



Global Supply Chain's Impact on Effective Site Selection

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The Manufacturing & Industrial Community



ABSTRACT

As globalization continues to shrink the world and blur boundaries across business development, the issues to consider in exploring new markets, establishing cost-effective distribution centers and containing business costs have become infinitely more complex. For global supply chain management and site selection decision points in this process, risks related to governmental and political issues, rising tariffs, increasing transportation costs, shifting markets and currency rates are highly volatile influencers of success. Responding to these shifting complexities, and to the roadblocks and opportunities they present, is essential for establishing and maintaining a highly-functioning, efficient global supply chain. Having both the knowledge and the tools to understand and act on these influencers in the site selection process must be a key business goal. This white paper attempts to address many of these key drivers that inform the decision making process for global supply chain and site selection strategies and sets the stage for additional research to be completed as these questions are further explored.



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A Note from the Manufacturing & Industrial Knowledge Advisory Panel:

This research on the drivers pushing both Global Supply Chains and Site Selection Strategies is an effort to reach outside the typical Corporate Real Estate professional's responsibilities and knowledge base. Global Supply Chains/Logistics is a discipline that increasingly impacts the Corporate Real Estate professional. As research on this topic evolves, additional efforts will be made to reach a wider audience to participate in our survey. Furthermore, ongoing interviews of leading experts in the field will help to provide a more thorough understanding of business and enterprise strategies and how today's Corporate Real Estate professional can be better equipped to respond to this evolution. Be on the lookout for more innovative, original content to be developed on this topic and other relevant research subjects as the Manufacturing & Industrial Community continues to strive to deliver cutting-edge thought leadership for our members and the Corporate Real Estate industry.

By Sarah Todd

BACKGROUND

In May 2013 CoreNet Global selected groups of industry experts for five Knowledge Advisory Panels (KAPs). The groups were tasked with setting and guiding the research agenda for the association's five Knowledge Communities, to assist in generating new knowledge in the field of corporate real estate. The five Knowledge Communities established were manufacturing and industrial, strategic facilities management, strategy and portfolio planning, sustainability and workplace.

The experts selected for the Manufacturing & Industrial KAP are recognized industry leaders, drawn from diverse backgrounds and global regions within CoreNet Global's membership. Representing the best in thought leadership, they were selected for this project by a special task force of CoreNet's board of directors.

The group's first act was developing an initial research initiative to explore the critical drivers of global supply chains/logistics. The preliminary research contained in this report is a first step in reporting on this critical topic and the influences it exercises on site selection decision making in the manufacturing and industrial arena.

RESEARCH PURPOSE & SCOPE

As globalization continues to shrink the world and blur boundaries across business development, the issues to consider in exploring new markets, establishing cost-effective distribution centers and containing business costs have become infinitely more complex. For global supply chain management and site selection decision points in this process, risks related to governmental and political issues, rising tariffs, increasing transportation costs, shifting markets and currency rates are highly volatile influencers of success.

Responding to these shifting complexities, and to the roadblocks and opportunities they present, is essential for establishing and maintaining a highly-functioning, efficient global supply chain. Having both the knowledge and the tools to understand and act on these influencers in the site selection process must be a key business goal.



RESEARCH PROCESS

In a two phase process, this research project will examine and define the drivers of global supply chain decision-making. It will note potential barriers and offer recommendations on the elements of successful global supply chains within the manufacturing and industrial space. It will attempt to answer questions such as how do these drivers intersect and where is there a disconnect? What are the associated risks? Is it better to be located near a customer or a supplier?

While the study will include two separate lines of research – global supply chain strategies and locational strategies – the end product will be a combination of the findings from each line of research. The goal is to illuminate the key drivers that influence both of these important business processes and decisions. Best practices will be suggested and options for sophisticated tools that assist in these complex analyses will be explored.

