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RUSCA & SUPPLY CHAIN

Rutgers University Supply Chain Association



Responding and Adapting to Changes

Supply chains are constantly faced with the challenge of innovatively responding and adapting to changing political, environmental, social, and technological situations. In this issue, our articles highlight how recent conferences, partnerships, and outsourcing decisions have worked towards addressing these changes. In addition, please find our guest article below on offshore windfarm development, written by Edward J. Linky from U.S. EPA.



RUSCA is now corporately sponsored by J.B. Hunt! For RUSCA-specific events, see page 11

For previous newsletter editions, visit http://rutgersrusca.weebly.com/newsletter.html

Event Preview: Microsoft Excel Certification Course

BY: JESSICA LEE

The RBS Supply Chain Management Department has partnered with RUSCA to offer a Microsoft Excel Certification Course for Rutgers SCM students.

The course will provide textbooks and cover key skills in creating, managing, and applying:

- Worksheets and workbooks
- Tables

- Cells and ranges
- Formulas and functions
- Charts and objects

Details

Five course sessions will be provided.

The all-inclusive course fee is **\$400 per student**, which covers the classes, textbooks and materials, and the certification exam.

The classes will take place on **Saturdays** from **9:00 AM to 12:00 PM**.

The first class will be on **Saturday**, **October 15th**.

At the end of the course, students will have the opportunity to take a certification exam for the Microsoft Office Specialist Certification in Excel 2016.

This certification provides a great opportunity to begin pursuing Microsoft Office Specialist Expert and Microsoft Office Specialist Master certifications in the future.

Please reach out to RUSCA if you have any questions at **rusca.rbs@gmail.com.**

East Coast Offshore Windfarm Development: Key Issues and the Role of Supply Chain Management

BY: EDWARD J. LINKY, ESQ. Usepa region 2 Senior Energy and climate advisor

*Opinions expressed are those of the author and are not necessarily endorsed by the United States Environmental Protection Agency

The Obama Administration, as part of its "all of the above" energy strategy, has been steering the U.S.' renewable energy sector for electricity towards offshore wind turbine farm development. Outside of the U.S., European farms in Denmark and Britain have been successfully constructed and operating for several years. Domestically, however, the development of offshore wind turbine farms has not been as established. Instead, there have

Works Cited:

www.mastersource.org/ offshore/offshore-east-coastwind-tepid

www.doi.gov/pressreleases/ interior-announces-milestone-new york-offshorecomm

"Action 1.3.2. Evaluate Supply Chain Bottlenecks, Cost, Risks and Future Scenarios." (National Offshore Wind Development Strategy p. 53).

> http://ichef-1.bbci. co.uk/news/660/media/images/73674000/ jpg/_73674073_offshorewindap.jpg

http://www.boem.gov/uploadedImages/offshore%20 wind%20turbines%20 during%20a%20beautiful%20sunset%20DP.jpg?n=5184

"Instead of using reactive peak shaving methods, which involve reducing electrical power consumption during heavy demands, infrastructure is now more commonly expected to have a proactive design that draws energy from cleaner energy sources." been more challenges such that not many mid- to larger-scale projects are completed and operating.

For example, the Cape Wind Project in Nantucket Sound, which is located near Cape Cod, Massachusetts, has faced citizen backlash that has impeded its construction permit approval and ultimately the project's financing. The future of the project remains questionable. In state waters off New Jersey, an additional small project called Fisherman's Dock Cooperative has been

hampered by the slow pace of final administrative rules for these projects by the State Board of Public Utilities. Again, the backdrop of no administrative legal network or an uncertainty about obtaining necessary existing permits holds the financing of the projects hostage and the



successful conclusion of purchase power agreements.

Despite these challenges, however, there is one project that has been more successful. The Block Island Wind Farm, which is located in Rhode Island state waters, has received all of the necessary permits and is slated for trial operations in Fall 2016.

