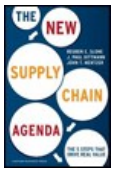

The New Supply Chain Agenda: The Five Steps That Drive Real Value

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Chapter 7: Managing Change in the Supply Chain

The last but equally critical step toward a strategy of supply chain excellence is change management. Everything else is for naught if you don't execute successfully. This chapter gives practical advice on how to increase your chances of success on the path to supply chain excellence. You can find project management fundamentals in many other books, but those references often have a generic orientation. Our focus is on creating an execution plan for your supply chain.

Are Supply Chain People Just Too Busy?

The lives of modern supply chain executives look just like those of other senior executives. They are constantly connected, with little downtime to recharge. They often find themselves at the center of the storm, striving to balance very demanding operational objectives with the need to satisfy customers, cut costs, and help grow revenue. They must find ways to operate successfully today, yet also improve rapidly to be competitive in the future. Improvement means getting projects done efficiently and effectively. Supply chain executives operate in the same maelstrom of competing priorities and limited time as their peers, but with the added responsibility of a much broader horizontal responsibility and less direct control than many other executives have.

Transforming the supply chain to achieve excellence and drive shareholder value requires careful attention to project and change management. Supply chain professionals often find themselves ill equipped to accomplish the task. This stems partly from a lack of disciplined application of project and change management principles, and partly results from simply being too busy to have the time to do the right things. Many supply chain executives we talk with concede that they don't have time to do "it" right the first time and therefore spend their days in a vicious cycle trying to fix problems that could have been avoided. In addition, people don't stay in their jobs long in the dynamic business environment today. All the constant turnover and turmoil raise tremendous barriers to getting things done. Successful execution of a supply chain excellence strategy requires more than just a competent supply chain executive; it requires the involvement and support of the entire senior management team.

Problems with Supply Chain Projects

In our audits, we often hear of supply chain initiatives that lost momentum and died. As any good project professional knows, projects fail for many reasons, from underestimating the size of the project to lack of good project leadership to technical deficiency. But in our experience, supply chain projects have unique issues that make them particularly challenging.

Fixing the Wrong Thing

A line manager from a manufacturing company told us of a chronic problem in its paint system. Defects such as small dark specks in the paint finish would show up on about 2 percent of the units, causing a huge rework cost for the plant, which produced at a high volume every day. The plant manager could hardly contain his frustration as his team launched project after project in a futile attempt to fix the problem, literally spending millions of dollars on possible solutions. As they later discovered, they were simply treating symptoms, not the root cause, and the defects continued unabated.

One day, out of total frustration, the plant manager gathered his staff and took them on a forced march, inch by inch, through the entire process. They found themselves on the roofs, peering inside ovens, and crawling under conveyor lines. Finally, they discovered a simple defect in a roof vent that was allowing dirty air to enter and corrupt the paint process. Fixing the root cause of black specs in the paint meant fixing the roof vent at a cost of a hundred dollars, not millions. This is just one small example from one small part of a supply chain, but if you amplify this complexity many thousands of times, you can see how difficult it can be to ensure that a strategy for supply chain excellence fixes problems rather than creates new ones.

Despite huge complexity, executives must challenge themselves to ensure their strategy and execution plan addresses the root cause of problems. And in most cases, nothing beats walking the process or "riding the truck" to see firsthand the physical flow. The devil is indeed in the details. Any project is unlikely to be successful if at least the most senior supply chain executive and other members of the senior team aren't getting up, away from the high-level reports, and seeing the lines and processes operating. The project management plan needs to include regular "oversight by walking around" checkpoints to make sure that problems obscured or hidden by quantitative reporting are ferreted out.

Failing to Draw a Line in the Sand

A supply chain project manager from a U.S.-based global company told us that she was asked to take her team from its Chicago offices and undertake a three-month assignment in Sweden in the middle of winter, where it was even colder and darker than in Chicago. The project consisted of implementing a supply chain planning process and system in the Swedish factory. The project came close to derailing her career due to her failure to draw a line in the sand.

When they were well into the project, the Swedish plant manager called her into his office and abruptly made a surprising and devastating demand. Unless the project team could provide "daily regeneration capability" (the capability to completely refresh the database every night), he wanted to kill the project. After much discussion and attempted persuasion, the Swedish plant manager remained adamant that this change had to be delivered.

