Supply Chain Management: From Operational to Strategic  
*From the Strategically Decoupled/Price-Driven to Strategically Coupled/Value-Driven Supply Chain*  
**Dr Steven A Melnyk, PhD and Nicholas C Little**

**Abstract**

Supply chain management is undergoing a sea change. Increasingly, we are seeing evidence in the experiences of companies such as Unilever, Coca-Cola, P&G, and others that the supply chain management is changing from being strategically-decoupled, price-driven to being strategically coupled, value-driven. Driving this transition is a different approach to the supply chain – an approach that integrates the supply chain into the business model. This white paper explores this approach. This approach is underpinned by ensuring clarity and meaning to three major elements of the business model (the key customer, the firm’s value proposition, and the capabilities including the supply chain. Specifically, it identifies the five key elements that must be present for this transition to take place: (1) understanding and integration with the business model; (2) being outcome-driven, rather than output-driven; (3) recognizing the need for blended outcomes; (4) manage the metrics; and, (5) building linkages to the top. The paper and SAPICS conference presentation illustrate this approach by using videos and other examples to illustrate the points raised. We conclude with an example of this approach being applied to a company as well as presenting some guidelines for management. Ultimately, non-strategic supply chains should be viewed as symptoms of incorrectly or incompletely executed business model planning and execution processes.

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**Introduction**

The impact of supply chains on cost and lead times are well known. By drawing on the capabilities offered by the supply chain and by developing and fostering appropriate ties with both customers and suppliers, firms can realize significant benefits. Benefits include reduced inventories, lower costs, enhanced responsiveness, and improved strategic focus in terms of design, execution, and capital investments (Harvard Business Review, 2006). Providing further support for the supply chain’s impact on performance, AMR (a leading supply chain research organization) stated that in 2008 the top 25 companies with best supply chain practices reported an average return of 17.89 percent compared to 6.43 percent for the Dow Jones Industrial Average (DJIA) and 3.53 percent for the S&P 500 (Reuters, January 10, 2008).

Yet, the ultimate impact of these supply chains is often limited if they are not linked to the strategic objectives of the firm. Firms such as Coca-Cola, Apple, Zara, Unilever, and P&G experience higher levels of benefits by successfully using their supply chains to achieve critical strategic objectives. They have achieved this, in part, by making their supply chains integral elements of corporate success. This then leaves open the question, how do we transform our current supply chains into strategic supply chains? That is the major question that this paper explores.
Ironically, the answer to this question appears to lie not within the supply chain but with the firm’s business model -- how the firm chooses to do business and generate value for its key customers. Consequently, to understand the strategic supply chain, we must understand the business model. However, to do so, we must first understand the differences between the two archetypes of supply chains.

### The Present and Future of Supply Chain Management

In academic terms, we can argue that two archetypes of supply chains exist. While the two may look similar in terms of functions, investments, and staffing, there is a world of difference in terms of performance and impact. The first type of supply chain can be described as being *strategically decoupled, price driven*. This is the most common type of supply chain. These supply chains are output driven with the focal outputs often very well defined and highly specific. Strategically-decoupled, price driven supply chains focus upon issues of lowest price (not necessarily the lowest total cost), maintaining or improving quality, lead time reduction, and supply chain disruption risk minimization. These supply chains are measured and evaluated using very specific performance measures – price, on-time delivery, parts per million defective (ppm). They are not generally well integrated into the firm’s strategy – a chasm exists between the supply chain and strategy. Irrespective of whatever the corporate strategy is, the supply chain is always expected to reduce cost. At times, as shown in the accompanying story of John Deere, this can lead to situations where supply chain decisions to reduce costs adversely affect the ability of the firm to respond quickly to increased demand and hence increase revenue. In many cases, top management sees this type of supply chain as a constraint or a potential source of risk. Due in part to past research (Hendricks & Singhal, 2005), we now recognize that supply chain problems, such as supplier disruptions, can adversely affect stock price (-40% average stock loss) and recovery can take up to two years.

