TECH Practices

By Glenn Murphy, CMA, CFM, CPA, CIA, CISA

Supply Chain Complexity Awaits Technology Solutions

The complexity of the supply chain continues to increase. In addition to the expansion of regulatory requirements and social responsibilities, there are increasing demands for traceability to source for many products, especially minerals, jewels, and foods. This expansion drives the need for technology and methods to efficiently gather, analyze, and store information as well as the need for professional expertise to verify that information is accurate (or to vet it).

There are a number of current regulations that include requirements on reporting information connected to items within the supply chain. The Dodd-Frank Act, for example, regulates reporting on conflict minerals, and the Customs-Trade Partnership Against Terrorism (C-TPAT) ensures supply chain security. Other regulations contain reporting requirements on product characteristics, source, and designation as well as corporate social responsibility (CSR), including verified factory/vendor compliance with environmental, labor/pay/safety, and other regulations.

The Supply Chain

For this column, the "supply chain" is the process that begins with the design or prototype of a product being assessed for possible production and ends with the product available for sale. Major supply chain subprocesses include:

1. Product design, requirements, capabilities, intellectual property protection, and/or source of materials;
2. Order commitment and tracking;
3. Private label business and overseas product delivery;
4. Importation;
5. Corporate social responsibility; and
6. Traffic, freight, transportation, and product tracking.

The three main flows related to the supply chain are goods, information, and funds. Visibility to all aspects related to these three flows is critical for optimizing the supply chain and managing the multitude of associated risks. Managing timeliness, quality, producers of the product (including any subcontractors), employees of the producers, security of the product at the point of shipment, product handling, security through the transportation and customs/ports processes, and determining who receives payment and for what purpose all need to have a high level of visibility. The complexity, number of entities, and volume of data involved presents an ideal opportunity for technology to provide this critical visibility. Unfortunately, a technology solution hasn't arrived yet.

Collaboration via the Cloud

The dominant supply chain planning systems remain SAP, Oracle, and JDA. While these systems purport to provide solutions for the six major supply chain subprocesses, no effective comprehensive system exists yet. Randy Rankin, vice president of CSR services at the Bureau Veritas Consumer Products Services, observes, "Expanding expectations around the depth of supply chain engagement coupled with increasing requirements—both regulatory and stakeholder driven—present a huge challenge from an information management perspective. Ultimately, successful companies need to find data solutions that cut across the identified sub-functions and promote collaboration to eliminate duplicative efforts. While there are examples of effective solutions in today's market, these are limited to individual sub-functions—such as quality and compliance—and individ-

ual companies. The real win will be a multi-function/multi-enterprise solution."

The supply chain should be an area ripe for cloud technology to provide a shared solution, but this hasn't occurred yet. Collaborative platforms like Sedex and Fair Factories Clearinghouse are CSR consortiums leading this approach, but neither has gotten much traction. The major collaboration challenge is agreeing on an approach (for example, what constitutes a robust factory audit). So far, getting agreement has been maddeningly difficult. ICIX provides cloud applications, a secure central platform, and repository to share information and reduce redundancy. The ICIX approach looks to leverage the fact that supply chain partners have the same relationship with numerous other entities. The challenge with using ICIX is that much of the information is self-reported and therefore not vetted, requiring entities to identify, verify, and log the vetting of their most critical data elements. Perhaps it's still early, and the shared-vetting approach will somehow come together with a platform like ICIX to provide a cloud-based supply chain solution that provides the visibility companies need.

Combining Technology with Outside Experts

A growing trend for companies striving to adjust to the increasing complexity and risk in their supply chain is contracting subject matter experts (SMEs) who specialize in supply chain resiliency. Resiliency includes building visibility to all aspects of risk, identifying supply chain partners' activities that mitigate risks, and developing strategies or action plans to reduce overall risk. James Cascone, partner at Deloitte & Touche's Supply Chain Risk Management practice, explains, "Companies are interested in end-to-end supply chain solutions that enable supplier collaboration and provide improved visibility, flexibility, and control over supply chain risk. Current tools help analyze supply chains at the node level, but expert interpretation is needed to extract insight across the extended value chain to help manage risk, improve compliance, and gain increased assurance of supply." This is affirmed by Carlton Adams, senior vice president of Global Supply Chain Management at Peabody Energy: "At Peabody Energy, a vital part of our category strategies is risk management, whether in commodities or equipment. We leverage third-party SMEs in this space as their data is always current and farther-reaching than our own."

One area to leverage the cloud and improve internal process is customs brokerage. The "importer of record" is responsible for the accuracy of all customs entries. Many companies rely exclusively on their third-party customs broker for all entries and typically don't test check the entries. In many cases, the entities don't have the internal expertise to audit entries. Mike Laden from Trade Innovations points out, "Nobody knows the product and supply process better nor cares as much as the company that is creating, importing, and selling the items. Companies are better served by eliminating brokers, leveraging or developing internal expertise, and using cloud technologies to complete all the customs filings internally." Cloud applications support entities bringing the customs filing in-house, improving controls, and realizing savings.

Overall supply chain resiliency requires a combination of technology to provide visibility and SMEs to provide the analysis. Collaboration using cloud technologies is emerging and may provide the solution if the challenge of vetting the information can be solved. **SF**

Glenn Murphy, CMA, CFM, CPA, CIA, CISA, is the cofounder of BestGRC, Inc., and founder of GRC Management Consulting, LLC. He is a member of the IMA® Technology Solutions and Practices Committee and a board member of IMA's Raritan Valley Chapter. You can follow him on Twitter @GlennMurphyGRC or e-mail him at gmurphy@bestgrc.com.