

The Trail to Transformation: The Electric Boat Story

**A Synopsis of a
Joint Labor-Management
Organizational Change Process**

by

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Introduction

This is the story of the Electric Boat Corporation (EB) and its unions in the midst of a long-term organizational change process. It is not a story about quality, per se, for they are on the basis of several measures, the best designers and builders of submarines in the world. The story is about the culture of the organization and changing that culture to meet the challenges of the next decade.

Although the Berlin Wall was the initial event that led to decreased appropriations in defense spending in general and submarine construction in particular, Electric Boat made a commitment to begin to change the culture before the Wall fell. As you will see in the following section, Electric Boat, like so many of its industrial counterparts, was a traditional hierarchical organization. Within that structure were the typical classical organizational functions. Among the most telling were the corporation's relationships with its unions. This relationship manifested itself in brutal labor disputes during the 70s and 80s including the Marine Draftsmen's Association (MDA)-UAW¹, which represents the designers of the submarines and components, culminating with a 5-month strike by the Metal Trades Council (MTC) unions in 1988.² A change in leadership of the corporation in 1988-89 led to the shift in philosophy about how the corporation would be run from a people standpoint.

During the subsequent period the shift away from the hot and cold wars of the 20th Century led to an era of unparalleled reductions in defense spending. Those businesses, such as Electric Boat, that were solely defense-related found themselves challenged in ways they could never have imagined.

This article outlines the Electric Boat/MDA-UAW/MTC experience in organizational change. The process began in 1990 and continues today. Their effort represents the design and implementation of a complex integrated change strategy, and the development of commitment, competence and trust. The story begins with descriptions of the business of Electric Boat and its culture in 1990. We continue with an outline of changes in leadership over a five-year period and the impact of those changes on the overall transformation process. From there we move to a description of the overall design of the change strategy and how it was implemented during the six-years of the effort. Finally, we describe the situation at present and the impacts of the effort as well as the direction the process is headed during the next three years.

¹ The Marine Draftsmen's Association-UAW had labor disputes resulting in strikes in 1973, 1979, and 1983.

² The Metal Trades Council consists of ten trade unions including IAM, IBEW, Teamsters, OPEIU, Foundry, Painters, Carpenters, Pipefitters, Boilermakers, and Laborers. Each local union has its own officials and the Council, consisting of representatives from the locals, elects officers who represent all ten unions.

The Culture of Electric Boat in 1990

The culture of Electric Boat emerged over decades of operation. It is a product of influences from the history of shipbuilding, being a government contractor, the Nuclear Navy,³ and the larger culture of the Northeast where Electric Boat resides. A large-scale change process normally begins with a thorough point-in-time “snapshot” of the organization. This snapshot, referred to as a diagnosis, is created through paper-and-pencil surveys and face-to-face interviews with individuals and small groups of peers at all levels of the organization.

When this approach was suggested to the management and union leadership, it met with strong resistance. Essentially, the leadership indicated that the workforce had been surveyed to death at EB to no avail.⁴ The leadership felt that any attempt to assess the perceptions of the workforce would destroy the credibility of the change effort before it even began.

As an alternative, the outside consultant proposed the creation of an employee study committee. The committee would be given access to all studies conducted by the corporation (on Electric Boat) and Electric Boat in the 1980s. From these data, the committee would create a report summarizing their perceptions of the culture of EB based on the various studies. A 36-member committee was formed representing a cross-section of employees from across the organization and from all levels (superintendent to hourly).⁵ The committee was given access to the two corporate studies as well as a variety of other data including the results of an exit survey of employees who left the company.

The committee created a 16-page report summarizing their findings. The report was presented to the Area Steering Committee in the Engineering & Design (Innovation) division. The committee, in turn, scheduled two feedback sessions one for union (MDA-UAW) and management leadership in Engineering & Design and one for management and union (MTC) in the Shipyard. Various committee members delivered portions of the report and answered questions from participants.

Committee’s Conclusions

Here is a summary of the findings in the report:

- The Corporation is too involved in Electric Boat’s business and does not “walk the talk” in that they say one thing and do another.
- In regard to leadership style and decision-making, top leadership was described as “autocratic, paternalistic, controlling and non-listening.” The committee found middle management hard to define, but concluded that there were a) too many layers of management and b) too many managers within those layers. First-line supervision was seen as caught between the proverbial rock-and-a-hard-place having to please upper management and keep the crews, designers, and engineers productive.