#### Low Inventory Angers John Deere Customers (Singh, 2010)

In early 2010, as the agriculture sector picked up steam, farmers who were loyal John Deere customers went to their John Deere dealers to buy combines and harvesters. There, they were frequently told that these would not be available until long after the harvests were done. The reason – John Deere and its supply chain had focused on reducing costs and improving profits by becoming a lean, build to order company. The changes had, as John Deere management painfully learned, impeded its ability to be responsive. John Deere lost sales to competitors who were able to meet demand earlier. In one case, a Kansas farmer, Jay Armstrong, broke a 50-year family tradition of only buying John Deere equipment, when he bought an Italian-made corn harvesting combine attachment. The reason – the attachment sold by Dragotec USA – would arrive in May; John Deere’s equivalent would not be delivered until August.

In contrast, *strategically coupled, value-driven* supply chains are far more complex supply chains focused on the outcomes desired by its key customers rather than making cost the dominant outcome. In many cases, this type of supply chain allows firms to focus on the higher levels of performance.
Performance can be viewed as a hierarchy. At the lowest level, there is cost savings. These savings can take place at three levels: within the department, within the firm, and within the supply chain. When focusing on cost savings within the department, it is likely that actions will be taken to improve departmental performance while hurting the performance of other departments (a lower quality part is bought at a significant discount, purchase cost savings are realized, but manufacturing costs increase due to increased rework). Ultimately, this approach precipitates remedial action – we made a bad decision in the past and we are now correcting it.

At the second level, the firm, there is cost avoidance. When organizations get to this level of performance, effort is expended to avoid the bad decision in the first place. However, this approach is harder to measure and to evaluate.

The third and highest level of performance, at the supply chain level, focuses upon revenue growth. This is the level that often generates most interest from top management. It is at this level that many strategically coupled, value-driven supply chains operate.

The strategically coupled, value driven supply chain is dynamic because the value proposition is continuously changing. The value proposition changes in response to fluid customer demands and expectations, corporate strategies, governmental legislation, competitive actions, and technological advances. In contrast, strategically decoupled, price driven supply chains are static in nature – the focus is always on cost, quality, and delivery. Consequently, performance measurement and management of the strategically coupled, value-driven supply chain tends to be more complex. It is no longer enough to focus solely upon reducing costs and maintaining quality; these elements may not reflect all that is important to the customer. At this level, top management recognizes the supply chain is both a deployable capability and a strategic opportunity.

There is strong evidence that the strategically decoupled, price driven supply chain is rapidly reaching a performance plateau. This plateau is being driven by the economic law of diminishing returns – the more we push on cost, the more we uncover meagre returns. Conversely, strategically coupled, value driven supply chains appear to be in a growth phase – the location of the plateau is not yet even known.

The challenge ahead is how to transform strategically decoupled, price driven supply chains into strategically coupled, value driven supply chains. As previously noted, the answer to this challenge lies not in the supply chain but in the firm’s business model. Simply put, supply chains become strategic when integrated into the firm’s business model. In contrast, the existence of a strategically decoupled and price-driven supply chain may reflect a business model that is either incorrectly or incompletely developed.

Understanding Business Models

In September 2008, Business Week (Jana, 2008) published an article where they asked the following simple but critical question: We know innovation is important but does the type of innovation matter? Which of the following innovation approaches has the biggest impact on the firm and its performance?

- Innovative processes
Innovative products
Innovative customer experiences
Innovative business models

As seen in Table 1, the results were interesting in that they emphasized the superiority of certain business models.

Table 1

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Innovative processes</td>
<td>1.4%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Innovate products</td>
<td>3.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Innovative customer experience</td>
<td>2.5%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Innovative business models</td>
<td>16.6%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

Business models define firms’ methods for doing business (Margetta & Stone 2002). Business models serve as frameworks, to be used by the firm for creating and maintaining value in a dynamic environment. In its simplest form, the business model (see Figure 1) consists of four major elements: (1) the key customer(s); (2) the value proposition; (3) capabilities; and, (4) resultant performance.

**Figure 1: The Business Model**

**Key Customers:** The first element, the key customer, recognizes that all customers are not equally important. The firm must identify the most important customers and focus on them. It must strive to “profitably delight” these customers. Furthermore, the desired outcomes sought by these key customers must be identified. Every key customer has outcomes they seek to achieve in their engagements with a particular firm. To describe these outcomes, we must recognize that not all outcomes are equally important.