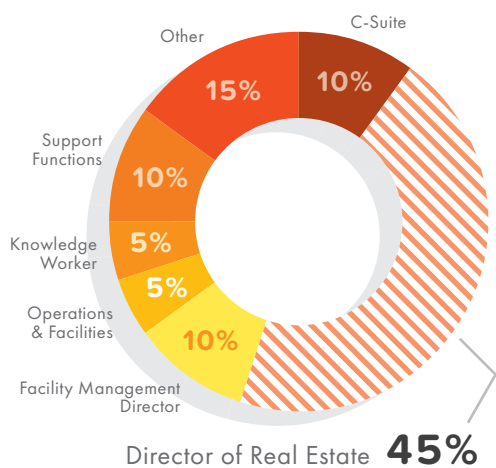
In phase one of the project, CoreNet Global sent a 34 question survey to members. The survey was designed to explore these two business processes, their organizational structures and overlap, and current practices. Industry experts on this topic were interviewed, asked for their observations about best practices, risks and future trends.



PHASE 1

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FIG. 1: What is your designation?

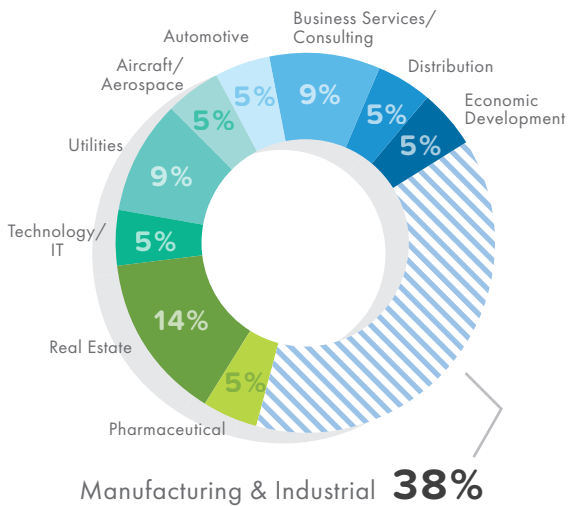


RESPONSE GROUP

While the early survey response group was not large enough to be statistically significant, initial results are nonetheless informative. The response group was composed of 62 percent end users, 28 percent service providers and 9.5 percent economic development professionals. There was significantly greater representation from site selection and corporate real estate managers and generalists than from global supply chain specialists. About 38 percent of the response group has a working knowledge of both site selection/ location strategy and global supply chain management. The majority (45.5 percent) have a working knowledge of site selection/location strategy. Only 2.8 percent reported a working knowledge of global supply chain management and not site selection/location strategy. In terms of CRE job focus, 76 percent are corporate real estate professionals and 19 percent are site selection and location specialists. Director of corporate real estate was the most frequent designation (45 percent) of the respondent group.



FIG. 2: What best describes your industry?



A broad swath of industries was represented by respondents. The majority are based in North America (71.4 percent) and the rest in Europe (28.6 percent), with corporate headquarters locations closely matching these percentages. Most participants work for companies with multinational operations that span at least some of the following regions: Latin or South America 61.9 percent, Europe 61.9 percent, Middle East 52.4 percent, North Africa 38.1 percent, Sub Saharan Africa 42.9 percent, Asia 61.9 percent, Australia/New Zealand 52.4 percent.

Most respondents work in companies employing 10,001 – 100,000 employees (42.9 percent), followed by 100,001 + employees (28.6 percent) and 1 to 1,000 employees (23.8 percent). Real estate portfolio size for over 33 percent of respondents was 50 million sq. ft. (over 4.65 million square meters). RE portfolio for the remaining respondents was evenly split between 28.8 percent of the group for under 2 million sq. ft. (186,000 square meters) with and 28.8 percent 5 to 20 million square feet (465,000 to 1.86 million sq. meters).

