

CASE STUDY

Pratt and Whitney (United Technologies)

*Fostering Workplace Innovation and
Labor-Management Partnership:
The Challenge of Strategic Shifts in Business Operations*

Summary

- Who:** Pratt & Whitney (United Technologies)
International Association of Machinists
Local Lodge 971
- Where:** West Palm Beach, Florida,
Military Jet Engines and Space Sector
- When:** First Visit: April 1999
Second Visit: October 25-26, 1999
- Why:** Strategic Organizational Change and Funding
- What:** Closing of military jet engine side of the facility
and lay off of workers

Introduction

Key Challenges and Key Lessons Learned

The central challenge facing this facility changed dramatically on August 12, 1999. Instead of the challenges of labor management partnership and continuous improvement, the focus shifted to core questions of business strategy and job security when United Technologies announced that it was closing the military jet engine business at West Palm Beach and reducing its total workforce by 1500 people. Ongoing cost reductions and the need to be leaner were cited as the reasons for this action. Louis R. Chenevert, Pratt and Whitney president explained,

We've made considerable progress transforming Pratt into a lean organization, reducing costs and improving our ability to respond to customers. However, we see continuing competitive pressures, which make it critical that we eliminate excess floor space and more closely match our cost structure to changing business conditions. As part of United Technologies' overall restructuring initiative, we have an exceptional opportunity to further reduce costs and streamline operations at Pratt¹

Such organizational instability has been a threat for some time at the facility. In an effort to improve the plant's performance and viability, management and labor had jointly been developing and implementing a high involvement work process. The process was an extensive effort initiated by managers and union officials at the facility. Unfortunately, it never achieved sustained commitment and support from either the International Association of Machinists (IAM) or United Technologies/Pratt and Whitney at the highest levels.

According to Jim Wilkinson, Materials Services Operations Manager at West Palm Beach, the early management champions of the initiative left the company for retirement or new jobs, and the process became solely driven from the bottom up. This bottom up approach is very risky in a company where the principles of labor management teamwork are not firmly embedded in the culture.

It appears that the leadership at the corporate level was aware of the activity, but they may have been unclear about what might be gained from the systematic involvement of employees and employee representatives in the operation of the facility. Local champions took a

¹ Press release: Pratt & Whitney, East Hartford, Connecticut, August 12, 1999; Mark Sullivan, contact person.

cautious approach and wanted to make sure the initiative would be successful before they shared much detail with their corporate officers. The lack of clearly defined and measurable benefits made it difficult for facility advocates of the process to convince others of its value. This made those working on the plan overly cautious which slowed the process of implementation. Ultimately results of the initiative came along too slowly to influence corporate policy. Among the lessons Jim Wilkinson highlighted is the idea that they should have moved forward more quickly and fixed some things later rather than wait to make the plan perfect.

Among the lessons Jim Wilkinson highlighted is the idea that they should have moved forward more quickly and fixed some things later rather than wait to make the plan perfect.

Another challenge that those in the facility faced was the history of contentious labor/management relationships, which existed at the main Pratt and Whitney headquarters. A relationship that was markedly more positive had developed at West Palm Beach, but no one at the corporate level was aware how different the nature of the relationship really was, and what it might mean for corporate economic viability.

The West Palm Beach facility has traditionally been a research and development center that employed a large number of engineers and a group of highly trained machinists.² The workforce possesses an array of knowledge and skills that the company will lose with this plant closing. Much of the top engineering talent has not accepted a transfer back to Connecticut, and the company has not made arrangements to transfer the majority of machinists currently employed at West Palm Beach. It is not clear whether the knowledge these employees possess was considered an asset outside the facility or whether its importance in the types and quality of work being done was in any way an issue in corporate strategic decision making.

Some unique operations such as the experimental jet and rocket engine test area will remain at the West Palm Beach site. The test facility must have a large area within which to erect its test stands and this space may not be available onsite in Connecticut. One of the teams interviewed in this study was a team in the test area. The test area crew performs 30-35 engine tests each year. The workers in this area were very proud of the work they do and the process they had made toward the joint creation of a new job description for this work area.