³See *Running Critical: The Silent War, Rickover and General Dynamics*, by Patrick Taylor.

⁴ In 1986 the corporation conducted a corporate-wide survey of employees to identify issues. That survey was re-administered in 1988. In two divisions, employees reported few changes as a result of the survey effort.

⁵ The Metal Trades Council declined to have any of its members participate. They were still upset about the outcomes of collective bargaining in 1988 and were withholding participation in any company-related effort. Some MTC leaders participated in the feedback/report sessions hosted by the study committee.

- The impact of leadership and decision-making were that decisions are difficult to move through the bureaucracy, feedback loops are weak or non-existent, and messages get filtered and changed.
- Cooperation across boundaries in the organization (functional areas, departments, nuclear/non-nuclear engineering, Groton (headquarters) and other sites, corporate and the division, labor-management) was poor.
- The model and history of labor-management relations left a residue of mistrust and bitterness.
- Although the morale of the workforce had declined as a result of failure to solve important motivational and work life problems and because of the way some people were treated (e.g., blaming, fear tactics), pride remained high and everyone pulled together to keep the product high quality and on time.
- Communication and information were a problem. The lower one went in the organization, the less information they received and the less the recipients believed the information.
- In general, “dissatisfaction, fear, anger, and depression” characterized the 1980s climate of the organization.
- On the positive side, the relationship between EB and the U.S. Navy was viewed as strong and positive.

The exercise had two positive effects. One, it got the hard issues on the table and in front of the people. That had never really happened. Second, it brought the transformation process to the people by virtue of who was involved in the task force and how the results were disseminated. In any case, the task force’s efforts have been used over and over to describe the context and level of challenges everyone faces in order to create the organization of the future.

The Model for Change

The model for change employed at Electric Boat has three components: (1) designing and managing change, (2) change initiatives, and (3) learning and change. Each component is explained briefly below.

Electric Boat designed and managed the change process at three levels. The overall corporate strategy was designed and overseen by the Electric Boat Steering Committee (EBSC). The membership of this committee includes the President and Vice Presidents of the corporation and the President and Vice President of the Metal Trades Council, the MDA-UAW, and the Patternmakers. Within the Research and Design business a joint labor-management Area Steering Committee (ASC) was responsible for the change process. This committee consists of the Vice Presidents of Human Resources and Innovation (Research & Design), the program directors, Human Resources, and the officers of the MDA-UAW. Several of the major program areas have joint implementation committees (now called Action Forums) which are responsible for the process in the specific area. The process in the Shipyard evolved more slowly. Here, it is a Joint Process Planning Committee (JPPC), consisting of four vice presidents, the superintendents in the yard, Human Resources, and the heads of the ten trade unions plus the officers of the Metal Trades Council.

The EBSC is responsible for strategic design and direction, the ASC and JPPC for translating the strategy into their respective businesses, and the Action Forums for day-to-day change management.

Change Initiatives

Change initiatives are focused efforts in the areas the organization targets for change. In an effort to change the culture of an organization, there are six broad categories for change:

Leadership (including the philosophy and style of leadership in the organization)

Involvement (including all the team efforts from task force to self-directed)

Communication (focusing on messages, strategies, and processes which drive change)

Education (ultimately the people in the business must understand the business)

Motivation (including reward and recognition assumptions, structures and processes)

Partnerships (including customer, supplier, internal functions, and labor-management)

The overall change effort at EB ultimately included activities in all six areas.

Learning and Change

In order to effect significant change in the culture, the model assumes that two things must occur:

1. Individuals and groups in the organization must experience what Senge calls “generative” learning and Argyris refers to as “double loop” learning.⁶ This type of learning goes beyond the day-to-day accumulation of knowledge based on experience and the incremental adjustments made in response to this knowledge to learning, which results from deeper insights and the complex modifications made on the basis of these insights.
2. Leadership of the organization (and organized labor, if present) must translate this learning into changes in philosophy, structure, and process. For example, the creation of new approaches to collective bargaining in Electric Boat is, in large part, a product of the experience and insights gained from the joint labor-management process.

The third element of the change model is dedicated to helping the organization be certain that these two steps occur.

⁶ See Peter Senge. *The Fifth Discipline*. New York: Doubleday, 1990 and Chris Argyris. “Teaching Smart People How To Learn.” *Harvard Business Review*, 69(3), May-June, 1991.