SUCCESSFUL GLOBAL SUPPLY CHAIN MANAGEMENT

The ultimate answer for developing and maintaining a highly functioning, efficient global supply chain with well integrated site selection decisions starts and end with the product. First, the value proposition of the company must be understood - the competitive landscape and the perception of value from the customer's perspective, based upon requirements by geographic markets, channel and product characteristic.

The demand for company products, whether they'll be used by consumers or distributed to be part of a larger product and how they will be used by customers is key. Says Ron Keller, Johnson Controls Workplace, "Supply chains for our batteries are put in places where we can use an integrated approach. But for the automotive sector side, car seating, most of our product need is 90 minute just-in-time. So our location strategy is predicated upon our client's process."

Our survey and industry expert interviews explored the current state of global supply chain management's intersection with site selection and logistics, where the barriers to effectiveness lie, and the near future trends that will likely affect these two areas.

"...our location strategy is predicated upon our client's process."

RONALD KELLER
Vice President & General Manager,
Johnson Controls Workplace

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Global Supply Chain Organization

How supply chain is organized in the company impacts not only costs, speed to market and reliability, but also teams and communication. For the majority (62 percent) of our respondents, supply chain/logistics reports to operations. Reporting structure for the other 48 percent were equally divided between shared services, individual business units or dedicated geographic divisions.

For 50 percent, supply chain management is a centralized function, while a quarter of companies use a center-led approach with overall strategy executed at the corporate level and tactical execution handled at the local or business unit level. A much smaller group (12 percent) work in companies where supply chain decision-making is completely decentralized.

The use of vertical integration for reducing cost and expanding control is found in over three quarters of respondents companies. For 66 percent, integration is both backward and forward (i.e., diversified downwards into its buyers' business and within the supply chain, or backwards into the core business of one's suppliers). For 12 percent, vertical integration varies by product. But 37 percent report no vertical integration of the supply chain at all.

Success Drivers & Barriers

OPERATIONAL DRIVERS. The total supply chain cost approach was seen by our small group of supply-chain experts as the most critical operational driver for developing and maintaining a highly-functioning, efficient global supply chain. Industry expert Tim Feemster, Managing Principal of Foremost Quality Logistics (FQL) sees that approach's increasingly widespread use now threatened by the response to changing transportation costs. "Now that transportation and labor costs are going up offshore, the response is to come back to Mexico or the U.S., for example, with less consideration of other factors involved. In site selection, if you don't use a total cost approach, you'll sub-optimize.

"An example of how focusing only on transportation cost can bite you can be seen in a move by Circuit City. Last year's statistics on total global supply chain costs revealed that on average, over 60 percent was transportation and rent was less than 5 percent. So moving even twenty miles can have a huge impact on your cost structure. Circuit City made a move to Oklahoma of just 90 miles (145 kilometers). They paid around \$2 per square foot (\$6.56 per square meter) for a 700,500 sq. ft. (65,078 sq. m.) building, but the supply chain manager had to dray 15,000 import containers from China. The additional transportation cost was approximately equal to \$8 per sq. ft. making their total occupancy cost including the drayage transportation around \$10 per sq. ft. They failed to look at the total supply chain cost first."

The ability to continue to innovate on the technology front, evolving our supply chain and technology platforms, is becoming a key success driver in global supply chain management. Big data is having a big impact. Previously there was no real time online, but that's changing. Our supply chain group rated lead time from planning to operational as the second most important operational

"Now tremendous amounts of data are being collected on all fronts. How that data is managed and used to help and facilitate these business operations is the question. How was the data collected at the beginning of the supply chain used as baseline for measuring the performance of the facility to see if key objectives are being met?"

JOHAN BEUKEMA
Partner, Supply Chain Solutions,
BCI Global



driver, and flexibility to adapt to changes and connectivity of IT systems were both ranked third. Said one respondent, "You can now know at any time where your shipment is." Says Johan Beukema, Partner, Supply Chain Solutions for BCI Global, "Now tremendous amounts of data are being collected on all fronts. How that data is managed and used to help and facilitate these business operations is the question. How was the data collected at the beginning of the supply chain used as baseline for measuring the performance of the facility to see if key objectives are being met?"

