International Competition and the Organization of Production: The Study Action Team Process at Trico Products

Peter M. Lazes
Cornell University

Chapter 5 (pp. 79-90) in: Restructuring and Emerging Patterns of Industrial Relations
Stephen R. Sleigh, ed.
Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1993
DOI: 10.17848/9780880995566.ch5

Copyright ©1993. W.E. Upjohn Institute for Employment Research. All rights reserved.
After losing $28 million over a four-year period, and faced with increasing pressure from OEMs (Original Equipment Manufacturers) demanding that Trico Products reduce their product costs, Dick Wolf, the president of the company, announced his plan to lay off 1,400 out of 2,000 workers in November 1985. The “Big Three” automakers were forcing Trico to reduce their costs by 30 percent in three years in order to retain their contracts. Trico decided, with the encouragement of Ford executives, to move the bulk of plant operations to Mexico and Texas in order to remain competitive, as this move would result in significant wage reductions. Little was done to investigate the feasibility of cutting operating costs in order to remain in Buffalo; it seemed that these costs were accepted as a given that could not be changed.

The projected plant closing and move from Buffalo was a major departure from the company’s traditions. Trico Products had been founded in Buffalo in 1917 and was still controlled by a Board of Directors mainly based in the city. For years, a basic concern of this board was to keep jobs and manufacturing in their area, yet the plan to set up plants in Mexico and Texas seemed to them to be the only practical way to remain profitable.

Soon after hearing of the relocation plan, I contacted both Dick Wolf and Tom Monaghan, the regional director of the United Auto Workers (UAW), to explore an alternate approach. I suggested that they consider the possibility of restructuring the existing Trico plants in order to
reduce manufacturing costs and improve production quality, thereby obviating the need to relocate. The proposal included the development of small groups of workers and managers as Study Action Teams (SATs) who would work full time on analyzing manufacturing procedures and the costs of production, and then propose alternative cost-cutting methods. This approach was based on a process that I had helped to establish at the Xerox Corporation in 1982-84, which eliminated the need for substantial layoffs by reducing production costs by 30 percent. In my work with the PEWS (Programs for Employment and Workplace Systems) group at the Cornell School of Industrial and Labor Relations, I had continued to refine this method successfully in working with several other companies and unions.

Wolf was initially reluctant to discuss the possibility of a Study Action Team process at Trico, because he had already given up on the attempt to make the Buffalo operation profitable. However, he finally agreed, after six weeks of discussions, to meet with local 2100 of the UAW and with Vincent Tese, director of the New York State Department of Economic Development, to at least consider the proposal. At this meeting, he was persuaded to set up Study Action Teams with three purposes: to examine ways to improve efficiency in Trico's manufacturing operations, to identify specific methods to reduce yearly costs, and to improve the quality and timeliness of product delivery. The Department of Economic Development would share the costs with Trico for Cornell consultants who would help to establish and guide the SAT process. While Wolf agreed to establish the Study Action Teams, he refused to set targets for each SAT, or to commit the company to a reversal of its relocation plan if the SATs were in fact successful. Despite this, the UAW informally set a 30 percent cost reduction target for the teams, which was the amount of the cost reduction required by Ford. It was decided by Wolf and the union that three SATs would be established and have 18 weeks to work on this project. Two teams would each study a different area of the plant—the toolroom and linkage assembly areas—and the third would analyze the possibility of constructing a new plant to replace current obsolete facilities and compare the costs of this with constructing new plants in Mexico and Texas.
Method of Analysis and Action

The Trico Study Action Teams for the toolroom and linkage assembly areas consisted of two workers (union representatives) and two managers from each of the departments. Each team was assisted by the Cornell staff and by a manufacturing engineer from Rensselaer Polytechnic Institute (RPI). The third SAT consisted of members of the executive committee of UAW local 2100, the manufacturing engineer from RPI, and an architect from Boston to study new plant construction. In addition, a joint Labor-Management Steering Committee of middle and upper management of the company and the executive committee of the union was established to meet with the three teams every two weeks.