The project manager left the plant manager's office in a daze and hurried to meet with her team. She asked them how much it would cost to provide the feature the plant manager demanded. The technical team's estimate was four thousand hours. She then asked how much slack existed in the resource plan controlling her team of twenty people; they told her that, in fact, four thousand hours of slack existed, but barely. The

team members thought they could rebalance the resources and still get the project done on schedule and on budget.

So she decided to agree to the change, all the while having a very uneasy feeling. When the dust settled, her intuition proved right. The change actually took over ten thousand hours instead of the forecasted four thousand hours and caused the project to be three months behind schedule and 20 percent over budget. Where did she go wrong? What could she have done differently?

As we've seen, supply chain excellence requires an expansive view of the supply chain from raw materials to customers. As a result, projects are so complex that it's easy to let a project grow too big and become unmanageable. Scope management is crucial in any project, but the nature of supply chain projects makes it especially important. In the previous example, the project leader later realized that had she set a new expectation at the time, there might have been some initial disappointment at the corporate office, but nothing like the grief she faced by being three months behind schedule and $450,000 over budget. (And that did not include the personal cost to her team of spending three additional months away from home.)

Inability to Quantify the Benefits of the Change

As we stated in chapter 4, "Benefits not quantified equal worthless benefits." Since most of the cost and inventory in a firm depends on how efficiently the supply chain functions, there are often economic profit benefits associated with improvement initiatives. Yet many supply chain professionals lack a financial orientation and struggle to quantify benefits. Their comfort zone consists of making real physical and process changes and leaving scorekeeping to others. Many supply chain projects have been derailed because the benefits were not clearly measured, articulated, and tracked.

On the other hand, we met one supply chain executive who had a real gift in this area. He had a cost-benefit model in his head and passionately felt that any supply chain initiative must deliver benefits in three critical areas. He said that the initiative must first provide better product availability, followed by working capital (inventory) improvement, and third, cost reduction—all key drivers of economic profit. All the people in his organization learned the drill. If you propose a project to the boss, you had better be able to show him benefits in availability, working capital, and cost, in that order. If you didn't, it was back to the drawing board. The supply chain leader kept his superiors and his subordinates constantly focused on the economic profit prize, absolutely critical to delivering and sustaining complex supply chain projects.

Shortage of Supply Chain Experts

A project manager implementing a new inventory management system estimated that a key expert in the inventory management area would need to spend 30 percent of his or her time on the initiative over four months. Although he documented this requirement in the project plan, he admitted that he failed to get full buy-in from the inventory expert and his supervisor. He said, "I found myself holding the bag at a critical stage of the project. When the crunch hit, they were totally consumed by priorities on their home turf, and the project simply could not proceed without this one guy."

The few key people who have focused supply chain expertise are very scarce, as we discussed in chapter 3. Supply chain projects must be planned around these critical resources. Excessively overloading these scarce resources leads to frustration, missed details, missed deadlines, and often failure.

Significant Risks

Since the supply chain is the lifeblood of the corporation, any changes to it can carry huge risk. As we mentioned earlier, supply chain disruptions can have a devastating impact on shareholder value. One study showed an average 40 percent decline in share price due to the supply chain disruptions in the study.[1] A common blind spot for many firms is the inadequate or nonexistent management of the risk associated with supply chain initiatives. There are numerous examples, but they are especially evident in global outsourcing initiatives.

For example, a dishwasher manufacturer decided to outsource the production of water seals to China. The net savings, considering all known costs, were nearly $.75 per unit and totaled a $2 million in annual savings. But soon after the arrangement was made, the Chinese supplier changed to a different rubber supplier, resulting in a catastrophic problem. The seals made from the new rubber leaked in dry climates, causing a nearly 10 percent failure rate. When the problem was discovered, over 2 million dishwashers had been produced with the defective seal. When the seal failed and the unit leaked water onto the floor, it took an average cost of $125 to fix, which included some compensation for water damage to floors in order to maintain goodwill and to try to salvage the manufacturer's reputation. The total cost to the company was north of $7 million. This one event wiped out savings from the outsourcing initiative for over three years. The company thought it had taken all factors into consideration, but it failed spectacularly in considering the potential risks.

Clearly, it is extremely important that a strategy for supply chain excellence identifies risks and that the change management plan appropriately mitigates those risks. We have been amazed to find that it is extremely rare in most of the hundreds of firms we have worked with. For example, when companies analyze outsourcing decisions, they fall into three categories:

- Category one (35 percent)—the company looks at unit cost plus transportation only.
- Category two (55 percent)—the company includes inventory as part of the assessment.
- Category three (10 percent)—the company adds a risk assessment.

