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# RUSCA & SUPPLY CHAIN

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**Event Recap:  
United Nations Site Visit**

PG. 2

**The Hyperloop:  
A Revolution at 700 MPH**

PG. 3

**Brexit and the Mass  
Migration of Businesses  
and People**

PG. 5

**Big Data:  
A Boon for the Modern  
Supply Chain Major  
and More**

PG. 7

**RUSCA Events**  
PG. 9

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**Rutgers University Supply Chain Association**

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## Creating the Future

As companies, countries, and institutions work to implement new changes, restructuring supply chains becomes essential to progressing forward towards these future states. In this issue, our articles discuss how supply chains will transform and be transformed by trends and events in the transportation industry, international policy, and information. We hope that you enjoy RUSCA Newsletter's last issue of the semester, and RUSCA would like to thank the Newsletter team and the SCM Department for a successful Spring 2017 semester!



RUSCA is now corporately sponsored by J.B. Hunt!  
For RUSCA-specific events, see page 9

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Jessica Lee | Editor

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## Event Recap: United Nations Site Visit

Led by Professor Spiegle and Professor McLaury, RUSCA had the opportunity this month to visit the United Nations. See below for pictures from the visit!





## The Hyperloop: A Revolution at 700 MPH

**BY: KEVIN RESHAMWALA**

### ***Works Cited:***

*Elon Musk: The Hyperloop Is Easy, My Interns Can Do It.* CNN, 10 Sept. 2015, [www.youtube.com/watch?v=bQcfi8HK1i8](https://www.youtube.com/watch?v=bQcfi8HK1i8). Accessed 12 Apr. 2017.

"Hyperloop One's SVP Reveals Supply Chain 'Disruption'." *Port Technology*. Port Technology, 31 Mar. 2017. Web. 12 Apr. 2017.

Jablonski, Christopher. "Christopher Jablonski, Director of Content and Communications, Tradeshift." *Supply Chain Digital*. Supply Chain Digital, 11 Apr. 2017. Web. 12 Apr. 2017.

Elon Musk is back at it again. The CEO of SpaceX, Tesla, and SolarCity might have a solution to the country's chronic infrastructure problems. Enter Hyperloop, the highly anticipated mode of high-speed transportation. Although it's still in its infancy, the Hyperloop could revolutionize the way governments, companies, and civilians think not only about infrastructure, but also about supply chain.

But what exactly is the Hyperloop? It is a high speed transportation system, consisting of pods inside of low-pressure cylindrical tubes. The pods float on a thin layer of air created by lifting devices known as air casters. This air serves a cushion that holds the pod and allows it glide smoothly without any contact with the tube. Compressors at the nose of the pod would prevent any oncoming air resistance by transferring air under and along the sides (CNN). Then, magnetic accelerators placed throughout the tubes propel the pods to move at speeds as high as 700 miles per hour! The Hyperloop can turn a six hour drive from San Francisco to Los Angeles into a blistering thirty minute trip.

More importantly, the Hyperloop has the potential to be a disruptive force in the world of supply chain. Its impact will be most strongly felt in the field of shipping and logistics. The sheer speed of the Hyperloop is overwhelming: it could move goods nearly at the speed of sound. Freight companies that embrace this technology will be able to transfer materials and cargo to places



and in times that were unthinkable just a few years ago. Congestion and traffic could soon become a thing of the past. Moreover, this rapid speed will translate into lower overall freight costs. Since freight costs are usually measured on a kilogram per minute scale, the Hyperloop will be instrumental in making the shipping process more efficient.

Furthermore, the

Hyperloop fits seamlessly into the framework of a sustainable supply chain. Considering the proposed designs, it could be more environmentally friendly than alternative modes of transportation. It is fully an electric system powered by solar panels, resulting in essentially no direct carbon emissions. In addition, the Hyperloop would basically eliminate human error. The closed and automatic nature of this system "does not allow for any human or external interference", resulting in increased security, safety, and accuracy (Jablonski). In turn, labor costs would drastically decrease as well.

Harnessing Hyperloop technology is not just an American phenomenon. In the United Arab Emirates, Hyperloop One and various logistics firms are entertaining the prospect of installing the technology at Jebel Ali Port in Dubai (Phillips). Cargo containers could move in and out of the port terminal at amazing speeds, thereby reducing congestion, emissions, and costs.

Overall, the idea of the Hyperloop is a promising one. A gradual transition towards this cutting-edge technology would be beneficial to the supply chain industry. Despite its clear impact on logistics, the Hyperloop will actually be felt throughout the entire supply chain, including areas such as manufacturing and warehousing (Port Technology). However, innovations in automation

Phillips, Erica E. "Hyperloop Technology to Be Studied as Shipping Tool." **The Wall Street Journal**. Dow Jones & Company, 16 Aug. 2016. Web. 12 Apr. 2017.

