"Hi, Tom! Come on in! Good to see you. You remember Richard Binish, don't you?" Lippet's spirits were buoyed by O'Leary's cheery greeting.

"Absolutely! How are you, Richard? Coming out from the old horse's shadow a bit now?"

Binish politely smiled and nodded affirmatively. Light banter continued as the three moved down the hallway to a small conference room.

"Well, great news, Tom! DEP has the contract again!" O'Leary paused, then continued, "But there's going to be a slight modification. Instead of the traditional 2-year contract we're only going to offer a 1-year deal. Nothing personal, just that management feels it's only fair to Richard that these last contracts I negotiate be limited to a year. That way he doesn't get locked into any deals that might make him look bad!" O'Leary roared with laughter at his last comment.

"It is certainly no reflection on DEP," Richard interjected. "It simply gives me a chance to evaluate suppliers in the coming year without being locked into a long-term contract. If my evaluation concurs with what Mr. O'Leary has told me about DEP I see no reason that our successful relationship won't continue."

"Entirely understandable," replied Tom as his mind pondered the meaning of Binish's *evaluation.* "I'm confident you'll find DEP's service and product every bit as good as Mike has told you."

Following the meeting O'Leary invited Lippet to join him for a cup of coffee in GARD's lunchroom. Binish excused himself, saying he had other matters to attend to.

As they enjoyed their coffee, O'Leary sighed. "You'll be seeing some changes coming, Tom. The best I could do was get you a year."

"I'm not sure I understand. As far as I know GARD's never had a major problem with DEP's products."

"We haven't," O'Leary replied. "At least not under the guidelines I hammered out with management. But there will be some changes by next year."

"Such as?"

"Well, you remember when I started buying from DEP? You were the leaders, no question about it. Now I knew some other suppliers had moved up since then but I figured, hey, if it ain't broke don't fix it! As long as DEP's price was in line, I knew I wouldn't have any troubles with manufacturing. Less headaches for me. Now it turns out that Binish has some other ideas about purchasing. I can tell you for a fact that he's sampled several lots of DEP feedstock. He's also invited other potential suppliers to submit samples. The long and short of it is that there's not much difference between DEP and the competition in terms of product."

"I still don't clearly understand the problem, Mike."

"In Binish's terms, product merely becomes a 'qualifying criterion.' If everyone's product is comparable, especially in something such as polymer feedstock, how do you distinguish yourself? Binish claims companies will need to demonstrate something called 'order winning criteria' to get our business in the future."

"I still don't see a problem. We have our reviews with GARD every year. Our service performance has always been found to be acceptable."

"True. But acceptable according to my guidelines. Let me throw a number at you. On average GARD schedules delivery 10 days from date of order. I count on-time delivery as plus or minus 2 days from scheduled delivery date. That's a 5-day service window. GARD's minimum service threshold within this 5-day window is 95 percent. DEP had a 96.2 percent record last year using my window. Do you know what Binish is talking?"

"Probably 3?"

"Exactly. And do you know what DEP's performance is if we use a 3-day service window?"

"No, Mike, I really don't."

"Well, Tom. Sorry to tell you it's 89.7 percent. Worse yet, with Binish not only will the window decline but also the threshold level will be bumped up to 96 percent. And, that's only going to be for the first 3 years after I retire. After that Binish is shooting for exact-day delivery only with 96.5 percent service capability. Right now using exact day DEP only has 80 percent flat. You aren't even close to being in the game."

"So we've got a 1-year contract essentially to demonstrate that we can deliver service as well as product?"

"You understand the problem now."

Polymer feedback production requires a mixture of chemical compounds. DEP's manufacturing process relies heavily on six principal compounds (A–F). DEP's current procurement policy is to source each of these compounds from three sources determined through an annual bidding process. Typically the firm with the lowest price is considered the best bid. The top bid receives 60 percent of DEP's business while the other two firms receive 25 percent and 15 percent, respectively. Management feels this policy protects DEP from material shortages and unreasonable price increases. Table 1 indicates the current compound suppliers and their performance statistics (percentage of business, delivery time from order date, fill rate).

DEP currently uses the following performance criteria:

1. Delivery of A: On-time considered 4 days from date of order ± 2 days.
2. Delivery of B: On-time considered 4 days from date of order ± 2 days.
3. Delivery of C: On-time considered 4 days from date of order ± 2 days.
4. Delivery of D: On-time considered 5 days from date of order ± 2 days.
5. Delivery of E: On-time considered 6 days from date of order ± 2 days.
6. Delivery of F: On-time considered 6 days from date of order ± 2 days.
7. Minimum acceptable fill rate on all compounds is 92 percent.

The manufacture of polymer feedstock is highly standardized. DEP has continually invested in technologically advanced manufacturing equipment. As a result, DEP can quickly change processes to manufacture different polymers.

TABLE 1
Performance Statistics of Compound Suppliers

	Chemical Compounds					
Supplier	**A**	**B**	**C**	**D**	**E**	**F**
Company 1	60% 3–8 days 93%	60% 2–9 days 94.5%			15% 5–8 days 92%	15% 6–9 days 94%
Company 2	25% 4–6 days 95%	25% 3–4 days 96%	15% 2–4 days 98%	15% 2–4 days 98.7%		
Company 3	15% 2–5 days 95.5%	15% 2–4 days 98%			25% 5–9 days 97.5%	25% 4–6 days 98.7%
Company 4			60% 4–9 days 96.5%	60% 2–9 days 97%		
Company 5					60% 4–7 days 98.3%	60% 4–6 days 97%
Company 6			25% 3–6 days 98.4%	25% 3–5 days 96%		

Entries list percentage of business, delivery time from order, and fill rate, respectively.

