

## NIBCO's "Big Bang": An SAP Implementation

December 30, 1997, was the "Go-Live" date at NIBCO, Inc., a privately held midsized manufacturer of valves and pipe fittings headquartered in Elkhart, Indiana. In 1996 NIBCO had more than 3,000 employees (called "associates") and annual revenues of \$461 million. Although many of the consultants NIBCO had interviewed would not endorse a "big bang" approach, the plan was to convert to SAP R/3 at all ten plants and the four new North American distribution centers at the same time. The price tag for the 15-month project was estimated to be \$17 million. One-quarter of the company's senior managers were dedicated to the project, including a leadership triad that included a former VP of operations (Beutler), the information services director (Wilson), and a former quality management director (Davis).

One of the major drivers of the whole thing was that Rex Martin said "I want it done now." That really was the defining moment—because it forced us to stare down these implementation partners and tell them "... we're going to do this big bang and we're going to do it fast."

*Scott Beutler, Project Co-Lead, Business Process*

We took ownership: It was our project, not theirs. We used the consultants for what we needed them for and that was technology skills, knowledge transfer, and extra hands.

*Gary Wilson, Project Co-Lead, Technology*

It was brutal. It was hard on families, but nobody quit, nobody left...Professionally I would say it was unequivocally the highlight of my career.

*Jim Davis, Project Co-Lead, Change Management*

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### Company Background

NIBCO's journey to the Go-Live date began about 3 years earlier, when a significant strategic planning effort took place. At the same time a cross-functional team was charged with reengineering the company's supply chain processes to better meet its customers' needs (see "NIBCO's Big Bang Timeline" in Exhibit 1). One of the key conclusions from these endeavors was that the organization could not prosper with its current information systems. The firm's most recent major investments in information technology had been made over 5 years earlier. Those systems had evolved into a patchwork of legacy systems and reporting tools that could not talk to each other.

After initial talks with several consulting firms, top management brought in the Boston Consulting Group (BCG) in August 1995 to help the company develop a strategic information systems plan to meet its new business objectives.

BCG brought in a team and what they instantly did was to start going through each of the functional areas of the company to determine the need for changes....And so they went into each little nook and cranny of the company and sorted out whether we really needed to change every system we had.

*Jim Davis, Project Co-Lead, Change Management*

The consensus among NIBCO's management team was that the company was "information poor" and needed to be "cut loose" from its existing systems. There were also major concerns about being able to grow the company and become more global without an integrated information capability. BCG's recommendation on December 1st was that NIBCO replace its legacy systems with common, integrated systems that could be implemented in small chunks over a 3- to 5-year time frame.

They told us, "You really need to look at integration as a major factor in your thought processes—the



Time Frame	Milestone
Early 1995	Cross-functional teams charged with developing NIBCO's strategic plan and reengineering supply chain processes determined that company could not prosper with its current information systems.
May, 1995	Gary Wilson hired as new head of IS department.
August–December, 1995	Boston Consulting Group conducted strategic IT planning study. Recommended that NIBCO replace its legacy systems with integrated enterprise system on client/server platform over 3 to 5 years.
January 1, 1996	Corporation restructured into cross-functional matrix organization. Scott Beutler, former VP of operations, residential division, given responsibility for business system strategic planning, including selection of an ERP package.
July, 1996	Committee recommended purchase of SAP R/3 and "big bang" implementation. Approved by Executive Leadership Team (ELT) and Board of Directors.
August, 1996	Contracts signed with SAP for R/3 modules and IBM as implementation partner. Wilson, Beutler, and Davis form triad leadership team.
September, 1996	Completion of project-team selection and September 30th project kickoff. Begin preparation phase.
December, 1996	Final project scope and resource estimates presented to ELT and Board with Go-Live date of Monday, November 29, 1997 (30-day grace period allowed). Final scope included North America only and consolidation of warehouses to a number yet to be determined. Final project budget was \$17 million.
March, 1997	Decision to consolidate warehouses from 17 to 4 by September, 1997. Incentive pay bonus in place a few months after project initiated.
April, 1997	Installation of PCs for customer service associates completed. Weekly newsletter via e-mail initiated.
May, 1997	Business review lead for materials management leaves company; role filled by business review lead for production planning.
Summer, 1997	Maintenance of legacy systems discontinued except for emergency repairs.
September, 1997	User training begins at NIBCO World Headquarters and at remote sites. Sandbox practice system becomes available.
November, 1997	Go-Live date moved from Monday following Thanksgiving to December 30 due to delays in completion of warehouse consolidation and master data load testing.
December 30, 1997	Go Live without consultants.

#### EXHIBIT 1 NIBCO's Big Bang Timeline

ability to have common systems with common communication for the manufacturing area, the distribution area, across the enterprise."

