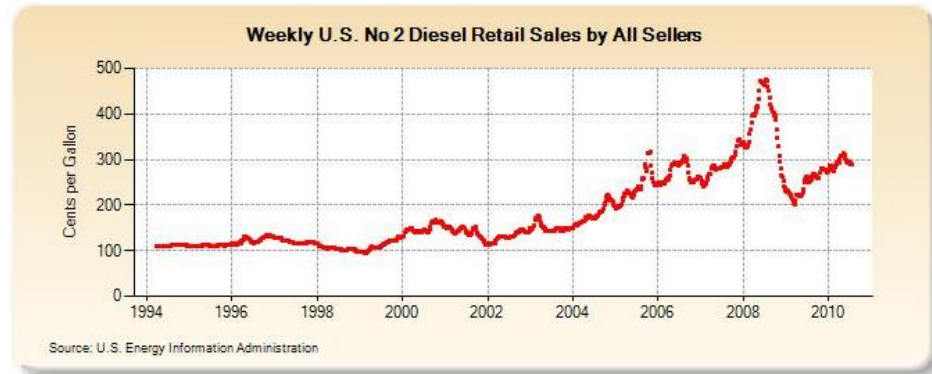
But what if the recession had never happened? Would we still be talking about a “new normal” today?

Probably not as much, but the reality is that the new normal was not triggered by the recession. Where we are today is the product of decades of change – economic, political, societal, technological, and so forth – a point in time in a long continuum, not the result of a single event.

What the recession did, however, was force companies to question the status quo, caused them to shift their focus from “the way we’ve always done

things” to the “way we need to do things” in response to certain market realities and trends.

For supply chain and logistics executives, the road ahead is characterized by ongoing risks, costs, and complexities. Transportation is a perfect example. The sharp rise in fuel prices, which reached record levels in July 2008, was a wake-up call for many executives, especially those still managing their transportation operations using spreadsheets and fax machines.



Fuel prices will remain volatile in the years ahead

Although the recession caused fuel prices to drop in late 2008 and through the first half of 2009, prices are on the rise again and they are still significantly higher than they were just five years ago. Considering that fuel prices are impacted by so many factors, including legislative and political actions, the one sure thing is that prices will remain volatile in the years ahead.

Other transportation-related trends and challenges include:

- *Reduction in available trucking capacity:* About 2,000 trucking companies went out of business in 2009 due to the recession, and another 2,000 are expected to exit the market this year, according to Avondale Partners. This is in addition to the thousands of carriers that went bankrupt in 2008 due to record high fuel prices. Making matters worse, leading carriers have been proactively reducing the size of their fleets to constrain supply and firm up rates. According to the American Trucking Associations, truckload fleet sizes (of carriers still in business) have decreased more than 13 percent over the past three years. Simply put, when the economy recovers, demand for truckload capacity will significantly outstrip supply; the same

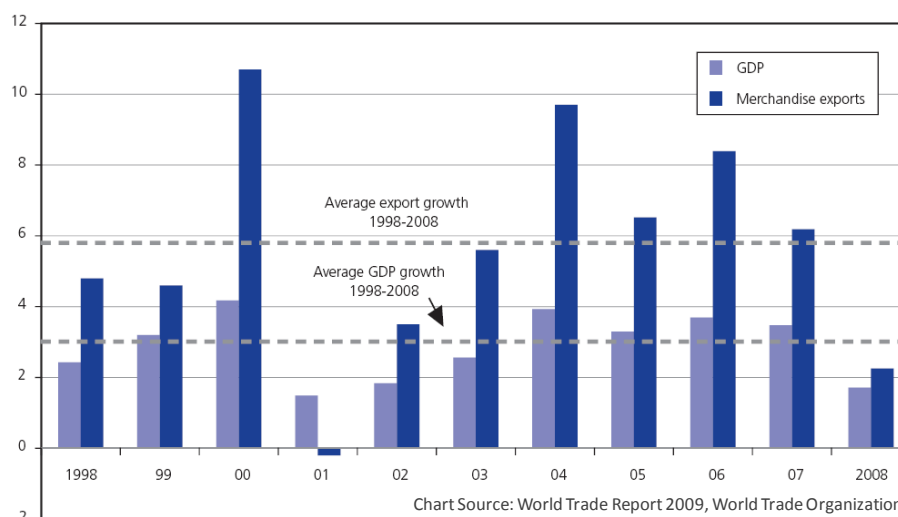
will be true for drivers. The net result will be an increase in transportation rates and service level failures.