Future projects with similar success can be expected because the push for offshore wind turbine farms has been supported by the U.S. Department of the Interior Bureau of Ocean Energy Management. This organization has been conducting offshore lease contract sales for wind power development since 2012. The latest sale announcement in June 2016 proposed offering 81,130 acres for sale with an accompanying Environmental Impact Statement in the waters covering the continental shelf off the State of New York. There is a sixty day comment period for this administrative action before a sale can actually take place. The Administration continues the process of identifying other Wind Energy Areas, which are areas that can be suitably developed with relevant environmental safeguard. To date, eleven commercial leases have been awarded. Many press commentators have summed up these efforts as "Offshore East Coast Wind: Federal Effort, Market Resistance."

The actual development of the offshore wind market sector faces stiff competition from solar energy sources. In addition, the growing recognition and construction of energy-efficient buildings increases expectations of supplying clean energy sources to meet electricity demand. Instead of using reactive peak shaving methods, which involve reducing electrical power consumption during heavy demands, infrastructure is now more commonly expected to have a proactive design that draws energy from cleaner energy sources.

Despite all these obstacles and expectations, there are several reasons why offshore wind turbine farms should and can be developed.

The development of microgrids, which are smaller, distinct energy systems that can operate independently or with a larger, main electrical grid, can build resilience against extreme storm events that make conventional central station power plants vulnerable.

The pylons, or support structures, once installed on the seabed with responsible environmental safeguards, including acoustic controls to lessen impact on marine life, have the potential for hosting a variety of offshore marine farming and aquaculture operations. Marine farming of oysters, mussels and kelp are just an an example of how these wind turbine development areas can spawn multi-use economic development.

The turbine pylons offer the opportunity to host telecommunications and environmental sensors, provided the leasing arrangements can be solved. However, one key factor has nearly been overlooked: the incorporation of supply chain management for the construction and maintenance of these offshore areas. The National Offshore Wind Strategy Program document released in September 2016 identifies the issue but provides no comprehensive elaboration in the discussion. The usual problems associated with any offshore development, such as Jones Act Compliance, is identified but not given any real prominence in the report.



The National Interest in leveraging the environmental and marine economic development potential for positions diminished through commercial fishing needs to be more fully explored. In addition, a supply chain based on marine support for the offshore oil and gas industry cannot be assumed to be a readily-available model for adaptation on the East Coast. Although offshore oil and gas development never took place on the East Coast, exploratory drilling and seismic sounding activities were conducted in the late 1970's. A robust Federal-State and local community planning program was in place and could serve as a model for the offshore wind program.

The Losing Fight between Organic and Genetically Modified Crops

BY: PHOEBE ARBEITEL

During the Textile Exchange Sustainability Conference on Tuesday, October 4th, NewForesight CEO Lucas Simons claimed that the textile and apparel industry is inherently unsustainable due to its current set-up. The push from consumers for eco-friendly crops has led the industry to search for a viable solution. However, consumers are not always willing to pay a higher price for the eco-friendly goods they are demanding. The search for an inexpensive way to produce greener crops has led executives to forget what journalist

Works Cited:

Bunge, Jacob. "Behind the Monsanto Deal, Doubts About the GMO Revolution." *WSJ*. Wsj.com, 14 Sept. 2016. Web. 07 Oct. 2016.

Donaldson, Tara. "The Current Sourcing Model Is Inherently Unsustainable -Sourcing Journal." *Sourcing* *Journal*. N.p., 06 Oct. 2016. Web. 07 Oct. 2016.

Zwerdling, Daniel. "'Green Revolution' Trapping India's Farmers In Debt." *NPR*. NPR, 14 Apr. 2009. Web. 07 Oct. 2016.

http://www-tc.pbs.org/ wgbh/nova/next/wp-content/uploads/2015/08/ farmer-880567_1280e1439390642106.jpg Tara Donaldson refers to as the main components that must be considered by those in the agriculture sector: "What are the barriers to enter and succeed? What do markets reward? What is the enabling environment? And what are the alternatives?" (Donaldson). Simons touched upon the problems presented by organic cotton during the conference, explaining how each of the aforementioned components make the crop unsustainable environmentally and financially.