Using the framework developed by Hill (1985), we can prioritize outcomes into one of three categories. The first are the order qualifiers. These are outcomes such as availability, price, or conformance that must meet a certain minimum level of performance for the customer to even consider the firm’s offerings. In the customer’s eyes, exceeding these minimum levels of
performance is not important; meeting them is critical. We need “good enough” performance. Second, there are order winners. These are traits that cause the key customer to select the firm’s offerings over those of competitors. These are the traits that the firm must excel on; they also identify the traits that the supply chain must excel at delivering. Third and finally are order losers. Poor performance on these traits can cause the firm to lose out on either current or future business.

Prioritizing these outcomes not only helps the firm better refine its business model; it also helps make the supply chain strategically coupled and value driven. Finally, these outcomes, when prioritized, help improve the quality of the performance measurement system since this system should be continuously monitoring and reporting on the performance of the firm as it pertains to the order winners.

**Value Proposition.** The value proposition defines what the firm offers the key customer. At a minimum, it should satisfy three requirements: (1) the customer must be willing to pay for it; (2) it differentiates the firm and its value proposition from those offered by its competitors; and, (3) it meets or exceeds the firm’s strategic and financial requirements. In other words, the value proposition identifies the promise that the firm makes to its key customers.

**Capabilities.** Capabilities, of which the supply chain is a critical element, define those problems and outcomes the firm excels at solving and the types which it will have difficulty in addressing. Capabilities come from investments that the firm makes in:

- Processes
- Planning systems
- Technology
- People and culture
- Infrastructure (of which the performance measurement and management process is a critical element)
- Supply chains (and their underlying relationships).

The supply chain becomes strategic to the extent that it contributes to the business model. Often, this contribution takes one of three forms:

- Faster, better, cheaper: In many ways, this contribution represents the lowest form of contribution. It is also the contribution most often associated with supply chain management. Here, our goal is to simply do things “better.”

- Help the firm meet the needs of either an existing key customer or new key customer whose needs are currently being poorly satisfied. Here, the supply chain can offer more value and enable the firm to charge more to its key customers.

- Help the firm meet the needs of either an existing key customer or new key customer whose needs are not being satisfied. This is the “home run” for supply chain management. This is what occurs when the supply chain contributes to the success of Apple’s iPad or the Coca-Cola “Freestyle” machine.

The linkage between the business model and the supply chain (as part of capabilities) goes both ways – from the business model to the supply chain (in the form of investments made
and objectives pursued) and from the supply chain to the business model (when the supply chain uncovers new capabilities that the firm can use in modifying the business model).

For the firm to develop and maintain a sustainable competitive advantage, the business model must be aligned around desired outcomes, not specific outputs. That is, the outcomes desired by a key customer (and for which the key customer is willing to pay) must be aligned with the promise of the value proposition (the desired outcomes offered to its key customer), and the outcomes ultimately delivered by the firm, through its capabilities. Corporate success, as measured by performance (the fourth element), is strongly dependent on this alignment and synchronization. This means that if we are to understand the business model, we must also understand the desired outcomes and how they should be structured to deliver value — the overall purpose of any supply chain. A good way to think of this is to segment the company’s supply chain operations according to customer needs as capable of satisfaction through the business model(s).

### Structuring Desired Outcomes — Understanding the Importance of “Blended Outcomes”

In strategically coupled, value driven supply chains, customers are not necessarily interested in the how outcomes are achieved. Whether you use lean, or Six Sigma or Total Quality Management, or a logistics control tower is less important than meeting their desired outcomes. Desired outcomes identify objectives — the goals that the firm and its supply chain are to achieve. Goals are focused upon achievement — not the exact manner or tools or methods to be used in achieving these goals. As soon as we develop a solution by selecting a method or general approach such as Lean or Six Sigma, then we have shifted focus from outcomes to outputs.

Focusing on outputs is attractive; after all, we are doing something. Action is ongoing, and there is a chance of success. However, focusing on outcomes is full of hidden pitfalls. First, by rushing to develop the solution, the desired outcomes may not have been adequately developed. There also may not be agreement by the key players as to the desired outcomes. Further, we may not have articulated the desired outcomes to the rest of the organization’s stakeholders.

By focusing on outputs, we limit options available to us. There is only one way to achieve the outcome — the path identified by the output. If we identify the output as lean, then we are essentially limited to lean solutions — irrespective of what the key customer may want. In strategically coupled, value driven supply chains, firms often rely upon their partners to identify new and different ways of achieving desired outcomes. This is best illustrated by the experiences of United States Coast Guard in Haiti during the 2010 earthquake (see “The U.S. Coast Guard Comes to the Rescue in Haiti”).