#### *Scott Beutler, Project Co-Lead, Business Process*

The company began to reorganize into a cross-functional, matrix structure in January 1996. It also initiated a new cross-functional strategic planning process. Scott Beutler was relieved of his line management responsibilities to focus on the development of a new IT strategy. Beutler had joined NIBCO in early 1990 as general manager of the retail business unit. When this

business unit was restructured, he became the VP of operations, residential division. Beutler was charged with learning whether a new type of integrated systems package called enterprise resource planning systems (ERP) would be the best IT investment to move the company forward.

#### Information Systems at NIBCO

Gary Wilson was hired as the new head of the IS department in May 1995 and became a member of the BCG study team soon after. Wilson had more than 20 years of



IS experience, including managing an IS group in a multidivisional company and leading four major project implementations. He reported to Dennis Parker, the chief financial officer.

Wilson inherited an IS department of about 30 NIBCO IS specialists, including those who ran mainframe applications on HP3000 and IBM/MVS platforms. About one-half were COBOL programmers. The IS payroll also included a number of contractors who had been at NIBCO for up to five years.

Four major legacy systems supported the order entry, manufacturing, distribution, and accounting functions (see Exhibit 2). The business units had purchased their own packages for some applications and plants were running their own versions of the same manufacturing software package with separate databases.

We had a neat manufacturing package that ran on a Hewlett Packard, an accounting system that ran on an IBM, and a distribution package that was repackaged

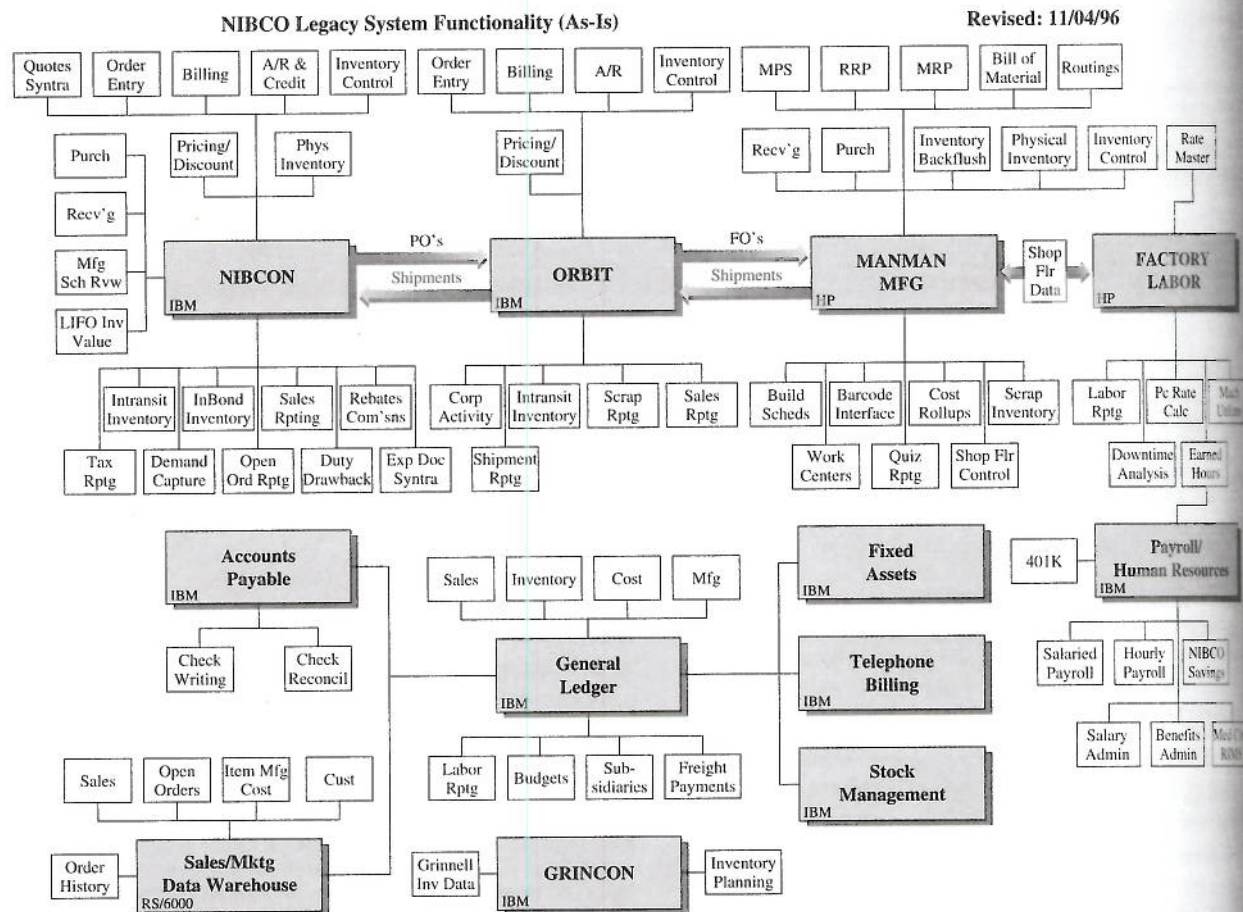
to run on the IBM. Nothing talked to each other. Distribution couldn't see what manufacturing was doing and manufacturing couldn't see what distribution and sales were doing.