Another key operational driver today is the shift from operational management on a continent by continent basis to greater and greater globalization, resulting in more corporate level control of global operations. Says global supply chain expert Johan Beukema (BCI), "During the last two years, our projects have become more global as companies are managing more on a global basis. As corporate is taking control over global operations, it is developing global operations and supply chain strategies and global real estate strategies."

"The supply chain analysis often focuses on transportation costs as the key driver for the desired location. But before we can get too far into questions about bringing site selection skills and expertise to bear, we need to understand what the operation is going to be at that center of gravity..."

JOHN PATELSKI
Executive Vice President,
Ghafari Associates

LOCATIONAL DRIVERS OF GLOBAL SUPPLY CHAIN. We asked respondents to choose three of several options for most important locational drivers. Survey results rated geo-specific infrastructure (distance to rail, airport, port, interstate, etc.) and distance to customers as most important locational drivers by our global supply chain group of respondents. Availability or shortage of warehousing space, distance to suppliers, and labor availability and regulations were the next most selected drivers, and taxes and customs and the presence of similar types of companies (i.e., clusters) were picked third most often as important locational drivers.

As always, changing conditions and current uncertainties will impact locational drivers. Tim Feemster of FQL pointed out a few of these. "Location drivers of supply chain will be impacted by things we don't know yet, like what will happen with the expansion of the Panama Canal, the future cost of fuel, will we have enough truck drivers, and the impact of continued automation to drive down costs in warehouse operations."

BCI Global Managing Partner Josefien Glaudemans brought up the impact of mergers and acquisitions initiatives on location strategies. "A focus on M&A activity to increase revenues results immediately in cost reduction initiatives and translates into location strategies."

Significant changes in transportation options in Europe and the increase in transportation costs in others areas have shifted global supply chain for many organizations. Johan Beukema (BCI) pointed out, "What will happen with transportation side of supply chain will still be the key driver – air, rail, sea, etc. Manufacturing facilities shifted from Western Europe to the Far East in the past as a result. Now a reverse effect is creating manufacturing that's independent of political stability and closer to the European market." Added Josefien Glaudemans (BCI), "Ports areas are more congested and very expensive. New ports regulations and increased costs in ports are going up so that more inland locations are being considered because they are cheaper. Improvements in consistency across the European rail system are also improving its appeal for transportation."



John Patelski, Executive Vice President for Ghafari Associates, brings the question back to first understanding the product need. “The supply chain analysis often focuses on transportation costs as the key driver for the desired location. But before we can get too far into questions about bringing site selection skills and expertise to bear, we need to understand what the operation is going to be at that center of gravity. Is it a combination of production and inventory, pure production, or production and third party logistics? These all have to be answered first. At the 30,000 foot level, ask how you will provide better information on testing and evaluating each market from a site selection stand point. The site selection process must also consider other factors such as the quality and quantity of the local labor force as well as the reliability of utilities. With our aging infrastructure you need to ask ‘is there enough capacity’ and ‘What kind of redundancy is available for utilities serving the site? What does it cost and how long does it take to bring the reliable capacity to that location?’ The cost and time required for permits are also a big factor for construction.”

INTERNAL BARRIERS TO SUPPLY CHAIN SUCCESS. Our survey respondents rated the “silo” approach to business as the biggest internal barrier for high-functioning global supply chains and well-integrated site selection. The industry experts we spoke with concurred with this assessment. Says Tim Feemster (FQL), “While our work is usually project based, we always circle back to corporate strategy since many organizations tend to be a bit siloed. We want to make sure a client’s project is aligned with corporate goals and strategies, embraced by senior management as a part of their direction. So it’s a multistep process.”