The Electric Boat Change Process: Engineering and the MDA-UAW

Early in 1990, the leadership of Electric Boat and specifically the Research & Engineering business reached an agreement with Local 571 of the MDA-UAW to form a joint planning and problem-solving committee to address major issues in the business and the labor-management relationship. This committee included the officers of the union and management officials including the vice president of the Research & Engineering business.

The committee began by addressing major concerns to the union. High on the list was the boundary between salaried and hourly in terms of who did what kind of work. A specific issue involved “checking” of design drawings. In this case, the bargaining unit designer creates the drawing and engineers add specifications. In the course of passing the drawing back and forth a process called checking occurs in which the drawing and its notes are audited for completeness and correctness. The union claimed that salaried personnel were doing checking work that belonged to the bargaining unit.

Focus on Issues

The scope of the joint effort was limited for a year to the specific issues (e.g., salaried personnel doing bargaining unit work) that were in the way of moving toward a partnership. Clearly, the union leadership did not trust management and much of the management felt as though the union leadership promoted practices that got in the way of running the business efficiently.

As a result of this feeling between the parties and because contract negotiations were coming up in the summer of 1990, the joint committee decided to limit its efforts to specific issues. In addition, they planned to suspend joint problem solving when negotiations began because the union feared that management would somehow use the joint process against them in negotiations. As it turned out, the committee began to make progress and had changed enough that by the time negotiations began (6 months later) they decided to continue meeting. (This meant that union officers, for example, went to bargaining sessions and steering committee meetings in the same week.) In addition, the negotiations went very well and the proposed contract was approved by over 90% of the membership, the largest majority in the history of the company and this union.

The New Attack Submarine Design Program

During the second year of the joint process, EB won contracts to design the propulsion plant (rear half) and the front end of a proposed new attack submarine. It was not just another job. This contract was won on the basis of proposed new technology for design (moving from the drafting table to the computer) and a design-build process which would link the design process to materials acquisition and submarine construction. In addition to new technology and a major change in the nature and culture of work, the designers (bargaining unit members) would work in teams with engineers and other salaried personnel. This approach to the contract would alter the organization significantly.

The pace of the start-up, the leadership style in much of the organization, and the culture of competition among managers when mixed with the traditions of organized labor, the deep mistrust, and the changes in corporate leadership which occurred over a three-year period combined to make for an extremely difficult situation.

In an attempt to deal with the challenges of the new business and to incorporate the values of the joint process, the Area Steering Committee recommended the establishment of two new structures. One was eventually called the Project Management Team (PMT). The PMT consisted of the project managers (who reported to the director) and a representative from the MDA-UAW.⁷ The second was called a Liaison Action Team (LAT). The LAT was a committee consisting of representatives from across the program and from three levels. The LAT focused its efforts on solving culture issues brought to it by the workforce, developed and implemented a communication strategy, and initiated the development of a longer term strategic plan. Meanwhile, the PMT focused on the business and oversaw the implementation of design-build teams that integrated design, materials, engineering, and the shipyard in the design issues and problem solving. The two groups met jointly as the Culture Change Council. In these meetings, the PMT and LAT worked on barriers to change and on building bridges between the change process and the business.

Other Joint Efforts

While the primary business focus was on the build-up of the new attack submarine design organization, other parts of the engineering and design business were implementing change efforts. For example, the Seawolf submarine design organization conducted a design team experiment by integrating all the key functions responsible for a design drawing into an integrated, empowered team. The Design Services organization instituted a joint committee to deal with business and people issues in their business. An organization called the Reactor Plant Planning Yard created some team projects to plan and manage special projects in a new, high involvement model. In addition, a number of business areas instituted communication planning processes and tools to bolster the change process.

⁷ The union officers recommended the MDA-UAW representative. Their candidate was a senior designer with a very good reputation among his peers and the management organization.

The Electric Boat Change Process: The Shipyard and the Metal Trades Council

Background

We noted in the introduction that the Shipyard experienced a long, tough strike in 1988. The resulting contract yielded no gains over the pre-strike proposal. The result was an angry workforce and a disenfranchised union leadership. So, in 1990 when the corporation and the MDA-UAW were ready to proceed with a joint effort, the Metal Trades Council officials, based on a vote of the Council, declined to have any role in such an effort.

So, for three years nothing was done directly in the construction business (Shipyard) to promote a change in the culture. During this period, however, there were two significant events. First, the Metal Trades Council elected a new president. He brought a different philosophy to the office and a willingness to look for ways to heal old wounds. At the same time, the MTC and Electric Boat agreed to reopen negotiations (1991) in an attempt to reach some agreements on how to improve productivity. The resulting agreement provided more money to the unions in exchange for changes in contract language that would presumably lead to productivity improvements. Although the revised contract did not wipe out the effects of the labor strife, it provided a platform for management and labor to look to a different way of doing business.