In other words, 90 percent of the firms do *not* consider risk when outsourcing production. Yet sourcing offshore carries myriad additional risks such as political instability, port disruptions, currency swings, demand swings, and so on. Unforeseen events occur more frequently in the very long global supply chains, as shown by the following examples:

- In July 2006, 4,700 Mazdas were trapped in a ship listing on its side off Alaska's Aleutian Islands.[2] As a result, inventory stood at twenty-one days of sales (DOS), versus the target of sixty-five DOS, creating a severe availability problem. (That's $103 million in cars lost.)
- In two separate incidents in 1992 and 2002, 113,000 Nike sneakers were lost and are still washing up all over beaches in the Pacific Northwest.[3]
- Ten thousand containers fall off ships annually. Although this is less than 1 percent of total container volume, the 1 percent lost can be enormously disruptive if it's your "efficient" supply chain.[4]
- In 2007, there were 275 pirate attacks on commercial shipping, which increased through 2009.[5]

Because of the huge impact on the corporation, supply chain change management plans have to include thorough risk analysis. Plans must include supply chain risks, probability and impact assessments, and risk-mitigation plans. Executing this process at the beginning of supply chain projects can avoid much pain later.

As far back as the 1940s, engineers developed a well-known approach to identify and prioritize risks using the failure mode and effects analysis (FMEA) approach. The military first used the FMEA approach. It prioritizes risks based on three factors:

1. Seriousness of consequences
2. Likelihood of the problem ever occurring, or frequency of occurrence
3. Likelihood of early detection of the problem

Several firms in our database have successfully applied this approach to the supply chain issues to identify the high-priority risks that require a mitigation plan. They tell us that the framework serves to guide the discussion of risks in a group setting; it's the real power. Given that risk analysis has a large subjective component, reaching group consensus is critical.

Supply Chain Risk at a Food Manufacturer

A food products manufacturer planned to outsource its warehouse operations to a third party. It used a table such as the one in table 7-1 to guide the risk discussion. In brainstorming sessions, the supply chain group identified thirteen risks. Using the approach outlined in the table, the group prioritized the risks and eventually decided to launch a mitigation project for the top five prioritized risks. (Only two of the risks are identified in the table.)

Table 7-1: Food manufacturer risk analysis

	Risk 1: Safety of food product	Risk 2: Freshness of product
Severity (1–10)	9	6
Probability of occurrence (1–10) High probability = 10 Low probability = 1	2	4
Probability of early detection (1–10) High probability = 1 Low probability = 10	6	2
Priority index (Multiply three items above)	9 x 2 x 6 = 108	6 x 4 x 2 = 48
Recommended action	Enhance testing process	Audit inventory, and ensure stock rotation
Responsibility	Safety engineering	Third party with company oversight

Risk at a Durable Goods Manufacturer

A durable goods manufacturing firm faced the problem of determining the risk associated with outsourcing a key manufacturing component to a Vietnamese manufacturer. It used a modified version of the earlier approach, focusing on two factors. It calculated the *probability* of occurrence of each risk multiplied by the *cost* of the occurrence. Although the data is heavily disguised in table 7-2, the analysis done in a group setting looked very much like that shown in the table.

Table 7-2: Durable goods manufacturer's outsourcing risk analysis

Risk	Estimated potential loss, stated as cost per unit	Subjective probability of occurrence	Net loss per unit (Prior two columns multiplied)
Quality failure	$25	.10	$2.50
Safety failure	$100	.01	$1.00
Unexpected demand spike	$30	.25	$7.50
Currency change	$20	.25	$5.00
Intellectual property problem	$10	.25	$2.50

Source disruption Force majeure	$30	.10	$3.00
Port problem	$25	.025	$0.62
		Total	**$22.12**

The firm used the analysis in two ways:

1. It made sure that the ROI on the project included the "cost of risk," which in this case was $22.12 per unit.

   The outsourcing savings without risk stood at a net $55, which gave it some assurance that the project was still viable, considering the supply chain risk. (It fully recognized the subjective nature of this analysis, but felt it was surely better than no risk analysis at all.)

2. It launched several projects designed to reduce the probability of occurrence of each of the top-five risks.

These two firms are the exceptions in our database of companies. The vast majority of firms have no formal process for dealing with supply chain risk.