Since the introduction of genetically modified organisms (GMOs) in 1997, GMOs have often been viewed as the evil twin of environmentally-sound organic crops. However, the barriers to entry for organic farmers have proved to be too great for many. Farmers who choose to go the organic route must be able to afford organic seeds, find alternative routes for supporting the crops' growth, and protect crops from pests and insects. The unpredictable success rate for these crops, along with the increased water requirement, puts many farmers below the poverty line (Donaldson). How can organic crops be considered sustainable if they put a strain on both the environment and the farmers' wallets? Simons says that consumers prefer organic crops, yet according to the USDA, "U.S. farmers this year will collectively earn \$9.2 billion less than they did in 2015, and 42% less than they did in 2013" (Bunge). While the market may demand more natural goods, consumers are not willing to pay the price for them.

The alternative to producing organic goods is to utilize GMOs. They yield a predictable crop and the market is willing to purchase goods at the current price. However, chemical-reliant crops such as GMOs do not come without their own set of problems. In fact,



agrochemical companies have manipulated farmers into cooperating with them for decades before GMOs came on the scene twenty years ago. During the Green Revolution in Punjab, India during the 1960s and 1970s, farmers were encouraged by western countries to grow crops using "chemicals, highyield seeds and irrigation" (Zwerdling). While this led to an economic boost, farmers quickly realized that they were stuck in a "vicious cycle of debt" and had to constantly improve upon irrigation systems and repurchase chemical and seed patents in order to turn a profit (Zwerdling). The quick turnover of fields and the salt residue brought up from irrigation pumps resulted in the destruction of the soil, making it impossible for farmers to grow crops. Even today, Indian farmers can earn as little as 70 cents a day (Donaldson), which is bad news for a country with the fastest growing population on the planet (Zwerdling).

The effects of the Green Revolution in India can still be seen today. Since Bayer AG's purchase of Monsanto for \$57 billion on October 5th, it is likely that the 33 cents on the dollar charged by Monsanto as a "technology fee" to farmers will increase (Bunge). With the European Union giving little signs of budging on GMO regulations, farmers are left with two unprofitable, environmentally damaging options. Donaldson's cri de coeur calls for

"The agriculture industry needs to develop structural sustainability throughout the field before focusing on anything else." "non-competitive collaboration" between organizations in order to come up with a viable option (Donaldson). This collaboration would benefit all of those involved if it led to industry-wide change. The agriculture industry needs to develop structural sustainability throughout the field before focusing on anything else. The purchasing power of a consumer often speaks louder than a political vote and compromises must be made on both ends of the supply chain; companies have to manufacture products that are worth paying more for and people must be willing to pay the price if they are serious about preventing further environmental destruction.

AT&T Strengthens Cloud Capabilities with Amazon, IBM Partnership

BY: STEPHANIE WONG

AT&T's recent cloud partnerships with Amazon.com Inc. and IBM indicate a push towards greater performance in cloud computing for enterprises. Cloud computing allows users to access huge volumes of computing power and data over the Internet, anywhere and anytime (Wisner, et. al.).

AT&T partnered with Amazon by forming a strategic relationship with Amazon Web Services, or AWS. AWS is Amazon.com's cloud service and largest infrastructure-as-a-service (laas) provider. With an infrastructure-as-a-ser-

vice platform, users benefit from third-party hosting of their "hardware, software, servers, storage and other infrastructure components" as well as more complex data management tasks such as "system maintenance, backup, and resiliency planning" (Rouse). AT&T's business customers will have increased accessibility to



cloud infrastructure tools and the ability to send data into the AWS cloud via Internet-of-Things apps (WSJ).