² According to Local 971 president David Straight, the average seniority for machinists is 24 years and the average age is 53. Notes from interview on April 27, 1999 at facility.

Additionally, the space propulsion sector working in the facility will remain for now, but there are rumors of a Pratt acquisition of a California-based firm. The future is not set for this unit.³ Jack Franklin, a methods engineer in the propulsion area, explained that this unit was separated from engines in an earlier restructuring. When that separation occurred, people began increasing their flexibility by learning a wider range of skills and creating a dedicated flow of materials through their section.

Summary of Types of Instability

Organizational instability is the key type of instability facing this facility. United Technologies/Pratt and Whitney are facing potential economic constraints with the decline in military spending coupled with increased competitive pressures. One response to these constraints is a general reduction in costs through a consolidation of operations, and a reduction in capital outlay through the reduction of facilities.

Pratt and Whitney's strategy for the West Palm facility appears to have shifted over time...

Corporate leadership appears to have had some ambivalence about the ongoing utility of the West Palm facility. There was uncertainty about what where the best uses for the facility and its highly trained workforce. West Palm Beach was originally established in 1958 as a research and development center in a location that allowed for high degrees of secrecy. Cutting edge engines were designed and tested here (the SR-71 Blackbird, the R-15, the F-16, and the current F-22). Employment rose to 8,300 employees in 1989 but has declined 88% since that time.⁴ The decline in employment reflects the decline in U.S. military budgets as well as increased competition from other engine manufacturers such as General Electric and Rolls Royce. We were told that it would be highly unlikely for the firm to develop another new engine design unless it could collaborate with others to help ameliorate the high costs of this type of development.⁵

Pratt and Whitney's strategy for the West Palm facility appears to have shifted over time from its beginnings as a research and design facility

³ Stephen Pounds, West Palm Beach Post, August 13, 1999, 41 years of history end as aerospace giant leaves. From Internet www.gofbi.com/news/1999/-8/13/pratt/html.

⁴ Ibid.

⁵ In fact, Pratt and Whitney has announce a joint venture with GE in Europe called the Engine Alliance. The goal of this joint venture is to develop an engine for the super jumbo airbus. From the Commission of the European Communities, Press release, September 15, 1999. Reference number: IP/99/684. Subject: Competition Policy-Transport Main.

to a 1994 proposal to combine Florida and Connecticut engineering staffs through a most recent attempt to shift some production to the facility. Comments by members of the West Palm Beach workforce indicated that they believed that the decision makers in Connecticut considered West Palm to be a ‘retirement assignment’ for executives. In fact, the facility may have been seen as less dynamic due to the nature of its research and development mission. Additionally, the facility was reported to have a great deal of autonomy. In 1994, when Karl Krepack took over the presidency of Pratt and Whitney, he began an integration process that included linking information and other production related systems throughout the company.

The subsequent introduction of production work into this facility was a radical change in culture and included the need to reduce the opportunities for individual highly skilled workers to use those skills in their daily tasks. It flew in the face of what the workforce perceived as the traditional split of primary tasks between their R and D role and the production role of other facilities. Workers were asked to broaden the span of the narrowly defined job classifications that they had previously gained through collective bargaining. The company and the union at West Palm were working through a very intricate pattern of contractual relationships in an effort to link the greater flexibility needed to meet competitive challenges with compensation and employee skill development. This was a slow process but many employees were finding it rewarding. One tool and die maker, Bob Gotsell, told us that he’s hoping to relocate to Connecticut and try and take some of this involvement process with him. Though he is still trying to make sense of the announcement, he said, “I know that we will lose the ability to do what we do here, but I’ll support it the whole way. Here you felt like you owned the business. Now you can’t figure out what you did wrong.”