To avoid material shortages and thereby maximize production, DEP normally maintains a 7-day supply of each compound. An earlier attempt at JIT manufacturing was abandoned after DEP experienced material shortages and production shutdowns. As a result, the manufacturing department is opposed to any reimplementation of JIT-type concepts.

The manufacturing department is electronically linked to the procurement and marketing/sales departments. Marketing/sales receives customer orders by phone or facsimile. The orders are then entered into the information system. This allows manufacturing to monitor incoming materials shipments as well as schedule production runs. Under this system most customer orders are produced within 6 to 8 days of order.

Following production, orders are immediately sent to a warehouse a short distance from DEP. At the warehouse shipping personnel verify manufacturing tickets, match the manufacturing ticket with the purchase order, and prepare shipping documents. Once the shipping documents are completed, the order is prepared for shipment (e.g., palletized, shrink-wrapped) and labeled. Once a shipment is labeled, delivery is scheduled. Three to 6 days normally elapse from the time an order leaves manufacturing until it is shipped from the warehouse.

Market distribution is divided between the private DEP truck fleet and common carriers. The majority of DEP's customers are within a 200-mile radius. DEP trucks service these customers via twice-a-week delivery routes. Customers beyond this delivery zone are serviced through common carriers; delivery time fluctuates according to location and distance but rarely exceeds 6 days from time of shipment.

Questions

1. Diagram the DEP/GARD supply chain. What stages are adding value? What stages are not?
2. Using the primary DEP suppliers (60 percent of business), what is the minimum performance cycle for the supply chain diagrammed above? What is the maximum?
3. Can the performance cycle be improved through the use of the 25 percent and 15 percent suppliers? What trade-offs must be made to use these suppliers?
4. If you were Tom Lippet, what changes would you make in DEP's operations? Why? What problems do you foresee as you try to implement these changes?
5. Assuming you can make the changes mentioned in question 4, how would you "sell" Richard Binish on DEP's next bid? What will likely be "qualifying criteria" and "order winning criteria"? Will these change over time? What does this suggest about supply chain management?

CASE 2

Woodmere Products

Judith M. Whipple

John Smith had just returned from what may prove to be one of his most important sales calls. John, a sales representative for a top window fashion manufacturer, had been meeting with a representative from HomeHelp, a major home decorating retailer. It seems the buyer, Nan Peterson, and the product team she heads had just returned from the annual Council of Supply Chain Management Professionals. At the conference, Nan's team had attended several sessions on time-based logistics strategies. Even though Nan and her team

CASE 1

Integrated Logistics for DEP/GARD

Steve Clinton

Tom Lippet, sales representative for DuPont Engineering Polymers (DEP), felt uneasy as he drove to his appointment at Gard Automotive Manufacturing (GARD). In the past, sales deals with GARD had proceeded smoothly. Oftentimes competitors were not even invited to bid on the GARD business. Mike O'Leary, purchasing agent at GARD, claimed that was because no competitor could match DEP's product quality.

But this contract negotiation was different. Several weeks before the contract renewal talks began, O'Leary had announced his plan to retire in 6 months. GARD management quickly promoted Richard Binish as O'Leary's successor. Although Binish had been relatively quiet at the previous two meetings Lippet sensed that it would not be business as usual with Binish. While the contract decision ultimately depended upon O'Leary's recommendation, Lippet felt Binish might pose a problem.

Binish, 35, had worked for a Fortune 500 firm following completion of his undergraduate degree in operations management. While with the Fortune 500 firm Binish had become extensively involved with JIT and quality programs. He had returned to school and earned an MBA with a concentration in purchasing and logistics. Eager to make his mark, Binish had rejected offers to return to large corporations and instead accepted GARD's offer in inventory management.

GARD, an original equipment manufacturer (OEM) for U.S. auto producers and aftermarket retailers, makes a wide variety of plastic products for automobiles and light trucks. Examples of GARD products are dashboards, door and window handles, and assorted control knobs. When Binish began working with GARD's inventory management he applied the 80/20 rule, illustrating to management that 80 percent of GARD's business was related to 20 percent of its product line. Over the next 3 years, as contracts expired with customers and suppliers, Binish trimmed GARD's product line. GARD management was impressed with the positive impact on GARD's profits as unprofitable contracts and products were discarded. A trimmer product line composed primarily of faster-moving products also resulted in higher inventory velocity.

So, when O'Leary announced his retirement plans, management immediately offered Binish the position. After taking a few days to review GARD's purchasing practices Binish felt he could make an impact. He accepted management's offer. As he learned his way around the purchasing department Binish tried to stay in the background, but he soon found himself questioning many of O'Leary's practices. He particularly disdained O'Leary's frequent "business lunches" with long-time associates from GARD suppliers. Despite these feelings Binish made an effort to not be openly critical of O'Leary. Such efforts did not, however, prevent him from asking more and more questions about GARD's purchasing process.

O'Leary, for his part, felt his style had served GARD well. Prices were kept low and quality was generally within established parameters. Although O'Leary typically maintained a wide network of suppliers, critical materials were sourced from a limited number of them. In those cases contract bids were a ritual, with the winner known well in advance.

DEP was one such winner. Its polymers were a critical feedstock material in GARD's manufacturing process. When O'Leary began sourcing from DEP nearly 15 years ago, there was no question that DEP polymers were the best on the market. GARD's production managers rarely complained about production problems caused by substandard polymers. O'Leary reasoned that the fewer complaints from manufacturing, the better.