Increasing volatility and uncertainty in consumer and commodities markets around the world is pushing companies to find better ways to manage their supply chains. Supply chain management has gone from poor cousin to high strategy in business over the last 20 years. Companies have invested heavily in supply chain technology, yet many admit they are still far from their goal of creating agile and responsive supply chains.

Attempts to apply centralized command and control have not worked well in commercial supply chains because they are composed of so many independent companies ranging from manufacturers to transportation and logistics providers to retailers. Each company has its own agenda and resists being ordered about by others. Yet all must find ways to work together for their companies to prosper. This calls for greater levels of human interaction and collaboration, not just installation of cutting-edge technology.

What if all parties could see daily operations across a supply chain as they happened, and could use that data for simulations to explore responses to problems and opportunities as they arose? Would it enable better collaboration? Could lots of people participate to formulate courses of action and see for themselves which ones are most likely to succeed? Would consensus emerge quickly enabling more effective action from everyone?

Traditional supply chain simulations are complex and difficult to use. Small groups of experts take weeks or months to collect and load the data. Then they run it through simulation algorithms that produce optimized best solutions – assuming the data still reflect current realities. That worked well enough in the slower moving industrial economy of the last century, but it cannot keep up with the pace of change in today's real-time economy. Continuous change in consumer demand and commodity prices turns last week's optimal solution into this week's big mistake.

What is needed now is a faster, simpler way for using continuous simulations to probe through the fog of uncertainty and find the best paths forward. And it must enable participation by a wide audience of business and technical people, not just small groups of experts, so that simulation results will be understood, accepted and acted upon.

The SCM Globe simulation application is based on a unique supply chain model created by defining and combining just four entities: Products; Facilities; Vehicles; and Routes. Making, moving and consuming products is why supply chains exist. Facilities are places where products are made, stored or consumed. Vehicles move products from one facility to another to meet demand, and routes are the paths vehicles follow to deliver products to facilities.

People can create accurate models of real supply chains by defining and positioning the four entities on a map of the world. SCM Globe simulations show daily operating results across the supply chain. The use of maps provides a clear geographic context for people to understand simulation results and not get lost in the details. Our supply chain simulations, and the situational awareness they enable, make it possible for large numbers of business and technical people to participate in building supply chain models, running simulations and acting on the results.

The first version of the simulation engine is already in production. We reached break-even revenue last year and are operating profitably (www.scmglobe.com). We are enhancing the simulation engine as we progress through a 3-step process to bring our supply chain simulation and collaboration platform to the corporate market.
The first step is to become profitable and grow in the education and training market. We are doing that. Our supply chain model and map-based user interface make us unique in this market. SCM Globe is used to teach supply chain operations at a growing number of colleges, universities and training programs worldwide.

The second step is to enter the supply chain planning and risk management market. We are entering that market this year. Initial opportunities are coming from people who used SCM Globe simulations in university courses or executive education seminars. This second step brings in a new source of revenue, and positions us to take the third step as we continue enhancing our application.

SCM Globe screen designs, simulation logic, and program code are covered by copyright protection. We are in the process of filing for a patent on our unique simulation model and the manner in which we have implemented it.

Computers work best to collect and display data in useful formats and contexts so people can gain situational awareness. We do not need complex artificial intelligence in computers when we make better use of the real intelligence and "street smarts" of human beings.

SCM Globe uses modeling and simulation to make that possible. It will be central to how supply chains operate in our real-time economy.
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Biography: MICHAEL HUGOS, CEO, combines cloud computing, simulation modeling and game theory to redesign and reinvigorate business operations. He has advised and developed applications for Microsoft, Starbucks, U.S. Navy Medical Logistics Command and numerous smaller companies. Previously he was CIO of a North American distribution organization and developed a suite of supply chain systems that transformed the company's operations and revenue model. He won the CIO 100 Award and Premier 100 Award. He is author of Essentials of Supply Chain Management, now in its third edition and reported by Amazon.com as the best selling book on supply chains worldwide since 2004. He earned his MBA from Northwestern University’s Kellogg School of Management.

STEVE KOJI, COO, is skilled in financial analysis and planning to deliver support services to high growth businesses. He has expertise in project management and experience in oversight of remote operations and outsourced services. As manager of retail support services for two high growth financial services organizations, his staff delivered support to keep pace with rapid growth. He was responsible for developing and implementing standardized policies and procedures to improve efficiency and generate savings. He earned a Masters in Management and Technology from Pepperdine University, Graziadio School of Business and Management.

Additional Author: GENE GLAUDELL, CTO, works with technology and business executives and software development teams to solve difficult problems and realize promising opportunities. He has experience designing, building, and improving IT systems, processes, and organization capabilities at all stages from startup companies to mature company turnarounds. He employs an agile approach delivering working systems in 90-day cycles. His broad industry experience includes positions as director of enterprise architecture for Cummins Engine and CIO for Tesla Motors. He earned his Masters in Physics from Harvard University.