### The U.S. Coast Guard Comes to the Rescue in Haiti

During a workshop on Humanitarian/Disaster Relief Supply Chain Management held at the Darden School, the University of Virginia (November 10, 2010), the participants listened to a presentation done by the United States Coast Guard Commander of the first American ship to be in Port au Prince after the 2010 Haitian earthquake. At that time, the commander was informed that she had to provide assistance to the civilian authorities. The authorities
requested that 150 armed shore patrol personnel be provided to ensure 24 hours protection for all emergency supplies. The request of 150 personnel is an output – a well defined solution. The only way to meet the requirement was to provide 150 shore patrol personnel (even if it meant that Coast Guard facilities might go unprotected). Had the authorities stated a desired outcome (protection for critical supplies), the commander could have identified and explored options other than deploying 150 critical personnel assets.

Ultimately, we propose that to be strategically coupled, value driven, supply chains should be outcome-driven, not output-driven. This idea was first proposed by Melnyk, Davis, Spekman, and Sandor (2010), who identified six major outcomes that shaped supply chain design and management:

- **Cost** – reducing price (initially) and cost (ultimately) is the key focus. Delivery and quality, while important, are secondary considerations and considered part of this outcome.
- **Responsiveness** – The ability to change quickly in terms of volume, mix or location in response to changing conditions. Typically, responsiveness warrants a higher price.
- **Security** – This focuses on quality and protection. Security involves supply chains that are safe and protected from external disruptions. Security is a relatively new requirement but has gained a great deal of attention recently, with cases of tainted food products from China and generic drugs from India. Issues such as intellectual property protection belong to this outcome.
- **Sustainability** – This outcome involves “green” supply chains that are environmentally responsible. It also deals with issues of social responsibility.
- **Resilience** – This refers to supply chains that can deal with unexpected disruptive conditions or threats to supply. This is also a supply chain that is free from geographical and political embargos.
- **Innovation** – In recent years, many firms have increasingly relied on their supply chain as a source of product and process innovation. For example, IKEA long ago generated a competitive advantage by changing how products were delivered. More recently, Proctor and Gamble involved both suppliers and customers in its highly successful new “connect and develop” innovation process.

Yet, they did not address how these outcomes should be mixed to meet the needs of the key customers. To address this issue, we introduce the concept of “blended outcomes.”

### Recognize the Importance of “Blended” Outcomes

Lee (2004) observed that, supply chains that focused on only one outcome (in Lee’s case, efficiency) ultimately were fatally flawed. Single-outcome supply chains could not develop and maintain a sustainable advantage over their competition. In particular, high-speed, low-cost supply chains were unable to respond adequately to unexpected changes in demand and supply. When supply chains focus on a single outcome, it becomes difficult to use the supply chain to create differentiation, a real source of competitive advantage.
Consequently, what is needed is a method of mixing, or blending, the outcomes so that they generate a desired outcome that is highly attractive to key customers, while also helping the firm differentiate itself in the marketplace. Developing such blends reflects specific design principles:

- Certain outcomes are complementary when mixed; others are inharmonious when combined. Some outcomes, such as cost and sustainability, can be mixed because they share similar practices. When mixed, the firm and its supply chain benefits from the resulting synergies. Lean, for example, with its emphasis on waste reduction, not only helps the firm reduce cost; it also helps the firm reduce other forms of waste such as pollution. Other outcomes, specifically cost (especially when pursued using lean practices and systems) and innovation (especially radical innovation) are less readily mixed. When combined, the resulting interactions are often negative, adversely affecting performance and achievement of strategic objectives.

- Some outcomes are more important than others.