One day prior to partnering with Amazon, AT&T settled a separate agreement with IBM that AT&T applications will run on IBM's cloud. In exchange, IBM will utilize FlexWare, a software that helps providers deploy IT-as-a-service (ITaas), information technology processes optimized for business, on its websites. FlexWare will also be offered to enterprises globally. Earlier in December, AT&T and IBM announced IBM would take over AT&T's hosted data center services (WSJ). In 2012, IBM's Integrated Supply Chain (ISC) revealed that cloud computing is an agile and powerful technology that can overcome the limitations of traditional computing. In 2013, ISC's cloud initiative enabled a move from reactive to predictive analytics, where analysis of data helped make predictions about future events. The initiative solidified an emerging new paradigm in data-driven decision making and business systems control. This led to an estimated \$50 million in savings from reduction of warranty costs (Wisner, et. al.).

Works Cited:

Matthieu, Lauras, Lamothe Jacques, Benaben Frederick, Andres Beatriz, and Poler Raul. "Towards an Agile and Collaborative Platform for Managing Supply Chain Uncertainties." Enterprise Interoperability: 6th International IFIP Working Conference, IWEI 2015, Nîmes, France, May 28-29, 2015; Proceedings. Comp. Marten Van, Sinderen, Vol. 213. Berlin U.a.: Springer, 2015. 64-72. Lecture Notes in Business Information Processing. Web.

Loten, Angus. "AT&T Strikes Cloud Partnerships With AWS, IBM." WSJ. Wsj.com, 06 Oct. 2016. Web. 07 Oct. 2016. Loten, Angus. "Cloud IT Infrastructure Spending Up." WSJ. Wsj.com, 05 Oct. 2016. Web. 07 Oct. 2016.

Rouse, Margaret. "Infrastructure as a Service (IaaS)." *SearchCloudComputing*. VMWorld 2013 Conference, 28 Jan. 2015. Web. 12 Oct. 2016. Wisner, Joel D., Tan, Keah-Choon, and Leong, G. Keong. Principles of Supply Chain Management: A Balanced Approach. 4th ed. Mason, OH: South-Western/ Cengage Learning, 2014. Web. 7 Oct. 2016.

Wu, Yun, Casey G. Cegielski, Benjamin T. Hazen, and Dianne J. Hall. "Cloud Computing in Support of Supply Chain Information System Infrastructure: Understanding When to Go to the Cloud." J Supply Chain Manag Journal of Supply Chain Management 49.3 (2013): 25-41. Wiley Online Library. Web. 7 Oct. 2016.

https://s.thestreet.com/ files/tsc/v2008/photos/ contrib/uploads/at-twindow_600x400.jpg

http://dallasnews.imgix. net/521728974_32359978. jpg

Works Cited:

Newman, Rick. "Why GM Is Importing a Buick from China." Why GM Is Importing a Buick from China. Yahoo Finance, 12 Jan. 2016. Web. 13 Oct. 2016.



As stated in an International Data Corp (IDC) study, as companies outsource digital tasks, enterprises and cloud providers are increasing growth in global spending on hardware infrastructure towards cloud computing (WSJ). Traditional IT infrastructure includes formal hardware and software that may need to be upgraded every 1 to 3 years, while Cloud IT infrastructure may be modeled on subscription or pay-as-you-go pricing, and automates bookkeeping and tasks that normally require systems maintenance. Cloud solutions are also scalable to meet changing computing needs; therefore, cloud technologies should be especially useful for supporting complex business processes. (Wu, et. al.). Cloud IT infrastructure spending is estimated to match traditional IT infrastructure spending by 2021, while total cloud IT infrastructure spending is expected to reach \$37.4 billion this year. According to IDC, this is a 16.2% increase in cloud IT infrastructure spending from 2015 (WSJ). By providing specific tools for optimization and collaboration in the cloud, companies involved in a Supply Chain will be able to increase their agility to respond guickly, flexibly and efficiently to changes in demand and unexpected events that have place during products supply (Matthieu, et. al.). Overall, cloud computing integrations in supply chain systems allow for real-time information transparency and execution of business operations-functions that were previously known as inevitably resource-intensive.