Financial obstacles, the decision approval process and visibility/steering mechanisms also ranked high as potential internal barriers to global supply chain management success. Johan Beukema (BCI) spoke on how important visibility can be from a risk management perspective. “Companies now try to mitigate risk by setting up management structures based on visibility – visibility of outsourcing partners, who you are using for transport. If you outsource, you may not keep track of who is using what facilities. While this sounds obvious, it hasn’t previously been readily available information. As an example, several years ago a global pharmaceuticals company had \$75 million in inventory stolen in one night. After that, a key driver for them was to set up a global logistics organization whose first task was to take a year to map out what they’re doing around the globe. From this start, they became a more mature organization.”

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TIM FEEMSTER
Managing Principal,
Foremost Quality Logistics

Risk Mitigation

Several survey questions explored the many risks for effective global supply chain management. Dependability of suppliers and transportation costs were picked as the top risks by most of the small global supply chain group surveyed. Cost of materials and cost of labor were both ranked second. Josefien Glaudemans of BCI agrees, “Cost, quality and risk factors are our decision-making differentiators. We advise clients to understand the risks – exchange rate, climate, politics, bribery, negative public relations, etc. Clients should understand the risks related to different countries.”

We asked our industry experts what could best be done to mitigate global supply chain risks. John Patelski (Ghafari Associates) offered, “Redundancy is key for lowering risk management and for the continuity of business operations.” Said Tim Feemster (FQL), “The impact of floods and typhoons – not getting a product for a month or longer – have raised awareness of this issue. You have to look at the risk of single sourcing. Should I look at a dual sourcing model, or do I have to take a strategic position on inventory instead, because I’m forced to single source? You may decide to carry a few months’ more inventory in your warehouse to avoid supply chain interruption. One alternative might be to leave 80 percent of your production in Asia and take 20 percent to Mexico, freezing the Asia production schedule six weeks out so you limit the inventory you have to carry to manage the production schedule. In Mexico however, you might give the plant a new production schedule one week out to respond to buyer demand.”

Survey respondents had their own ideas on risk reduction strategies. Joint supply agreements with other organizations were ranked the most important, followed closely by the application of a stress test to measure effectiveness of response plan. The third most selected strategy was improved data sharing along and between supply chains.

Supply problems also raised the issue of reputational risk. “Pushing the boundaries by going to emerging markets, as a result of cost or new markets opening up, could cause difficulties delivering on promises due to failures of others in the supply chain. So don’t have just the one manufacturing facility if you can afford it,” said Guy Douetil of Colliers. Josefien Glaudemans (BCI) pointed out that some companies have “an appetite for risk. Pioneers in the market, tech companies and outsource service providers are typically willing to take on greater risk.”

FIG. 3: Top Responses to Risk Mitigation Strategies



No. 1

Joint supply agreements



No. 2

Stress test to measure effectiveness of response plan



No. 3

Improved data sharing along and between supply chains

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JOSEFIEN GLAUDEMANS
Managing Partner,
Supply Chain Solutions,
BCI Global



SITE SELECTION/LOCATION SUCCESS

Organization Structure

Site selection's location in the organization inevitably impacts how well it integrates with global supply chain management. Queried on where site selection reports in their organizations, for 36.8 percent of survey respondents site selection/location reports to a dedicated, centralized corporate real estate (CRE) operation. For just over 21 percent, the function is housed within dedicated, non-centralized and geographically-targeted CRE departments. For another 21 percent, the function is housed in individual business units.

The majority of our survey group have a formal process in their companies for site selection review and approval, and for 26 percent of respondents that process varies by project size and scope. About 16 percent have no formal site selection and review process. Many reported they addressed or shifted site selection/location strategies as often as needed on a per-project or business needs basis (36.8 percent). For others, location strategies were examined on an annual basis (31.6 percent) and for a smaller group, every one to three years (15.8 percent). Cross-functional teams are typically an intersection point for supply chain and site selection strategies. Such teams are in place for the operation and location of supply chain and for site selection decisions among over 47 percent of survey participants. For 38 percent, cross functionality varies by the size and scope of each project. For 14 percent, no cross functional teams address these decisions and processes.