The Joint Process Planning Committee (JPPC)

In the fall of 1993, the officers of the MTC convened a meeting of chief stewards and other leaders of the trade unions in the MTC. The MTC's attorney and the consultant for the joint process in the engineering/design business made presentations to the group. Following this meeting, there were a series of discussions between management and union leadership concerning whether and how to proceed.⁸

In early 1994, the union, Shipyard management, and corporate leadership held a two-day planning retreat to a) review the status and direction of the business, b) discuss major issues in the culture, and c) attempt to decide whether to institute a joint process. Because the unions were highly skeptical about the corporation's motives and honesty, they would only agree to establish a business discussion and problem-solving forum made up of the leadership of both groups.

The Joint Process Planning Committee (JPPC) was formed and began meeting on a bi-weekly basis for a full day. They dealt with day-to-day issues and "baggage" for the first few months. There was no interest on the part of the unions' leadership in doing any form of employee involvement and no push in that direction came from management. As a result, the JPPC stayed focused on quality of life (food service, employee facilities) and business issues (critical skills, training, etc.) in the Shipyard.

⁸ While the president of the MTC and the union's attorney were key players in developing the unions' position on a joint process, the leadership from management came primarily from the Vice President of Human Resources and the President. Subsequently, the Vice President of Delivery (Shipyard) brought his resources and support to the effort.

Two factors provided the early impetus to do something different. The first was the fact that the economics and politics of the defense industry resulted in a business that would be substantially smaller than it was in 1990.⁹ Corporate leadership felt that if they were going to move toward a partnership with organized labor, they would have to educate union leaders on the business and where it was headed.¹⁰ The second factor was that the MTC and Electric Boat were going to open contract negotiations in late spring of 1995. This negotiation might determine the company's ability to remain in the submarine construction business.

In discussing the two forces, the JPPC decided to hold an off-site meeting to explore key issues and to discuss joint strategies. In this session, the JPPC identified key business issues they were facing. Because they concluded that all of the issues would influence and be influenced by the labor agreement, they created four joint task forces consisting of members of the JPPC to address the issues. Task forces focused on: *Critical Skills*, *Quality of Life*, *Communications*, and *Culture Change*. Each task force had access to whatever information and resource people it needed to understand the situation and to develop proposed strategies or solutions. This was not intended as a negotiation process, but rather as a planning process in which products of task forces could be fed into contract negotiations the following spring. By and large, the process worked that way with the exception of the Quality of Life committee. This group addressed existing issues and problems and presented solutions to the JPPC for immediate implementation.

Education & Negotiations

Three things occurred during the following twelve months. First, the task forces learned a great deal about the major issues facing the business and were able to develop some proposals to deal with those issues. Second, there was a constant flow of information and continuing attempts to educate union leadership and middle managers. Part of the information/education effort included sharing the corporation's strategic plan and personnel projections so that management and labor leadership understood where EB was headed. One vice president said: "The union officials now get information regularly that even I didn't get four years ago." Third, the JPPC recommended that the collective bargaining process be done on a win-win basis rather than on the classic adversarial model. In the spring of 1995, the full JPPC and the bargaining committee went through alternative bargaining training. As a result of this effort, negotiations were completed on time and the proposed contract received a strong majority vote from the membership on acceptance.

In reflecting on the negotiation process, both parties indicated that the pre-bargaining problem solving contributed positively to negotiations. In the task forces, union officials and middle managers learned about the business and the numbers that drive it. As a result, when bargaining began there were no hidden numbers or agendas because almost everything was on the table. The exception was the economic package and union wage demands which were reported done near the end of bargaining in a more classical adversarial mode.

⁹ At the peak, Electric Boat employed about 25,000 people. 18,000 of these were in the Shipyard and, of that number, 12,000 were members of the MTC. The projection by early 1995 as a result of reduction in the government's reduced commitment to the Seawolf program was that employment in the Shipyard would decline to 2300-2700 (estimate) by 1997. Of that number, only 1800-2300 (estimate) would be union members.

¹⁰ In 1991, the company and unions joined forces to promote Electric Boat as the sole source for submarine construction. In this effort they made joint trips to Washington and initiated some business improvement efforts.