Using these two principals, we propose the notion of a “blended outcomes enterprise” – a system where the six outcomes are blended using a “1-2-3” formula:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number</th>
<th>Implication</th>
<th>Performance Level Attained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>1</td>
<td>The strategic core. This outcome defines the strategic essence of the firm and its supply chain. It is the one outcome that the firm will never compromise on. This outcome should be most closely monitored using the firm’s performance measurement and management system. This outcome forms the heart of the corporate organizational culture system.</td>
<td>Top 5 percent of performance when benchmarked.</td>
</tr>
<tr>
<td>Important</td>
<td>2 outcomes</td>
<td>Important (but not as important as the core outcome). Measured but not to the same extent as the core outcome. When combined with the core, describes how the value proposition is to be delivered. When combined with the core outcome, enable the firm and its supply chain to differentiate themselves from their competition.</td>
<td>Top 20 percent of performance when benchmarked.</td>
</tr>
<tr>
<td>Necessary</td>
<td>3 outcomes</td>
<td>The remaining outcomes fall into this category. We want “good enough” performance – that is, we want to prevent problems when they occur. These outcomes are viewed more as outcomes that can lose orders rather than outcomes that can help us win orders. When there is a conflict between these outcomes and the preceding two sets of outcomes, we will resolve the dispute in favour of the other two sets.</td>
<td>Top 50 percent of performance when benchmarked.</td>
</tr>
</tbody>
</table>
When we combine the first two sets of outcomes, core, and important, we essentially define how the firm and its supply chain will meet the key customer’s desired outcomes.

The attraction of this approach is that it creates strategic richness that helps firms competing in the same market for the same customers differentiate themselves, even if their desired outcome is the same. It provides a set of guidelines that can help direct decision-making. It also helps guide management in determining how to respond to “problem” situations. Furthermore, this approach helps organizations segment their supply chains and realize that there is a lack of homogeneity and a need to manage and control the critical supply chains impacting current and future financial success.

### Metrics – The Key Communication Vehicle

Critical strategic decisions such as the selection of the key customer are only effective when communicated and understood throughout the organization. To achieve this objective, we have to select a communication vehicle. Many firms rely on the business vision or mission statement to do so. While important, these are not enough. To effectively communicate, we must be able to restate the business model in terms meaningful to the people involved, irrespective of their level in the organization. To do that, we must rely on metrics.

Before discussing the critical role played by metrics, we must differentiate between measures and metrics. For many managers, they are synonymous. Yet, while interrelated, they are not the same. A performance measure is simply a number – an evaluation of some form of performance. Alone, it is informative but often not meaningful. In contrast, a performance metric consists of three elements – (1) a measure (quantitatively stated); (2) a standard (which helps identify what constitutes acceptable performance); and, (3) a consequence (which would be a punishment or a reward). When combined, these three elements make metrics critical to the firm, even more critical than something like the business vision or mission statement (Melnyk, Stewart & Swink, 2004).

Metrics fulfil critical functions: control, setting expectations, facilitating learning and improvement, and communication. Of these, communication is arguably the most important. Metrics communicate to the rest of the firm, and its supply chain, what is important and what is not important. The very act of measurement communicates importance. When something is measured, we are telling everyone that it is important. If we fail to measure something, we communicate that it is NOT important. Metrics facilitate communication from the top down and from supplier to customer. Metrics communicate more than how well we are doing; they also communicate intent and desired outcomes, stated in terms that make sense to the people involved. Metrics make desired outcome real and meaningful.

It is important to understand how metrics reflect and communicate the business model. First, the desired outcomes of the key customers are communicated in terms of the frequency with which metrics are measured and reported. That is, order winners should form the heart of the performance metrics; deserving monitoring on a regular basis. The metrics should be interval-based. Like the speedometer in a car, they should communicate how far below or above the standard current performance is. In contrast, the metrics for order qualifiers and order losers should be attribute-based. That is, like the signal that tells the driver when oil pressure is out...
of limits, these metrics should only come on when intervention is required – when recorded performance falls below the minimum acceptable levels. Once the problem has been corrected, the metric should no longer be reported.

### The Strategic Response Cycle – the Key to the Successful Business Model

In today’s turbulent environment, it is not enough for firms to merely develop and implement business models; they have to be able to respond quickly to changes, altering their business models rapidly when needed, and to subsequently deploy these changes. It is this ability to respond rapidly to strategic changes that differentiates the successful firms from those less successful. Key to this rapid response is the ability to manage the strategic response cycle, which consists of the following six elements:

- **Sensing** – the ability of the firm to quickly identify systematic changes in the environment or new developments and to separate these factors from the other, more random changes.

- **Assessing** – the ability of the firm to quickly assess the developments flagged in the preceding step and to determine whether these developments are sufficiently important to merit a change in the business model.