- *Increased gridlock on transportation networks:* This is a different type of capacity problem, and it's a global one. Trucks stuck in traffic are the most visible symptom of this problem, but all other modes (air, ocean, and rail) suffer from similar infrastructure congestion. George Stalk, Jr. summarized the problem well in "[The Threat of Global Gridlock](#)" (*Harvard Business Review*, July-August 2009): "As the worldwide transportation network becomes less and less able to support the demands of a global economy, we're heading straight into a crisis. Today's economic meltdown masks the threat. But if prerecession trends reappear when the economy recovers, lack of infrastructure capacity, in combination with rising oil prices, will constrain global trade and drive up costs."
- *The impact of new regulations:* For example, there is currently a lot of focus on the [Comprehensive Safety Analysis 2010 \(CSA 2010\)](#) initiative and its impact on the transportation industry. In a nutshell, CSA 2010 is a more comprehensive and detailed system for identifying and resolving carrier and driver safety issues. While improving safety is the main objective, some anticipated ancillary effects include further reduction in capacity, as some carriers will be unable to comply with the new requirements, and increased costs, especially in driver wages, as carriers compete to retain drivers with excellent safety records. [The Safe and Efficient Transportation Act of 2009 \(H.R. 1799\)](#) is another example. The bill, which the House of Representatives is currently considering, aims to increase the federal vehicle weight limit to 97,000 pounds for vehicles equipped with an additional (sixth) axle.

Supply chain and logistics executives face similar trends and challenges when it comes to global trade.

Global trade activity has increased significantly over the past few decades. According to the most recent data from the World Trade Organization (WTO), the value of world merchandise imports and exports totaled more than \$31.8 trillion in 2008 (in current prices), a 52 percent increase from 2003! In volume terms, world merchandise exports grew an average of 5.7 percent annually from 1998-2008. Although merchandise trade declined

about 12 percent in 2009 due to the global recession, the outlook for 2010 and beyond remains healthy (the WTO forecasts trade to grow by 9.5 percent in 2010).



Annual percentage change in the volume of world merchandise exports and GDP, 1998-2008 (Source: World Trade Organization)

Several factors have fueled this growth in global trade, including manufacturing outsourcing; global sourcing and selling; and preferential trade agreements. And these growth factors will continue to drive global trade activity in the future, once economic conditions improve.

It is important to note that although trade volumes were down last year, the costs, risks, and complexities of global trade continued to increase. Consider these recent developments:

- According to a report issued in September 2009 by Global Trade Alert, "[Broken Promises: A G-20 Summit Report by the Global Trade Alert](#)," protectionist measures are being implemented around the world. At least 70 harmful measures had been implemented in the first three quarters of 2009, and another 134 protectionist measures were in the pipeline.
- In July 2009, the European Union (EU) voted to implement a "permanent" tariff (typically lasting five years) on Chinese steel pipe imports. Duty rates will range between 18 and 39 percent, depending on the product classification.

- In March 2009, the Mexican government implemented tariffs on 90 U.S. industrial and agricultural products valued at \$2.4 billion. These tariffs are still in place today.
- In January 2009, the Importer Security Filing (ISF) rule went into effect for U.S. importers. ISF (also referred to as “10+2”) requires importers or their agents to submit ten data elements to U.S. Customs and Border Protection (US CBP) 24 hours prior to vessel departure, and ocean carriers to submit two additional data elements. Previous regulations did not require importers to file some of this information, or they were able to file after the shipment had arrived in the US (within fifteen calendar days of arrival).
- Customs modernization projects, like the European Commission’s eCustoms Initiative and the Automated Commercial Environment (ACE) in the United States, continue to move forward. Although these initiatives make customs processing more efficient by replacing paper-based filings with electronic communication, they also create new challenges, requiring companies to upgrade their trade compliance processes and technology to meet ever-changing regulatory requirements.