Success Drivers & Barriers

Responses to the question of most critical operational drivers for an effective site selection strategy were grouped by warehouse/distribution and manufacturing facility types. Respondents were asked to choose up to three drivers each for manufacturing and warehouse/distribution facilities. The most important drivers selected for warehouse/ distribution were, from highest ranked, labor costs and availability, occupancy costs and impact on cost of goods sold. Much lower but still in fourth place were available incentives. For manufacturing facilities, operational drivers, labor costs and availability were ranked first by the group, occupancy costs second and impact on cost of goods sold third, with available incentives a close fourth as critical operational drivers for effective site selection/location strate

FIG. 4: Does your organization have a formal site selection review and approval process?

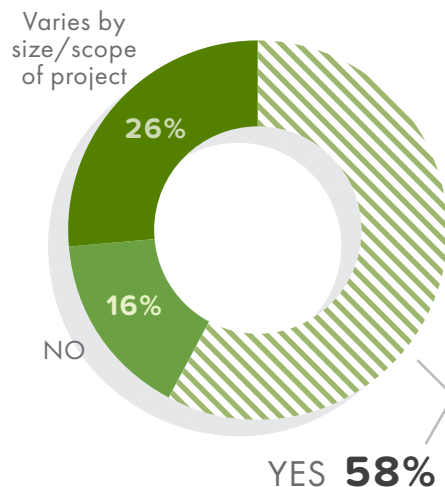


FIG. 5: Top responses to operational drivers for both Manufacturing & Warehouse/ Distribution Facilities

Facility Type	Rank	Operational Driver
Manufacturing	1.	Operatioinal drivers, labor costs and availability
	2.	Occupancy costs
	3.	Impact on cost of goods sold
Warehouse/Distribution	1.	Labor costs and availability
	2.	Occupancy costs
	3.	Impact on cost of goods sold



Critical locational drivers for designing and executing an effective site selection/location strategy were also divided into manufacturing and warehouse/distribution categories. For manufacturing facilities, proximity to customers was ranked as most important and supply chain criteria second. For warehouse/distribution facilities, proximity to customers was most important followed by access to transportation and quality of available space.

TRENDS IMPACTING SUCCESSFUL GLOBAL SUPPLY CHAIN & SITE SELECTION

How will recent trends impact planning for effective global supply chain management and site selection over the next three to five years? Our global supply chain respondents see market demand outstripping existing supply chain capabilities in some industries, noting that demand pressures are now being seen in the healthcare industry, in fast-moving consumer goods (FMCGs) industries and in others. Other respondents felt the increasing focus on sustainability will continue as a trend, and our industry experts agreed with that assessment.

Industry expert Johan Beukema of BCI also sees sustainability as a continuing trend. "Sustainability is a big topic for our clients, especially on the supply side. To the good, the most sustainable solution is almost always also the most cost effective solution. The less distance, the less cost, the more sustainable."

Survey participants believe that continuing reshoring will be the result of the downward trend in U.S. energy prices and upward trend in China's utility prices, transportation and labor costs. Guy Douetil of Colliers pointed out, "Apple has brought some production back to the U.S., as have GE and Caterpillar. On other trends, the availability of skilled people will continue to drive location decisions, particularly in engineering. The next revolution will be 3D printing - while not suitable for everything, we will be able to produce things in local markets that we could not produce before."

Trends are expected to vary in the domestic versus international arenas and in developed countries versus emerging markets. Said one respondent, "In domestic site selection, the push is site selection's process resulting in an executable capital markets solution. In developed international countries, the focus is on evolving to centralized capabilities, compliance and translating effectively the intended facilitated solutions. Other influencers are human capital, moving closer to the customer base and energy. For logistics specifically, influencers may vary by population density. Capital cost and occupancy costs are now primary."

