

## SYNOPSIS

This case describes the organizational transformation of Boeing fostered and directed by new CEO Philip Condit. The creation of hundreds of integrated “design-build” teams, inspired by the success of the 777 project, has changed the way in which things are done at Boeing. The result is a more flexible and efficient company supported by teams. This case illustrates the importance of interdisciplinary teams and the close relationship between Boeing and its projects.

## LEARNING OBJECTIVES - “DESTROYING THE OLD HIERARCHIES”

This case will allow the participants to understand the growing importance and impact of teams. From reading the case and answering the questions provided, the class should:

- understand the pros and cons of teams
- understand the current organizational trend at Boeing
- realize the importance of cost management in low margin industries
- learn about the importance of interpersonal skills in leadership

# Discussion Point

- The PMBOK Guide, section 2.3, Organizational Influences, presents and discusses different kinds of organizational charts.
- With the increasing importance of teams, do you think that a new type of chart should be developed and included in the future?

# Destroying the Old Hierarchies

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*Forbes*, June 3, 1996, pp. 62-70

*Aircraft are no longer gee-whiz products—just machines for moving people and goods cheaply over long distances. As it struggles to adapt, Boeing has a new boss with a new mission.*

At a recent charity event, Boeing Co.'s new chief executive officer, Philip Condit, donned a cowboy hat and belted out a rendition of the country and western classic "Could I Have This Dance?" A karaoke machine provided the accompaniment.

No one could imagine Condit's predecessor, Frank Shrontz, 64, a lawyer by training and a former Pentagon deputy, singing in the shower much less in front of strangers. The change in personalities at the top of the world's largest aircraft manufacturer is rich in symbolism.

The seventh man to run Boeing since its founding by timberman William Boeing in 1916, fifty-four year-old Condit is a Boeing lifer who faces the tough task of redefining Boeing's often confrontational relationship with its 108,000-employee work force, tightly unionized by the militant International Association of Machinists & Aerospace Workers. Nobody states the problem better than Ronald Woodard, the blunt-spoken president of Boeing's Commercial Airplane Group: "We have to understand that we are a manufacturing enterprise. We aren't an engineering, technology development enterprise." There's a world of meaning in that seemingly bland statement.

Booming on the surface, Boeing is in fact a company in transition. Much as they are technological marvels, today's passenger jets are basically commodities to Boeing's customers, the world's airlines. Their job is to move people and goods from point A to point B at minimum cost consistent with safety. Boeing makes great airplanes, but so do Airbus and McDonnell Douglas. Who gets the sale depends to a large degree on price, terms, and availability.

That's what Boeing's Woodard means when he talks about making people understand that Boeing is a manufacturing company, not a high technology company.

Boeing jets represented two-thirds of the dollar value of all commercial airplanes ordered in 1995. Boeing's defense division, already the prime contractor on NASA's space station, is competing on the Joint Strike Fighter jet project, a potential \$160 billion contract. Wall Street expects per share earnings to rise by 20 percent this year (before charges in 1995), to \$2.75, on sales of \$22 billion. The Street expects earnings to go on rising through the decade.

But that will happen in what is now a commodity business only if Boeing can do what companies like General Electric do so successfully: take costs out of the product and continue to take out.

Condit made his mark when he oversaw development of Boeing's latest-generation airplane, the 777, known internally as the "triple seven." Smaller than Boeing's humpbacked 747, the 777 is more distinctive for what you don't see than for its profile. It's a pilot-friendly and airline-friendly product. For the first time, the pilot's commands to the rudder and flaps are communicated electronically, rather than by cables and levers. Airlines can internally reconfigure such areas as galleys and lavatories within as few as seventy-two hours, compared with two to three weeks on older aircraft. No marketing detail was too small; even the toilet seats gently sink onto the toilet bowls, instead of loudly smacking. First put into service by United Airlines last June, the 777 is Boeing's first plane designed entirely on computers.

But for Boeing, Condit's biggest change was in the organization of the program. Adopting the theme of "Working Together," Condit broke down the old-fashioned procedural walls within the company. In the past, design engineers worked independently of the production and operations people who actually built the plane. Here it is, the designers would say; now, go build it.

Condit instead organized hundreds of integrated "design-build" teams, composed of members of all these groups. Each consults the other, so that production people aren't stuck with overly costly, hard-to-build design specifications, for example. This sort of reform, common now in manufacturing, came late to Boeing. "None of us is as smart as all of us," Condit says, explaining his new integrated design strategy. He wants to reorganize the whole company along these lines. Explains Ron Woodard: "We're trying to destroy all the old functional hierarchies."