[1]Kevin Hendricks and Vinod Singhal, "An Empirical Analysis of the Effect of Supply Chain Disruptions on Long-Run Stock Price performance and Equity Risk of the Firm," *Production Operation Management* 14, no. 1 (Spring 2005): 35–52.

[2]Sharon Silke Carty, "When Cargo Gets Lost at Sea Firms Can See Big Shortages, Losses," *USA Today*, August 3, 2006.

[3]Ibid.

[4]Ibid.

[5]Ibid.

The Toughest Part of Change Management

As we stated in chapter 4, people issues are tougher than technology issues. Supply chain professionals tend to underestimate people issues. Supply chain experts, when asked what it takes to successfully implement initiatives, frequently say that it simply requires excellent analysis and a good project plan. Many technically oriented people don't gravitate naturally to the softer issues of communication planning and organizational buy-in. Yet failures in these areas are at the root of many initiative failures.

One firm was installing a warehouse management system but soon ran into a roadblock that caused the project to shut down for several months. The project manager told us that her biggest mistake was to focus on the technical tasks, figuring that the people stuff could come later. She failed to recognize that resistance was building as her team worked in a vacuum. With no communication, the management staff people who operated the warehouse felt totally outside the loop. Their anxiety increased exponentially. It wasn't that the changes were bad; within a year of implementation, the warehouse staff people found they liked them. But fear of the unknown is a powerful force, and that emotion grew and spread as the project proceeded with little communication. When it was nearly time to go live, the backlash grew so strong that it was impossible to proceed. The warehouse management staff banded together and refused to accept the new system. The project leader realized too late that the buy-in process needs to start at the beginning of a project, not the end. This lesson magnifies the importance of the cross-functional, cross-company world of many supply chain initiatives.

Communicate with the Right People

As shown in the previous example, supply chain plans tend to focus on the major challenges of making physical and process changes and don't allocate enough time for communication. But even when communication takes place, it often misses the point.

A project manager leading a major supply chain initiative in a *Fortune* 100 firm thought he had designed the perfect communication plan. He introduced the initiative with a well-crafted thirty-minute presentation to everyone affected. He followed that with a one-hour review to go deeper into the coming change. About a month after the project began, he issued a newsletter that clearly showed the progress made and the benefits to be achieved. Finally, as the project neared completion, he put a six-hundred-word article in the company newsletter. The project manager did many things right, but missed in one important item. He failed to first identify the key individuals in each functional area critical to the success of his initiative, and he failed to design a communication plan specifically for those individuals.

One company we audited estimated that each quarter it communicates over 2 million words to their employees regarding new initiatives. If true, the communication plan in the earlier example amounts to only one-half of 1 percent of that mass of information bombarding these employees quarterly. Unless the communication process precisely targets the key players, it becomes lost in the normal noise of communications in a large enterprise.

In every company, there are people who will make or break a project; this is especially true for complex, cross-functional supply chain projects. These people may be senior executives or critical subject-matter experts embedded in the organization. To manage change effectively, the company must identify these key people and expose them to a *customized* communication plan, with the message depending on the audience. In the extreme stereotype, operations people love to hear about cost-reduction projects, and sales managers get excited about plans to increase revenue. Although never this simplistic, the message must be tailored to the audience for cross-functional supply chain initiatives, as we show in the following examples.

A supply chain executive told us the story of Joe, a brilliant sales planning manager reporting up through the sales organization. The executive suspected that Joe found creative ways to subvert supply chain change initiatives unless he was involved in their planning. It was clear that Joe needed to be involved in the early plans of all new supply chain initiatives affecting the sales area. Not only did this eliminate the problem, but Joe, with his influence within the sales organization, added greatly to the new change effort.

An insightful supply chain project leader described how she achieved full support in the sales and marketing areas for her project, which involved an automated process to flush slow-moving inventory from the company. She first identified each individual in sales and marketing critical to the effort and developed a communications package tailored to them. She then met with each person one-on-one and asked for his or her input. After deciding how to incorporate the suggestions, she again met with each person and described her decisions. She gave them frequent updates as the project progressed. Although extremely time consuming, the process resulted in all key stakeholders in the sales and marketing areas having full ownership. She succeeded in making the initiative to reduce obsolete inventory their project, not a supply chain project.