General Imports

BY: SOMIK SHAH

General Motors, or GM, recently made headlines after announcing their plans to import Chinese manufactured Buicks into America. These Buicks are crossover vehicles, which are SUV-sized vehicles designed with the handling of smaller passenger cars. Many auto industry analysts have found this move to be strategic since GM has already been importing from other countries. However, they are wary that GM is planning to import such an expensive car, whose price point of almost \$40,000 is greater than that of average and more economical ones (Newman). From a manufacturing perspective, the United Auto Workers (UAW) union protested GM's practice of outsourcing labour of manufacturing vehicles at the expense of American workers, but to no avail. However, the UAW push for decreasing outsourced labor could gain further momentum following the economic changes put into place following the 2016 Presidential election. In particular, it can be boosted by the current Republican Presidential nominee Donald Trump, whose stance on international trade favors increasing import tariffs from China in order to decrease imports from the country.

Regardless of the possible roadblocks, GM's decision to import Buicks seems rather promising.



One key reason is the increase in sales of crossover vehicles and the consumer attractiveness to the market for crossovers. For instance, sales of crossovers went up by almost 18.5% in 2015, while midsize cars became less popular (Press). For the firm in particular, GM has been able to increase the sales of its Buicks and its share of the crossover market by slightly altering the imported vehicles to fit American preferences. It has done so by adding features of, for example, larger engines and parking assistance.

An additional reason is the cheap manufacturing in China. Recently, the sluggish state of the Chinese stock market and the devaluation of the yuan has made manufacturing in China quite cheap. This has made importing manufactured products more affordable for businesses across the globe. Therefore, outsourcing manufacturing to and importing cars from China would be economically favorable for GM. By outsourcing, GM can develop a more lean supply chain by eliminating the high manufacturing costs prevalent in the U.S.A. Furthermore, since GM already imports from South Korea, Poland, and other countries, experts do not predict much change in consumer behaviour if they add another country to the list (Press). In short, as long as GM sells Buicks that appeal to the American public at a justifiable price point, consumers would not really care about who manufactured the vehicle. Press, Greg Gardner Detroit Free. "Buick Shows Photos of Chinese-made Envision SUV for U.S." USA Today. Gannett, 10 Jan. 2016. Web. 13 Oct. 2016.

https://si.wsj.net/public/resources/images/ BN-LF512_1112G-M_J_20151112100046.jpg

http://cdn.abclocal.go.com/ content/ktrk/images/ cms/56742_1280x720.jpg

"...if the Buick takes off in America, GM could be in a strong enough financial position to build factories that would domestically manufacture Buicks, freeing them from tariff worries, expensive logistics and the wrath of the UAW." The effect of importing Chinese manufactured automobiles could go either way for General Motors. On one hand, they could lose the support of consumers that are against outsourcing and free trade and could be painted negatively by them. Furthermore, they may have



to hike up prices if import tariffs really do increase, making American consumers less likely to buy Buicks and instead turn to more affordable options like Audi Q5's or BMW X3's. Additionally, the logistics involved in moving

cars halfway across the world are expensive and can cause delays in GM's supply chain. On the other hand, if the Buick takes off in America, GM could be in a strong enough financial position to build factories that would domestically manufacture Buicks, freeing them from tariff worries, expensive logistics and the wrath of the UAW.

Wal-Mart & the Elevation of E-Commerce

BY: BRANDON DALEY

In attempt to combat dips in in-store purchases, Wal-Mart has sought to build a solid e-commerce foundation to accommodate its online shoppers ("What Is Ecommerce", 2016). The decision was spurred by a number of reasons. Technology, for one, has forced big brands to become more organized. This shift mandates quick access to product costs, big data, and other data essentials so companies can plan their every next move. Impatience has also popularized e-commerce. Customers demand orders in the now. Because customers determine the value of companies' supply chains, it is essential for firms to meet, and even surpass, customer expectations online. While it remains to be seen what the future holds for e-commerce, the decision to increase its presence is a positive first step.

