Deconstruct to Reconstruct: Using the Past to Create the Future

By James B. Rice, Jr.

Big Data, cloud computing, driverless vehicles, drones, 3D printing, The Internet of Things: It seems that never a day goes by without the arrival of another paradigm-shifting innovation. Market and industry dynamics are constantly changing. The emergence of omni-channel retailing, wide fluctuations in energy prices that require supply chain designs to be revisited, and the impact of mega-size container ships on global operations are just a few examples of these changes.

While you likely find this endless stream of new capabilities and applications exciting, you might also feel somewhat overwhelmed. It’s becoming increasingly difficult to identify how these developments translate into successful supply chain innovations (SCI) that can be leveraged to create competitive advantage.

Don’t get discouraged. By deconstructing these thirty new objects, you will find that they are not as revolutionary as is widely assumed. And having disassembled them, you will have a clearer idea of how SClS can be derived from innovative ideas.

The Simple Truth

SCls are often characterized as ground-breaking ideas that bring about dramatic and disruptive changes in the supply chain. The truth, however, is more mundane. The majority of SClSs are what is known as sustaining: they provide incremental improvement in cost, quality, or service.

Also, rarely does an SCI pop out of a laboratory or result from a light bulb idea. More often than not, this type of innovation evolves out of a series of many small modifications that, in combination achieve meaningful change in performance (this is what supply chain professionals have always been doing, but we’ve called it different things like business process reengineering, Kaizen/continuous improvement, etc.).

Recognizing this truism will help rekindle your efforts toward a productive and disciplined approach to innovation. Let’s thoughtful approaches often result in companies chasing technological silver bullet.

Also, practitioners often make the mistake of conflating process innovation, or SCI, with product innovation. Keep in mind that each one has distinct outcomes that derive from very different sets of processes.

Usually product innovation involves a stage-gate process for the assessment, selection, and development of new product ideas. SCI, on the other hand, focuses on changing or improving an existing process with a clear, predefined outcome, such as the creation of a specific product or service. An SCI could serve to create the same product, but using a different process that might have different economics and performance expectations.

Additionally, there is generally a burst of innovation at the genesis of a new product, followed by diminishing and increasing smaller innovations. The pace of development for an SCI takes the opposite direction. Early in the product lifecycle there is some process innovation that increases over time, and then peaks at the point where there is convergence on a “dominant design” for the product and process.

Time to Choose

Having clarified the nature of an SCI, firms need to choose whether to pursue sustaining or disruptive supply chain innovation. Why choose? Each one requires very different approaches and skill sets. Sustaining SCI innovations come from process improvements infused with the inspiration of learning from others and adapting methods from other environments to your own. Disruptive supply chain innovation entails changing the dominant design of your supply chain. Yes, changing the way things are done.

Disruptive innovations are hard to achieve if you are part of a big company that has established processes serving large customers that depend on you for reliable supply. Dell changed the dominant design when it started producing to order and selling direct. The previous dominant design was to produce to stock and sell through retailers and distributors. Zara challenged the dominant design when it designed a vertically integrated, near-market, fast fashion business that was capital-intensive and relied on high levels of automation. At the time, the dominant design for mass merchandise fashion products was a low capital, high-labor model, based on outsourcing, as part of a long-cycle supply chain.

Disruptive innovations are hard to achieve if you are part of a big company that has established processes serving large customers that depend on you for reliable supply.

Transformations like these are rare, and almost always the disrupter is not a market leader, as Clay Christensen explains in his seminal work, The Innovator’s Dilemma.

Deconstruct to Reconstruct

Now that you have a clearer idea of what type of SCI you’re chasing, and what it might entail, you may well have come to realize that nearly all SCI are combinations or re-combinations of established ideas. The “new” aspect is the combination that is then applied and scaled.

To prove this is the case, try deconstructing some well-known innovations, including the ones mentioned at the beginning of this article. Such an exercise helps you to interpret innovations in the context of the supply chain as a whole, and identify commonly used techniques that may have been borrowed from other industries. In fact, iBubble is an ingenious application of postponement—delaying the final assembly of a product until as late as possible.

Take the Right Road

In the words of Yogi Berra: “If you don’t know where you’re going, you might not get there.”

When developing and applying SClS, practitioners need to focus on the process and not the product. Technologies don’t change supply chains; technical invention is not SC innovation. Instead, concentrate on how innovative technologies can be applied and scaled to help change supply chains. Remember that meeting performance, cost and quality objectives is the key to sustaining and disruptive SCI. Choose your objective, stick to it, and secure the right resources and support to achieve it (e.g., process innovators for sustaining SCI, process dreamers for disruptive SCI).

This is the disciplined and productive path to successful supply chain innovation, an approach that will reward adopters given the accelerating pace of innovation.