INSIDE SUPPLY MANAGEMENT® MAGAZINE

AUGUST 2016
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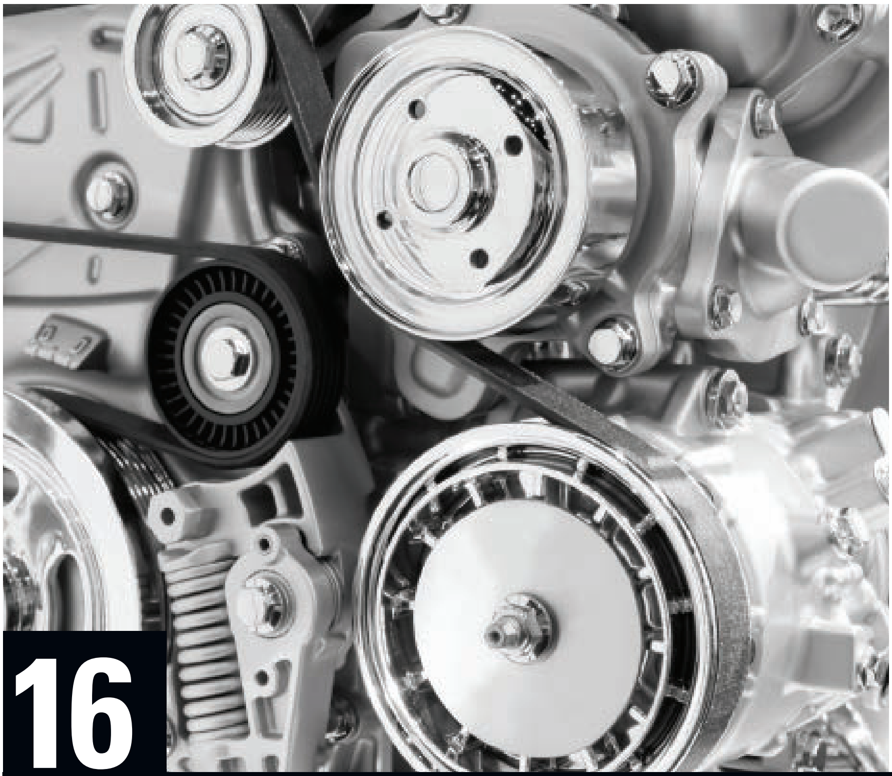

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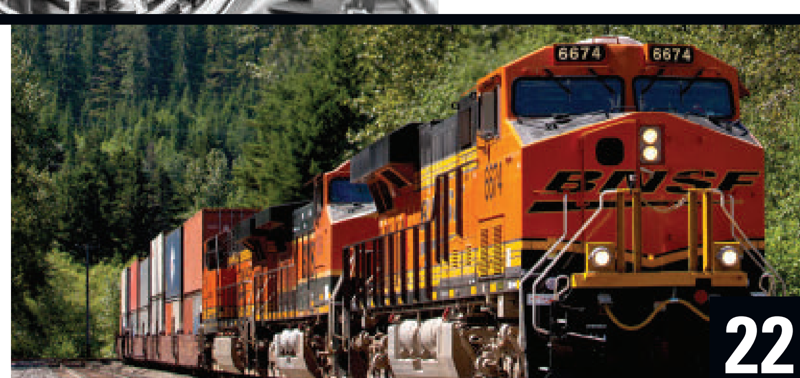

Report On Business®

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Editor's **Letter**

from the publications director

By John Yuva

Did You Download the App?

The August issue is our second digital-only edition of the year, and we hope you're enjoying it using our ISM Magazine app. If you haven't downloaded the app, do so to view *Inside Supply Management®* on your tablet or phone. Access your magazine issues and digital supplements with ease. The app serves as your digital gateway to ISM publications. So don't miss out!

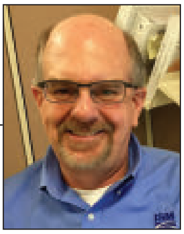
With that short promo, it's time to talk about your current issue. Our August issue features tales of two engines — automobile manufacturing in Mexico and challenges faced by railroads.

The former is accelerating as companies continue transitioning manufacturing back to North America. The International Trade Administration's (ITA) *2016 Top Markets Report Automotive Parts Country Case Study* states that Mexico produced 3.4 million vehicles in 2015 and is the seventh-largest vehicle producer in the world. Its auto sector accounts for 18.3 percent of Mexico's manufacturing sector and 3.2 percent of its national GDP. These statistics from ITA are not surprising, as more auto companies from around the world expand operations in the country. On page 16, learn more about how companies such as General Motors and ThyssenKrupp are working with their supply chain partners in Mexico.

The topic of railroads shines a light on the effects of energy markets and the strength of intermodal to sustain this critical transportation sector. The decline in coal production and rise in alternative fuels, among other energy issues, are posing significant challenges for the rail industry. However, as you'll read on page 22, there is a light at the end of the tunnel in the form of intermodal freight — the movement of goods in containers and trailers. According to the Association of American Railroads, an average of 5 million tons of goods are delivered by rail each day, accounting for 54 tons of goods shipped annually for each U.S. citizen. Since the Industrial Revolution, rail continues its critical linkage in our transportation infrastructure.

Take in the August issue on your tablet, phone or desktop with many more articles to peruse. Let us know how the ISM Magazine app is working for you. **ISM**

By Jim Fleming, CPSM, CPSD



E-Learning Evolves at ISM

Supply chain organizations are investigating what today's technological advances can do for them. Those technologies range from cloud data-storage solutions to software as a solution (SaaS) to robotics and others. However, technology is needed to streamline professional development opportunities as well — and this is an area where e-learning and Institute for Supply Management® are making a difference for supply managers.

The e-learning trend capitalizes on technologies that enable students to learn anywhere. Companies can use mobile learning as a way to conveniently and economically train employees around the globe. Unlike a traditional seminar, an e-seminar doesn't require significant time away from the office, making it more accessible and accommodating to an individual's schedule. And it can be spread out to an hour per day over a few weeks, rather than two or three eight-hour days, like a traditional classroom seminar.

According to the *Global E-learning Market 2016-2020* report by London-based market research company Technavio, the global e-learning market is expected to grow by 17.81 percent through 2020, with U.S. growth anticipated to be 16 percent.

At ISM, e-learning allows us to deliver world-class education to meet the expanding needs of supply management professionals. Through technology upgrades, we are expanding e-learning course offerings, products and solutions.

We also added micro learning to the mix. According to the *Association Learning + Technology 2016* report by Carrboro, North Carolina-based Tagoras, micro learning is one of the most adopted types of learning among associations, with 18.1 percent already offering it and 33 percent planning to implement it within 12 months.

ISM now offers its own innovative micro learning experience. ISM members and nonmembers who want to advance their supply management knowledge and skills can subscribe to our new Just in Time or Guided Learning courses, where content is consumed in small, specified bursts. E-learning enables supply management practitioners to choose the options that work best within their busy schedules.

E-learning, including micro learning, is one of the numerous evolving technological trends that companies — and ISM — will continue to explore as a way to train and enhance employees' knowledge in years to come. ISM

Jim Fleming, CPSM, CPSD, is a program manager for learning solutions at Institute for Supply Management. Before arriving at ISM, he previously worked in supply management with Intel Corporation.

Just in **Time**

news, notes & quotes — just when you need them

Attribute-based Demand Forecasting Can Help Find Emerging Markets — and Profits

Until a crystal ball becomes a reliable tool, businesses must use forecasting to determine today where demand will come from tomorrow — and in the coming years. With analysts predicting a near-doubling of the global consumer class in the next decade, identifying and establishing a presence in emerging markets before the competition becomes more critical.

The consumer class is expected to grow to 4.2 billion customers by 2026, the first time in history that it will make up more than half of the Earth's population. With that people power comes economic power, with annual spending in emerging markets projected to reach $30 trillion, according to a 2013 report by McKinsey & Company.

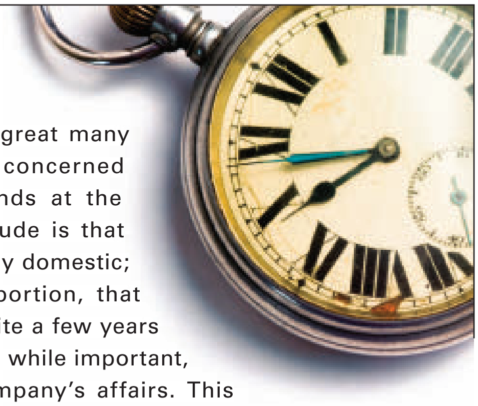
Better Forecasting, Better Business, a white paper from Quintiq, a Dutch company that makes planning, scheduling and supply chain optimization software, states the case for attribute-based demand forecasting as the best barometer for future trends. That model is superior to traditional demand forecasting, the paper says, because it can provide information that is faster, more accurate and more tailored to the needs of a business.

"Many current solutions ... are hampered by conventional data categorizations, which limit a user's control over how data is viewed and organized," the paper says. "This, in turn, limits the efficacy of forecasting efforts and subsequent actions taken based on forecast results. If you can categorize your data into custom attributes based on your company's needs — as opposed to being constrained by rigid parameters — your options become more dynamic and flexible."

"Whatever you do, be different — that was the advice my mother gave me, and I can't think of better advice for an entrepreneur. If you're different, you will stand out."

Anita Roddick
Founder, The Body Shop

A Moment in Time



Business Cannot Ignore World: A great many businessmen are very deeply concerned about international political trends at the moment. ... Quite frequently, the attitude is that most of the company's business is purely domestic; that exports count for only a small portion, that domestic demands will be heavy for quite a few years to come, and that foreign developments, while important, have little effect on the individual company's affairs. This viewpoint is discouraging not only because foreign developments have a business influence extending beyond mere imports and exports, but because it indicates a frame of mind similar to that existing before the war. — **A.W. Zelomek**, *The Bulletin of the National Association of Purchasing Agents*, December 5, 1945

Proactivity is Most Important Element for Increasing Supply Chain Security

Practitioners can be diligent and their technology up-to-date, but security is still going to be a major issue for supply chains as they get bigger. That's especially true in today's climate. According to BSI Supply Chain Solutions, 74 percent of companies worldwide suffered a supplier-related disruption in the past year related to such threats as terrorism, natural disasters, labor strife and cargo theft.

And while organizations can be diligent and use the most up-to-date technology, they still can be more proactive, says an e-book by Amber Road, an East Rutherford, New Jersey-based global trade management software provider. Citing BSI data, *Heightening Supply Chain Security* notes that many companies cannot name their key suppliers, and 70 percent say they lack visibility over their entire supply chain.

