

# TRIUMPH OF PLANNING

**"In preparing for battle, I have always found that plans are useless, but planning is indispensable."**

**— General Dwight D. Eisenhower.**

Normandy overwhelmed me when I first went there several years ago. I was sobered by the sea of white crosses in the cemeteries, I was inspired by the memorials and their tales of courageous soldiers battling impossible odds, and I was horrified by the visions of carnage that came to me as I stood on the scarred beaches of one of the most significant conflicts in human history.

I recently took my second trip to Normandy, and the experience was equally powerful, but for different reasons. Although the emotions were still a big part of the experience, I also began to see the Normandy Invasion from a more technical and intellectual perspective. As I learned more about the planning and resources that went into the operation, I was awed by the enormity of the enterprise that took place on those beaches and in the waters beyond in the summer of 1944.

On June 6, 1944, in the span of just one hour, roughly 135,000 men and 20,000 vehicles landed on five stretches of beach on the coast of France. The Allies chose one of the most inconvenient locations for their landing in order to gain the element of surprise. Over the next five months, another 700,000 soldiers, 200,000 vehicles and 725,000 tons of supplies were brought ashore. It's hard to fathom how the Allied forces were able to get the right men and material, in the right quantities, to the right place at the right time.

Perhaps what's most amazing about the Normandy Invasion is that they did all of their planning using pencil and paper. They didn't have software or computers. They relied on manpower, brainpower and leadership to get the job done.

One of the biggest challenges facing the Allied commanders was getting huge quantities of men, material and supplies ashore in an area with no port. More than two years before D-Day, the Allies were already planning the invasion. It was then that Winston Churchill conceived the idea of a system of floating docks that would allow the unloading of material amid 20-foot tides and unpredictable weather in order to supply the fighting forces on the mainland. I find it remarkable that in Britain's darkest hour, when it was on its knees defensively, Churchill was thinking about the logistics of an invasion that might never have happened.

The Allies spent the next two years constructing the pieces for an artificial harbor. The British sank many large sections of the floating docks in the Thames River to hide them from enemy spies and surveillance. After D-Day, all the pieces were refloated and towed across the English Channel to a point off the coast of Arromanches, France. The floating harbor became one of the keys to the Allied success after they established the beachhead.

The artificial harbor consisted of a breakwater made up of sunken ships, four floating unloading docks, and a series of floating roadways to connect the docks to the shore. In effect, the Allies built a fully functional floating port in a matter of weeks. Under normal circumstances, it should have taken years to build a facility capable of off-loading as much material as the 7,000 tons per day that the artificial harbor at Arromanches handled.

Just as impressive as the manufacturing and design of the artificial harbor was the way it worked. The whole operation was set up in circles so that the trucks were always moving. One circle moved goods from the ships to the docks. As soon as a truck full of goods and equipment pulled away from the ship, an empty one on its return trip from the dock pulled up right behind it. Another circle of trucks moved the goods from dock to shore.

Many of the pieces of the artificial harbor are still there today. The system was a model of efficiency that reminded me of manu-



facturing cells and the way we try to set up our factories today. Getting the right material to the right place at the right time sounds an awful lot like the mantra of today's just-in-time manufacturing world. Today we've developed powerful tools to monitor and control the flow of material in our factories—tools that make us more efficient, profitable and successful.

I shouldn't be surprised that the Allies were able to coordinate such a huge effort without such tools. After all, the cost of failure would have been unthinkable, while monetary cost was of no object. They were willing to devote whatever resources were necessary to accomplish their task. "Give us the tools," Churchill said in 1941, "and we will finish the job."

Fortunately, we're not normally faced with such challenges. However, the story of the Normandy Invasion and the background behind it should serve as a model for enterprises of all sizes. On a much smaller scale, most of us must deal with the same logistical issues that faced the Allies.

Today we have sophisticated computers and software to help us with our planning. We implement MRP systems, we invest in technology and we study our own efficiency. Despite these advantages, brainpower, manpower and leadership are still the drivers of success in any operation. In manufacturing, as in war, we need to make time for strategically important, long-range planning.

In particular, we're often faced with less than ideal situations. Business is sometimes bad. Competition is tough. But these are the *most important* times to prepare for the future.

When everyone thought Churchill and Britain were about to be defeated, he felt defeat was not an option. That was his strength. The plans he made and the leadership he displayed during those most trying times helped his country come back from almost insurmountable odds and achieve victory for the Allies. Ask yourself what victories you need to win. Whether you face unthinkable challenges or everyday obstacles, your planning today might make all the difference in your future.

Michael Goldstein, Publisher and Editor-in-Chief