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Summary of Mitigation Strategies

In 1995, Jim Wilkinson and Larry Richards, two SBU managers, collaborated to investigate the possibility of a more cooperative relationship with the workforce. They had been dissatisfied with how they perceived the interests of their business units had been represented during collective bargaining. With the assistance of a change agent from UTC’s flexible manufacturing team, Alden Davis, management decided to move forward with a plan to reduce or adjust job descriptions. The union needed to be involved. Jeff Hopkins, West Palm Human Resources Manager and one of those involved in the initiative from the beginning, indicated that getting the union

involved was possible because the level of trust was higher in Florida than in some other parts of the organization.

The initial joint group participated in team building exercises led by Alden Davis. Out of these early-shared experiences, the group developed enough understanding to agree to a feasibility study and a benchmarking trip that took them to four widely diverse sites. Three of the sites were in the industry and produced weapons or related products. The fourth organization was the New Haven Symphony where, after the musicians had gone on strike and been locked out, a joint team was able to put together a contract. From this base of shared experience, the West Palm team created a mission statement and made plans to go forward.

These early fact-finding efforts eventually evolved into an agreement with the union to develop a high involvement initiative. In January of 1996, exploratory language, Letter 29, was developed after a one-week offsite. Jeff Hopkins recalled that Bill Lefco and Larry Richards wrote the initial “strawman” language during a phone call. This original language was modified and included in the collective bargaining agreement (see Appendix). This led to the joint development of a carefully devised plan for the change initiative. Joint committees were set up to create implementation designs for the process.

The initiative called for the formation of a leaner, team-based work organization system with attention to skill development, compensation, job preservation and work design. A committee was created to work on each of these four elements of the initiative. It speaks volumes for the local union that not only did local members ratify the contract containing Letter 29 in January 1996, but also local members ratified the processes and their implementation again on February 22, 1998. The goals of the initiative were to improve quality, increase job flexibility, and improve employee skill levels. As the result of doing these things, the West Palm Beach facility has become the “site of choice for growth within Pratt and Whitney.”⁶

Although the bargaining unit voted on the plan and reportedly supported it by a large margin, there was less direct support from managers both inside and outside the facility. Pratt and Whitney still had not made a decision about the future of the facility. Many hoped that successful implementation of the plan would lead to cost savings and other innovative changes that would persuade the corporate office to maintain and expand work in the facility.

⁶ Taken from Letter 29 materials received from both union and management at West Palm Beach.

Managers within the facility were not receiving much encouragement for their efforts in the initiative, and they were frustrated with the slow pace that often accompanies a joint effort. A main procedural point was the agreement that decision-making in the Core Team or leadership group was by consensus. This type of decision-making rests in a trust relationship that must be built and maintained. A number of small setbacks made trust building a very slow process. A vicious cycle developed. People became frustrated at the slow process and decided that attending meetings was a waste of time. Then, as attendance became sporadic, it became more and more difficult to reach any decisions, which then fed into a spiral of frustration over the slow progress. The lack of progress in implementing the plan was a deep source of disappointment. Dave Straight, president of IAM Local Lodge 971, expressed this best when he said, "My biggest heart ache is that I would have given anything to have that plan work somewhere."

Multiple agendas surfaced within those working on the planning, which made the progress seem even slower. Dave Straight recounted one specific example from the introduction of a new turbine exhaust product. The product was new and production facilities were 'greenfield,' so it seemed the perfect place to introduce the processes from the labor/management initiative. There were only four machinists involved so it was not practical to create a new job classification. The introduction became a "total nightmare" when union people working on the process made promises linked to money. Expectations were raised among the people in the unit that they would be paid more for learning additional skills to allow job rotation and a different work design. Those union representatives had a separate agenda that linked all cooperative efforts to pay increases. When this did not occur, the people in the unit felt deceived.

Although the complete labor/management plan was never fully implemented, at least one production cell had been designed and put in operation using the process. The workers can do any job in the cell, which raised concerns among the workers who worried about the crossing of crafts as "a sheet metal worker did press work." The plan was most fully implemented among the members of the Test Area Work Team. One important note is that this team is to remain on site after much of the work leaves this facility. It is unclear whether they will continue to implement the provisions of Letter 29. According to Dave Leibeck, a local IAM representative, it is, however, possible to see fragmented pieces of the process all over the plant.