The e-book identifies six "critical elements" to supply chain security:

1) Risks defined and ranked by their likelihood to occur
2) Corrective action plans to address identified risks
3) Mitigation "must-haves" like budget and organizational structures and financial incentives to encourage compliance
4) A commitment to people, processes and technology best practices
5) Regular supplier self-audits
6) Regular risk-mitigation training and remediation.

The e-book emphasizes that global companies "need common approaches that involve a range of stakeholders in the supply chain."

'Transportation Visibility' Key to E-commerce

Consumers of a certain age will remember the era of placing orders for products on television that required them to "allow 4-6 weeks for delivery." Like Saturday morning network cartoons, such commercials have become a TV relic, as businesses strive to master e-commerce in an era of sophisticated customers with a multitude of choices.

In a report, *Leveraging Global Trade Management (GTM) for Frictionless eCommerce*, Aberdeen Group says that 61 percent of companies ship direct to the customer, up from less than 50 percent two years ago. And one of the biggest e-commerce demands of those customers is what the report calls "transportation visibility" — constant tracking, monitoring and updates. Best-in-class companies are 47 percent more likely to have such visibility into in-transit shipment status compared to the competition, according to the report.

"Online customers expect updates as events occur. ... For customer deliveries, the window of notification is down to as little as two hours for expected delivery," the report says.

Comm*Oddities*

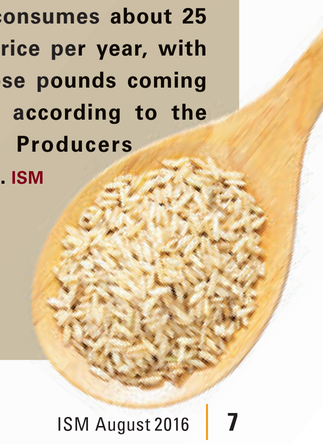
Rice

Also known as: Rice that has been harvested and remains in its natural, unprocessed state is called rough rice, paddy rice, hulled rice or unmilled rice.

Where does it come from? China and India are the world's runaway producers — and consumers — of rice. India was the No. 1 exporter in 2015, with Thailand, the U.S., Vietnam and Pakistan rounding out the top five.

What's it used for? It is one of the top staple foods in the world, especially in the two most populous nations (China and India). Last year, 741 million metric tons of rough rice — the most common term when referring to the commodity — were produced worldwide, trailing only corn among grains.

And that's a fact: The average American consumes about 25 pounds of rice per year, with four of those pounds coming from beer, according to the U.S. Rice Producers Association. ISM



Practitioner **Talks**

first-person procurement insights

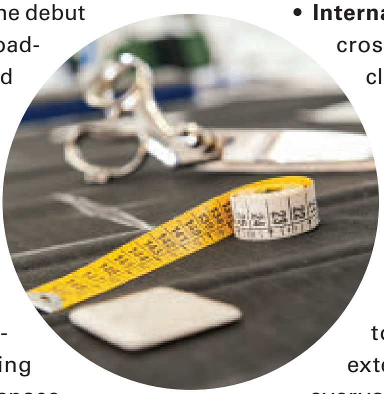
Brynn Matkoski
Director, supply chain strategy
Gap Inc.
San Francisco

Business books that have made an impact on my career:

Two books that really changed how I work are *How to Win Friends and Influence People* by Dale Carnegie and *Linchpin: Are You Indispensable?* by Seth Godin. It is so important to understand others and be able to build trust when driving change within an organization. Also, *Linchpin* always reminds me that you cannot be afraid to challenge the status quo and leverage your unique creativity.

Q: What are the pressing supply management challenges in the apparel industry?

Predicting demand and designing products that customers want have always been challenges in the apparel industry. With today's speed and ubiquity of information, customers have high expectations for a new, on-trend product. Where companies once had years to plan for new trends to hit their product lines, now they have only months. One example of how information availability is accelerating customer demand for trends is designer fashion. Fashion shows were once only accessible by the elite and industry experts. Today, the debut of designer fashions is broadcast live, pinned and shared immediately. The days of waiting six months for a fashion magazine to tell you what trends are emerging are long gone.



If you follow recent news, retail apparel continues to be a challenging and highly competitive space. Several brands have filed for Chapter 11 bankruptcy in the past 12 months, including American Apparel, Aéropostale and Abercrombie & Fitch. In this environment, the ability to be responsive to your customers' needs is not optional, it is a requirement. The faster customer demand changes, the less you can rely on long lead-time design and development cycles. This makes flexible supply chain capabilities a critical competitive advantage, but it also requires end-to-end collaboration. Considering new partnerships for your organization, both internally and externally, can unlock hidden opportunities, such as streamlining processes and eliminating non-value added activities.

There are several opportunities in the end-to-end process to consider when you want to improve collaboration and unlock value in your organization:

- **Suppliers:** Leverage collective knowledge through joint R&D or co-creation.
- **Internal teams:** Develop small cross-functional teams with clear objectives.
- **Customers:** Listen to your customer through crowdsourcing or online feedback to better anticipate their needs.
- **Metrics/incentives:** Re-evaluate your end-to-end KPIs, including external partners, to be sure everyone is aligned and delivering value for the customer.

Customer preferences and competition are always evolving, so it is important to develop dynamic supply chain processes that can be optimized for a variety of scenarios. This may require flexible production or speed-to-market logistics strategies. A one-size-fits-all supply chain strategy is not enough in today's customer-driven world.

Three phrases I find myself saying nearly every day at my job:

If it wasn't difficult, everyone would do it. It's the challenge that makes it great.

"If you don't know where you are going, any road will get you there."

— Lewis Carroll

"Make things as simple as possible, just not any simpler."

— attributed to Albert Einstein

When people ask what I do for a living, here's how I describe my job in one sentence:

As a supply chain professional, I develop creative and efficient ways to get the right product to customers when they want it.

The most helpful career advice I've received was:

One of my favorite bosses had a No. 1 rule to "focus on what you can control." This statement was not meant to encourage complacency, but instead concentrate effort to deliver against your goals. This advice was so helpful to me because I naturally like to challenge the status quo and try to improve everything at once. As you strive to find a better way to do things in your organization, it's inevitable that you'll run into highly complex challenges as well. When this happens, remember this rule and break down your big ideas into smaller, achievable steps. This is a helpful lens to build realistic plans of attack and realistic timelines to deliver against big goals.

The biggest professional challenge I've had to overcome was:

The most important lesson I have learned is to show up; in other words, do what you say you are going to do. It seems so simple, but how many times has someone let you down and delivered something late — or worse, not at all? In a world where there is always too much to do and everyone is busy, this probably happens more than it should.

The challenge for me was getting involved in many projects without always understanding or acknowledging the time it would take to deliver everything. As a perfectionist, I struggled to balance producing something good enough instead of always aiming for perfect. As I focused on not only signing up, but developing the discipline to deliver, it made such a difference in my career. Remembering to "show up" on all your projects and deliverables will help make you a highly trusted go-to person in your organization.

A supply chain concern that keeps me up at night:

The speed at which customers change their brand preferences. Across retail, switching costs are becoming extremely low, and customers can quickly evaluate many brands' products at one time. This highlights the criticality of customer engagement, but there are very few gold standards that exist today. It is definitely an area that will continue to evolve and have an impact on the predictability of demand for the supply chain.

By Jeffrey J. Mayer and John T. Shapiro

ISM Mastery Model™

Competency: **Supplier Relationship Management**

The Value of Legal Expertise

An attorney can help protect critical communications, navigate laws and regulations, and ease the termination process.

Few corners of our world are out of reach today for global supply chains. As such, supply management professionals are likely to have numerous supplier relationships. With each relationship, there may be laws, regulations, business practices and cultural norms that may not align with the practitioner's company. This is where legal counsel can be a critical team member. Whether it's an in-house or outside attorney, a team member with legal expertise can help navigate supplier complexities and potential pitfalls that new and even seasoned supply professionals find challenging.

At its foundation, a supply chain is about the relationships among its players. Those relationships have both a business and a legal character. Risks inherent in supply relationships can be managed through proactive risk assessment and careful contracting that addresses business and legal issues unique to each stage of the supply relationship life cycle.

The relationship life cycle can be divided among four stages:

1) Due diligence
2) Relationship formation
3) Maintenance and fine-tuning
4) Termination, if need be.

If a contracting hurdle or problem occurs with the supplier relationship during any point of the life cycle, it's imperative to have legal counsel as part of your resolution team. Any admissions can be used to the supplier's benefit unless legal counsel is present. When you consult with in-house or outside attorneys for purposes of legal advice, your communications are subject to attorney-client privilege. That is, communications with counsel are protected from discovery by your supply partner should the relationship devolve into litigation or an alternative dispute proceeding. This bedrock principal applies regardless of the life-cycle stage or subject of your inquiry.

Let's take a closer look at how working with an attorney can help at each stage of the supply relationship life cycle.

Due Diligence

When assessing whether to engage a new supply partner, consider these critical questions: (1) What would a successful relationship with the partner look like and (2) how would my company envision and measure the relationship?

Often, due diligence involves analysis of issues — including laws, regulations and other customs and practices with which your company must comply — your legal counsel is uniquely qualified to assess. Counsel can also determine whether a relationship with the potential supply partner would allow your company to fulfill those obligations — and thrive. To ensure success of the supply relationship, it's important to have team members who are best suited to assess components of pre-relationship investigation. Information obtained from due diligence will shape the structure and guide the terms of the supplier agreement and relationship.

Additionally, legal advisors add a diverse perspective from that of supply management professionals. For example, attorneys consider whether due diligence reveals a potential for dispute, the ease with which it could be resolved, and the likelihood that a dispute would harm the supplier relationship and your company's overall objectives. Put simply, your legal counsel brings a valuable perspective to a fundamental question: Is the risk worth it? And, should that assessment result in "no," asking your legal counsel for perspective will have paid dividends. You will have avoided a misstep that could have been disruptive and potentially devastating to your company's brand and bottom line.

Relationship Formation and Fine-Tuning

A well-negotiated and well-written supply agreement is critical to forming a productive relationship and to achieving your company's objectives. Although use of boilerplate may be permissible in some instances, this could backfire for some relationships.

The full array of provisions that typically warrant original drafting to meet the particularities of a new relationship are numerous and beyond the scope of this article. However, those provisions typically involve critical concepts, terms that will drive the success of the relationship and protect your company's interests. These include:

- A description of the product or services supplied
- Quality assurance standards and performance metrics
- Oversight and audit rights
- A procedure for declaring breach, cure and termination, and the law that governs the relationship
- The method by which the parties will resolve disputes.

Your counsel can provide advice on when and how to use a form contract and when original drafting would be prudent.