- **Formulating/Responding** – if the development is sufficiently important, then we have to formulate a response.

- **Deploying** – once the response has been developed, it must be deployed (implemented). This element concerns itself with how well the response is implemented.

- **Recalibrating** – when a significant strategic change takes place and a response has been formulated and successfully deployed, then it is very likely the prior goals and objectives are no longer relevant. Consequently, new goals and objectives must be developed and implemented.

- **Learning** – whenever a change takes place, the firm must be prepared to assess past actions with the goal of determining what went wrong, what went right, and what was missing. This information can be used to improve further response cycles.

Integral to this strategic response cycle is the supply chain. What differentiates firms such as P&G, Unilever, and Zara from their competitors is their ability to go through this strategic response cycle more rapidly than competitors. These firms have been recognized by many as having highly responsive supply chains. Zara, for example, can go from design concept to the shelf in 10 to 15 days (Yaya, 2010). Unilever has identified that developing markets will form their new key customers. However, to enable these new customers to buy Unilever’s products, Paul Polman has developed a strategy that seeks to develop these same customers as suppliers (Ignatius, 2012). P&G has long had a reputation for being responsive. Yet, it can be argued that the responsive supply chain is little more than a reflection of the ability of management to move through the strategic response cycle faster than its competitors.

Additionally, and most importantly, this change has significant implications for people involved in supply chain management. The need to rebalance and possibly renew their skill sets.
2011, Little and Hadley reported to the APICS International Conference (Pittsburgh, PA, USA) that the gap appeared to be widening in terms of the skills and capability dimensions that industry desired in university undergraduate new hires compared with what the universities provided. An MIT white paper (Cotterill, 2010) identified that future supply chain leaders and managers will require well-rounded, broad business skills and experience to supplement deep knowledge in one or more supply chain functional disciplines. The authors suggest this non-traditional skills and capabilities set will be essential for tomorrow’s supply chain operations to be truly strategic and enable true strategic opportunities to be realized.

Concluding Comments – Transforming Tomorrow’s Supply Chain Operations To Be Truly Strategic

Managing with a supply chain perspective is not inherently strategic; supply chains are only strategic when they are integrated into the firm’s business models. Supply chains, after all, define capabilities. These capabilities have to be in sync with the needs of the key customer and the promise made toward the value proposition. Maintaining this alignment over time is not easy as there are pressures acting on the elements of the business model seeking to pull them apart. Yet, when management can maintain this alignment, it effectively makes the supply chain strategic. By focusing on the business model, we observe the emergence of a new competitive thrust. By emphasizing the business model, we effectively change how firms compete in today’s turbulent environment.

In the 1990s, we focused on firms competing against firms. At the beginning of the 21st century, Martin Christopher stated that the focus shifted to supply chain against supply chain. As we show in this paper, the second decade of the 21st century is seeing another shift – to business models competing against business models. Those supply chains that are integrated into the business model and that contribute to the business model’s evolution over time are effectively strategic in nature – the goal of effective supply chain management.

References


**About Steve Melnyk and Nick Little**

**Steven A Melnyk** PhD, from the Ivey School, University of Western Ontario, in 1981 is Professor of Operations and Supply Chain Management at Michigan State University. He has co-authored fifteen books on operations and supply chain management. His research interests include supply chain management and design, metrics/system measurement, responsiveness supply chains, supply chain design, and Environmentally Responsible Manufacturing (ERM).

Dr Steven A Melnyk is an active researcher whose articles have appeared in over 80 international and national refereed journals. Dr Melnyk sits on the editorial review board for Production and Inventory Management, the Journal of Business Logistics, the Journal of Supply Chain Management, the Journal of Business Logistics, the Journal of Humanitarian Logistics and Supply Chain Management (where he is co-author for North America), and the International Journal of Production Research.