Workers explained dilemmas they faced in trying to reduce costs. For example, they had responsibility for only 30% of the nozzle for the F-22 engine. Outside vendors who were not prime contracts do not have

to maintain the same level of redundancy that prime contractors do. Department of Defense requirements for prime contractors mandate a series of checks on product quality and cost effectiveness that are not extended to outside contractors. As such, the cost reduction opportunities are constrained or require links out into the supply chain.

Local union officers tried to rally support for their efforts...	During the period that the initiative was being developed, there were constant concerns that the facility would be closed. Paul Strang, an IAM Business Representative from the West Palm Beach Local Lodge, told us how local union officers tried to rally support for their efforts from local business groups as well as country and state politicians. These efforts were not as successful as they would have liked since Pratt and Whitney's Connecticut offices would not acknowledge any plans to move or reduce the size of the facility even after requests by the governor. ⁷
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Local public officials were hopeful that some change in the company's plans might be forthcoming after they learned of a letter, dated August 4, 1999, to Pratt from Air Force Lt. Col. Gail C. Allen, that detailed the Pentagon's concerns about whether moving the work out of Florida would "compromise Pratt's performance on some military programs."⁸ Of special concern was the work on the new joint strike fighter.

A representative from U.S. Representative Mark Foley's office reported that they had hoped that the Air Force concerns might provide some leverage to keep Pratt in the area. Union officials will have found this concern too little and too late. At a much earlier date, they had approached Representative Foley and asked him to help them in their efforts to keep Pratt in West Palm Beach. His lack of responsiveness generated the display of "Impeach Foley" bumper stickers on a number of cars driven by IAM members.

Pratt apparently addressed the military's concerns adequately because the U.S. Defense Logistics Office announced that the "company has assured the military that its concerns are going to be addressed." Company spokesperson Mark Sullivan reported that Pratt "went to the highest levels to assure the military the move to Connecticut would be

⁷ Associated Press Story, Naples Daily News, August 11, 1999, Officials scramble to stop Pratt & Whitney from leaving Florida, <http://www.naplesnews.com/today/business/d304917a.html>. The county and state were hit twice as they learned that the Sikorsky Aircraft facility located next to the Pratt and Whitney site is also to be closed laying off 520 employees.

⁸ Ibid.

flawless and seamless.”⁹ Certainly it is in Pratt’s interest to protect the \$1.9 billion in business the company does with the government each year.

Additional Observations Framing the Case

A number of factors may well have influenced the situation at Pratt and Whitney West Palm Beach. It is unclear what if any impact the following had on the eventual outcome. Nonetheless they have been identified by people at the facility or by the authors of this case as potentially influencing the relationship and the course of events. The first of these factors is the long-term history of labor relations distrust between the company and the IAM. This relationship was particularly fierce between the parties at the Connecticut headquarters location, although the company made no attempt to hide its desire to be non-union. Such traditional antagonisms shape the relationship between the workforce and management by creating distrust and a general unwillingness to cooperate with each other. In Florida, the relationship appears to have been less negative. Certainly the parties were able to work through many issues and build a mutually respectful collaboration.

For the international union this situation was a dilemma. Members would be affected no matter how the experiment in West Palm Beach turned out. It must have been difficult for long-term union leaders to place any trust in an initiative that included managers from a company with whom they had long had serious disputes. It is also frequently very hard for union leaders to understand how non-traditional initiatives that involve collaboration with management could ever work to the benefit of the membership. Years of collective bargaining experience have often reinforced distrust of leaders on both sides of the bargaining table.

However the transfer of knowledge and information happened, and subsequent negotiations in East Hartford led to the implementation of similar language as that which had been developed in West Palm. Since the more traditional labor management relationship in Connecticut did not contain the same levels of trust that had been built in Florida, we would anticipate a different set of outcomes.