Of course, even the best-laid plans may change over time, causing the need to maintain or fine-tune a contract. Business needs or outside influences beyond your control may occur that render contract terms obsolete or even harmful. Knowing when to call counsel during the life of a contract is a critical and underappreciated skill.

Relationship Divorce

Even with careful management of a relationship, it can deteriorate to the point where it makes no sense to maintain or fine-tune the association. Terminating a relationship is an act that significantly heightens the risk of litigation. Even if you have not involved legal counsel prior to this point, you should do so as soon as termination is a consideration to protect your internal communications going forward. The possibility of termination often results in an angry supplier — and its hungry counsel who will ask for copies of your non-privileged documents and other communications concerning the supplier and reasons for termination.

At times, it is difficult to separate emotion engendered by the dispute from your obligations under the supply agreement. Emotion can cloud judgment. Your counsel can ensure that your decision to terminate a relationship is consistent with the supplier agreement terms and the complex laws and regulations — often international in scope — that may impact your ability to end the relationship without having to pay damages.

The Moral of the Story

Of course, not every situation warrants a call to attorneys. Supply management professionals develop their own expertise in contracts and managing relationships. And much of the time, that expertise makes the supply professional well-suited to investigate, negotiate and manage the relationship without need for legal support.

But as a supply professional's career advances, he or she learns the basics of applicable law and should gain a greater sense of when it is prudent to involve legal counsel in managing a particular part, or perhaps all, of the relationship life cycle. Like the rest of the far-reaching world, supply partners are not immune from acrimony. No doubt, there will be many times over a supply management professional's career when it would be shrewd to add legal counsel to the professional's team. ISM

Jeffrey J. Mayer is an attorney and partner at Akerman LLP in Chicago. **John T. Shapiro** is an attorney and partner at Freeborn & Peters LLP in Chicago.

ISM® Report On **Business**®

July 2016

manufacturing

Analysis by **Bradley J. Holcomb, CPSM, CPSD**, chair of the Institute for Supply Management® Manufacturing Business Survey Committee.

Economic activity in the **manufacturing sector** expanded in July for the fifth consecutive month, while the overall economy grew for the 86th consecutive month, say the nation's supply executives in the latest **Manufacturing ISM® *Report On Business*®**.

The July PMI® registered 52.6 percent. The New Orders Index registered 56.9 percent, a decrease of 0.1 percentage point from the June reading of 57 percent. The Production Index registered 55.4 percent, 0.7 percentage point higher than the June reading of 54.7 percent. The Employment Index registered 49.4 percent, a decrease of 1 percentage point from the June reading of 50.4 percent. Inventories of raw materials registered 49.5 percent, an increase of 1 percentage point from the June reading of 48.5 percent. The Prices Index registered 55 percent, a decrease of 5.5 percentage points from the June reading of 60.5 percent, indicating higher raw materials prices for the fifth consecutive month. Manufacturing registered growth in July for the fifth consecutive month, as 12 of the 18 industries reported an increase in new orders in July (same as in June), and nine of the 18 industries reported an increase in production in July (down from 12 in June). Of the 18 manufacturing industries, 11 are reporting growth in July in the following order: Textile Mills; Printing & Related Support Activities; Miscellaneous Manufacturing‡; Wood Products; Furniture & Related Products; Chemical Products; Food, Beverage & Tobacco Products; Fabricated Metal Products; Nonmetallic Mineral Products; Petroleum & Coal Products; and Computer & Electronic Products. ISM

‡*Miscellaneous Manufacturing (products such as medical equipment and supplies, jewelry, sporting goods, toys and office supplies).*

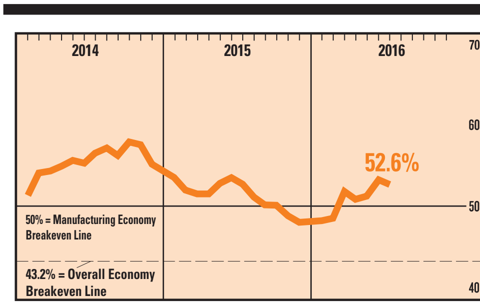
PMI® at 52.6%

New Orders and Production Growing; Employment and Inventories Contracting; Supplier Deliveries Slowing

Manufacturing at a Glance

INDEX	Jul Index	Jun Index	% Point Change	Direction	Rate of Change	Trend* (months)
PMI®	52.6	53.2	-0.6	Growing	Slower	5
New Orders	56.9	57.0	-0.1	Growing	Slower	7
Production	55.4	54.7	+0.7	Growing	Faster	7
Employment	49.4	50.4	-1.0	Contracting	From Growing	1
Supplier Deliveries	51.8	55.4	-3.6	Slowing	Slower	3
Inventories	49.5	48.5	+1.0	Contracting	Slower	13
Customers' Inventories	51.0	51.0	0.0	Too High	Same	2
Prices	55.0	60.5	-5.5	Increasing	Slower	5
Backlog of Orders	48.0	52.5	-4.5	Contracting	From Growing	1
New Export Orders	52.5	53.5	-1.0	Growing	Slower	5
Imports	52.0	52.0	0.0	Growing	Same	2
Overall Economy				**Growing**	**Slower**	**86**
Manufacturing Sector				**Growing**	**Slower**	**5**

*Number of months moving in current direction.
Manufacturing ISM® *Report On Business*® data is seasonally adjusted for the New Orders, Production, Employment and Supplier Deliveries Indexes.



PMI®

Manufacturing expanded in July as the PMI® registered 52.6 percent, a decrease of 0.6 percentage point from the June reading of 53.2 percent, indicating growth in manufacturing for the fifth consecutive month. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting. A PMI® above 43.2 percent, over a period of time, generally indicates an expansion of the overall economy.

Commodities Reported

Commodities Up in Price: Copper*; Corrugate* (2); Dairy; Diesel (4); Gold; Natural Gas (2); Petroleum Based Products; Polyethylene Resins; Stainless Steel (4); Steel (7); Steel — Carbon (2); and Steel — Hot Rolled (6).

Commodities Down in Price: Copper*; Corn; Corrugate*; and Steel.

Commodities in Short Supply: None (4).

***Note:** The number of consecutive months the commodity is listed is indicated after each item.*

**Reported as both up and down in price.*

Analysis by **Anthony Nieves, CPSM, C.P.M., A.P.P., CFPM,**
chair of the Institute for Supply Management®
Non-Manufacturing Business Survey Committee.

NMI® at 55.5%

Business Activity Index at 59.3%; New Orders Index at 60.3%; Employment Index at 51.4%

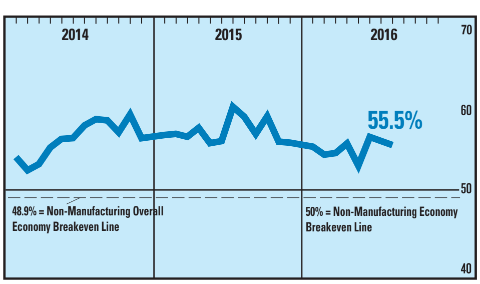
Economic activity in the **non-manufacturing sector** grew in July for the 78th consecutive month, say the nation's purchasing and supply executives in the latest **Non-Manufacturing ISM® *Report On Business*®**.

The NMI® registered 55.5 percent. This represents continued growth in the non-manufacturing sector at a slower rate. The Non-Manufacturing Business Activity Index decreased to 59.3 percent, 0.2 percentage point lower than the June reading of 59.5 percent, reflecting growth for the 84th consecutive month, at a slightly slower rate in July. The New Orders Index registered 60.3 percent, 0.4 percentage point higher than the reading of 59.9 percent in June. The Employment Index decreased 1.3 percentage points in July to 51.4 percent from the June reading of 52.7 percent. The Prices Index decreased 3.6 percentage points from the June reading of 55.5 percent to 51.9 percent, indicating prices increased in July for the fourth consecutive month. The majority of the respondents' comments reflect stability and continued growth for their respective companies and a positive outlook on the economy. The 15 non-manufacturing industries reporting growth in July — listed in order — are: Arts, Entertainment & Recreation; Educational Services; Accommodation & Food Services; Real Estate, Rental & Leasing; Retail Trade; Utilities; Health Care & Social Assistance; Public Administration; Finance & Insurance; Management of Companies & Support Services; Transportation & Warehousing; Wholesale Trade; Construction; Information; and Professional, Scientific & Technical Services. **ISM**

Non-Manufacturing at a Glance

INDEX	Jul Index	Jun Index	% Point Change	Direction	Rate of Change	Trend* (months)
NMI®	55.5	56.5	-1.0	Growing	Slower	78
Business Activity	59.3	59.5	-0.2	Growing	Slower	84
New Orders	60.3	59.9	+0.4	Growing	Faster	84
Employment	51.4	52.7	-1.3	Growing	Slower	2
Supplier Deliveries	51.0	54.0	-3.0	Slowing	Slower	7
Inventories	54.0	55.5	-1.5	Growing	Slower	16
Prices	51.9	55.5	-3.6	Increasing	Slower	4
Backlog of Orders	51.0	47.5	+3.5	Growing	From Contracting	1
New Export Orders	55.5	53.0	+2.5	Growing	Faster	2
Imports	53.0	54.0	-1.0	Growing	Slower	6
Inventory Sentiment	63.0	62.5	+0.5	Too High	Faster	230
Overall Economy				**Growing**	**Slower**	**84**
Non-Manufacturing Sector				**Growing**	**Slower**	**78**

*Number of months moving in current direction.
Non-Manufacturing ISM® *Report On Business*® data is seasonally adjusted for the Business Activity, New Orders, Prices and Employment Indexes.



NMI®

In July, the NMI® registered 55.5 percent, a decrease of 1 percentage point when compared to June's reading of 56.5 percent, indicating continued growth in the non-manufacturing sector for the 78th consecutive month. A reading above 50 percent indicates the non-manufacturing sector economy is generally expanding; below 50 percent indicates the non-manufacturing sector is generally contracting. An NMI® above 48.9 percent, over a period of time, generally indicates an expansion of the overall economy.

Commodities Reported

Commodities Up in Price: Avocados; Beef (2); Cheese; Construction; Labor – Construction (2); Consulting; Dairy; #2 Diesel Fuel (2); Fuel* (4); Labor (15); Medical/Surgical Supplies (2); Produce* (4); Steel; and Steel Products (2).

Commodities Down in Price: Chicken; Corn; #1 Diesel Fuel; Fuel*; Gasoline; Lumber Products; Pork; and Produce* (2).

Commodities in Short Supply: Almonds; Avocados; Labor (10); and Labor – Construction (4).