The role of the Steering Committee was to provide overall guidance to each team, help link and integrate their work, and remove roadblocks to obtaining technical assistance and production/customer information. It would also help judge the value of projects and implement solutions.

All three SATs worked full time on their respective tasks. Technical and financial assistance was obtained from Trico employees upon the written request of the teams. However, towards the end of the SAT process, access to accounting staff became hard to obtain, so the consulting manufacturing engineer from RPI was asked to analyze and evaluate many of the final proposals.

In addition to the three SAT projects, Cornell conducted a study analyzing the successes and problems of firms that had relocated to the Texas-Mexico border where Trico planned to move. This study, which was included in the final report to Trico, examined the type of work performed, the skills and wages of workers in the area, and the availability of technical specialists.

Training for Study Action Teams

Study Action Team and Steering Committee members took part in an intensive four-day training program which included exercises in problemsolving and team building; cost-accounting procedures (cost-benefit analysis); presentation methods; team meeting skills; techniques to obtain technical and financial information; breakdowns of the
cost structure of the toolroom and linkage departments; methods for conducting surveys and questionnaires; methods for involving employees in changes within their departments; and methods of evaluating the workflow of production. Former SAT members from the Xerox Corporation participated in two training sessions and presented techniques they had found successful for identifying, analyzing, and implementing solutions.

Plant visits were also arranged for the SAT members to meet with labor and management of Packard Electric, a major supplier of parts for General Motors, and Harley Davidson. At Harley Davidson, workers and managers are engaged in cost reductions, product improvement, and restructuring of the decisionmaking roles of labor and management. Meeting and observing other teams in action provided the Trico SAT members with suggestions for changes and specific areas to investigate, and helped them better understand their roles.

Initial Outcomes

At the end of 18 weeks, the two in-plant SATs presented their recommendations for changes to the Trico management, regional UAW representatives, local 2100 executives, and New York State government officials. All of the recommendations had been analyzed by the appropriate production areas prior to this meeting and had received the approval of line operators.

The toolroom SAT proposals included: a new layout of equipment, a comprehensive training program for all employees in CAD/CAM to improve their capacity for insourcing work, improved workflow within the department, a gainsharing compensation plan, and a flexible time schedule for workers. The most controversial recommendation was a wage increase, which was suggested because 38 skilled workers had quit during the past 18 months due to the low pay in comparison to other companies in Buffalo.

The linkage SAT presented over 60 cost-saving projects. Savings amounted to over $9 million per year for this department—considerably more than the $8 million (30 percent cost reduction) target originally set by the team. Included in this proposal were suggestions for a
substantial redesign of almost all jobs and a new layout of equipment and material storage. Recommendations by this team focused on the elimination of production supervisors: all operators would be trained and have responsibility for the quality of each stage of the production process. An investment in high-speed presses and modification of old equipment were recommended to enable the assembly area to reduce set-up time, improve servicing of equipment, and increase their ability to make quick die changeovers. New equipment and accessible areas for storing component parts were to be integrated into a just-in-time inventory control system. These changes would eliminate the need for their expensive computerized Materials Information System. As a result of these restructuring activities, extensive amounts of in-process inventory would also be eliminated. Inventory would consist only of what was immediately needed. Adjustments in compensation were also suggested by this team, including the elimination of the piece-rate system and the development of a plantwide gainsharing process.

**Final Outcomes and Agreements**

A final meeting was held at the Department of Economic Development office in New York City on October 8, 1986 to review all of the recommendations of the SATs. This meeting was held with Dick Wolf, Vincent Tese, the manufacturing engineer consultant, the shop chairman of the UAW, and myself. Our final report summarized the total cost savings based on the findings of the two in-plant SATs, and the work of the third SAT, which had analyzed the cost savings as a result of consolidating all operations in Buffalo and constructing a new plant at square footage costs equal to those in Brownsville, Texas. The combined work of the three SATs amounted to the identification of cost savings of $37.5 million per year, amounting to 30 percent of operating costs—the initial target. Although the consolidation into one plant would result in a loss of 250 direct and 100 indirect jobs, most of these reductions would be achieved by retirement and attrition. The UAW agreed to these reductions as part of the total proposal.