This is where the job gets tough. Any significant changes involving the workforce still have to get past the machinists local, Boeing's largest union, with about 33,000 members. (Boeing's engineers are represented by another, less combative union, the Seattle Professional Engineering Employees Association.)

Say what you may about the shrinking clout of private-sector unions in this country, the fact is that the Machinists can still bring Boeing to its knees, as they proved during last fall's sixty-nine-day strike. "The thing that's different is ten years ago we could have had a strike and delivered airplanes late to customers, and they didn't care," says Woodard. But today a strike means lost sales.

Frank Shrontz hammered at reducing cycle times and cutting costs, to the point when Boeing now delivers an airplane within ten months of the order, compared with eighteen months previously. He pushed toward greater standardization of parts and shrank the workforce from 161,700 in 1990 to 108,000.

But Condit knows that making further gains in reducing costs and improving delivery time depends on making improvement in that amorphous area known as human relations. In naming Condit as his successor, Shrontz cited Condit's interpersonal skills—not necessarily his engineering abilities—as the characteristic he considered most important for the next leader of the company. "We can make pronouncements up here all day long," says Shrontz, sitting in his orderly office overlooking historic Boeing Field. "Phil is motivational. We need to motivate the people to understand the importance of the change and to help make it happen."

Unlike Shrontz, who was rarely seen on the shop floor, Condit frequently pops into plants unannounced, usually tie-less and dressed casually.

Recently he walked unescorted onto a 777 undergoing final assembly in Boeing's Everett, Washington, plant and asked the supervisor to leave the plane so the workers could speak without feeling intimidated.

During the strike last fall, when most Boeing executives kept a low profile, Condit walked over to a group of picketers outside his Seattle office and chatted amiably about the proposed contract for forty minutes. He even signed striking union member Tony Russell's picket sign. Addressing the message to Russell's wife, another Boeing employee, Condit wrote: "We all need to work together."

Back at work now, Russell, a tool builder, is already seeing some differences in his job. Under the old, military style of management, if Russell detected something wrong in his engineering plans, he'd have to go through his supervisor and the problem would move through the chain of command until it eventually reached the engineer.

Now Russell speaks with the engineer directly. When he was building the scaffolding for the 777 line, for instance, Russell noticed that the metal deck he received was bigger than the deck on the blueprints. Russell called the engineer and quickly fixed the problem.

Multiply this sort of shortcut throughout a company as large as Boeing and you can see how much expensive time was wasted before. You can see, too, why it used to take the company eighteen months to deliver a product as complex as a giant jet.

When Phil Condit chats up workers on the factory floor, he's not just going through a public relations exercise. He is obviously sincere when he talks about making the workers partners rather than just a factor of production. Traditionally, when Boeing needed additional hands, it would run a classified ad in the newspaper for, say, qualified assembly mechanics. It would get maybe 2,500 applicants and hire perhaps 1,500, just so many bodies in the machine.

In keeping with the new attitude, Boeing is putting more time and effort into the hiring process. In April, announcing that it would hire 8,200 new hands, Boeing also said it would put applicants through extensive aptitude tests.

A cynic might say that Boeing wants to weed out potential malcontents, but that misses the point: Boeing is also recognizing that an efficient work force is one that genuinely believes in what it is doing and gets along well as a team. Thus such questions as: How does a worker respond in a confrontation with a supervisor? None of this is new in manufacturing circles (*Forbes*, Oct. 9, 1995), but it's a big change for Boeing.

Selection of supervisors and managers, too, will change. Rather than promoting a person who is good at, say, riveting, and making him a supervisor of rivets, the company will look for managers who can motivate, rather than intimidate, the workforce.

To underscore the emphasis on communications, at least symbolically, Boeing now sends annual reports to all its employees, not just shareholders. The company also put 75,000 employees through a program that discussed the realities of a tough market. The message: We no longer have it made just because we're Boeing; the customers tell us our planes cost too much and take too long to deliver.

"It has been a cultural change, a fundamental change in the way we think, act, and do," says C. Gerald King, president of Boeing's Defense & Space Group.