Looking Toward the Future

During 1996, the JPPC began wrestling with the tough issue of a 70% reduction in the workforce by 1998. This was extraordinarily hard since families have worked in the Shipyard for generations and it seemed as though friends went out the gate every month. There was pressure on the unions to stop the reductions; this pressure translated into stress on the joint process. Unfortunately, there was little either party could do to alter the course of things.

The major challenge was how to position the Shipyard to be competitive in the future. In an effort to change the culture of the yard to enhance EB's ability to compete, the JPPC implemented several actions:

1. An orientation of key management and union leadership to the organization of the future;
2. The creation of a communication process to help move information to and from the Shipyard;
3. The development of a pilot involvement effort to empower the workforce;¹¹
4. Redesign of the pre-bargaining task forces to continue to address critical business issues;¹² and
5. Institution of regular team meetings to discuss business issues and solve business problems.

At this time, the JPPC continues to meet and design strategies and tactics to improve the performance of the Shipyard and improve the quality of work life.

¹¹ The team strategy was given a boost by what is called the SHIIP Project, a contract to design tools to help design strategies to revive the shipbuilding industry in this country.

¹² Perhaps the most difficult of the business/labor issues is the inherent conflict between the need to maintain critical skills in order to construct submarines, the boundaries between the ten trade unions, and the need to preserve seniority as the sole tool for who stays and who goes. Some of the skills involved in constructing submarines take years to develop and a number of these critical skills will leave the Shipyard because of headcount reductions and seniority rules.

Electric Boat Joint Steering Committee and the Strategic Plan for Change¹³

The Electric Boat Steering Committee (EBSC) was formed at the point in time the Metal Trades Council entered the joint process in the Shipyard. The EBSC consists of the President and Vice Presidents of Electric Boat as well as the presidents and vice presidents of the three union organizations.¹⁴ Although the original intent of the committee was to design and oversee organizational change, John Welch, the current president of Electric Boat said, “This is the leadership of the organization. We want this committee to move beyond change to the business at large so that we have the major stakeholders understanding and providing input to the critical business decisions.”

From the outset, the EBSC had three charges:

1. Articulate the mission of and vision for the corporation and design a strategy to move the corporation toward the vision;
2. Understand and deal with significant business issues facing the company and major quality of work life issues facing the people; and
3. Understand and deal with the barriers to change in the organization.

While business and organizational issues consume a significant amount of time and energy, the EBSC committed major effort and resources to the development and implementation of a strategic plan for change. The next section describes the overall strategic plan.

The strategic plan for change had three major components: Foundations for Change, Strategic Initiatives, and Implementation Plans.

Foundations for Change

The foundations for change include the mission, vision, and values that will guide the organization.¹⁵ In addition to the mission and vision, the EBSC specified the values for leadership of the future. These values were particularly helpful in designing the leadership development program.

¹³ In addition to a long-term change effort, the corporation conducted both a business strategic planning process and a quality improvement re-engineering process.

¹⁴ In addition to the MDA-UAW and MTC, there is a small Patternmakers local in the Shipyard.

¹⁵ A brochure containing an overview of the Foundations for Change is available from: Culture Change Coordinators, Electric Boat Corporation, 75 Eastern Point Road, Groton, CT 06340.

Strategic Initiatives

Strategic initiatives focused on five areas:

- Involving employees in the business
- Development of leadership
- Communication
- Education
- Motivation

The EBSC commissioned various committees and task forces to develop the content of the initiatives. By the end of 1996, there were firm plans for three areas (communication, leadership, and employee involvement). In 1997, the EBSC will focus on developing plans for education (on the business and change) and motivation (systems and processes).

Involving Employees. There are different strategies for engineering/design and the Shipyard. The engineering and design businesses are a combination of design-build teams, design groups, and project teams. The Shipyard, on the other hand, will move from traditional crews to a combination of crews as problem-solving groups, business teams, and design-build teams.

Leadership Development. The leadership development process has four components: Selection, Training, Assessment, and Coaching. The selection process is aimed at incorporating the new values for leadership into the selection of leaders at all levels. The training component aims to provide leadership with the knowledge and skills to lead the transformation of the organization. The training program will consist of 50-70 hours of applied development activities to be available to all supervisors, managers, executives, and union leaders. The assessment initiative is designed to provide leaders with feedback about their leadership style and behavior.¹⁶ The instrumentation was developed by the EBSC based on their leadership values. Two pilot efforts were conducted to test and refine the instrument and the process. In the initial phase, the results are used strictly for personal development planning. The coaching component of the initiative is still in the planning phase.

