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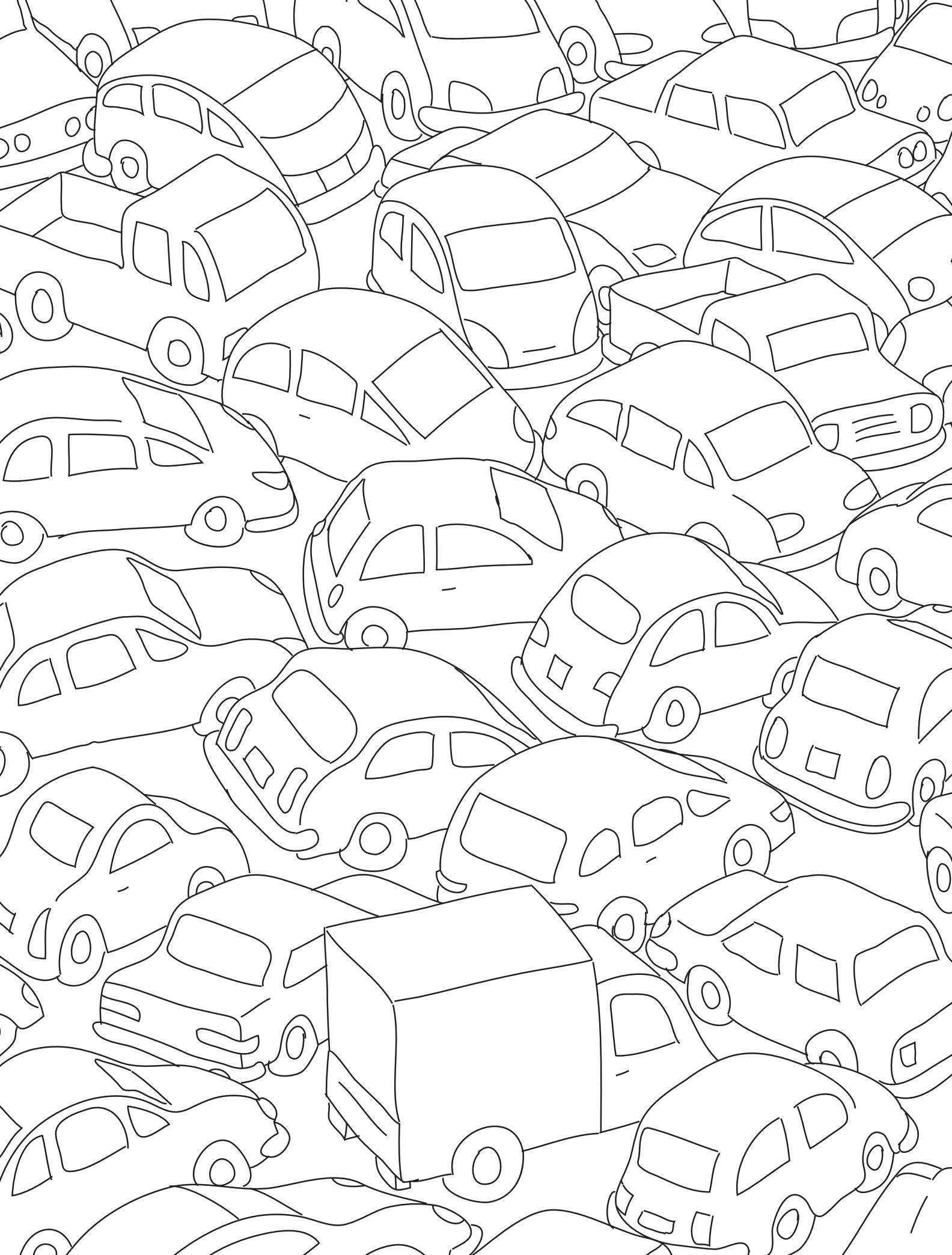
Evaluating and enhancing communication styles

Sustainable supply chain optimization



GOING NOWHERE

NAVIGATING YOUR GLOBAL
TRANSPORT NETWORK



TRAFFIC



IS YOUR SUPPLY CHAIN READY FOR THE GLOBAL INFRASTRUCTURE CRISIS?

BY ELIZABETH RENNIE

Trade is a remarkable catalyst for large-scale economic development. It enhances productivity, accelerates growth, makes supply networks more flexible and responsive, and even helps raise wages and advance value chains in emerging markets. Transportation and intermodal links enable shippers to source from faraway suppliers and reduce inventory, procurement, logistics, and warehousing expenses by forming networks that unite several distribution points at central operating hubs. Perhaps the greatest business benefit, however, is the prospective boost to revenues through implementation of superior infrastructure. Such advancements can make it possible to connect with a broader audience while offering improved customer service via shorter lead times.