Companies across many industries are going to supply chain segmentation/ differentiation, offering different solutions for different product market segments. Josefien Glaudemans of BCI relates, "The classic example of why to do this is highly over-serviced and highly underserved markets, where pace-makers are getting the same service as a box of tissues. Now different models are also part of supplying new markets. A segmented customer base where different levels of service are offered. IKEA has piloted this approach in several countries, using cost sensitivity to segment the market and reshape the supply chain structure."

"...the availability of skilled people will continue to drive location decisions, particularly in engineering. The next revolution will be 3D printing - while not suitable for everything, we will be able to produce things in local markets that we could not produce before."

GUY DOUETIL
Managing Director of EMEA
Corporate Solutions,
Colliers International



PRELIMINARY CONCLUSIONS

What are the ideal intersection points for global supply chain management and site selection? Our survey results on the role currently played by real estate in companies' global supply chain decisions warrants further exploration of this question. For 45 percent of respondents, corporate real estate operates independently with ad hoc support function partnering. Forty percent operate independently, with strong partnerships between support functions.

Many survey respondents want to see stronger partnerships between the end-user and real estate at project conception, and a clear supply chain strategy. Respondents also said project management and facilities need to be partnered at beginning of the process to achieve better options and outcomes and a faster siting decision. The need for greater alignment of supply chain and site selection in the following areas were also mentioned: amount and quality of space available, available incentives, design and planning costs, environmental issues (e.g. contamination), flexibility of space, impact on cost of goods sold (COGS), labor costs and availability, lease terms, occupancy costs, utility costs and transportation costs.

Increasingly, the notion of collaboration within an operation and between an organization and its suppliers and customers has come to the fore. Says Johan Beukema (BCI), "Within the supply chain collaboration is being driven heavily, since it's now easier to collaborate through all the IT and communication tools we have available, as well as our improved access to data. You can assess a situation much more quickly now."

Ideally, the intersection between global supply chain management and site selection takes place through a thorough network optimization analysis. Josefien Glaudemans overviewed BCI's approach to this with their clients. "The process steps in development of an end to end supply chain strategy include benchmarking, capturing the voice of the customer (both internally and externally), mapping the client's supply chain on a maturity grid, detailed quantitative supply chain modelling and developing a detailed roadmap for the next 3 -5 years in terms of competences, organization, responsibilities, processes, footprint, IT, etc. The benefits will be a clearly documented and aligned supply chain strategy acting as a communication tool and prioritizer of actions within the end to end supply chain."

Survey respondents' note of greater alignment of supply chain and site selection in amount and quality of space available, available incentives, design and planning costs, environmental issues, flexibility of space, impact on cost of goods sold (COGS), labor costs and availability, lease terms, occupancy costs, utility costs and transportation costs could all be addressed through in-depth network optimization analyses for projects.

Johan Beukema (BCI) points out that network optimization will be understood differently by different functions. "Breaking down the big walls between the manufacturing side of the company and outsourced or own warehouse facilities is much less of an investment than a very large manufacturing plant. The distribution side is typically much more advanced in looking at network optimization than the manufacturing side. The manufacturing side does footprint optimizations much less frequently, because plants are planned for years and kept for years, while distribution and warehousing have more flexibility to quickly react to change."



Many survey respondents want to see stronger partnerships between the end-user and real estate at project conception, and a clear supply chain strategy.



NEXT STEPS

CoreNet Global's next phase in this research will reach a larger group of participants in an expanded survey to help further explore the information obtained through our early survey results. Additional insight from industry thought leaders will also be incorporated to provide diverse viewpoints. Finally, several case studies are being developed that will help to provide real world perspectives on the critical drivers behind global supply chain strategies and locational strategies and how these two important disciplines inform and shape each other.



PHASE 2

CoreNet Global's next phase in this research will reach a larger group of participants in an expanded survey to help further explore the information obtained through our early survey results.