—Jan Bleile, Power User

At the time of the BCG study, there was widespread dissatisfaction with the functionality of the legacy environment and data were suspect, at best, because of multiple points of access and multiple databases. The systems development staff spent most of their time building custom interfaces between the systems and trying to resolve the "disconnects."

The systems blew up on a regular basis because we made lots of ad hoc changes. As a result, the IS people weren't a particularly happy lot . . . no one really had a great deal of respect for them.

—Dennis Parker, Chief Financial Officer



**EXHIBIT 2** Legacy Systems at NIBCO



### The ERP Selection Team

Beutler set up a cross-functional team to select an ERP package early in 1996. CFO Parker was the executive sponsor, and it included eight other, primarily director-level, managers. Wilson played an internal technology consultant role for Beutler while still managing the IS group, which was heavily immersed in a new data warehousing project.

Seven ERP packages were evaluated in depth. Representatives from the various functional areas participated in walk-throughs of specific modules, and the selection team also visited several different vendors' customers. The strengths and weaknesses of each package were mapped into an evaluation matrix. One of the key decisions was whether to wrap a series of best-in-class finance and supply chain solutions around a common database, or whether to select a single ERP system that integrated all the modules.

The selection team also did some benchmarking on implementation approaches and success rates. Some of the team members sensed that the BCG recommendation for a three to five year phased ERP implementation was not the best approach for NIBCO. The fear was that the company would just get to the point where it would say "enough is enough" without executing the whole plan. Team members had also observed that some of the companies that had used a phased, "go-slow" approach were not among the most successful. At the same time business initiatives were demanding a quicker implementation.

Jim Davis, who had led a reengineering team for the strategic planning process, was asked to facilitate the selection team's formulation of a recommendation to the executive leadership team (ELT).

Because of my facilitation experience, I was asked to facilitate that meeting so that there would be an objective person who had no particular interest or bias to help lead the discussion... It actually was a bit of a breakthrough because in the context of that meeting we changed our approach from the point solution over 3 to 5 years to an ERP big bang.

—Jim Davis, *Project Co-Lead, Change Management*

In July 1996, the ERP selection team recommended to the ELT that NIBCO purchase a single ERP system: SAP R/3. Among the benefits would be multimillion dollar operational improvements and reductions in inventory costs; the ROI was based on a 6 percent forecast growth rate in NIBCO's revenues. The cost estimates included the move from a mainframe to a client/server platform and an estimated number of R/3 licenses. Although consulting costs under the big bang approach were still expected to be high—about one-third of the project budget—they would

be lower than the 1,000 days estimated for the three to five year phased approach. Either approach would involve a big increase in IS spending. The ELT supported the recommendation to implement R/3 as quickly as possible—pull the people out of the business to work on it, focus, and get it done.

The R/3 purchase and big bang implementation plan were then presented to NIBCO's Board of Directors. The Board viewed the big bang approach as a high-risk, high-reward scenario. In order to quickly put in place the systems to execute the new supply chain and customer-facing strategies, which had come out of the strategic planning process, the company would have to commit a significant portion of its resources. This meant dedicating its best people to the project to ensure that the implementation risks were well managed.

A contract was signed with SAP for the FI/CO, MM, PP, SD, and HR modules and for about 620 user licenses soon afterward. The HR (human resources) module would be implemented later. Rex Martin, chairman, president, and CEO of NIBCO, assumed the senior oversight role.

### The TIGER Triad

Once the team's big bang recommendation was endorsed, Beutler began to focus on the R/3 implementation project. The initial idea was to have Wilson co-lead the R/3 project with Beutler. In an earlier position, Wilson had worked on equal footing with a business manager as co-leads of a project involving a major platform change, and it had been a huge success. He therefore quickly endorsed the idea of co-leading the project with Beutler. Between the two of them there was both deep NIBCO business knowledge and large-scale IT project management knowledge. Although Beutler was already dedicated full-time to the ERP project, Wilson would continue to manage the IS department as well as co-lead the project for the next 18 months.

Shortly after the Board decision in late July, Rex Martin asked Jim Davis to join Beutler and Wilson as a third co-lead out of concern for the high strategic risk of the project. Martin had been the executive sponsor of a team led by Davis that reengineered strategic planning at NIBCO. The morning after Davis agreed, Martin introduced Davis as the third co-lead of the project, and then let the three directors work out what roles they were going to play.

As the three co-leads looked at what needed to be accomplished, it became clear that Davis' experience with total quality management initiatives could bring focus to the change management aspects of the project. Davis split his time between his quality management job and the R/3 project for about a month, and then began to work full-time on the ERP implementation.