Communication. A Communication Advisory Committee (CAC) was named to create an overall strategic plan for communication. The committee did a thorough review of all existing communication efforts and vehicles in conjunction with the people responsible. This included the unions' communication vehicles. From there the CAC developed the plan and oversaw implementation during the following year.

Education. The aim is to educate the workforce on the business and on the process and aims of change. An education task force has developed a preliminary plan for business education and the CAC will implement initial education efforts in change through communication.

Motivation. A task force conducted a study of reward and recognition practices at Electric Boat. They presented a preliminary summary of results to the EBSC. The steering committee is holding the results until other initiatives are in place.

¹⁶ The 360° process focuses strictly on style and behavior. The instrumentation was created from the leadership values. Other aspects of leadership evaluation for annual performance reviews are based on data collected elsewhere.

A Perspective on Change: Variables, Impacts and Lessons Learned

The final section of this study deals with the variables that have a major impact on efforts to change in this setting, on the impacts of the change effort, and on the lessons learned. Several factors influenced the nature and pace of the change efforts at Electric Boat. Here is a summary of the major ones.

- ***Changes in leadership.*** The president of the division changed four times between 1990 and 1995.¹⁷ The position of Vice President of Human Resources also changed four times in that period. The original vice president had been the key advocate for the change process.¹⁸ During that time, there were three vice presidents of engineering and five different vice presidents of the construction business. These changes had two impacts: (1) there was never enough continuity to build a leadership team at the top and (2) when new people, especially those from outside the staff, entered the positions, there was a shift in philosophy, a loss of experience, and a need for re-orientation to the effort.
- ***The labor context.*** Labor-management relations were a major albatross around the neck of change. For almost two decades, General Dynamics was at odds with its unions. Although the philosophy of the corporation and surely of Electric Boat had begun to shift by 1990, the leadership and membership of the unions were neither aware nor trusting of those commitments to change. Even after years of work together, there are a number of union leaders who are still hesitant to move deeply into a partnership mode. The fact that their membership is even less aware of any shifts than they also works against change.
- ***EB Management.*** Supervision at all levels had been recruited, trained (mostly OJT) and rewarded based on the traditional model of management in Electric Boat. Without a strong, concerted, ongoing effort to transform leaders, each day was more like the status quo than like the vision. Further, even as the message about change went out, the vast majority was skeptical because they had heard the commitment to change so many times.
- ***Nature of the business.*** Being a defense contractor creates special problems for a business. For example, design, engineering, and construction work is charged to contracts. When employees are not “working” on the contract they must be charged to overhead. As a result, training of teams and team leaders, communication committees, planning groups, etc. are all charged to the business. In a declining industry that is cutting people and losing revenue, there are always strong efforts to reduce overhead, not increase it. To Electric Boat’s credit, they continued to make significant investments in the change effort over the last three years. [Note: This situation can be rectified as the Department of Defense provides some impetus to think of efforts such as this as investments, not costs. Some creativity in how to fund defense work or other government contracts is a real need for the future.]

¹⁷ The person who was president in 1990 came back to EB for about a year in 1994-5 before returning to an executive position in corporate.

¹⁸ The vice president for human resources who was there in 1990 also returned with the president in 1994. He stayed on until retirement in 1996.

- ***Integrity.*** Of primary importance to the entire effort is the courage and integrity of the leadership of the business and the unions. In spite of difficulties in the industry, with each other, with their constituents, and various situations, the top leadership always acted with honesty and integrity. Without this variable, the organizations would not be where they are today.