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<http://static.trustedreviews.com/94/0000307cd/9b04/hyperloop.jpeg>

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**"...the Hyperloop has the potential to be a disruptive force in the world of supply chain. Its impact will be most strongly felt in the field of shipping and logistics."**

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will create disruptions in the workforce: companies would need to grapple with the fact that implementing this invention could put many truck drivers, rail workers, and train engineers out of work. But in general, the business and societal benefits should encourage the supply chain world and governments to support the development of the Hyperloop. The task looks difficult, but Elon Musk claims that “it’s easy, my interns can do it.”

## Brexit and the Mass Migration of Businesses and People

### Works Cited:

Castle, Stephen. “British Firms Await Brexit Plans, Poised to Relocate.” *The New York Times*. The New York Times, 15 Jan. 2017. Web.

Colchester, Max. “An Investment Bankers’ Guide to Brexit.” *The Wall Street Journal*. Dow Jones & Company, 27 Nov. 2016. Web.

Colchester, Max. “J.P. Morgan Scours Europe for Best Post-Brexit Home.” *The Wall Street Journal*. Dow Jones & Company, 29 Mar. 2017. Web.

Watts, Joe. “Third of Manufacturing Firms Want to Move Some Operations Out of UK after Brexit, Report Warns.” *The Independent*. Independent Digital News and Media, 22 Feb. 2017. Web.

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‘With many multinational corporations having chosen the United Kingdom as a base for conducting their business, Brexit poses a real tough question for the future of these businesses in the UK: “Do we stay or do we go?”’

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**BY: CHRIS DOYLE**

On March 29th, 2017, British Prime Minister Theresa May invoked Article 50 of the Treaty on European Union, setting into motion the United Kingdom’s withdrawal process from the EU by April 2019. The European Union, a political and economic alliance, ensures the free movement of people, goods, services and capital across its 28 member states. With many multinational corporations having chosen the United Kingdom as a base for conducting their business, Brexit poses a real tough question for the future of these businesses in the UK: “Do we stay or do we go?”



Rumblings are that many companies will partially relocate their operations: the longer one “waits to adjust operations, the more clarity they will have regarding the Brexit deal...but wait too long, [and] they may not have enough time to implement changes.” This restructuring decision to relocate aspects of their business out of the UK while reducing staffing is a preemptive measure that half of the 233 financial services companies surveyed by the *The Sunday Times* of London have begun (Castle). For many of the U.S. banks headquartered in London, the financial capital of Europe, future business actions will be resting on the resultant Brexit negotiations. Some of these major banks that will be impacted include Goldman Sachs, J.P. Morgan Chase, Morgan Stanley, and Citigroup.

If companies choose to restructure, they can follow four basic restruc-

turing models: *Introductory*, *Back-to-Back*, *European Branch*, and *Full Blown Bank*. These models vary according to the levels of required capital investment. First, the *Introductory Model* requires the least amount of restructuring of activities, personnel, and capital, for it employs an EU “sales team” to introduce clients to their existing U.K. entity. Second, the *Back-to-Back Model* focuses on booking trades in the EU and then flipping them to a bigger entity operating outside of the EU, such as in London or New York. Third, the *European Branch* encourages companies to acquire licenses to establish branches in other countries and create holding companies, and not just outposts, in these areas of interest. Lastly, the *Full Blown Bank* requires the most significant amount of investment, for companies are to set up smaller versions of their U.K investment bank elsewhere (Colchester, Investment).

Although the latter two models require greater capital investment, the uncertainty of the Brexit transition has influenced many companies, such as J.P. Morgan Chase to prepare for the worst. For the past nine months, J.P. Morgan assigned a group of 75 staff members to evaluate a selection of European cities as their potential new home, among them including Dublin, Paris and Frankfurt. A major component of this evaluation has been for the company to consider that, as noted by J.P. Morgan Chief Executive Jamie Dimon, “up to a quarter of J.P. Morgan’s staff in the UK may have to move” (Colchester, Home). In such circumstances, a company not only has to consider how its ability to conduct business will change, but also the logistics behind relocating its capital goods and its employees.



From the business decision perspective, originally setting up shop in the UK was a strategic decision for many businesses. As a result, their next decision in response to Brexit should provide access to similar channels to new and established revenue streams and allow companies to leverage tax and lessen government restrictions and regulations to ultimately reduce costs and increase operational efficiency. From the relocation logistics perspective, the person tasked with this new strategic decision must also consider the functionality of the city, its standard of living and suitability for its employees. As a result, making these decisions is as much about business as it is about people.

The balancing of these two considerations is a dilemma shared by

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[http://si.wsj.net/public/resources/images/BN-NN397\\_0413\\_J\\_P\\_20160413010428.jpg](http://si.wsj.net/public/resources/images/BN-NN397_0413_J_P_20160413010428.jpg)

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“Big Data is not ready made. Like any good meal, its use takes preparation, and in order to be of value, Big Data must first be cleaned, refined, and plotted many times before it begins to form patterns.”