In addition, many companies continue to leave money on the table by (among many other things) failing to take advantage of preferential trade agreements and by misclassifying products and paying too much in duties and taxes. While these missed opportunities are sometimes worth millions of dollars, they are also the most difficult to track unless you have the right knowledge, experience, and metrics.

Simply put, managing the flow of goods, information, and money across borders is a highly complex, regulated, and dynamic process – and becoming more so every day! Therefore, companies can no longer rely on manual processes to manage their global trade operations, which is why the Global Trade Management (GTM) systems market is one of the fastest growing segments of the software industry.

Clearly, supply chain and logistics managers face a more complex, challenging, and dynamic business environment today than ever before, and these trends will continue in the years ahead. Supply chain excellence and success will be defined differently tomorrow than how they are defined

today. This is the underlying message of the article "[Outcome-Driven Supply Chains](#)" (MIT Sloan Management Review, Winter 2010), where Steven

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A. Melnyk and co-authors write that "the supply chains of tomorrow must deliver varying degrees of six outcomes – the traditional cost-related benefit plus responsiveness, security, sustainability, resilience and innovation – depending on key customers' needs."

Unfortunately, many companies aren't ready for tomorrow.

What Got You Here (Won't Work Anymore)

Some people mistakenly believe that they are living a healthy lifestyle, until they unexpectedly have a heart attack and are forced to face the truth and eat more nutritious foods and exercise more regularly.

The same is true for companies.

Take the case a \$5 billion chemical company that until late 2007 was still managing its transportation operations with spreadsheets and fax machines. It wasn't until its transportation costs soared, due to the sharp rise in oil prices, that the company finally started to pay attention to transportation. And what did it find? The company's ocean contracts, for example, had expired back in 2002, so it had been paying market rates for more than five years! But everyone in transportation and procurement thought they were doing a good job. A reminder that many cancers, both physical and corporate, are silent killers, with symptoms emerging only after the damage is done.

Are your private fleet trucks coming back empty to your warehouses, behind trucks from third-party carriers filled with products your fleet could have picked up?

Do you have multiple divisions working with the same carriers, but instead of leveraging your total spend, each division has its own contract and rates with the carriers?

Is your transportation department the last to know that a product promotion is occurring next week, causing them to scramble to find additional trucking capacity (at premium rates) to accommodate the lift in shipments?

Are your suppliers shipping your orders on time to meet your “Must Arrive By Date,” but when the carrier calls to schedule a delivery appointment, your warehouse pushes out the receiving date because they are overbooked or don’t have enough receiving resources?

There are many root causes to these problems, but they all boil down to this: a failure to view, organize, and manage supply chain and logistics as a system, instead of a fragmented collection of functional groups, business processes, and IT applications.

Are many of your shipments delayed at customs due to missing or incorrect filing information? Do you use average costs and “guesstimates” to determine the true landed cost of your imported products?

Those are just some of the symptoms, either hidden or visible, of supply chains that are riddled with inefficient processes, poorly integrated systems, and misaligned functional groups.

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What Will Get You “There”

On paper, the answer is simple: question the status quo and then change what doesn’t make sense any more.

- *Why do we have multiple transportation management organizations and IT systems across the company?*
- *Why do we have separate groups and software applications to plan, execute, and manage our private fleet and common carrier operations?*
- *Why do we manage inbound loads separately from outbound?*
- *Why are our supply chain and logistics processes (transportation, warehousing, global trade, demand planning, order management, etc.) so poorly synchronized?*
- *Why do we currently outsource all of our logistics operations instead of managing them in-house? Or, why don’t we outsource some or part of our operations?*

Asking these types of questions and uncovering opportunities to eliminate waste from supply chain and logistics processes is relatively easy. The hard part, of course, is taking corrective action and managing change.