Wal-Mart began its rebuilding stage by enlisting the services of e-commerce aficionado Jet.com. The partnership, confirmed in early August, restructured the pricing options for consumers when checking out ("Walmart Doubling Down", 2016). For those online, users would receive encouragement to purchase additional items based on what they just ordered. A worn out college student, for instance, might be

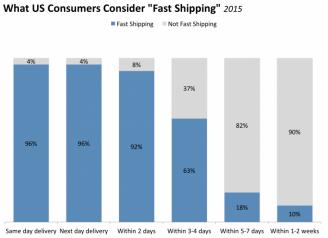
Works Cited:

"Walmart Is Doubling down on E-Commerce Investments." *Business Insider*, 7 Oct. 2016, www.businessinsider.com/walmart-is-doubling-down-on-e-commerceinvestments-2016-10.

"What Is Ecommerce?" Network Solutions, www. networksolutions.com/education/what-is-ecommerce/.

http://static5.businessinsider.com/image/5787d51288e4a-725238b7eb5-700/fast%20 shipping%202.png prompted to buy mugs for his drink, or a dancer ballet may be offered shoes for her upcoming recital. Many companies have viewed such marketing ploys as procedural, but to Jet, these were subtle changes with the power to sway the customer and keep them coming back. Gone are the days of the drab and dull webpage. Over the years, companies have improved their e-commerce sites and the benefits to us, consequently, have gotten more enticing.

Unfortunately, e-commerce isn't this easy. For countries strict on cyber regulation, e-commerce can get a bit tricky. How can companies



keep the population engaged, and what company actions will retain the most customer loyalty? The problem, at first, appears daunting. Most companies don't know where to begin.

The answer, however, is really quite simple: Get help from those who you trust most. In June, Wal-Mart decided to up

Next day delivery Within 2 days Within 3-4 days Within 5-7 days Within 1-2 weeks Wal-Mart decided to up REINTELLIGENCE its stake in JD.com The

spike, which went from 5% to 10%, paved the way for better relations with the Chinese e-commerce giant ("Walmart Doubling Down", 2016). Moving forward, the partnership expects to grow Walmart's international service revenue as well as boom online store attendance ("Walmart Doubling Down", 2016). Chinese residents look favorably upon JD.com, and with roughly one million loyal customers, the business decision will likely raise visibility for Wal-Mart to become the go-to retailer of the country moving forward ("Walmart Doubling Down", 2016). In the words of CFO Brett Biggs, the partnership "will better serve customers through a powerful combination of e-commerce and retail ("Walmart Doubling Down", 2016)."

So far, Wal-Mart has heightened the notion that e-commerce works. Now it is proving that it works well consistently, one partnership at a time.



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"While it remains to be seen what the future holds for e-commerce, the decision to increase its presence is a positive first step."

RUSCA EVENTS

J.P.Morgan

What has RUSCA been up to this past month? The following are events RUSCA has held and will host during October, as well as those we will intend to host for November. Each information session highlighted the company's internal structure, culture, strategy, philoso- phy, and last but not least, employment opportunities for our fellow RBS students. Each event concluded with the chance to network with the respective recruiters and representatives.

Past and Upcoming Events in October:

10/4/16: JP Morgan Information Session

10/15/16: Excel Certification Course (1st day)

10/28/16: Toys R Us Site Visit

Limited seats available!

Upcoming Events for November:

11/3/16: Guest Lecture - Dr. David Schreck

"Supply Chain in the Challenging Health Care Field"

RUSCA's Mission Statement:

To inspire our RBS students into learning more about Supply Chain Management and its opportunities, as well as to serve as an intermedi- ary organization on behalf of the RBS student and support the student in the pursuit of a successful internship, co-op, or full-time offer, most especially for our Supply Chain majors.

Want to know more and stay up to date with RUSCA events?

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