Yet, as is often the case with progress, it can come at a price. “More and better transport infrastructure is driving global economic growth, and that growth is subsequently requiring more infrastructure. So there is a cycle,” explains David Jacoby, CFPIM, CIRM, CSCP, president of Boston Strategies International. He says the globalization of commerce and cultures has made the transportation industry, both freight and passenger, pivotal to most countries’ economic growth. The challenge now is that the complexity of interrelated factors, together with the compounding cycle of growth, are requiring increasingly larger investments—and, correspondingly, more expertise and analysis to determine the optimal location, mode, and size of infrastructure investments.

London-based financial services firm HSBC estimates that this new phase of global availability will contribute to almost 3 billion more people joining the world’s middle classes by 2050. And, like today’s middle classes, these consumers will demand access to products and thus significantly contribute to the need for dependable global infrastructure.

As countries strive to import basic commodities, building equipment, and high-end machinery in order to create homes, rails, roads, and employment opportunities, there is mounting pressure on capacity. HSBC’s October 2013 report “Shifts in World Trade” says this strain can be seen “at the world’s container ports, on the railroads that move goods inland, on highways and urban roads strangled by gridlock, and at airports that struggle to operate with outdated air traffic control facilities and limited runway space.”

RELIABLE AND PREDICTABLE PIPELINES

During this period of incredible complexity—with goods being hindered from flowing efficiently and businesses facing serious hurdles to timely operation—innovative supply chain managers are rethinking global infrastructure strategies. One forward-looking professional is Cesar Mendes, CPIM, head of supply chain for Amryis, a renewable products company that provides sustainable alternatives to a broad range of petroleum-sourced goods. Mendes was responsible for preparing the local supply chain infrastructure for the startup of his company’s operations in Brazil. “My work is dependent on the Brazilian logistics infrastructure—especially for bulk liquids, such as renewable hydrocarbons—and transportation throughout the country and abroad,” he says.

Mendes believes the main challenge for Brazil is a lack of competitive transportation modes resulting from scarce or even obsolete rail and road infrastructures. “In my industry, having a pipeline infrastructure would be great, but that is not a reality in the short term,” he explains. “Due to the recent boom in the Brazilian economy, the supply chain professional is now facing a huge challenge in bringing integrated logistics solutions at competitive costs.”

His approach to addressing these difficulties includes analysis of local economies and their cultural and social environments, as well as strategies for achieving consistent stability. He says the right way to do business in a new or emerging market is by first considering

the country’s “moment”—look at the growth; has it been continuous? Take into account workforce preparedness, stability of average wages, and shifting class structures. Be sure to weigh any signals, either positive or negative, that might affect the supply chain.

“The supply chain design process depends on the evaluation of multiple scenarios ... which is not an easy task,” he adds. “There are some common challenges: where to invest, what are the bottlenecks,



“THE SUPPLY CHAIN PROFESSIONAL IS NOW FACING A HUGE CHALLENGE IN BRINGING INTEGRATED LOGISTICS SOLUTIONS AT COMPETITIVE COSTS.”

what is preventing growth, and what is critical to bringing competitiveness for the local industry. Thinking ahead of time and reinforcing collaborative planning among cities, states, countries, and key industries would alleviate the issues.”

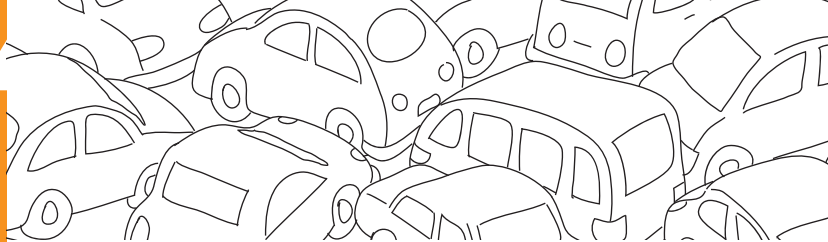
John Cummings, principal at advisory firm KPMG’s global strategy and operations practice, helps clients around the world analyze the availability of transport infrastructure when they want to work in new markets. He heads up KPMG’s business effectiveness teams, which focus on fundamental issues including managing risk, increasing revenues, and controlling costs. Cummings says, when planning to do business in new markets, it’s important to look at throughput; capacity; the workforce as it relates to ease of supply; and the demand side, including demographics.