Note: *The number of consecutive months the commodity is listed is indicated after each item.*

**Reported as both up and down in price.*

Global **Trends**

news in a changing world



Resources

Information in this report was gathered from the following sources:

Euromonitor International
www.euromonitor.com

FiercePharma
www.fiercepharma.com

Maritime Executive
www.maritime-executive.com

MarketsandMarkets
www.marketsandmarkets.com

Technavio
www.technavio.com

TechSci Research
www.techsciresearch.com

US
United States

The U.S. chocolate market, the largest in the world, is projected to surpass US$30 billion annually by 2021, according to a report by TechSci Research. *United States Chocolate Market by Type, by Age Group, by Point of Sale, Competition Forecast and Opportunities, 2011-2021* says the surge will be fueled by increasing product offerings from private-label brands and a shifting consumer preference toward chocolates with health benefits. Dark chocolate consumption has increased in the U.S., thanks in part to its being rich in antioxidants. Countline and seasonal chocolate segments dominated the American market in 2015, accounting for a cumulative revenue share of about 65 percent. Other market-driving factors are a higher use of chocolate in beverage, cosmetic and pharmaceutical products as well as an increase in chocolate gifting during holidays and other special occasions.

MX
Mexico

Mexico's dominant wind-energy, marine- and transportation-sector markets are key drivers of the North and South American structural adhesives market, which is expected to reach US$4.4 billion by 2021, according to a MarketsandMarkets report. *Americas Structural Adhesives Market by Type, by Application — Forecasts to 2021* projects a compound annual growth rate of 7.47 percent in the next five years. Building and construction, transportation, marine and wind energy are among industries demanding materials that can reduce weight and increase mechanical performance. Adhesives are widely used to bond such components as rotor blades, car hoods and doors, and aircraft cockpits.

ZA
South Africa

The bottled water market in South Africa is expected to grow at a compound annual rate of 7.01 percent through 2020, according to a report by Technavio. Doubts about the reliability of the nation's tap water have increased due to reports of pollution in reservoirs in many cities. Also, South Africa is a dry country, with 464 millimeters of yearly rainfall, half the global average. The growing volume sales of bottled water have been fueled by consumers with a higher standard of living. "The growing water crisis in many parts of South Africa is leading consumers to shift toward bottled water, as it is clean and hygienic, microbe-free, and safe," says Vijay Sarathi, a lead analyst at Technavio.

IR
Iran

Iran is increasing oil exports faster than analysts expected after economic sanctions were lifted earlier this year, according to a *Maritime Executive* report. More than a third of Iran's crude shipments are being handled by foreign vessels, including 25 European- and Asian-owned supertankers. "Charterers are buying cargo from Iran, and the rest of the world is OK with that," Odysseus Valatsas, chartering manager at Glyfada, Greece-based Dynacom Tankers Management, told *Maritime Executive*. Three Dynacom supertankers carry Iranian crude. Not all of the world is OK with it, however — some shippers are reluctant to handle Iranian oil, thanks in part to U.S. restrictions still in place, including a ban on involvement by American firms.

CN
China

China continues toughening its oversight of the country's pharmaceutical industry to quell concerns by its own citizens and international export buyers about fraudulent medicines. Chinese regulatory officials have advocated mandatory good manufacturing practice (GMP) certification for drug manufacturing plants, and the country's Center for Food and Drug Inspection has been more aggressive in inspecting firms that apply for GMP status. Last year, the center reviewed 221 applications, rejecting nine. Of those that were approved, 68 later received warning letters. Officials noted an increase in the number of warning letters issued last year, while the number of applications declined sharply from 2014.

By Brian Moscogiuri

Egg Industry Faces New Battle: Demand Recovery

More than 34 million of the nation's 307 million egg-laying hens were killed late last spring during the worst outbreak of avian influenza (AI) the U.S. had ever seen. In the wake of this disaster, the egg industry faced an uphill battle in dealing with supply shocks, high prices and subsequent demand destruction, both domestically and abroad.

The virus markedly impacted egg-processing plants located in the Central Flyway region of the U.S., as roughly 30 million of the hens lost produced for the products sector. Thus, in just a few months' time, 30 percent of the production destined to become egg products was removed from the marketplace. Processors had no choice but to compete for any egg available to cover orders, and thus purchased eggs originally destined for the cartoned market. Urner Barry, a market news publisher, reported breaking egg prices peaked at US$2.35 per dozen in early June, then hit an all-time high of $2.37 in August.

The flow of eggs into the processing sector quickly tightened overall supplies, and the cartoned market followed a week later. The industry benchmark Midwest Large Egg Quotation hit an initial high of $2.62 per dozen in early June, then peaked at an all-time high of $2.88 in August.

A year after the virus, demand has been slow to recover, although production levels have almost fully returned to pre-AI levels. Exports are beginning to rebound but are hindered by adequate global stocks and the U.S. dollar's recent strength. Egg product usage has yet to fully recover, particularly in the ingredients category, and industry participants suggest that finished-product business could be down 15 percent to 20 percent so far in 2016. Several major bakery buyers have told Urner Barry they have replaced or reduced egg usage by as much as 50 percent, and that they don't plan to increase their orders because of supply issues and price volatility. Retail demand has rallied around low-priced features, but a number of grocery chains have yet to fully adjust shelf prices from AI-related highs.

Given production trends and demand conditions, wholesale markets have hit some of their lowest levels in the last 10 years. From shell eggs to finished egg products, prices have dipped well below longer term average levels, and producers are struggling to recapture normal business volumes internationally and at home.

The egg industry faces another uphill battle. This time, the challenge will be to rekindle lost demand and grow sales to absorb the additional layers expected to make their way into production by the end of the year. ISM

Brian Moscogiuri is a market reporter covering the U.S. and European Union egg and egg-product markets for Urner Barry in Toms River, New Jersey.

Mexico Revs Its MANUFACTURING MOTORS

August

COVER STORY

By Lisa Arnseth

As costs rise in China, the auto industry sees Mexico as an attractive nearshoring alternative.

Over the past decade, Asia has been losing its grip as the reigning low-cost manufacturing hub for companies around the world. Labor costs, which were once the main draw to global corporations, have been steadily rising each year. Manufacturers in a number of industries are seeking more efficient and cost-effective solutions outside Asia, and one country is currently taking the lead: **Mexico**.

It's not just the lure of lower labor costs, however. While affordable by many standards, the Mexican workforce is increasingly well-trained and eager to work. Rosemary Coates, executive director of The Reshoring Institute and president of Blue Silk Consulting in San Francisco, says the labor pool is strong in Mexico, and the country also offers proximity to the North American market. "You're going to have lower logistics costs, and it's definitely easier to control operations when you are in nearby time zones, rather than having to fly to Shanghai," Coates says.

In addition, Mexico has been rising in the World Bank Group's *Doing Business* report rankings, thanks to business reforms that make it more attractive to global companies. In 2015, Mexico was ranked No. 42 in the world in "ease of doing business," but in 2016 rose to 38th. That's because the Mexican government has invested in infrastructure improvements and favorable trade policies while working to make the process of starting a business in the

"It's also a more favorable location for exporting product. The rail infrastructure might need some work, but their ports on the West Coast are improving all the time."

— **Willy C. Shih**, professor, Harvard Business School

country simpler and more attractive. "Mexico also has more trade agreements with other countries than the United States does," says Willy C. Shih, the Robert and Jane Cizik Professor of Management Practice in Business Administration at Harvard Business School in Boston. "It's also a more favorable location for exporting product. The rail infrastructure might need some work, but their ports on the West Coast are improving all the time."

Stuart Andrews, head of procurement for ThyssenKrupp North America in Chicago, agrees that Mexico is a strong location for competitive development for a number of industries. "The country is driving cost reductions in manufacturing by leveraging free trade agreements and labor costs," he says. "ThyssenKrupp values Mexico's growing skilled trade labor market as well as its business-friendly culture and environment."

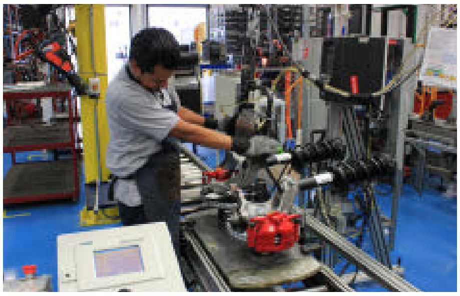
Automotive Production Not Slowing Down

One industry in particular is experiencing massive growth south of the U.S. border: automotive. International auto manufacturers have been assembling vehicles in Mexico for many years, often to increase their proximity to the lucrative North American market.

General Motors (GM) has had a presence in the country for 80 years, in marketing, sales and distribution as well as production. "Mexico offers a stable business environment in addition to a proven track record of quality manufacturing, and a capable, skilled and competitive labor force," says Chris Naegeli, executive director, GM Global Purchasing and Supply Chain in Detroit. "We source from Mexico to optimize our supply chain network, taking advantage of the strong supply base to yield the best total enterprise cost." Some of the more complex commodities for automobiles — such as safety components, manual transmissions and chassis components — are procured from Mexican suppliers for use in North American operations.

Currently, GM's Mexican division, General Motors Mexico, has manufacturing operations that include four manufacturing complexes and 14 different plants, composed of vehicle

In February 2015, ThyssenKrupp started production at a new automotive components site in Puebla, Mexico (below photo) which assembles front axles for Volkswagen. Producing about 2,200 axis modules daily, the site employs around 240 people.



assembly operations, engine and transmission assembly, foundry operations and stamping plants. The primary models produced in Mexico include the Chevrolet Cheyenne, Silverado, Cruze, Trax, and Aveo vehicles as well as the GMC Sierra. Up to 70 percent of the content in these GM vehicles comes from local suppliers, and the company wants to do more, says Naegeli. "Our goal is to increase local sourcing to 90 percent for local assembly operations."

Of course, working in Mexico is not without challenges. There are well-known issues with general safety and security when traveling around the country, and its fiscal and legal systems can be confusing to inexperienced outsiders. Hiring knowledgeable management personnel with local expertise can help address many of these concerns.

On a supply management level, there are also pressing shortage issues. As manufacturing increases in the country, skilled labor and raw materials are currently in high demand. Finding the right talent, navigating the country's logistics infrastructure, sourcing needed raw materials like aluminum and resin, and compensating for the amount of vertical integration at the tier-two and tier-three levels in the supply chain are all pressing concerns for supply management practitioners, says Naegeli.

"Fortunately, GM has strong relationships with our partners in Mexico," he says. To address the industry's need to increase the trained-labor pool, GM works with both public and private universities to develop courses on the latest technologies. The company also speaks directly with government officials to help understand where the industry's logistics needs intersect with infrastructure to pinpoint potential issues. And finally, GM works directly with the supply base to identify and address gaps in the supply chain, and has committed to a US$5 billion investment to expand and modernize its manufacturing capabilities, which is projected to create up to 5,000 direct and 40,000 indirect jobs.