Impacts

- First and foremost, the business units are performing better than ever. For the first time in the history of the company a design and engineering contract is on schedule. And, in spite of massive reductions in the Shipyard and the chaos that goes with the downsizing, EB continues to deliver high quality products on schedule at budget.
- There are some significant changes in management leadership. This is a tough, military-like setting. It placed and promoted managers who fit the setting. Change is neither quick nor easy, but it is happening. The change is occurring in two ways. Some traditional leaders are moving in the direction of the vision. Moreover, they are asking for help and assistance in making the shifts. Second, the corporation is beginning to choose leaders differently both in the criteria applied and in the manner of selection. Managers in both the Shipyard and design/engineering are screened for their people skills as well as their technical skills when vacancies are filled. Furthermore, the leadership of the unions is starting to have a role in the selection of managers.¹⁹ For example, this past year, the presidents of the three unions were invited to be members of the final screening interview teams for the vice president of human resources position.
- The process has changed the unions' relationship to each other. At the broad level, there was a time when the MTC and the MDA-UAW would not even talk to each other. The only thing they had in common was the company as the enemy. Today, the situation is completely different. The heads of the two unions consult with each other, cooperate, and work together to make each other stronger. For example, as there are reductions in headcount in the Shipyard, interested MTC members (and salaried employees) are invited to apply for positions as apprentice designers. This level of cooperation has provided new career opportunities for a number of laid off shipbuilders.
- The process has vastly improved both the quantity and quality of information available to employees. There are numerous vehicles in existence, many of which are controlled by employee committees that provide up-to-date, credible information about the business.
- The process is helping integrate the organization horizontally. It is an organization of silos in which, historically, managers looked out for their areas, their people and themselves. More and more, these managers and their staffs are seeing the connections among everyone in being successful in the long run and are beginning to behave accordingly.
- The process has resulted in some "high road" decisions. A favorite phrase of John Welch, the current president of Electric Boat, is that they are "going to take the high road to the future." In practical terms this means that when the organization comes to a fork in the road, they will choose the path that best manifests the values to which they have committed. On a number of

¹⁹ The involvement to date sets a clear guideline that union officials do not make decisions about whom to hire. They do, however, have a direct and legitimate input to the selection process.

occasions during the last year, leadership has demonstrated a strong commitment to the high road to the future. For example, there was a point at which the company could have saved some money in unpaid contractual bonuses by laying off a group of workers two or three weeks ahead of their scheduled layoff in the long-range plan. When the union raised the issue of the “morality” of this given the situation and how hard people were working in the Yard, management listened and did not pursue the idea.

There are, of course, other changes. The list above represents the critical impacts of the process on the organization. As time moves forward, there will likely be others.

Lessons Learned

This may be the most difficult section to write. At this point it is difficult to know just what lessons are known. And, the process has been so long and so complex that it is sometimes difficult to understand what you know. In any case, here is our attempt to capture some lessons.

- As goes leadership, so goes the change. Unless and until an organization has visionary, committed, energetic top leaders who both create the vision and help the organization walk the talk, there is little long term hope for a transformation effort.
- In the organized parts of the business, you can only go as fast as the unions or management is willing to go. The process operates on the lowest common denominator principle. If either party is stuck in their past, change will be slow if not impossible.
- Technical genius does not equate to transforming the culture. In any number of cases, a management culture that will engineer the daylights out of a single part will turn right around and go launch a major people program with little or no forethought or planning. Getting managers to devote the same level of energy to the human system that they do to the technical, product, or business system would be a great advantage.
- The pathology of the organization will show up in the change process. On any number of occasions, difficulties in the change process end up looking exactly like the difficulties in the business units. It seems that what goes wrong with the organization will eventually go wrong with the effort to change the organization. [The key, in our judgment, is to treat the pathology in the change process as a learning opportunity and try to deal with it in such a way that the lessons are transferable to the day-to-day business.]
- We needed stronger joint leadership for change at the top earlier in the process. For a time and in some areas, the change process and activities meandered. There was not solid direction and no accountability. For example, one business unit’s steering committee acted for almost three years like a problem-solving group, addressing issues rather than designing and instituting change in the business.
- The lack of strong strategic leadership in the unions was a limitation. Although the union leadership was intelligent and well intentioned, they have yet to figure out how to be a business stakeholder while filling their legal representative role. For several years we encouraged the unions’ leadership to adopt internal change processes and strategic planning efforts to strengthen their unions and their contribution to overall change.
- The management organization apparently did not understand the need to, did not have the data for, or was not willing to deal with leaders whose actions in the workplace ran counter

to the principles and vision of the culture change process. This is a difficult situation. First, whatever leaders had been doing, they had been doing for years and it worked—worked in the sense that the behavior was at worst tolerated and at best rewarded. All of a sudden, there is this push from the top (which was seen by many middle and first-line managers as out-of-touch with the day-to-day reality of the business) for the latest program-of-the-month. Why would this be any different than the hundreds of other initiatives that have come and gone over the last three decades? So, people kept doing what they had always done and, as the saying goes, kept getting what they always got. The problem in this case was that the actions and the failure to address the actions sent strong messages to employees that “this, too, shall pass.”