⁹ S. Pounds, West Palm Beach Post, August 14, 1999, Government won’t block Pratt and Whitney’s planned move, from <http://www.gopbi.com/news/1999/08/14/pratt.html>

The local in East Hartford is much larger and represents many more workers than the local in West Palm Beach. The Connecticut local also had a pool of laid off people who needed work. It is entirely understandable for a local union to do what it can to try and return its members to the workforce. Unfortunately, union members in West Palm Beach believed that the international union sacrificed them since they were the smaller, and therefore electorally less powerful group. Traditionally, however, if jobs are to be lost, unions will try to serve the greater good even if it must be at the expense of the smaller number.

One larger economic factor has surfaced in the form of suppositions by many people concerning economic pressures on the parent company. United Technologies Incorporated, Pratt and Whitney's parent company, recently sold its automotive parts unit, and the losses from this restructuring action would offset the capital gains from the sale. In addition, closing the facility is estimated to save between \$50 million to \$100 million in overhead. These financial incentives match current needs as Pratt has suffered several competitive setbacks such as the recent failure of a bid to supply commercial engines to Boeing's 77 aircraft.¹⁰

An internal issue at this site, albeit not directly with the IAM local, may have been the pending potential certification of a union for the engineers at this facility by the Florida Professional Association. There had already been one vote in 1997 when the ballots were sealed after a legal challenge from corporate management. A second vote was held in May of 1999. Karl Krapeck, who had just been appointed COO of United Technologies from his post as president of Pratt and Whitney, issued a statement prior to the election which many felt linked the outcome of the vote to decisions about the future of the facility. The engineers voted not to affiliate.

The clearest of these lessons is the need for strong leadership and support for the process at the highest levels of the organizations involved whether the initiative starts bottom up or top down.

Final Reflections

A number of points in this case can be taken away as lessons to be used by others as they attempt to make a transition to greater joint operations and implementation of network systems. The clearest of these lessons is the need for strong leadership and support for the process at the highest levels of the organizations involves whether the

¹⁰ S. Pounds, West Palm Beach Post, August 13, 1999, 41 years of history end as aerospace giant leaves. From Internet www.gopbi.com/news/1999/08/13/pratt.html.

initiative starts bottom up or top down. Clearly in this situation, the lack of sustained support from high levels of management and the union left local leadership to drive the program forward.

Often local leadership would be caught unaware by higher-level decisions that did not take the local joint activities into account. In addition, local leaders were trying to participate in the activities necessary for a successful implementation while doing their regular tasks. An initiative as ambitious as this plan needed to have full time support from more people. It did not fail because of the lack of dedicated resources and commitment, but it may have been more successful with them.

The best plan in the world is worth little unless it is implemented. In this facility, the plan was comprehensive. The implementation process, however, was restrained by caution and the slow development of trust as well as huge frustrations over the deliberate pace of consensus decision-making. These problems were exacerbated by a number of events over time that provided obstacles to the smooth progress of the plan such as periodic small layoffs, the introduction of production work, and the movement of engineers to Connecticut. Each of these actions might have been handled differently with high-level support and buy-in for the initiative.

Measures must be developed that reflect the effect that these initiatives have on organizations. How to place a value on a partnership agreement to address critical issues such as skills and job redesign? Often the results of employee involvement are reflected in costly details that don't occur because they have been avoided through employee actions. The company cannot estimate how much cost was avoided by employee involvement nor can it estimate how much value was lost by restructuring. These are critical puzzles that need to be solved before the full impact of joint initiatives can be appreciated.

At a higher level, events in Florida and Connecticut point out a valuable insight. The language that both locations implemented was similar but had distinctly different outcomes in each site. Where the language was embedded in a more trusting and cooperative environment it led to greater collaboration and innovative behaviors. Employees began to feel as though their expertise and knowledge could make some positive improvements in their daily work as well as the firm's future.