Overall, Naegeli says, GM is able to harmonize the purchasing and supply chain management activities it uses in the U.S. with Mexico by leveraging its global scale and optimizing common business practices worldwide. "In general, our decisions are based on the best total enterprise cost, considering the whole company rather than specific regions or countries," he says.

On April 24, 2015, ThyssenKrupp opened a new steering components plant in Puebla, Mexico (above photo). The new site can produce more than 1 million steering columns, 7 million steering shafts and 45 million cold-forged steering parts per year.

STAT: By 2020, one in four vehicles built in North America will be produced in Mexico.

Source: WardsAuto

ThyssenKrupp North America also coordinates its business practices to work across different countries, leveraging a holistic and single voice to the market to maintain better costs and service delivery positions. The company produces elevators, develops and builds plants for the cement and oil/gas industries, and processes and distributes aluminum and carbon steel, but its largest area of focus is on the automotive industry.

As one of the leading material and component suppliers and engineering partners to a number of global auto manufacturers, the company is planning further investment in Mexico to handle the ongoing growth in the auto sector. This makes financial sense for the future, as approximately one quarter of the company's sales are generated with automotive customers. ThyssenKrupp generated about US$919 million in sales in Mexico during its 2014-15 fiscal year.

"Mexico and ThyssenKrupp share a 170-year history. Today, four of the company's six business areas are represented in Mexico, employing about 3,500 people across 20 locations," says Andrews. "We have an integrated position supporting many of the large industry OEMs that continue to grow and invest in Mexico. Our strategy is to grow with our customers and source from North American-based companies that meet our requirements for quality, cost targets and product innovation." To that end, ThyssenKrupp plans to invest approximately 500 million euros (US$555.7 million) through the year 2020 for businesses that primarily support the automotive industry in North America.

Eve Anderson, regional sourcing manager for ThyssenKrupp North America, says this scaled growth plan will support the rapid expansion of international OEMs in the auto industry. "According to the U.S. Department of Commerce, Mexico is the seventh-largest vehicle producer in the world and the first in Latin America, and it's growing. ThyssenKrupp's presence in Mexico allows us to keep close proximity to our end customer, remain competitive and yield additional flexibility in our supply chain, which is critical." Anderson says a key facet of the company's plan is to focus on expanding its MRO supply chain capacity to help expand and improve productivity in its Mexico-based facilities.

Like GM, ThyssenKrupp also experiences tight commodity and raw material availability at its Mexican locations due to the rapid growth of the industry, causing pricing pressures, according to Anderson. "The availability of certain commodities could not meet the demand, and as a result it made some prices uncompetitive with other markets, such as China. We addressed this challenge by leveraging our global supply relationships with production plants in Mexico to take advantage of the country's growth," says Anderson. Supply management professionals went to work building on long-standing relationships with Mexico-based suppliers, offering partnerships and helping them develop their operations to contend with demand.

Ups and Downs; Dollars and Pesos

Currency fluctuations are another area that creates pricing pressure for manufacturers working in Mexico. Fluctuations in currency exchange rates are an unavoidable part of doing business today, as these dips and increases affect the net value and buying positions for goods. ThyssenKrupp addresses this issue by using its position as a global company to leverage its reach across the U.S., Canada and Mexico to reduce the overall costs to its customers and increase its EBIT.

"To remain competitive in the North American market and defend against pricing disparities found in the U.S., Canada and Mexico, we were able to coordinate regionally and globally ... uniting our businesses and working holistically, acting as one ThyssenKrupp," says Anderson. "This gives us the ability to focus on standardizing our indirect supply management strategy, creating

As manufacturing increases in the country, skilled labor and raw materials are currently in high demand.

one standard to satisfy the needs of the entire North American region. Leveraging U.S. economies of scale and applying them to the Mexican market allows ThyssenKrupp to maintain a better cost position for similar goods versus the local supply market used historically." According to Anderson, this strategy has been successful in the case of certain indirect materials such as spare parts, tools and safety supplies, where it had been difficult for the localized market to compete on pricing and availability.

Like GM, sourcing locally does have benefits in some areas for ThyssenKrupp. Such commodities as machined components, precision tubes, steel, packaging and some textiles are produced in large quantities in Mexico, says Anderson. Competition stemming from the large number of suppliers for these products has increased quality and reduced prices for these goods.

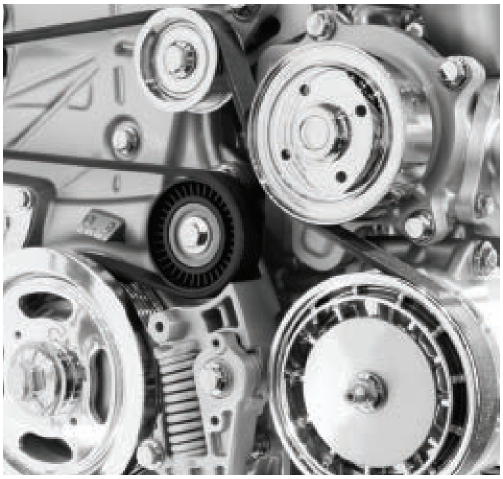
In addition, ThyssenKrupp also looks for ways to lower its TCO by making Mexico an extension of the MRO supply chain the company established in the U.S. "We have a strong MRO partner with an integrated network to allow us to spread into Mexico and increase our capacity while reducing our overall supply chain spend," explains Anderson.

There's also a strong possibility that energy costs will soon become more favorable in the country overall, says Anderson. "Two government entities — Permex and the Commission Federal de Electricidad (CFE) — are driving interesting changes. If the energy sector, which has been historically closed, continues to open to private investment, then deregulation could leverage added market competition and lower the cost of energy for our businesses," she says. "There are a lot of positive developments going on in Mexico at the moment."

Secrets of Success

As manufacturers like GM and ThyssenKrupp deepen their relationships with Mexican suppliers and invest heavily in the region, it's proof positive that the globalization of the automotive supply chain is well underway, says Shih. "Whether executives are making plant location decisions or contracting with existing Mexican operations, it's no longer a simple question of finding the lowest-cost country," he says. "Today, we do see components coming from all over the world, and cars being shipped around the globe, but we also see close-to-market assembly. It's a complex mix of things going on, and cost is not the only conversation I'm hearing executives discussing. They want to go where the best quality is possible, and where the customers are."

In his experience, Shih says, doing business in Mexico can be eye-opening and impressive. "One of my favorite factories in the world is in Guadalajara, Mexico. The workforce is terrific, with great attitudes and work ethics. The workers are well-trained, and the shop floor leadership is excellent. Their costs are attractive, but the work being done is exceptional," he says.



STAT: Mexico's gross domestic product (GDP) is around US$1 trillion. In 2016, the GDP is expected to grow by about 2.0 percent.

Source: www.mexperience.com

Developing relationships is the key, and that means respect goes both ways. Mexico's workers and business leaders are very responsive to clear communication and building two-way trust. The country has undeniable social and governmental problems to solve, and working out of Mexico is not always a simple proposition, but a number of companies are reaping the benefits of immersion in the local culture. "We work hard to foster local relationships in accordance with cultural customs," says Anderson. "This is very important when building credibility in professional relationships, on both the customer and the supplier side."

Andrews agrees: "Our success stems first from our respect for our colleagues in Mexico and their culture, followed by frequent communication that is open, transparent and considers points from all perspectives." ISM

Lisa Arnseth is a publications coordinator for *Inside Supply Management®*.

Growth ENGINES

By Sue Doerfler

Railroads of old created expansion. They were a driving force in the industrial revolution of the 19th century. They helped North America expand, not only developing new frontiers but connecting people with goods and power.

Railroads are still expanding and connecting, but the focus of railroad companies has changed. While their appearance hasn't changed much over the past few decades, today's railroads have become sophisticated transporters, responding to technological advances and changing demands.

Theirs is a two-part tale: one of industry and one of freight. While interconnected, these two portray different pictures. The former is a profitable one highlighted by a strong network and infrastructure, while the latter is challenged by factors outside of the railroads' control: A drop in coal production, the strong dollar and other issues tied to energy, manufacturing and the economy.

Today's
railroads
respond to
challenges
and change
to remain
profitable.

BNSF No. 6674 leads a double-stacked intermodal container train through mountains in Washington state. Each double-stack intermodal train can take 280 trucks off the highways, resulting in lower emissions and fuel consumption. A BNSF train can haul one ton of freight 500 miles on one gallon of diesel fuel.

Photo Credit: BNSF Railway

A Look at the Industry

Industry-wise, rail is doing well, both in profit and infrastructure, says analyst Anthony Hatch, who heads New York-based ABH Consulting. "Their network and infrastructure is currently in the best condition it's ever been in," he says.

Freight railroads have spent an average of US$25 billion a year over the past five years — and $600 billion over the past three decades — in private infrastructure and equipment to maintain and further modernize the nation's rail network, according to Ed Greenberg, spokesman for the Washington D.C.-based American Association of Railroads (AAR).

BNSF, one of North America's seven Class 1 railroads (railroads with at least $476 million in revenue in 2014), has a 2016 capital expenditure of $4.2 billion, of which $2.8 billion is allocated for maintenance of its vast network of track that extends from the West Coast to Chicago and Atlanta and includes three Canadian provinces. "Ours is a business where we all own our own track — and we have to maintain it — so we have to have the ability to invest in the business to continue moving freight and contributing to the supply chain and growing economy," says Mike Trevino, spokesman for BNSF, based in Fort Worth, Texas. "The sector is in really good shape."

Freight and Energy

The freight sector, however, has been challenged. "After a really good run this entire century, which I call the 'rail renaissance,' I think we're in a bit of a pause," Hatch says.

In recent years, railroading has undergone a state of flux that is tied in particular to energy issues:

Coal. The rail industry grew up moving coal, but its future is likely not tied to it. Freight analyst Larry Gross, president of Gross Transportation Consulting in New York, says, "Coal, which has been the most important of the conventional carload commodities, is in a long-term decline, accelerating this year."

According to the U.S. Energy Information Administration (EIA), coal accounted for 39 percent of the fuel consumption by U.S. power plants in 2007 but only 33 percent in 2015. Coal production was 38 percent lower in April 2016 than it was in April 2015, the agency says, and coal stockpiles at power plants have been rising, thus, shipments of coal by rail have dropped. According to the EIA, there were about 75,000 coal rail loadings in February, which is 35 percent lower than the February average for the previous five years.

The reasons for the decline include warmer weather and proposed emissions regulations under the Clean Power Plan that call for reducing carbon pollution from existing and new power plants, Gross and Hatch say.