- In this business the customer really is king.²⁰ The United States Navy’s principles and practices (as well as the U.S. Government’s) will need to evolve over time if there is to be a larger context that supports change. Some of the historical philosophies get in the way and some of the rules of finance (charging to contracts versus “overhead”) are a major barrier to change and improvement.
- The change in the philosophy and behavior of the corporation’s headquarters has been significant. In contrast to the early 80s, the philosophy appears to be one of openness and willingness to learn combined with a style of empowering its businesses to operate in a semi-autonomous manner. Top corporate leadership has been willing to stand back and let Electric Boat make its own cultural bed for the future. This shift was essential.

Conclusion

Whatever comes of this effort, it is truly a model of commitment. Through several years and the most difficult of times, General Dynamics, Electric Boat, The Marine Draftsmen’s Association-UAW, The Metal Trades Council, and hundreds of salaried/hourly employees stayed the course. This persistence, a handful of visionary leaders, and a lot of courage among some managers, some union leaders, and some employees (salaried and hourly) has kept the process moving through the best and worst of times. Without these people, nothing would have been possible.

The model for change is complex and difficult to implement. EB and the unions adopted the complex system model in which they have to deal with a variety of factors simultaneously. Each of those factors (employee involvement, communication, leadership development, etc.) is a challenge in itself. Managing a number of them simultaneously in this context is like herding cats while juggling sharp knives. The synergistic effects of the efforts are beginning to show results. The difficulty is that with each level of success comes another more complex and more difficult challenge.

Finally, there are tributes due to a number of employees who serve in, consult to, and generally support the process. From a point in time when there were few interested in applying for full-time internal consultant positions, the last round of vacancies had an applicant pool of almost

²⁰ In fact, there is not just one United States Navy customer, but several different Navy customers which have different philosophies and different approaches to dealing with contractors.

forty people from all levels and roles in the organization. To pursue and accept one of these positions was and is an act of courage.

At the same time, a number of employees have performed service above and beyond the call of duty on their own time without additional compensation and, sometimes, at their own professional risk. EB will in many cases not even know about these contributions and, therefore, will never be able to recognize people for it. These “underground” change agents have made invaluable contributions to the change process and to the future of the Electric Boat Company.

Postscript

Since this case was originally written in 1997, there have been a number of events that affected the change process at Electric Boat. On the positive side, the company sponsored a series of leadership development workshops for all leadership in the business (including union officials). Over 1,000 people attended the three-day sessions. Included was extensive involvement by members of the EBSC. They introduced the program the first day, held a “listening” lunch during the program, and came back for the closing session and “graduation.” The sessions received very positive reviews and have generated a “common language” about how to treat people in the shipyard and engineering/design businesses.

A bad news/good news effort involves communication. Because there continued to be difficulties with communication processes, the corporation contracted with an outside communications consulting firm to do an evaluation of communication. Their report was highly critical and contained several recommendations about what needed to be done. At the time of publication, the recommendations are being reviewed for implementation.

Probably the most difficult situation since 1997 involves negotiations. In '97, the corporation and the MDA-UAW bargained. Although the parties had intended to do alternative bargaining; however, the bargaining process turned out to be very traditional and nearly came apart near the end.

A year later, the corporation and the MTC opened talks on a critical contract. Again the intention was to do alternative bargaining. After a couple of months, however, this bargaining turned traditional. There was a great deal of tension near the end. Although the membership approved the final contract, there was a great deal of residual hostility about some elements of the agreement. Immediately after the vote was taken to approve the contract, the MTC leadership voted unanimously to withdraw from all joint efforts with the company in protest against the process and outcome of bargaining. Nearly a year after the completion of bargaining, the company and union have reached some accord on a couple of issues.

This is a most difficult time for the business. In fact, the survival of the business may be at stake. As such, it is a time when the company and unions most need to work together to develop a strategy for the future. Although the corporate leaders are ready and willing, the union leaders of the MTC have refused to meet and discuss the reactivation of the joint process.

In the meantime, the next cycle of MDA-UAW bargaining has begun. This time both parties spent considerable time assuring managers and union members that there would be a different approach. The effectiveness of this approach will not be known for a couple of more months.²¹

So, the effort continues at some level. The corporate leadership continues its interest in changing the organization toward the values stated in the EBSC. The unions still support the overall goals of the joint effort, but in the case of the MTC, there is severe resistance to sitting as part of a joint committee.

Only time and continuing efforts on the parts of both parties will assure that the early signs of progress will continue.

²¹ This bargaining process turned out to be successful as well. The overall impact on the relationship and, hence, the business continues to be positive.