

GET WITH THE PLAN

How do projects get from point A to the end?

Consult the blueprint. **By Jean Thilmany, Associate Editor**

communication.

The word is bandied about so frequently in management circles it's become a buzzword. Any way you cut it, the sentiment is the same: Good communication between management and employee fosters well-run, profitable companies. The types of companies where managers speak openly to employees, where manufacturing knows where mechanical engineers are coming from, where executives tap managers' knowledge and have their fingers on the pulse of every department.

You know, the types of places that don't exist. Or exist only in the pages of how-to business books. How do you make that back-and-forth happen at your company? One word, and it's a bit of a *non sequitur*: blueprint. Two authors of their own business-advice book on how to carry out complex and overarching projects say that clear, companywide communication results from working with a good, clear plan.

"We keep track of all those books and we found one common theme: communication," said Vince Kasten, coauthor with Ralph Welborn of *Get it Done* (John Wiley & Sons, 2006). "They tell you to communicate better, but they don't tell you about the mechanics that need to sit behind the organization in order to do that."

Kasten and Welborn posit that a healthy, open dialogue between company managers and employees comes about only after higher-ups have stated a project goal and drawn up a clear plan for how to get to the project's end. Both authors are managing partners of global business transformation at the information technology consulting company Unisys Corp. of Blue Bell, Pa.

If the plan doesn't come first, managers flounder and

engineering projects go awry, they say. To blueprint, managers need intricate workings of how projects get done. They have to know exactly how engineering works with the manufacturing, marketing, and IT departments. Everything is interconnected, after all.

"Let's say the CEO says, 'I want to go after the Joint Strike Fighter contract,'" Kasten said. "What needs to happen? You have to rapidly line up the resources of the organization behind that goal. To do that, you need to know what connects with who, and how and how much."

Take an example from domestic life. Say you undertake a kitchen remodel. You can say to your spouse, "I want to remodel our kitchen for \$15,000 and have it done in time to have Thanksgiving at our place." If that's as far as you get, the project will never be done. Best to sit down and figure out how you'd get there. You might run cost scenarios, shop for cabinets, figure out what you like, and compare costs. Even more important, you'd need a timeline and a series of daily tasks—like call three contractors for comparison quotes—to get you there. You'd have to know how a contractor would work with suppliers and subcontractors, and you'd need to know what hands-on role you'll play.

DOWN ON PAPER

That concept may seem obvious. But companies often don't have blueprints in place that they can follow to get from point A to point B. The authors tell the story of a bank executive who boasted proudly that every project he decreed must be done done—



The Bell/Agusta 609 Tiltrotor, from Bell Helicopter, takes off straight up in the air. Rotors then tilt and the craft moves forward. Delivery is set for 2009. To keep this huge project on track, managers follow a blueprint every step of the way, although the plan does include some flexibility.

on time and within budget, to boot.

According to Kasten, "I told him, 'You're the senior guy; people are trying to figure out how to make you happy. There could be 200 people working behind the scenes 24/7 to support you.'"

Essentially, Kasten and Welborn advocate a kind of across-the-board method of project management that's put in place for every project a company takes on and is implemented across the entire organization. All departments are connected in a predetermined way, on the blueprint. This aspect remains much the same from project to project.

"If you're running an engineering project—whether it's the Joint Strike Fighter or designing a new transmission—at the end of the day you've got the same issues," Kasten said. "People are doing their own stuff, supported by software and serving their own goals, yet everyone has to work together and they need to know where they're heading and how to get there, step by step.

To begin, an executive first sets a companywide goal: win the Joint Strike Fighter contract. They meet the objective with a lot of behind-the-scenes groundwork that executives and managers must set ahead of time and adhere to for all projects: the blueprint. The mechanics behind the blueprint detail how all the people and processes that make up the company will come together to support the project.

"You can think of the company in layers: business processes, strategy, applications, and infrastructures,"

Kasten said. "In each layer, there are people highly specialized in what they do in that layer, but they're not alone. What the mechanical engineer does for a living depends crucially on CAD and the IT department that keeps CAD going."

Spelling out connections in such a firm way gives everyone at the company a look at what the business does and how it does it, how to use that knowledge to execute projects and to link from project results to business resolutions, he added.