“The trend we’re continuing to see is that developed nations are not and have not been investing in infrastructure, and emerging nations can’t develop fast enough. It’s a double whammy,” he says. “And when you’re trying to design high-performing supply chains that work fast—proactive supply chains—these types of constraints, whether they be on the supply or the demand side, are only going to get worse.”

Cummings says that, as transport complications increasingly become the constraint, it’s essential that all countries recognize the value of infrastructure to the engine of commerce. “It’s what greases the skids for speed, throughput, and the ability to satisfy consumer demand,” he explains.

His team spends a lot of time helping clients improve speed and take latency out of their supply chains. The goal is to create high-performing networks; but, often, infrastructure challenges get in the way. “Once you lean up the supply lines, you don’t have the buffers you used to have. When you add constraints from an infra-

EVALUATING ACCESS



Infrastructure used to transport resources, services, and people is a fundamental requirement for supply chains to function effectively around the globe. While the state of physical resources varies widely among nations, there are some common problems.

Robyn Boerstling, director of transportation and infrastructure policy for the National Association of Manufacturers, says the recent survey “Infrastructure: Essential to Manufacturing Competitiveness” showed there was not a single segment of US infrastructure performing at a level to meet the needs of business. She adds that the quality of roads is of particular concern, as 70 percent of manufacturers believe American infrastructure, including all modes of transportation, is in need of improvement.

Numerous countries also face an exponentially mounting number of automobiles trying to get around on failing roads. In Warsaw, car ownership has doubled over the past 15 years—an indication of Poland’s economic success. Unfortunately, road-building programs have fallen short.

Egypt’s Cairo metropolitan region is approaching a population of 18 million people. Narrow streets on the banks of the Nile intended for two-way traffic have been transformed incredibly into four-lane highways, thanks to a society of drivers who have learned how to deftly navigate the smallest of spaces.

São Paulo has some of the world’s worst daily traffic jams. Citizens spend as much as four hours at the wheel every day—unless, of course, they’re lucky enough to be among the city’s millionaires, in which case they may choose to get around town in a massive fleet of private helicopters.

The number of vehicles purchased, transportation, connection, and innovation are among the 22 factors considered by nonprofit research group SRI International while creating the “Access Index.” This report evaluates global infrastructure in order to measure a nation’s openness to being a part of in the world market. The top 10 countries are

1. Hong Kong
2. Singapore
3. Denmark
4. Switzerland
5. The Netherlands
6. Finland
7. Germany
8. Sweden
9. The United Kingdom
10. France.

The United States and Canada were numbers 12 and 13, respectively.

structure perspective ... those unplanned events cause problems. They really slow down the supply chain and cause you to now have to build more buffers,” he says. “That’s very frustrating.”

EASING THE GRIDLOCK

Modern infrastructure planning requires collaborative efforts among cities, states, countries, and industry. Supply chain managers must recognize that a great deal of freight is multimodal, so infrastructure decisions thus call for broad transportation and analytics experience. In “Guide to Quantifying the Economic Impacts of Federal Investments in Large-Scale Freight Transportation Projects,” a report prepared for the US Department of Transportation, Jacoby and his fellow authors write that an improved framework with significant infrastructure improvements would benefit shippers by giving them access to lower-cost supply sources, the consolidation of facilities (due to greater market reach), and the reduction of inventory through smaller order quantities.

However, he acknowledges that intermodal integration is a large and continuing challenge. “Many megaprojects are going on that assume or require multimodal coordination,” Jacoby says. “Yet, large-scale planning that involves collaboration and getting alignment between seven or eight major stakeholder groups—each with its own leadership, performance metrics, and culture—is a huge challenge. The consequences of failure include project delays, imbalanced capacity, and inevitable bottlenecks at intermodal junctions.”

Acting as consistent and persuasive advocates is another important part of the equation for supply chain professionals. Many experts agree that there is significant public understanding that the quality and condition of global transport infrastructure is not where it needs to be. Robyn Boerstling, director of transportation and infrastructure policy at the National Association of Manufacturers, notes that, “In addition to advocating for improvements to infrastructure, the cost of inaction needs to be continuously assessed and communicated.”

For example, she says that, while policymakers in the United States are keenly aware of the infrastructure challenges the nation faces, it’s still vital for them to regularly hear from practitioners and employers on why a modern and efficient infrastructure is necessary for a productive economy.

Amyris’s Mendes says the greatest strategies he employs to create a more effective infrastructure for his company include collaborative planning, strong partnerships with key logistics players, analysis of the success factors in his region, studying competitors, and benchmarking. “Ask for information when you don’t have clarity, build different scenarios, bring people to discuss and contribute, and think creatively,” he urges. “Most importantly, aim high and move fast.”

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