Our report also concluded that, no matter where the plants were located, it would be critical for Trico to change its production philoso-
phy and not just chase low wages if it wanted to achieve a just-in-time, flexible, high-performance work system. The report also stressed the need for technological breakthroughs by acquiring modular assembly parts such as electric motors, since the Big Three were moving towards modular assembly units. The report maintained that although competitors might find it easy to manufacture where wage rates are low, they would not have the skilled workforce and technical resources of New York to continue to improve their production system.

In summary, the report stated that the lack of a skilled workforce and technical resources in Brownsville and Matamoros, coupled with the cost-saving analysis of the three SATs, proved that the strategy to move south was “economically unsound” and, further, would eventually erode Trico's technological superiority. It also concluded that going forward with the plan to move would likely result in the loss of all manufacturing jobs in Buffalo. Vincent Tese offered Dick Wolf funds to help pay for release time for training employees in the new work systems and in how to use new equipment, R&D funds to assist in acquiring the new motor for modular assembly, and the development of a high-tech training center to be located adjacent to the new factory.

In February 1987, after months of meetings between Trico and the UAW, a final agreement on the SAT proposal was reached between Trico Products and UAW Local 2100. Although Trico decided not to reverse their decision to move, the company did decide to keep an additional 300 jobs in Buffalo over what they had originally planned. (Left behind was to have been a skeleton staff of 600 employees to do basic engineering, research and development, and low-volume work.) The 300 additional jobs resulted from productivity improvements suggested by the linkage SAT in several of their low-volume areas. A strong severance package was established for all workers to be laid off, which included continued medical insurance for several months, creation of an outplacement center, and additional pay for years of service.

The toolroom suggestions were implemented by Trico, except for the proposed wage increase, which was tabled for future discussion. The linkage assembly proposal to enable operators to inspect their own work and eliminate the need for final inspectors was also implemented, and several joint labor-management committees became a permanent
part of this department for training and to investigate the best use of
equipment.

A significant focus of the union during negotiations, aside from the
number of jobs that would remain in Buffalo, was the need to establish
a new production system with appropriate compensation. It had
become apparent to the leaders of UAW local 2100 during the SAT
process that significant changes would be needed in the production
system in order to save the jobs of Trico workers in the future.

General Risks and Benefits
of the Process for Participants

The entire SAT process was a risk for the union, management, and
the state. For management, the possibility of reversing their decision to
relocate involved losing approximately $5 million of construction
costs already committed to building a new plant. If it were not for the
fact that they were locally owned and that there was considerable com-
munity pressure to reduce the continued erosion of manufacturing jobs,
they would probably never even have considered the SAT proposal.

The union took a risk in getting involved in the SAT process
because they had no guarantee from Trico that the plan to move would
be changed. However, they were facing a no-win situation anyway, at
best being able to bargain for keeping only a few hundred jobs. The
gamble paid off as the Study Action Team process evolved into a con-
structive method which saved an additional 300 jobs.

The SAT process provided union representatives with extensive
access to financial and production information, giving them skills for
evaluating financial balance sheets and production accounting, and
giving them valuable information about advanced manufacturing
methods. The experience gained in these areas proved to be useful dur-
ing the final negotiations for severance pay and benefits and for keep-
ing more jobs in Buffalo.
Risks and Benefits of the SAT Approach

There are several questions raised concerning the Trico project, some of them related to the SAT process itself. How effective is this process, and why? Why does this method of analysis identify more comprehensive changes and a more realistic implementation process than traditional approaches?