SAIL ON CALM WATERS

As project manager at BAE Systems Naval Ships in Glasgow, Scotland, Scott Jamieson oversees the creation of two landing-ship docks for the Royal Fleet Auxiliary. The docks are vessels that deliver the troops ashore for an amphibious assault after marines have secured a beachhead.

Many aerospace and defense projects veer off track because managers don't spend enough time detailing the scope of the work—essentially creating a blueprint, Jamieson said.

"The ships are complex from beginning to end," Jamieson said. "The work we did early on was invaluable in putting us in a position of knowledge from which we based decisions on everything from cost and schedule to production performance."

BAE won the landing-ship dock contract in November

2001. The first vessel was delivered to the United Kingdom's Defense Procurement Agency late last year; the second will be delivered within the next few months.

Before engineers began work, Jamieson detailed how his group would receive and update design drawings. The plan accounted for the 6,000 tons of steel, the 19,000 pipes, the 8,000 meters of ventilation, and the



Projects like the U.S. Joint Strike Fighter stretch over years and include many contractors and subcontractors. This makes preplanning vital.

thousands of pieces of equipment that eventually need to be linked.

“By investing in this plan and flushing out all of the unknowns early on, and ensuring clear understanding of how everything related, we had the information that we needed to make the right decisions as we started and progressed through the phases of the build,” Jamieson said.

This plan also gave engineers and manufacturers a clear understanding of how all the project pieces fit together and of the project's time frame. To keep the blueprint on track, Jamieson also made sure all groups building the vessels—such as manufacturing and engineering—were in constant communication. Yes, that word again. In this case, it complemented the blueprint.

Because BAE Systems is what's termed a follow-on builder—Swan Hunter Ltd. of Newcastle-upon-Tyne, England, is building the first two docks—Jamieson sometimes has difficulty getting updated design and build information. So he ferreted out potential design and specification changes early on.

When the design changes inevitably affect the overall plan, team members on the engineering and manufacturing side get advance notice to better plan for their own changes, Jamieson said.

“The plan changes, but we always know where we are against the baseline and have a forecast of exactly where we will end up,” he said.

Also, to help improve the return on investment, BAE

Systems recently introduced an information technology system that links planning, finance, procurement, and production to ensure that all information is aligned and consistent.

Although Jamieson prepared rigorously for the contract, he still reviews his advance blueprint all the time to make sure his team uses its time effectively. He compares that initial blueprint against the present project to ensure that the plan is still pertinent.

“One thing we have definitely learned is that you can never know your scope of work well enough. The work we did early on (in this area) was invaluable in putting us in a position of knowledge from which to base decisions on everything from cost and schedule to product performance,” he said.

Still, Jamieson always walks a fine line between intruding upon the project—getting caught up in details—and controlling the project—focusing solely on where it's going at the expense of where it is, he added.

OUT OF THIN AIR

The sky is full of examples of complex tasks. They're called aircraft.

Because aerospace projects are so large, it's easy for company executives and managers to lose control. A blueprint helps to keep all aspects of a huge project on track, said Jack Gallagher, executive director for the Bell/Agusta 609 Tiltrotor.

The Tiltrotor takes off straight into the air like a helicopter. Once in the sky, the rotors reposition, or tilt, and the aircraft moves forward.

Gallagher has worked at Bell Helicopter in Fort Worth, Texas, for more than 36 years, many of them as a manager. “You have to take the time to develop and to really have a good description of the task ahead of you before you're able to analyze it and make certain decisions,” he said.

Project risks are high in the aviation industry and because projects are expensive, they run for a long time and have little room for error. The BA609 project kicked off in 1991, and Bell expects to deliver the first aircraft in about three years.

Gallagher relies on a number of software programs that grant him project overview. He tries to assess those risks ahead of time so he can work to mitigate them up front.

“Aeronautics is difficult because you need to act quickly and with velocity, but you need to be patient, too, as the entire project comes together,” he said.

Gallagher is a strong proponent of working an overall plan while leaving plenty of room to vary that plan.

A project plan, a roadmap, and a clear goal help him sidestep company quagmires, he said.

According to Kasten and Welborn, that goes for every company—engineering or otherwise.

“We say, if you learn how your business works and run from the blueprints—which really are how you do stuff—you'll see a great improvement in how things work at your company,” Kasten said. ■