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The machinists union is responding—cautiously. It says it is willing to relax job specifications to allow cross-training of workers. But William Johnson, president of the local that represents the Boeing workers, is hard-nosed about subcontracting, or what the union calls “off-loading” work, now done in-house. Boeing makes 52 percent of its planes’ parts in-house and wants to shrink that down to 48 percent. Management thinks it can save an estimated \$600 million annually by such outsourcing. More important: outsourcing is a way to win favor from foreign airlines by agreeing to let factories on their home turf do some of the work.

In settling the latest strike, union and management compromised on outsourcing. Boeing agreed to give the union warning on any major subcontracting deals and to retrain surplus workers for other jobs in the company. “In the old days we would have fired them,” says Larry McKean, senior vice president of human resources.

But what is perhaps the biggest current irritant in management/labor relations at Boeing remains the constant pressure on the workforce to meet constantly shrinking delivery schedules. Front-line managers—and the workers below them—are evaluated on how fast they can get the planes out the door. If the work falls behind, the teams must go on overtime. “They’re trying to get into cross-training, but we don’t really have time,” says a frantic Robert Boudreau, a lead mechanic on the 777 wing line, as he motions to a schedule that indicates his team is days behind on its work.

Many workers are cynical about the new togetherness the company tries to foster—“buzzers” is their slang for the buzzword phrases like “total quality management” and “world class competitiveness.”

Daniel Mahoney, general counsel of the engineers union, sums up the dilemma neatly: “You just can’t have peer democracy in the workplace. We have these extraordinary leaders in management who are willing to treat the rank and file with great respect and listen to their ideas. But at the same time they have a responsibility to get the best product out on time.”

But Mahoney doesn’t deny that Phil Condit is doing his best to reconcile those seemingly irreconcilable objectives. Condit plans incentive pay and rewards for achieving individual performance goals. To make his point, he banishes Boeing’s model airplanes to a display case outside of his office and in their place displays his mother’s black and white photos of children from around the world. He says he wants his employees to think, “Gosh, the company is really interested in my welfare.” And there can be no doubt: Condit really means it.

He rightly says that many new ideas are just old ideas the people forgot. Visit the restored converted barn where William Boeing first began building planes, he says. Designers were on the top floor; production was downstairs. If production people had a problem with a blueprint, they just walked upstairs for an answer. Can Boeing get back to that as an employer of over 100,000 people spread over 76 million square feet of factory floor. No, but Condit is determined to show that at the new Boeing, while aircraft are now a commodity, people no longer are.

### **No Experience Necessary**

Want to work at Boeing? Be prepared to sit through at least four hours of tests. The company wants workers who will fit into cross-functional teams and show initiative

Experience? It counts less than aptitude. As a recent Boeing trainee stated, even if you've never touched an airplane, you may have what Boeing is looking for. When testing prospective assembly mechanics in February, the first tests asked seventy-five questions involving skills such as mathematics, spatial understanding, and mechanical abilities. The point is to get workers who can move easily among jobs.

Applicants were then shown a dozen videos of possible workplace situations. One portrayed a confrontation between a worker and a supervisor. The supervisor asks the worker to cut corners to meet a schedule. The worker objects. The boss tells the worker to leave if he doesn't like it. What would you do: 1) Quit? 2) Do the job, but report the incident to a higher supervisor? 3) Do the work, but talk to the supervisor later? 4) Complain behind the boss' back?

"Quit" is the wrong answer. So is "complain." These suggest you are not a team player. The right answers are: Do the job but talk it over later either with the supervisor or a higher authority.

Of the applicants, 73 percent passed. Broken down by sexes, 65 percent of the women passed. Broken down by race, 57 percent of "minorities" passed.

## Study Questions

### DESTROYING THE OLD HIERARCHIES

1. The article mentions that former CEO Frank Shrontz considered interpersonal skills as one of the most important characteristics of his successor. What are some of the key management skills needed to run a project or enterprise? Support your answers with information from the *PMBOK Guide*.
2. The labor union-management relationship at Boeing had been very antagonistic in the past and remains tense. How is Boeing's new CEO Philip Condit attempting to ameliorate these relations?
3. The biggest change made by Condit on the 777 project from previous Boeing endeavors was the organizational design. "Working Together" challenged all the former ways of doing things and brought together the design and production areas of Boeing. The undertaking of this endeavor was supported by teams. Does this management approach have any resemblance to the work organization utilized in project management?
4. Boeing is one of the three major players in the airline production industry, with AirBus and McDonnell Douglas as the other two major companies. How does this small amount of competition affect the selection and management of projects?