In crew, if one rower is rowing out of synch from the rest of the team, the boat will not travel as fast or as straight as it should. The same is true with supply chain and logistics processes.

Obviously, there is no single definition of “There” that applies to every company and industry. The details will vary, but there are some fundamental attributes that tomorrow’s supply chain and logistics leaders will all share. They will all...

[View Supply Chain as a Synchronized System](#)

In crew, if one rower is rowing out of synch from the rest of the team, the boat will not travel as fast or as straight as it should. The same is true with supply chain and logistics processes. If inbound transportation is out of synch with receiving at the warehouse, for example, the net result is delayed deliveries and increased overtime (among other things).

Today, many companies still view their end-to-end supply chain processes as a collection of independent process steps, managed by a collection of independent teams, using a collection of independent systems.

Tomorrow’s supply chain and logistics leaders will recognize the interdependency of these things and will put in place the organizational structure, metrics, and IT capabilities to exploit these interdependencies. Among the actions some companies are taking today include:

- *Implement Sales and Operations Planning (S&OP).* This provides a framework for enhanced collaboration and decision-making between sales, marketing, supply chain, logistics, manufacturing, finance, and other functional groups.
- *Create Centralized Shared Services Organizations.* Many companies, for example, are centralizing their transportation procurement, planning, and execution process to more effectively leverage their spend, maximize the utilization of their private fleet assets, and have greater visibility and control of orders, shipments, assets, costs, and performance metrics.
- *Establish Cross-Functional, Customer-Facing Metrics:* It’s no secret that metrics drive behavior. But oftentimes, because functional groups

tend to operate independently, the “right” metrics for one functional group, such as procurement, could drive behaviors that negatively impact other groups, such as transportation or quality. One way to create alignment, not only internally but with customers and suppliers too, is to establish metrics, such as out-of-stocks and total cost to serve, that drive synchronized behavior between functional groups and trading partners.

Make Smarter Decisions Faster

Companies are starting to view the information they collect about their customers and supply chains as a corporate asset that they can leverage to create more efficient, flexible and impactful business processes. As Tom Davenport states in his book [*Competing on Analytics: The New Science of Winning*](#), “At a time when firms in many industries offer similar products and use comparable technologies, business processes are among the last remaining points of differentiation.”

Not surprising, demand for Business Intelligence (BI) and Analytics solutions has been rising in recent years. But BI is more than just software; it is about empowering people, across all levels of the organization, to make smarter and faster business decisions by providing them with a more detailed, accurate, and timely understanding of their role in achieving the company’s strategic, tactical, and operational goals.

In addition to selecting a best-in-class BI software solution, a successful BI strategy must include the following steps:

- *Determine upfront which KPIs are important and create standard definitions.* This is, arguably, the most important step because it forces companies to think about why they’re investing in BI and what benefits and outcomes they expect to achieve. Best practice is to align corporate and operational KPIs with strategic objectives and desired competitive differentiators. If you don’t know why you’re collecting certain data or can’t explain the value of a metric, you probably don’t need it.
- *Hire and train the “right” people; create incentives to use BI tools.* “Personable geeks with MBAs” is the way some folks characterize the talent required to successfully leverage BI. Put differently, compa-

nies need people with the right mix of analytical, business, and relationship skills.

- *Take a “manage globally, act locally” approach to BI.* Just like many companies have established centralized load control centers, BI leaders have centralized their BI and analytics operations. This approach makes it easier to evaluate strategic and tactical scenarios, where the analysis may span across multiple business units, geographies, and functional groups. But to achieve the greatest value from BI, it’s also important to bring BI and analytics down to the operations level, so that employees can make smarter and faster decisions on a day-to-day basis, particularly in response to exceptions.
- *Establish a BI Governance Framework and Process.* Most companies don’t think about this step until it’s too late. BI Governance is about answering some basic questions: What decisions need to be made? Who will make those decisions? How will the decisions be made? How will the decisions be monitored? The more strategic your BI focus, the more critical governance becomes because strategic decisions typically come with the most financial risk.