Natural gas. Another contributor to declining coal is cheaper fuel alternatives, namely natural gas. Prices of natural gas have hit historically low levels this year due to its abundance, which is the result of fracking, Trevino says. Fracking — a drilling method called hydraulic fracturing that extracts oil and natural gas from shale and other rock — began around 2005 and exploded in early 2010s, he says. According to EIA, the U.S. was the world's No. 1 producer of natural gas in 2015.

Crude oil. Shipments of crude oil (called crude-by-rail) have helped to offset the decline in coal shipments. According to the AAR, railroads saw an increase of nearly 5,100 percent in carload shipments of crude oil from 2008 to 2014, growing from 9,500 carloads to 493,146 during that period.

However, because of the significant decline in crude oil prices over the past 18 months, crude production also has declined, meaning crude-by-rail has dropped, Trevino says. This also has resulted in a decline in shipments of frac sand, which is used to fracture rocks that allows for the production of crude oil, he says.

"Frac sand has declined. Crude oil has declined," he says. "The mild winter that the U.S. experienced this year contributed to a decline in demand for electricity, which also contributed to the decline in coal movements. As demand for energy consumption declined, so did the need for firing up those plants."

Hatch sums up the situation this way: "The whole energy side of the rail story is in a depression."

Cyclical Issues and Other Challenges

In addition to secular issues such as the decline in coal,

BNSF's Logistics Park

Kansas City (LPKC) Intermodal Facility in Edgerton, Kansas, opened in October 2013. LPKC is a more than 1,550-acre master-planned distribution and warehouse development anchored by BNSF's newest intermodal facility.

Photo Credit: BNSF Railway

railways face a variety of cyclical issues that affect the movement of freight at any given time. "One cyclical issue is that the industrial sector, which the railroad industry relies on, is going through a soft spot," Gross says. "You look at metals and metal ores: They are down because of global over-capacity and Chinese imports. If you look at the commodities, it's a mix of secular and cyclical issues."

One of those commodities is grain, whose shipments have been hurt by the strong dollar, Hatch says. "Grain is typically acyclic, and while it can be tied to the health of the local economy, it's also tied to weather, global politics and foreign exchange. A very strong dollar makes our grain particularly expensive relative to big crops in Latin America, for example," he says.

> **"Consumer goods are moved in this country in containers,** so that's where intermodal plays a big part for railroads."
>
> — **Mike Trevino**, BNSF spokesman

Intermodal: Freight's Shining Star

One bright spot has been in intermodal, a type of rail transportation that covers the multimodal movement of trailers and containers by rail, ship and truck.

"Rail intermodal has been growing rapidly for many years. It is the largest broad segment of the railroads' business," Greenberg says. In 2015, freight railroads moved 13.71 million containers and trailers — about half the total rail traffic for the year, he says.

Strong consumer spending is contributing to intermodal's growth, Trevino says. "Consumer goods are moved in this country in containers, so that's where intermodal plays a big part for railroads," he says.

To accommodate the growth, railroads are increasing their intermodal footprint and network infrastructure. "Railroads have invested heavily to enable the high level of services that customers demand," Greenberg says. "Some investments include new and expanded intermodal terminals, additional track capacity, and advanced signaling systems and bridge and tunnel improvements to accommodate the adjusted height that double-stack trains require."

For example, in July 2015, Kansas City Southern opened a new terminal in Wylie, Texas. C. Doniele Carlson, spokeswoman for the Kansas City-based railway, which has investments in the United States, Mexico and Panama, says the terminal not only has increased capacity but features state-of-the-art technology, including an automated gate system with high-definition imagers, optical character recognition and biometric driver identification.

Among intermodal's advantages are that it generally offers a high-capacity and reliable mode of transport over medium to long distances, and in some cases, over short distances, Carlson says. "It is an environmentally-friendly way to transport goods compared to trucking, and at the same time, reduces congestion on the highways," she says. "Almost anything can be transported in a container."

Carlson says that for KCS's cross-border market, intermodal provides shippers with seamless end-to-end transport of their goods in containers. "The container is sealed at origin and moved across the border to its destination, without the need for inspections at the border," she says.

Because the railway offers additional security and capacity to and from Mexico's growing consumer market and manufacturing areas, the shift to intermodal from over-the-road trucking has been significant over the past 10 years, she says. "A large part of this freight was not moved by rail before the conversion to intermodal, which accounts for the significant contribution to growth for KCS," says Carlson.

The trucking industry is an influencer of intermodal activity, Trevino says. With trucking facing such challenges as potential driver shortages and federal hours-of-service regulations that limit the number of hours truck drivers can spend on the road, railroads have the opportunity to capitalize on long-haul moves, he says.

Adaptation and Opportunities

Looking for opportunities and dealing with external issues and challenges are nothing new to railroads.

"We've always had to respond to macroeconomic events and situations that were beyond our control," Trevino says. Railroads are always looking for revenue opportunities to help fund continued expansion and infrastructure development, he says. "What we have done is look for ways to move product — that's what prompted the evolution and creation of intermodal," he says. "We have historically moved grain by putting it in hopper cars, but today we can also put grain in containers and ship it overseas. There are opportunities in the Gulf Coast region for the containerization of plastic resins, a byproduct of crude oil refinement that can be exported around the world for production of plastics."

The railroad sector does a good job of looking forward, anticipating future demand and having the capacity to meet it, Trevino says. "As demand for one commodity changes, railroads have an opportunity to manage their volumes in another space," he says.

Responding to change will be a factor in railroads' future success, Gross says. "Railroads have been extremely effective. The infrastructure is in better shape than it's ever been. The industry is more profitable now than it's ever been," he says.

"But we live in a dynamic world — and the tools and strategies that work today might not be appropriate for tomorrow's challenges. It's an industry with a massive interconnected network that doesn't turn on a dime. There's no magic bullet here. There's not a single problem and not a single solution. A lot of it is out of the rail industry's control."

Hatch says that railroading may look like an older industry "that's tied to its tracks. But if you look back, railroads have been able to take these shifts, put their capital where it's needed and adjust their networks. As long as you have good expectations of the North American industry and economy — our industrial prowess, our trading position, the rise of the middle class in Mexico and other trends — the railroads are well-suited, given their networks and infrastructure, to continue to play a role. And in fact, an ever-larger one." ISM

Sue Doerfler is a publications coordinator for *Inside Supply Management®*.

"There's no magic bullet here. There's not a single problem and not a single solution. A lot of it is out of the rail industry's control."

— **Larry Gross**, president, Gross Transportation Consulting

Mitigating the High Risk of Low-Cost Items

Low-spend items may be a lesser priority for suppliers, yet critical components for the companies buying them.

By Yossi Sheffi, Ph.D.

How important are you to your suppliers? It's a question that companies need to ask when evaluating risk in procurement strategies. And it is especially important in today's fast-changing commercial environment, where suppliers' priorities can change quickly. Consider, for example, the rapidly growing market for products that take advantage of Internet of Things (IoT) connectivity. Suppliers such as Intel that prospered in more established markets like PCs are now investing in IoT applications.

Mitigating the

High Risk

of Low-Cost Items

"Companies shouldn't overlook the risk of losing a vendor that makes basic yet essential parts. The loss of either could result in a significant supply chain disruption."

— **Gerry Smith**, senior vice president of global supply chain, Lenovo

When considering procurement risk, it's tempting to immediately associate high-spend, strategic items with the highest level of risk. But critical, low-spend items are often the riskiest because they can lack a high priority for suppliers more focused on larger-volume products. Of particular interest are items that are low cost and low volume but essential to the business.

For example, a cellphone manufacturer experienced problems securing camera components after losing its tier-one customer status. And despite its prominence as a farm equipment manufacturer, Deere & Company experiences secondary customer status from component suppliers that are more focused on customers of their vehicle components in the auto industry.

Categories of Risk

Practitioners have defined four categories of procurement conditions:

- **Tactical buys**. This category refers to common items with low volume and ready availability. Because the volume is low, transaction costs as a percentage of spend are high.
- **Leveraged buys**. These are high-spend commodities. Minimizing total landed cost is important to keep spend under control.
- **Strategic buys**. Items or services that provide a competitive advantage appear in this category. Companies frequently enter into long-term, deep partnerships with suppliers of these key items.
- **Critical buys**. This category covers essential, low-spend and hard-to-procure items. An obvious risk-mitigation strategy is to maintain high inventory levels.

The latter category is often the riskiest. Buyers of critical buys can be relatively low in the hierarchy from a supplier's perspective. Also, dual sourcing may not be viable due to the lack of alternatives and high cost involved relative to spend.

Low Spend, Low Importance

Supply managers dealing with electronics are subject to this type of risk. For example, both General Motors and Verifone depend on a variety of electronic-industry suppliers. But many of those suppliers pay more attention to cellphone and computer makers that use the latest products. In many cases, these suppliers stop manufacturing and supporting the parts that GM or Verifone rely on.

Here lies the paradox. Makers of cars, commercial systems and many industrial systems prefer not to use the latest electronic chip but rather "tried and true" components. Consider BASF, the giant German chemical company, which has a policy of "three generations behind" in its IT implementation policy. When a chemical plant relies on digital controls, reliability and safety are more important than small performance improvements.

Moreover, in the dynamic electronics industry, suppliers are constantly shifting their gaze to other market opportunities. Consider Apple Inc.'s new 3D Touch technology that it launched with much fanfare as part of the iPhone 6s Plus unveiling in September 2015. As reported by *The Wall Street Journal*, some of the largest beneficiaries of the expected growth in demand for the new iPhone are suppliers of this specialist technology. Two key suppliers, TPK and General Interface Solution Ltd., found their fortunes changed with the arrival of 3D Touch. As key suppliers of this technology, they are expected to capture much new business from Apple going forward.

Of course, the items required by Apple will likely become the primary focus for these suppliers — meaning a shift in priority involving other items they manufacture could lead to obsolescence for other customers. Market changes like this mean that suppliers' production priorities are often in a state of flux, and buyers of less commercially attractive, low-volume items must take these demand swings into consideration when assessing procurement risk.

These risks are not confined to the electronics industry, but those that have witnessed it can attest to the vulnerabilities and disruption. Gerry Smith, senior vice president of global supply chain for personal computer maker Lenovo, sums up the dangers: "Companies shouldn't overlook the risk of losing a vendor that makes basic yet essential parts. The loss of either could result in a significant supply chain disruption."

In short, low spend is risky where essential materials are involved, because the buyer might not be an important customer of the supplier.

Mitigation Options

There are a number of risk mitigation strategies for this category of low-spend/high-risk items. The obvious one is to keep relatively high inventory. Inventory carrying costs are, by definition, low for low-spend materials, and the strategy does not require supplier cooperation. Furthermore, as the risk varies over time, companies can adjust inventories.