Another important area of analysis concerns the overall outcomes and what could have strengthened the ability to keep jobs in Buffalo. What could have been done differently? Should unions support activities such as Study Action Teams? If this is a useful process for unions, are there better ways to establish such activities? Some of these questions may be answered by comparing the SAT process to traditional methods.

First, the SAT process helped to integrate the day-to-day knowledge of shop-floor employees, who know specific details of problems, with the broader knowledge of technical specialists. In traditional studies done by management, the ideas and perspectives of the workforce are rarely examined or considered. As a result of the integrated perspective, new ideas and solutions emerge. Independently, the observations of labor and management are significantly different and are rarely brought together.3

The second and perhaps most important aspect of the Study Action Team process is that it helps to establish a commitment to implement changes by the workforce and management. Analyses done solely by technical and financial specialists rarely convince plant management and workers to make changes. Without the commitment of key employees, and support from both management and labor, solutions agreed upon by specialists often remain just good suggestions which are never actually implemented.

Another beneficial aspect of the SAT process is that it enables an organization to identify and then find solutions to politically risky problems. Since the union members of SATs cannot be fired for voicing their ideas and concerns, the SAT process allows major problems to be identified which in the past might have been overlooked. Managers are often reluctant to raise problems because they are fearful of admitting to these situations in their departments or in the organization
as a whole. A fairly common feeling among managers is the fear that raising such questions could cost them their jobs. Also, the very process of engaging the employees who will be directly affected by a major organizational change creates an environment in which they are more likely to be committed to working in structures which they understand and have helped to develop.

To some extent, the entire SAT process at Trico Products was hindered by the president's initial and ongoing reluctance to establish a formal agreement. Although he accepted in principle the use of the three SATs and provided them with access to technical and financial staff, he never signed an agreement nor agreed to cost-saving targets. The experience at Xerox showed that having clear cost, productivity, and quality targets from the beginning of the process helped to keep the SAT process on track even when several managers left in the middle of the project because they were promoted into the manufacturing plants.4

The UAW decided that the practical course of action at Trico was to make the best of the situation rather than further delay getting the teams started or decide to withdraw from the process entirely. They felt they had no other choice than to continue even without having everything in place. In hindsight, another approach might have been tried to obtain a formal agreement from Dick Wolf. Requesting involvement and an agreement from the Board of Directors might have helped create a more accountable process.

The information on cost structures, production information, and new product requirements of customers which local 2100 and region 9 gained through the SAT process had never been made available to them before. This information gave the union a new tool for protecting the interests of workers by examining and then making recommendations for changing production methods. Traditionally, when there were severe economic problems in a particular firm, the UAW became involved in negotiating cost problems solely in terms of what they knew best and had control over—wages, benefits, and employment of workers. Specific productivity improvement changes had rarely been identified as an alternative to cutting wages or laying off workers. Although the members of the shop committee of local 2100 had no previous experience in analyzing and improving manufacturing processes, they quickly became experts.
The results of the Trico project and similar activities at Xerox suggest that the SAT process can give unions an opportunity to explore extensive changes in production, material control, and general costs, as well as customer-supplier relations. Rather than just battling over wages, benefits, and employment, solutions can be identified to reduce overhead and indirect labor and material costs, as well as improve the efficiencies of equipment and manufacturing processes. As David Steinwald, chairman of the shop committee, noted at the end of the SAT process, "it would have been nearly impossible to have saved an additional 300 jobs or obtained the severance package using traditional bargaining methods and lacking access to financial and productivity information." The above conclusions have been seconded by the leadership of local 2100 and the regional director of the UAW, Tom Friscano.

The final agreement between the UAW and Trico was reached largely because of the factual results of the studies conducted by the SATs. These findings identified the importance of keeping specific high-volume operations in Buffalo rather than relocating them to Texas. By agreeing to changes in work responsibility and manufacturing approaches in the toolroom and linkage departments, the union put itself in a strong position for negotiating an extensive severance package and the development of outplacement services.