Steve is known for his ability to bridge the gap between the academic and practitioner worlds. He has spoken extensively nationally and internationally at meetings of such organizations as ISM, APICS, Supply Chain Council, SAPICS, InterLog, General Services Administration, National Defense Industry Association, Decisions Sciences Institute, Production and Operations Management Society, and North American Research Symposium. In addition, in 1999, Dr Melnyk was recognized as a Faculty Pioneer by ASPEN Institute for his leading edge work on integrating environmental concerns into business practice (in general) and into supply chain management specifically. Finally, Dr Melnyk is part of an initiative currently being undertaken at Michigan State University to make the entire system more sustainable through an integrated approach. He is also working actively with the purchasing group at Michigan State University to bring sustainability into the purchasing function.
Nick Little, Assistant Director of Executive Development Programs at the Eli Broad College of Business at Michigan State University, has extensive academic, industry and international experience in Supply and Supply Chain Management. A graduate of British Rail’s prestigious Supplies Management Training Scheme, he worked within the UK Railway industry and its subsidiaries before moving to the UK Post Office where he established a regional and business unit supply management organization. He led a review of internal and external Post Office supply chains saving and avoiding over 25% of total costs and achieving a recurrent annual saving over £10 million ($16 million). Nick also was involved in internal education and development. Nick has a Bachelor of Arts in Business Studies from Ealing CHE in England and, professionally, is qualified MCIPS (UK Chartered Institute of Purchasing and Supply) and CPSM from ISM (US). Nick has spoken at events in the Middle East and in North America. He chaired Supply Chain World, North America in 2011, regularly speaks at ISM and APICS annual conferences, and is currently Corporate Secretary and Treasurer for APICS Educational and Research Foundation.

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Outcome

• The upcoming Sea Change now taking place

• 5 steps for making supply chains strategic

• Questions
REMEmber!

- Today’s supply chain is a result of actions taken in the past

- Tomorrow supply chain will be the result of actions that we take today
Comparing Supply Chains

• Today’s supply chain

  – *Strategically-Decoupled, Price-Driven*

  – Focused

    • Driven by the supply chain disruptions/risk, leadership within the supply chain, managing the timely delivery of goods and services.

  – Measured by three critical indicators

    • Price
    • Delivery
    • Quality

  – Not linked to strategic objectives
Tomorrow’s Supply Chain

- Strategically-Coupled, Value-Driven
- Global
- Highly adaptive
- More complex performance measurement
  - Cost savings
  - Cost avoidance
  - Asset utilization/Relationships
  - Revenue growth
- Strategic in nature
  - A corporate capability and asset
  - A necessity and an opportunity.
What do people really think of supply chain management?
How do others View SCM?

- Boeing 787 delayed again
  - Suppliers blamed
- How the Supply Chain stole Christmas
  - Mattel orders massive recall due to supplier problems (Nov. 2007)
- Japan, tsunamis and the IPad
  - NBR March 24, 2011
Cloak of Invisibility?

• How can you convince top management of the value of SCM?
• You only hear about supply chains when something goes wrong!
• The only good supply chain is the one that you never hear about!
MAKING SUPPLY CHAINS TRULY STRATEGIC
Making the Transition

Business Models Rule!

Outcomes not Outputs

Avoid single outcome solutions

Manage the Metrics

Build Linkages to the Top
Making the Transition

**Business Models Rule!**

Outcomes not Outputs

Avoid single outcome solutions

Manage the Metrics

Build Linkages to the Top
Which would you pick?

In terms of innovation, what has the biggest impact on average year sales increase and average impact on stock price?

* Innovative Product

* Innovative Process

* Innovative Customer Experience

* Innovative Business Model
Which is best?

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Process</td>
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<td>Product</td>
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<td>2.1%</td>
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<tr>
<td>Customer Experience</td>
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<td>5.1%</td>
</tr>
<tr>
<td>Business Model</td>
<td><strong>16.6%</strong></td>
<td><strong>7.2%</strong></td>
</tr>
</tbody>
</table>
The Business Model

Value Proposition

Key Customer

Capabilities

Performance
Importance of the Critical Customer

• Pepsi versus Coca Cola
• Pepsi focus:
  – Distributors
  – Retailers

• Coca Cola focus
  – End consumer
Coca Cola’s Response
Supply Chain’s Contribution

- Tesco
- Coca-Cola
- Pepsico

- Customer needs not met
- Customer needs poorly met
- Better, faster, cheaper

Best
Better
Good
Changing Realities

• 1990s
  – Company against company

• 2000
  – Supply chain against supply chain

• 2012
  – Business model against business model
Supply Chains are strategic … only if used with a business model
Making the Transition

Business Models Rule!