Plan for Sustaining Change

Most business executives remember initiatives—particularly supply chain projects—that were once big deals but have since faded away and now reside in the scrap heap of "programs of the month." A supply chain executive shared her frustration about a collaborative forecasting project involving the firm's largest customer. Initially very successful, the project languished as key people in both companies moved on to other jobs. As one executive said, "Around here, nothing is colder than yesterday's hot project."

When we polled project managers across many companies, most admitted they did not have a plan for *sustaining* change once the initial implementation is complete (project managers are rarely evaluated on sustaining change, so why should they?). Stories abound of technology projects that were initially successful, but then died when a key individual left the organization or other initiatives were launched. Sustaining change is often more difficult than implementing it in the first place, especially with the cross-functional, cross-company projects required for supply chain excellence. Senior executives should require and support with time and dollars a plan to sustain change after the initial implementation. Such plans often include a provision for refresher training of all users, even those in other functions, and detailed documentation of cross-functional responsibilities in the new process.

Because of the crush of daily demands, supply chain professionals tend to move to the next initiative before ensuring the process change made will be sustained. For example, the CEO of a *Fortune* 500 hard-goods company decided that it was critical to improve forecast accuracy. He told us that this realization hit him when someone accidentally sent him a report showing a 60 percent forecast error at the SKU level. Initially, he said he was very upset that he had never before seen this report, but later realized that this situation had to be the source of many operational inefficiencies in his company. He delegated the problem to a young supply chain vice president who was rising rapidly in the firm. When given the assignment, the vice president realized that he needed help. So he did a little research and brought in the best consultant he could find.

The consultant conducted an audit and found many deficiencies in the process and the systems used. He designed a world-class process and brought in state-of-the-art software. He also convinced the vice president to initiate a forecast collaboration process with the company's largest customers. The plan was outstanding and worked beautifully. Forecast error quickly fell by one-fourth from 60 percent errors to 45 percent errors at the SKU level. Of course, room for improvement still existed, but the CEO told us that he was ecstatic with the process. He said he still demanded additional improvement for the next year. But the young vice president moved on to other problems, assuming this one was on the right track, and was quickly consumed by those other issues. By midyear, the vice president was embarrassed to admit to the CEO that something was very wrong. All the accuracy improvement had been reversed. Of course, they took immediate action to rectify the situation, but by the time the process stabilized, it was too late. Although an improvement trend was reestablished, the average results for the year came in at 59 percent error, almost back to where they started.

What went wrong here? The plan for improvement was technically flawless and had produced early promising results. However, the program missed a key component. The plan to *sustain* the change was missing. When their behavior was no longer monitored, operators gradually returned to their old ways. This process accelerated when new people joined the team. They saw the new process as the consultant's program, not theirs. They didn't understand why they were required to do certain things and quickly returned to their comfort zone.

If sustaining supply chain change is more difficult than implementing it in the first place, why do project plans for supply chain excellence rarely include a plan for sustaining change? Such a plan should consist of training programs, with a special focus across all functions involved when there is employee turnover. It should also include a periodic audit of the process. And, finally, it should have metrics very clearly posted so that the problems are visible as soon as things start to veer off track.

Senior supply chain executives often have global responsibilities, as we discussed in detail in chapter 3. Clearly, managing the supply chain change in a global environment takes on a new dimension of complexity. Cultural differences must be fully included in the change management plan. One thing is certain: change management will take longer in a global, cross-cultural environment.

Conclusion

Driving economic profit and shareholder value through supply chain excellence means focusing on the steps we have outlined in this and prior chapters. Building on these steps means launching projects and completing them successfully. Successful supply chain excellence projects, of course, need to follow all the well-known rules of project and change management. But, with supply chain projects, it is especially important to make sure you are addressing the root cause issues, containing project size properly, and anticipating risk rigorously. Plan for supply chain excellence must recognize the broad scope of the twenty-first century supply chain and embrace the organizational and financial issues that will make or break change efforts. In the next chapter, we pull all the steps together and, with two case studies, illustrate a strategy for supply chain excellence in action. These companies not only developed a strategy but were particularly adept at getting things done.

ACTION STEPS

1. Address the root cause of supply chain problems.
2. Draw a line in the sand and manage project scope closely.
3. Clearly and continuously articulate goals and benefits.
4. Manage and develop a plan to mitigate supply chain risk.
5. Ensure time to communicate properly.
6. Embrace the complexity of managing change in the global environment.