Medical equipment maker Medtronic uses such adjustments to shield the company from adverse weather. During the hurricane period in South America, the company applies a "hurricane factor" in its safety stock levels to ensure that it has sufficient stock in the region to cover operations. Extra inventory of both finished products and parts can be used immediately after a disruption. Even if the inventory is insufficient to cover the entire recovery period, it allows crisis managers to "catch their breath" and organize a response — continuing operations and not affecting customers' orders, while collecting data from suppliers, consulting with customers and launching various recovery efforts.

Changing engineering specifications to avoid uniqueness is an important mitigation measure for low-cost, essential items. This reduces the complexity of the material and moves it into the "tactical buy" category described earlier. Cisco, for example, tries to standardize parts where possible, using a "new-product resiliency index" it developed. This index includes such factors as the maturity of each part (is it close to its end of life?) and the uniqueness of the supplier (do we have others that can step in?).

Another approach to mitigation is to consolidate procurement in two ways. First, companies can consolidate buying of the critical parts by all product divisions across the company to the same supplier, then combine the procurement efforts with other companies to create a buying consortium — thus increasing the spend and the attention paid by the supplier to the company. Second, companies can direct the procurement of other, non-critical parts and materials to the critical supplier, thus making the company a more important customer.

Both initiatives — changing specs and consolidation — serve to move the critical part and its supplier to the "leveraged buys" category. Companies can also couple these approaches with investment, equity stakes, joint innovation initiatives and other such approaches, thereby moving the supplier to the "strategic buys" category.

Valued Customers

Companies should not automatically attach a low level of risk to low-spend items without considering their criticality. For critical items, companies should ascertain whether suppliers value their business sufficiently to go the extra mile when a crisis hits.

If they are low in the hierarchy, companies need to take steps to bolster these relationships. For example, after Lenovo faced shortages of disk drives following floods in Thailand in 2011, it entered into long-term agreements with disk-drive suppliers, effectively elevating them to strategic status.

There are many other ways to bestow strategic status on suppliers. Klaus Hofmann, senior vice president, global purchasing at Reckitt Benckiser PLC, a U.K. manufacturer of household and health-care products, says, "We've got a couple single-source suppliers purposely chosen for innovation capability, price and business-continuity planning, where they can support us from different factories if one goes down." In another example, Cisco works with chosen suppliers on "get-well plans" that mitigate a supplier's risk and reduce time-to-recovery. Cisco advises on measures such as the availability of backup power and the ability to execute an IT recovery strategy that help a supplier recover quickly when its operations are disrupted.

Risk Evaluation

Most companies are a minor customer to some of their suppliers, and that low-spend situation adds to the risk of disruption. The good news is, certain actions can help prevent many problems before they occur, or make the difference between quickly solving an unexpected issue and facing major shutdowns or delayed deliveries. What is critical to remember is that when creating risk management strategies or adjusting existing ones for supplier networks, low-spend does not necessarily equal low importance. Give these items high priority. **ISM**

Yossi Sheffi, Ph.D., is director of the MIT Center for Transportation & Logistics and author of *The Power of Resilience: How the Best Companies Manage the Unexpected.*

By Mary Siegfried

Cybersecurity Risk and Your Supply Chain

Making a supply chain safer from cyberattacks now means going beyond what worked before.

The statistics concerning cybersecurity risk serve as a wake-up call for business and supply management leaders faced with securing their firms' extensive computer networks and global supply chains. The *Verizon 2015 Data Breach Investigations Report* finds that more than 70 percent of cyberattacks exploited known vulnerabilities with available patches. It also notes that the average cost of a breach affecting 10 million records is between US$2.1 million and $5.2 million. And that figure does not take into account the damage to brand reputation or consumer confidence.

As threats and attacks continue to evolve, cybersecurity experts are shifting their focus from prevention to managing loss once intruders have breached a network. With the new understanding that attacks are not separate, distinct events but are consistent and repeatable, companies are transitioning from reacting to a particular incident to developing techniques to better understand how the adversary works in the aggregate.

A recent CAPS Research Critical Issues Exchange, "Managing Your Supply Base to Comply with Cyber Security," took an in-depth look at cybersecurity risk, supply management's role in securing lengthy supply chains, and evolving trends in cybersecurity.

It's a Team Sport

Because a company's electronic communications network weaves throughout the organization, cybersecurity risk is a business discussion that should involve all departments. Your firm's IT department should not be single-handedly attempting to tackle this issue. In fact, business and supply chain executives say cybersecurity is a team sport in which all departments should be sharing their challenges and seeking solutions.

Key aspects of a solid cybersecurity program include information sharing, education and preparation.

Information sharing. Cybersecurity is bigger than any one company, and experts agree that sharing information about threats, attacks and solutions within and across industries is critical. It's been found that, within industry sectors, attackers often navigate laterally across an entire industry. Sharing security information through an information sharing and analysis organization (ISAO) in an industry sector is encouraged. In fact, President Barack Obama issued an executive order directing the Department of Homeland Security to encourage the development of ISAOs.

The defense and financial sectors are leading the way in information sharing about cybersecurity. The Financial Services Information Sharing and Analysis Center and the Defense Industrial Base are considered "pre-eminent information sharing organizations." Also, in 2014 a group of leading cybersecurity solutions providers created the Cyber Threat Alliance to share threat intelligence on advanced attacks or motivations as well as the tactics of the malicious actors behind them.

Educating staff, suppliers. IBM's *2014 Cyber Security Intelligence Index* finds that 95 percent of all security incidents involve human error. That's why continuing education for employees and suppliers about cybersecurity risks, processes and requirements is a key ingredient of any company's security program. Elements of a solid program can include annual mandatory training; brief training sessions to highlight timely issues; consistent communications through newsletters, websites and posters; and continually updated screen-saver messages.

Being prepared. Firms need an incident response plan and a disaster recovery plan in place, and those plans should be tested, evaluated and updated regularly. Issues to address in a response and recovery plan include:

- Determining how to respond to a security breach
- Identifying business partners that will be involved in the response/recovery plan
- Developing a plan to handle a breach at a supplier's facility
- Developing a work-around plan in the event a supplier's network is breached and has to be shut down
- Knowing all the data that is in your firm's network in order to promptly identify what has been corrupted or compromised.

Making Strides

Supply management's role in cybersecurity is an important one because it manages risk throughout the supply chain. That's why supply chain leaders should be working with suppliers at all tiers to help them establish cybersecurity processes. Large companies are concerned that as they and their top-tier supplier partners get better at defending their networks, cyber adversaries will shift their focus to lower-tier suppliers.

Some suggestions for supply chain cybersecurity include: establishing a security council to plan and evaluate plans, developing third-party security best practices, and including security expectations and validation in contracts.

While some recent high-profile network breaches paint a grim picture of the state of cybersecurity, strides are being made that offer "courage" to business and supply management executives. For example, in 2011 security researchers from Lockheed Martin presented the concept of "intrusion kill chains." They found that adversaries have to accomplish specific tasks along an entire attack life cycle (kill chain), and be successful at every step. On the other hand, a company only has to stop the intruder at one link along the chain in order to be successful. Of course, this means that companies need a system that has prevention at every stage in the life cycle.

Improving cybersecurity programs and processes are essential for companies as they strive to protect the data at the heart of the business, from customer records to intellectual property. Educating suppliers and employees, sharing information and supporting continuing innovations may go a long way to stopping today's evolving cybersecurity threats.

For more information on this and other reports, contact CAPS Research at research@capsresearch.org. ISM

Mary Siegfried is a freelance writer based in Chandler, Arizona.

CAPS RESEARCH

By Sriram Narayanan, Ph.D.

Transferring Knowledge Strategically

Clear goals and new ways of thinking about how a company accesses knowledge can help organizations develop a plan.

To be competitive, organizations must build a lasting and purposeful knowledge-transfer environment in their supply chain ecosystem. All too often, firms focus on one element like customers or suppliers rather than take a holistic approach involving many stakeholders. An effective knowledge-transfer environment can be a powerful catalyst to spur innovations.

Four interconnected strategies can help companies develop superior knowledge-transfer practices: Viewing themselves as a platform that integrates supply chain knowledge; giving a sense of purpose to knowledge-transfer efforts by setting stretch goals and incentives; creating the right culture for receiving and appropriately interpreting knowledge; and setting up codification and analyzing routines to facilitate knowledge use over time.

Developing an Ecosystem View

First, a company must view itself as a platform that facilitates interactions among ecosystem partners, both internal and external and located within and across geographies. This view allows the organization access to a portfolio of knowledge resources and offers greater opportunities to mix and match ideas from various entities of an ecosystem to create new ones. The opportunities increase exponentially as the number and range of ecosystem partners with diverse perspectives increase. The thrust of the platform notion is for the firm to become the primary force driving interactions in its ecosystem and becoming a knowledge integrator.

Critical internal partners within an organization are those directly engaged with suppliers in some form. These include engineering or R&D groups, procurement, legal, quality inspection and manufacturing. External partners are customers, suppliers, other partners such as universities, external research labs and other organizations in related and, sometimes, unrelated industries. While customers and suppliers are important players in the ecosystem, other partners also can play a critical part in transferring knowledge.

One example of an effective ecosystem of knowledge transfer is Procter & Gamble's Connect + Develop program, which tapped into an array of internal and external stakeholders to improve innovation, and thus knowledge transfer, within P&G. The stakeholders in the ecosystem included not only suppliers, customers and competitors, but university organizations and individual inventors.

In 2001, only 10 percent of P&G's innovations were attributable to external partnerships. By 2005, that figure had grown to 50 percent. Further, according to a 2011 *Inside P&G* newsletter article by Mike Addison, former global business development manager at P&G, external collaboration programs were targeted to bring more than US$3 billion per annum in new business by 2015. Clearly, such an effort is not just about external engagement and collaboration, but an ability to integrate the ecosystem partners within the organization.

In another example, Toyota effectively transfers and integrates knowledge by productively engaging several players in its ecosystem. The car maker is known to engage with its suppliers through a dedicated consulting organization to improve products and processes in the supplier community.

The company promotes not only firm-to-supplier interactions but also supplier-to-supplier interactions, leading to many learning opportunities. Finally, Toyota engages with customers through crowdsourced innovation efforts in its "Ideas for Good" campaign to figure out how its technologies can be applied to other areas beyond automobiles. In both examples, the lens adopted for knowledge transfer and innovation was larger than a firm-supplier relationship, resulting in unexpected successes for the organizations.

Clarify Goals and Align Partner Incentives

Setting goals and creating a sense of urgency are closely connected to each other. In pursuing knowledge transfer, having clear goals is necessary. In an organization with a large ecosystem of partners, clear goals direct efforts to locate and engage the portfolio of participants to meet organizational needs and optimize investments.