INDUSTRY EXPERTS

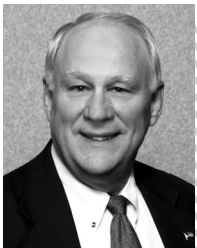


JOHAN BEUKEMA is Partner Supply Chain Strategies at BCI. With 15+ years of experience he is an expert in supply chain network redesign, logistics outsourcing, transport and inventory optimization as well as supply chain change management. Johan has extensive experience in EMEA, Russia/CIS, Asia-Pacific as well as in project with a global scope and works across different industry

verticals such as e.g. pharma, medtech, electronics, fashion/lifestyle and food/FMCG. Leading customers that he worked with are e.g. Kraft Foods, Medtronic, Roche Pharmaceuticals, Brown-Forman, Johnson & Johnson, Amgen, Hilti, Eli Lilly, IKEA, Liz Claiborne/Mexx, and many others. Johan is a regular speaker at supply chain conferences and has published about relevant themes during the years.



GUY DOUETIL is Managing Director of EMEA Corporate Solutions for Colliers International, the third largest global real estate firm worldwide. Headquartered in Seattle, Washington with professionals in 485 locations across the globe, the company completed \$75 billion worth of transactions in 2013. Its clients include BMW, BT, Siemens, Microsoft, L'Oreal, General Motors and many more globally recognized companies.



Global supply chain expert **TIM FEEMSTER**, Managing Principal of Foremost Quality Logistics has forty years of combined experience in food manufacturing, and distribution, third party outsourcing and major real estate corporations. FQL clients include Nike, Hewlett Packard, Cisco Systems, GM and Ingersoll-Rand. Tim has managed operations for Nabisco, Quaker Oats, Georgia Pacific and

International Paper, among others. Tim is a frequent keynote speaker and widely quoted in industry media on understanding logistics in the site selection process.



JOSEFIËN GLAUDEMANS, BCI Global Managing Partner, Supply Chain Solutions has worked on strategic projects and operational consulting for projects in Europe, Middle East and Africa, with other services to the Americas and Asia. BCI carries out research, advisement and implementation in business strategy, supply chain design and optimization and location selection. BCI

Global has offices in The Hague, Brussels, Frankfurt, London, Paris and Chicago and has served over 1,500 clients in more than 40 countries.



RONALD KELLER is Vice President and General Manager, Johnson Controls Workplace, for Johnson Controls. Inc. A \$40 billion company with 2,000-plus locations worldwide, JCI produces over 50 percent of the world's car batteries. Johnson controls Workplace manages 120-130 million square feet of space and about \$1 billion in real estate transactions annually. A global

diversified technology and industrial leader, JCI serves customers in more than 150 countries and has 170,000 employees. The real estate operation oversees headquarters, warehouses, data centers and factories across the globe.



JOHN PATELSKI is the Executive Vice President for Ghafari Associates, a leading architecture, engineering, consulting and construction services organization. With offices in North and South America, the Middle East and India, Ghafari serves a diverse client base across a variety of technically intensive market sectors. Their expertise across a diverse array of strategic markets

and geographies encompasses aviation, commercial, education, energy, food, government/ institutional, healthcare and industrial/ manufacturing sectors.



ACKNOWLEDGEMENTS

Additional data and the complete results of the 2014 CoreNet Global Manufacturing & Industrial Community survey will be available [here](#) when the survey is closed.

The CoreNet Global Manufacturing & Industrial Community would like to thank all of the CoreNet Global members that took the time and effort to complete our survey. We would also like to thank the Manufacturing & Industrial Knowledge Advisory Panel (KAP) for their service, expertise and valuable time working on this project. Further we would like to thank both BCI Global and Foremost Quality Logistics for providing their time in both developing the survey and participating in this white paper.

Be on the lookout for additional output from the [CoreNet Global Knowledge Communities](#) over the upcoming weeks and months. The website also includes ways to get involved and a list of upcoming research items



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