Appendix

LETTER XXIX

Mr. Frederick W. Thorpe, Jr., President
Seminole Lodge 971
International Association of Machinists
And Aerospace Workers
P. O. Box 968
Jupiter, FL 33468

Dear Mr. Thorpe:

This is to confirm the understanding and agreement reached in this contract negotiation between the company and Seminole Lodge 971, International Association of Machinists and Aerospace Workers, AFL-CIO, that both parties are committed to the continuation of improved relations to make GESP a site of choice for future work.

We are both committed to the key goals of improved quality, employee development, productivity, employee participation, flexibility and the financial performance of the company while enhancing earning opportunities, long term employment, job satisfaction and safety for employees.

In an effort to meet these commitments it is agreed to establish a joint CORE team consisting of the union president and the shop committee. Company representatives will include managers representing Assembly, Manufacturing, Quality, Facilities and Human Resources. Immediately after the ratification of this collective bargaining agreement the CORE team will begin to investigate mutually defined issues and initiatives intended to support the accomplishment of the goals of this agreement. Costs directly associated with this joint initiative will be solely the responsibility of the company.

The CORE team will focus on, but not be limited to, the following issues and initiatives. To accomplish these tasks the CORE team will utilize sub-teams, made up of both company and union representatives, to work specific items at the discretion of the CORE team.

- Development of a WORK DESIGN plan for all hourly functions with focus on job flexibility by a target date of August 31, 1996 that is mutually agreeable to the company and the union.

- Development of an hourly SKILLS DEVELOPMENT system that supports the Work Design Plan by a target date of September 30, 1996 that is mutually agreeable to both the company and the union.
- Development of an hourly COMPENSATION system that supports the Work Design Plan by a target date of October 31, 1996 that is mutually agreeable to both the company and the union.
- Development of an hourly JOB PRESERVATION plan that supports the above items and is mutually agreeable to both the company and the union by a target date of November 30, 1996.
- It is agreed that no involuntary layoffs or reduction of wages shall occur as a direct result of the implementation of any joint initiatives.

Very truly yours,
PRATT & WHITNEY

W. V. Panetta
Vice President, Human Resources

Teaching Notes

It is people who are at the heart of new work systems – establishing stability and then driving continuous improvement. The Labor Aerospace Research Agenda (LARA) at MIT is committed to furthering our understanding of the human and institutional aspects of these new work systems, especially as they relate to broader issues of employment and vitality in the aerospace industry.

These case studies were written by a MIT-based research team and were developed in conjunction with representatives from each of the sites with the help of representatives of the United Auto Workers and the International Association of Machinists.

These case studies will be valuable to union leaders, labor educators, college professors and human resource trainers as well as anyone interested in discussing current dilemmas in the aerospace industry around employment. These can be used in a classroom setting, in small discussion groups, or by individuals as thought starters. This case study was prepared as an example of the challenges of instability in the aerospace industry. It was written as a basis for dialogue and learning, not as an illustration of either effective or ineffective actions. There may be many possible answers to these questions. They are designed to foster constructive dialogue and action on these very challenging issues.

Potential Discussion Questions

- What would explain the successes associated with the labor-partnership and other innovations in this case?
- What are limitations associated with this set of change efforts?
- What steps could have been taken to move the employee involvement along more quickly?
- What specific limitations are associated with the bottom up approach employed at West Palm? Can a bottom up approach succeed? If so, what does it need to succeed?
- To what extent do you think the changing markets (declining military spending, increased competition, etc.) were the real drivers of

the closing of the jet engine side of the facility – as compared to organizational instability as the primary driver?

- Given the difficulty in assessing the cost avoided by employee involvement or the value lost by restructuring, what does this case teach us about the challenges of valuing joint initiatives?

Betty Barrett prepared this case with editorial design input from Susan Cass, John Verbos and other members of the LARA team. This case study is an example of the challenges of instability in the aerospace industry and was written as a basis for dialogue and learning – not as an illustration of either effective or ineffective action.

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