Collaborate and Share Networks with Suppliers and Customers

At the *CSCMP Europe 2010 Conference*, Deborah Lentz, Vice President of Customer Service and Logistics at Kraft Foods Europe, made the case that the time for “walking the talk” on collaboration had finally come, especially when you consider all of the trends and challenges facing the industry: urbanization, shift in global populations, transportation network constraints, sustainability, mobile commerce, government regulations, labor (un)availability, and so forth.

Ms. Lentz presented a future scenario where multiple manufacturers would share warehousing space, transportation capacity, and other assets and resources to serve their common customers. And she challenged the third-party logistics (3PL) providers in the room: What role will you play in this scenario? She was direct in her warning: If you don’t proactively work towards creating these collaborative networks, we will do it ourselves (i.e., we will work directly with our key suppliers and customers to share warehousing and transportation assets and resources, a path Kraft Foods in Europe was already exploring).

What steps can you take today?

- *Challenge your 3PLs to take the lead.* ARC received a call recently from a 3PL executive that over the past few months had been approached by several of his clients in the food industry about creating a shared logistics network. After brainstorming a bit on what would be a good first step, we concluded that having a workshop with a small group of key stakeholders – manufacturers, carriers, and retailers – would be a good step towards defining the path forward.
- *Conduct joint network design and optimization exercise with key supplier(s) and customer(s).* If you and one of your key suppliers and customers operated your value chain as one company, what would it look like? Would you have as many central and regional distribution centers and where would they be located? Would you use fewer carriers, and have greater load factors, than today? These are just some of the questions you can explore by conducting a joint supply chain network optimization exercise.

Have Flexible, Adaptable, and Scalable IT Systems

The buzz word in the software industry these days is “platform,” which can be defined many different ways. In non-technical terms, a software platform – part of the industry’s evolution towards open standards and service oriented architecture – allows companies to enable, manage, and reconfigure business processes in a more timely, cost-effective, and scalable manner.

The old debate of ERP versus best-of-breed applications is irrelevant today, especially when so many business processes extend beyond the four walls of the enterprise and involve hundreds (if not thousands) of trading partners, and when users of applications are not just your employees, but your suppliers, customers, logistics partners, and even consumers too!

Somewhere along the way, companies started thinking in terms of software applications first – ERP, CRM, TMS, WMS, GTM, and so on – and then about what they wanted to do with these applications. The painful result, as described earlier, was a lack of synchronization between business processes.

Moving forward, companies need to get back to basics.

- *Focus on end-to-end processes, not on individual apps.* This means mapping out current end-to-end process flows; identifying opportunities to eliminate waste; and defining a more streamlined “To Be” process. And instead of thinking of what *applications* are required to enable this new process, think about what *capabilities* (or *services*, in today’s vernacular) are needed and how they should link together.
- *Enable end-to-end processes in incremental fashion.* Instead of taking a “big bang” approach to implementing a complete solution, you can address specific “pain points” by deploying, and paying for, a set of modules at a time. This approach compresses time-to-value, and in many cases, you can use the savings achieved from the initial implementation to fund future ones.
- *Empower users.* The one sure thing is that the “To Be” process you define today will change down the road, most likely in response to changes in customer requirements (e.g., Walmart announcing that it will take control of inbound shipments from suppliers). The ability for software users to quickly and easily configure workflows and user interfaces in response to new customer or internal requirements will be critically important moving forward. Waiting for IT or the software vendor to make the changes, or even worse, to develop custom code, is no longer acceptable. The empowerment of users is the power of a platform.

Conclusions

- In light of new and more complex supply chain and logistics challenges, companies will no longer be able to “succeed despite” any more.
- Past performance is no guarantee of future results.
- The “There” each company must strive towards will vary by company and industry, but tomorrow’s leaders will share some common attributes:
 - They will all view supply chain as a synchronized system, not a fragmented collection of processes, functional groups, and IT applications.

- They will all make smarter decisions faster.
- They will collaborate and share networks with suppliers and customers.
- They will all have flexible, adaptable, and scalable IT systems.

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