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firms across all industries, from J.P Morgan, PWC and HSBC to Magal Engineering, an automotive mechanical engineering company that is a fraction of the size of the aforementioned companies. Magal Engineering, based in Reading, England, operates with factories in France and Germany and makes full use of the minimal paperwork and tariff-free shipping in moving their supplies, finished products and personnel across the continent (Castle). The anticipation of changes to taxation, labor pressures and exchange rates has a "third [of manufacturing firms] considering relocating aspects of their plant or operations to another country to boost productivity or reduce cost" as well as "a slight but notable increase in consideration of moving elements of the supply chain away from the UK" (Watts). For Magal Engineering CEO, Gamil Magal, he is beginning to rethink the structure of his business, his ability to hire and retain engineers, the future of his plants and facilities and the need for more administrative staff for the paperwork (Castle).

As shown by its impacts on both large and smaller companies, Brexit brings with it an across-the-board planning of "partial relocation, supply chain management, increased business development, and new sources of financing" (Watts). Above all, it has brought to light the considerations a company, during this transition, must make to adapt and manage their most important supply chain resource: the people..

## Big Data: A Boon for the Modern Supply Chain Major and More

**BY: BRANDON DALEY**

### **Works Cited:**

Selingo, Jeffrey. "How Colleges Use Big Data to Target the Students They Want." *The Atlantic*, 11 Apr. 2017.

[http://lh3.googleusercontent.com/o4IJr\\_kjegdV2a-Cli2CUaAmOWqNHI9E-40HtGU7sLjxBLjYqJlCy-Ls-ftCq-\\_nYRfBKnxSDFCBRh-JgH9czGsn8w=s0](http://lh3.googleusercontent.com/o4IJr_kjegdV2a-Cli2CUaAmOWqNHI9E-40HtGU7sLjxBLjYqJlCy-Ls-ftCq-_nYRfBKnxSDFCBRh-JgH9czGsn8w=s0)

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**'Why would a company use SAP? What is special about SAP? Is it worth all the hype that was created since their inception?'**

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The term is thrown around loosely. Most people don't know what it means, but Big Data has enabled us to pursue the unknown and do so in more powerful ways. In its simplest form, Big Data is comprised of words and numbers sorted into columns of variables. However, it is not the idea that makes Big Data valuable, it is, rather, its application.

Big Data is not ready made. Like any good meal, its use takes preparation, and in order to be of value, Big Data must first be cleaned, refined, and plotted many times before it begins to form patterns. This process is known as predictive analytics and has become a staple amongst supply chain professionals.

Predictive analytics, foremost, have helped in forecasting demand planning for many companies (Vorhies). If companies reduce their forecasting error, they will eliminate waste and slash unused inventory, subsequently saving money through reduced costs. Predictive analytics also seep into other areas within the supply chain, like procurement and logistics (Vorhies). They can aid in functions like determining resource demography or finding the efficiencies of transportation methods, investigating, say, how fast a truckload can travel from Orlando to Miami or Philly to Boston.

Beyond supply chain, Big Data is also applicable in other areas that directly impact our lives. Colleges, today, use predictive analytics to diversify their candidate pool. When Saint Louis University found that fewer Midwest high schoolers were projected to graduate by the year 2028, they began



to pursue students more likely to travel far from home (Selingo). When they found that these travelers were those with higher SAT scores, they began to send recruiters to those select states (Selingo). And by sending questionnaires to accomplished students in select states, they targeted those interested in majors most popular at their institution (Selingo). By employing predictive analytics, SLU obtained its most in-

triguing class to date and attributes their success to the advents of Big Data technology.

Several tools can help us ascertain predictive analytics. One such tool is a program called R, which creates basic plots, calculates p-value, computes prediction error, and much more. Another is the software Tableau, which aids in forming visualizations to better illustrate trends in given data. The next time you see a Verizon commercial on TV, pay attention to when they claim to have the largest 4G LTE network. That heat map, in fact, was created with Tableau. For those interested, students have many options to refine their data skills. Professor Imielinski from the Computer Science department teaches an elective called Data 101, dealing with the fundamentals of R. Tableau is free among students, so it's encouraged that everyone check it out, and certain BAIT courses, like Time Series, expand on R as well.



# RUSCA EVENTS

**The following are events that RUSCA will be hosting in April, as well as the General Meeting schedule.**

## **General Meeting Schedule:**

Every other Monday, 9:30pm  
at Livingston Campus - Tillet Hall Room 103B

## **Events for April:**

4/5: RBS Open House

4/10: General Interest Meeting - Class Scheduling Advice

4/19: RUSCA End of the Year Banquet

4/24: General Interest Meeting - Networking Workshop

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## **Rutgers University Supply Chain Association**

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## **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 intermediary 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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