In retrospect, it would have been extremely helpful to have been able to start the SAT process as soon as there were signs that Trico was in bad shape. If the process could have been established earlier, Dick Wolf and his Board of Directors might have been more receptive to a comprehensive approach for achieving cost reductions and changes, rather than focusing solely on labor costs.

In order to spread the knowledge of the methods and results of the SAT process to the UAW leadership in region 9, a workshop on the risks and benefits of SATs was held at their annual retreat in August 1987. The SAT process used at Trico Products was presented by members of the teams, who examined both the positive benefits and the areas of weakness. Many delegates to the meeting showed a strong interest in learning more about this new approach in case their local membership faced a similar plant closing or major layoff problem in the future.
Government Involvement

The Study Action Team process was an innovative and challenging experiment for the New York State Department of Economic Development. Prior to the Trico project, the strategy of this agency had been to focus on trying to attract new business to relocate to New York and improving access to on-the-shelf technology by existing factories. Although the Department of Economic Development and the governor felt comfortable with the concept of joint labor-management programs, such activities had not been seen as a practical process for solving significant productivity problems of firms.

Pressure from the governor’s office was important in getting Dick Wolf to sit down and agree to the SAT process. The state did not accept the conclusion of an earlier consulting report to Trico management which stated that “Trico’s middle managers and hourly employees could not change their nonproductive ways.”

After seeing the results of the SAT process at Trico, Vincent Tese decided to create the Industrial Effectiveness Program to provide development and implementation funds to companies and unions that establish SAT activities. By providing funding and holding workshops and seminars to promote the Study Action Team approach, New York State is helping to make the SAT process more accessible to other firms and unions; it is encouraging an aggressive examination of cost reductions rather than relying solely on wage reductions and layoffs when companies are faced with extensive needs to reduce costs. Vincent Tese commented at the end of the Trico project that “the Trico experience will make us better prepared to respond in the future...it sets a model that can be used to work with other companies.”

Future Issues

Study Action Teams are currently being used not only in New York State and around this country, but also in Poland to help improve efficiency and to create new work structures in some of their plants. The process is also being used to increase the opportunity for workers to
contribute to a more democratic form of decisionmaking as Poland changes to a social market economy.

There is an ongoing need to examine how to effectively integrate the ideas and concerns of employees at all levels of plants, and particularly at times of crisis such as Trico Products faced. The involvement of workers in the manufacturing and production decisionmaking areas of companies has not generally been considered important, but it seems likely that unions will need to consider the use of this approach more in the future as traditional methods used to negotiate saving jobs become less effective. In order to use this particular approach in the future, a careful analysis of the risks and benefits are needed, as well as proper training to help establish these activities.

NOTES

*I would like to express my thanks to Mary Mahon and Marie Rudden for their help in editing this article.

1. The Study Action Team (SAT) process is an intensive in-plant method of analyzing problems and implementing necessary changes. Workers and managers work full time on these projects (with some assistance from outside specialists), evaluating production processes and methods, workflow, quality processes, equipment improvements, and changes in the compensation system. The labor-management SAT process was originally started at Xerox in 1982 as a method for restructuring their manufacturing units. Instead of just having engineers and managers analyze production and cost problems, the SAT approach engaged all levels of the organization in the investigation. This method differed from previous approaches by thoroughly evaluating and making changes in all cost areas and not focusing mainly on labor rates, which traditionally are what management focuses on in their productivity analysis. (See Peter Lazes and Tony Costanza, "Xerox Cuts Costs Without Layoffs Through Union-Management Collaboration," Labor-Management Brief, July 1984.)

The ultimate goal of the SAT process at Trico Products was to keep as many jobs as possible in Buffalo, as well as cut costs. Ideally, the outcome of their work would be to eliminate the planned move to the Texas-Mexico border.