*Outcomes not Outputs*

Avoid single outcome solutions

Manage the Metrics

Build Linkages to the Top
The USCG and Haiti
Interesting Insight

There is a fundamental difference between OUTPUT DRIVEN SUPPLY CHAINS and OUTCOME-DRIVEN SUPPLY CHAINS.

Output driven specifies both:

- Desired outcome
- Method of achieving the outcome

Outcome-driven specifies only the outcome

- Allow more freedom for the supply chain
Outcome-driven supply chain

Six Major Outcomes:

– Cost
– Responsiveness
– Security
– Sustainability
– Resiliency
– Innovation
Making the Transition

- Business Models Rule!
- Outcomes not Outputs
- **Avoid single outcome solutions**
- Manage the Metrics
- Build Linkages to the Top
The Single Outcome Solution

• Focus on one outcome!
• Be the best on it!
• Attractive because it is simple and direct!
• YET ➔ High Risk
We Need to *Blend* Outcomes

- Mix outcomes to create attractive outcomes for critical customers

- Some outcomes don’t mix:
  - Lean/Cost and Innovation

- Must prioritize outcomes!
Prioritization – Key to Blending

- 1 - 2 - 3

1 outcome → strategically critical
2 outcomes → strategically important
3 outcomes → strategically necessary
What Are We Doing?

- Differentiation
- Using strategic adjectives!
- Creating rich strategic solutions
What Are You Selling?

- A component
- A solution
Other Issues

• Supply chains will become more complex

• Who manages the complexity?
  – Airlines vs. medical supply chains
Making the Transition

Business Models Rule!

Outcomes not Outputs

Avoid single outcome solutions

Manage the Metrics

Build Linkages to the Top
Metrics & Measures

- Metrics – consist of:
  - Measure
  - Standard
  - Consequence

- Metrics – purpose is to:
  - Communicate
  - Control
  - Coordinate
Why Focus On Metrics?

- If you want to influence the game, make sure that you determine how score is kept!
- How to communicate with top management!
Going from Outcomes to Metrics

Outcomes

Attributes

Metrics
  • Measures/Standards/Consequences
Making the Transition

Business Models Rule!

Outcomes not Outputs

Avoid single outcome solutions

Manage the Metrics

Build Linkages to the Top
Closing the Loop

- Audit the current capabilities
  - To what extent is the current system able to support corporate strategy and meet/exceed the critical customer’s outcomes?

- Staff with strategic supply chain managers

- Provide a compelling argument that is value-based, not error-driven

- Recognize the importance of culture!!!
The Supply Chain Talent Academic Initiative (SCTAI) is an international not for profit consortium of industry, academia, and professional associations with a mission to increase the depth and breadth of the global supply chain talent pool by:

1. Identifying industry competency requirements.
2. Assisting universities and other educational institutions in building programs to meet those requirements.
3. Marketing the supply chain profession as a career of choice.
Strategic SCM in Action – A Story

- A drug manufacturer located in south-eastern USA
- Past – cost-driven contract manufacturer
- New reality – major customers have outsourced manufacturing
- Complaints increasing
- Why?
Analysis

- Current system:
  - Cost focused
  - Many measures -- cost
  - Build capacity only when necessary and after demand has emerged.
  - Expediting the norm (even if it compromises quality/security)

- Strategic Analysis
  - Critical outcome
    - Security
  - Important outcomes
    - Resilience
    - Responsiveness
  - Yet, only one metric on security (FDA required)!
  - Customer is not price-sensitive.
Next Stage – SCM:BTH

• Now launching the next stage
  – Supply Chain Management: Beyond the Horizon

• Four mega themes identified.
  – Emergence of new Supply Chain perspectives
    • Humanitarian/disaster, military, event
  – Managing supply chain dynamics
  – Resource Development
    • Talent, suppliers, customers
  – Application of new tools and procedures
Making the Transition

- Business Models Rule!
- Outcomes not Outputs
- Avoid single outcome solutions
- Manage the Metrics
- Build Linkages to the Top
One final element – Strategic Response Cycle

- Sensing
- Assessing
- Formulating
- Deploying
- Recalibrating
- Learning
Concluding Comments

• Supply chains are becoming strategic
• Supply chains are built around outcomes
• Supply chains are becoming more complex
  ✓ Blended outcomes
• Must address the critical challenges
  ✓ Right Metrics
  ✓ Right Capabilities
  ✓ Right Culture
It’s not that hard, dude!
Questions