Goal clarity provides a sense of urgency and make actions more purposeful. In P&G's Connect + Develop example, the program had set a goal of achieving 50 percent innovation from external partnerships by 2005. After achieving that, it later revised the goals: To deliver $3 billion towards the firm's growth and become the partner of choice for innovation collaboration among external organizations.

Goal clarity also enables internal stakeholders to be engaged and plan resource investments in facilitating knowledge transfer. Such resource investments may be related to technology infrastructure as well as setting up appropriate partner incentives, both monetary (preferred supplier, greater share of business) and nonmonetary (recognition).

Encourage Cultural Syncretism

Pursuing knowledge-transfer strategies with an ecosystem view requires organizations to encourage syncretism in their culture. The word "syncretism" stands for the combination of different, often contradictory, beliefs that can originate from entirely different paradigms. Although typically used in religion studies, syncretism is an idea that can be applied to an ecosystem that has different cultures with a common purpose. The cultural environment of the "supply chain ecosystem" contains divergent views that need to be correctly understood.

This is particularly important in global contexts, where innovation partners come from several divergent cultures, such as Asia. Syncretism accommodates divergent paradigms of partners, facilitates understanding of the other organization's point of view, and allows for open-mindedness in interactions to create a conducive communication environment. This facilitates deeper, more collaborative engagements by broadening a firm's perspectives. Syncretism facilitates knowledge "co-creation" in supply chains, as seen in the examples below.

A.G. Lafley, now P&G's executive chair of the board, notes the importance of integrative thinking in a 2008 *Strategy+Business* article describing P&G's culture. He wrote that when the product Febreze was tested in Japan, P&G executives interpreted its rejection as the Japanese considering it another Western product that wouldn't work there. However, P&G persisted by asking an alternative question: Who liked the product? The company discovered entirely different answers that were anchored on Japanese cultural norms. This provided a starting point for an improved product that was launched successfully. Such thinking is an example of an open-minded approach to understanding another culture.

Similarly, Ikea took seven years to enter the South Korean market; however, the result was an extremely successful launch that altered the Korean furniture market. Before the launch, the company spent a lot of time learning how Koreans used their furniture and adapted to those needs.

Codify Outcomes of Interactions and Synthesize

Formalizing outcomes of interactions is crucial to developing knowledge-transfer strategies. And a key step in formalization is codification of knowledge from interactions. Codification can take the form of documentation, discussion groups, forums and other methods.

Consulting firms commonly use this strategy by codifying consulting engagements and storing them in an internal database where consultants can search archival projects for reuse in the future. For organizations with diverse stakeholders, codifying knowledge allows the opportunity to scale up knowledge use for innovation efforts by allowing integration of past knowledge with that of the present, when synthesized.

In current environments where big data and text analytics technologies are becoming increasingly common, synthesis of codified knowledge can pay dividends for an organization in creating and nurturing its knowledge-transfer platform to aid the firm in its long-run growth endeavors. Thus, codification and synthesis provides the impetus to more forward-looking knowledge-transfer strategies that organizations can carry into the future.

Ultimately, the key to successfully implementing any strategy is execution. As Leonardo da Vinci notes, "Knowing is not enough; we must apply. Being willing is not enough; we must do" — with effectiveness and consistency. ISM

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Affiliate Leadership Web Seminars

Look for new affiliate leadership web seminars in fall 2016. These upcoming web seminars will be recorded and made available under the Volunteer Resources section of the ISM website (www.instituteforsupplymanagement.org):

- eISM: A demonstration of the new online learning platform. Affiliates who participated in leadership training will receive access to the Mastery Model™ Assessment to familiarize themselves with the new product.
- Social media: ISM launched its social media platform in 2008 and has learned a lot since. Topics discussed will include the good and bad of social media, lessons learned and strategies for the future.
- New member orientation: An introduction to the benefits of our association.
- Affiliate Advisory Council: An update of Council initiatives and timelines. This web seminar will include Q&A time and a follow-up survey for additional feedback.

Support ISM's Groups and Forums

Fall is a busy time for ISM group and forum events. An overview of upcoming conferences is below.

For more information and to register for these and all ISM events, select the ISM Training Calendar, located in the drop-down box under Conferences & Events on ISM's website:

UPMG2016 — Nashville; September 11-13: This event will feature informative sessions and exciting keynote speakers like TV personality Pete Nelson and researcher and author Vanessa Van Edwards.

NY/NJ Forum Conference — Corning, New York; September 23-24: "Transitions in Supply Management" will be explored.

NESCON — Marlborough, Massachusetts; October 2-3: The New England Supply Chain Conference and Educational Exposition will feature leading-edge workshops, keynote speakers and plenty of networking time.

SWSMC — Oklahoma City; October 12-13: The Southwest Forum of ISM will host the 69th annual Southwest Supply Management Conference.

Indirect 2016 — Las Vegas; November 30-December 2: Leading experts and industry innovators will provide practical supply chain strategies and insights on indirect spend, which represents a significant impact to the bottom line.

Affiliate Leaders: When logged into the Affiliate Management System, visit the Promotional section of the Volunteer Resources area for banner ads, brochures and flyers to support these volunteer-driven events.

Affiliate Excellence Awards

The Affiliate Advisory Council is updating the Excellence Awards criteria. Attend the Affiliate Advisory Council web seminar to learn more.

eISM Online Learning

Supply management is constantly changing, and succeeding in the profession means maintaining and updating job skills and professional knowledge on a regular basis. Whether it's earning an advanced degree, pursuing a certification or committing to continuous learning opportunities, it's vital to invest in yourself and your career.

The challenge facing adult learners today is finding time to fit education into already busy schedules, and making the most of that time. Working adults need efficient, high-quality targeted content in order to get the best ROI, and micro learning can be the best tool.

ISM encourages members to explore the many new and expanded resources available through eISM online learning. Learning solutions include:

- Just in Time Learning
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- ISM Mastery Model™ Assessment

- E-books
- Podcasts
- Glossary
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Bright Ideas

ISM is always looking for bright ideas from affiliates, groups and forums to share in NewsLine. If you would like to share what your affiliate has done to grow, innovate or otherwise help ISM succeed, email mballesteros@instituteforsupplymanagement.org.

Use the New ISM Catalog to Boost Your Career

Visit the ISM website to access the latest ISM Catalog. You'll find career-enhancing ISM products that can help you achieve mastery in essential supply management concepts. Whether you're looking for certification study aids, special events, online learning or any of our other offerings, this catalog puts everything at your fingertips. Also, the ISM Catalog allows you to directly purchase products by selecting the corresponding blue links.

Our Profession Is Expanding!

Don't get overwhelmed on popular job sites by trying to sift through hundreds of unrelated job postings. The ISM Career Center is supply management focused and has job postings from across the profession. Plus, many companies prefer to find candidates on industry-related sites, and some of the largest and most reputable organizations have active listings in the ISM Career Center.

Select Career Center at ISM's website to create your profile, upload your résumé and take advantage of other resources available. ISM

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REGISTRATION

	ISM Members	Nonmembers
Open-Jan. 15	**$1,195**	$1,495
Jan. 15-Feb. 28	**$1,395**	$1,695
March 1-31	**$1,595**	$1,895
April 1-30	**$1,795**	$2,095
May 1-onsite	**$1,995**	$2,295

Affiliate leaders who register for the Leadership Training Program save $300 on Conference registration.

Hotel information: Disney's Coronado Springs Resort; 1000 Buena Vista Dr., Orlando, FL 32830. Room rate: US$182 per night, cut-off date is April 28, 2017.

August Ad Index

When it Comes to Truckload Rates, Do Shippers Get What They Pay For?

Choosing a carrier is one of the key decisions shippers face — constantly under pressure to cut costs, they seek the biggest bang for their transportation-rate bucks. However, is there a documented correlation between truckload-carrier rates and (1) on-time performance and (2) load tender acceptance?

Third-party logistics and supply chain management provider C.H. Robinson enlisted two graduate students at the Massachusetts Institute of Technology's Center for Transportation & Logistics to find out. The results were published in a white paper, *Do Higher Truckload Rates Bring Better Carrier Performance?* The answer: No, but don't assume that means the lowest rate is the best deal.

After 27 months of tracking single-stop loads between 250 miles and 3,000 miles in the continental U.S., researchers found that paying higher rates than market average did not result in a better on-time pickup (OTP) or on-time delivery (OTD) percentage. They also found no correlation between acceptance ratios and character pricing in a lane, adding that carrier ratios are more likely to rise when shippers offer consistent load volumes.

"The best carrier for a lane is neither the cheapest nor most expensive, but the one whose service network complements the shipper's freight," the white paper says. "This research suggests that paying the market rate yields the best on-time delivery."

However, paying less than market rate will result in decreased performance, the research suggests. Carriers with OTD rates under 70 percent typically charged less. An average drop of US$50 below the market rate resulted in OTD performance below 40 percent.

Source: www.chrobinson.com

Inside the Glossary

BONDED STORAGE: Secure storage for product for which taxes, such as excise tax, may become due when product leaves storage, depending upon its destination. The warehouse owner guarantees to tax/tariff collecting agencies that product will not be released without payment of any taxes due depending upon where the product is shipped.

IN THE NEWS: (Beef) imports from both Australia and New Zealand are expected to slow down in the fourth quarter as cattle slaughter rates begin to ease and traders manage exports in order to limit exposure to the above-quota duties. It is possible that some volumes of lean beef imports will be placed in bonded storage to avoid incurring additional costs. It is very likely any processed beef placed in bonded storage during late 2015 will be released in early 2016. (www.cattlenetwork.com/news/markets/us-beef-exports-struggle-strong-demand-lean-processing-beef-supports-higher-imports)

Source: *ISM Glossary of Key Supply Management Terms* (www.instituteforsupplymanagement.org/glossary)

East-West Ocean Trade Rates Continue Drop

Shippers' success in securing price cuts from carriers has led to a tumble in ocean cargo freight rates during the first half of the year, according to research by Drewry, a London-based shipping consultant.

Drewry's Benchmarking Club Contract Rate Index, which is based on average freight rates on Trans-Pacific and Asia-Europe routes and provided confidentially by shippers, declined 29 percent from January to May.

"The price war between carriers in the container shipping market continues, and this is, for now, resulting in substantial reductions in contract rates for exporters and importers buying under contract," says Philip Damas, head of the logistics practice for Drewry.

Rates could reverse course with the arrival of the third-quarter peak season. Carriers have announced capacity reductions for the Trans-Pacific and Asia-Europe routes in hopes of setting the stage for price increases, which could be as high as $1,500 per 20-foot equivalent unit. **ISM**

Source: www.drewry.co.uk


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