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Implementation Workshop: High Performance Work Organizations

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Part I: Introduction and Executive Summary

Since the rise of the industrial revolution, there are few challenges that compare in scale and scope with the challenge of implementing lean principles in order to achieve high performance work systems. This report summarize key insights and learning by representatives from a cross section of organizations who are on this journey. Specifically, we report on findings from the first Lean Aircraft Initiative (LAI) Implementation Workshop, which was held on February 5-6, 1997.

The report is not a "cookbook" or a "how to" manual. Rather, it is a summary of the first phase in a learning process. It is designed to codify lessons learning, facilitate diffusion among people not at the session, and set the stage for further learning about implementation.

The Implementation Workshop featured 59 participants attending in 15 teams representing all LAI organizations. Thirty-nine managers/support professionals and 20 shop floor team members/labor representatives attended in teams of 3-6 people. Team membership included operations managers/supervisors, team leaders/team members, support people (HR, training, materials, etc.), and local union presidents/union facilitators. There were many complex and cross-cutting relationships among the participants, including the involvement of people from unionized and nonunion locations, firms who were direct competitors, pairs of customers and suppliers, and settings featuring newly merged organizations.

The overall goal of the session was to facilitate learning about the implementation of high performance work organizations among LAI consortium members. Three case study presentations helped initiate the discussion. The two unionized cases were selected based on recommendations from the UAW and the IAM, while the Texas Instruments case was selected for the length of experience operating as a team-based work system.

> Boeing Rocketdyne & UAW Local 887 presented an overview of a initiative launched in 1993 that features extensive training, joint governance, and self-directed teams. The aim involves applying quality principles to the continuous improvement of operations. This case is especially important as an example of deep change in an older facility. It did not have the "clean slate" advantages of implementation in a new facility with a workforce selected based on a desire to work in a team-based setting. Instead, the parties found advantages in the union-management partnership structure, the experience of the workforce, the use of metrics to drive change, and the commitment to quality principles of leaders at all levels.
>
> Texas Instruments presented highlights of Baldridge award winning operation featuring self-directed work teams since 1988, a "star-point system" for duties within a team, an extensive training matrix and peer appraisal system, and mechanisms to link the effort to organizational goals. Though the case features long-standing and highly successful team-

based operations, it is important to note that these efforts were preceded by earlier attempts that taught critical lessons. Further, the system continues to evolve. This commitment to continuous learning may be the most important lesson from the experience at Texas Instruments.

Pratt & Whitney (West Palm Beach) & IAM Local 971 presented recent developments in a 1995 union-management partnership initiative driven from the grass-roots and centering on work design, skills development, compensation, and job preservation. This session illustrated the work of parties who are attempting to ensure appropriate involvement of all key stakeholders, as well as up-front consideration of key issues. It served as a way for others at the session to reflect on their own start-up and launch strategies.

Altogether, the case studies served as useful discussion starters and valuable benchmarking opportunities. Selected comments by participants on the case studies included:

"All three were somewhat different in their development approach, but touted similar results – positive performance results."

"Very surprised at total commitment of union and management trying to work through problems and processes together."

"To find that other companies are in the same boat as we are was very encouraging"

Following each case study presentation, participants met in break-out task force sessions organized around the following five themes: leadership, measuring progress, skill development, rewards and incentives, and diffusion. In each case, the themes were defined by the groups, most of which featured at least one team member from each participating organization. The groups reflected on the cases, surfaced their own experiences and developed recommendations for action. Among the key lessons learned and highlights from the sessions are the following:

- <u>Leadership</u> - Key lessons were highlighted around alignment, infrastructure support, and defining expectations. In these regards, it is important for managers and other leaders to see themselves not as "enforcers," but as "enablers." Perhaps the most significant underlying theme involved a focus on the importance of leadership at all levels – leadership was seen as a verb, something that everyone can and should be providing.

- <u>Skill Development</u> - Two aspects were highlighted – technical skills and process skills. Around technical skills, key issues were highlighted around cross-training and career development – all linked to business strategy. Around process skills, the group looked beyond traditional communications and groups process topics to include skills in strategy development and resource acquisition. A key underlying theme involved a growing expectation that employees need to take responsibility for their own development, but organizations need to provide them with the proper tools and resources.

- Measuring Progress - The analysis highlighted the seemingly simple, but critical and deep challenges around taking baseline measures, providing ongoing feedback at the team level, with understandable and accepted metrics, which then serve as data to drive continuous improvement. Alignment of metrics across levels represents a critical but daunting redesign initiative in most organizations.

- Rewards and Incentives - The emphasis was on simple, consistent and clearly defined standards that are appropriate to the situation and developed with input from all levels. Rewards should be SMART (Specific, Measurable, Attainable, Relevant, and Trackable) – including intrinsic as well as extrinsic rewards. Key challenges were also highlighted – especially around tensions between individual and group rewards as well as rewards that drive one part of a system rather than optimizing the entire system.

- Diffusion - This issue emerged as a challenge in all topic areas since innovation of any kind is limited in impact in the absence of diffusion. This led to a focus on communication as the primary vehicle for diffusion and culture as a key context for diffusion. Around culture, the group emphasized a culture that values asking questions and removing fear as critical to diffusion. With respect to communications, the group emphasized the importance of clear and consistent messages, as well as the inevitability that the messages received will not be the same as the messages sent.

Among the key lessons learned and highlights from the workshop are the following:

- It was possible and even desirable to bring together people from diverse settings, including unionized and nonunion operations, competitors, customers and suppliers, and newly merged partners.

- Many recommendations and conclusions seem obvious, but are very difficult to implement. For example, it seams obvious that change should be preceded by baseline measures, followed by regular feedback to workers at all levels on progress in their work area – which is understood and the basis for improvement efforts. Yet, this is very difficult to achieve in practice.

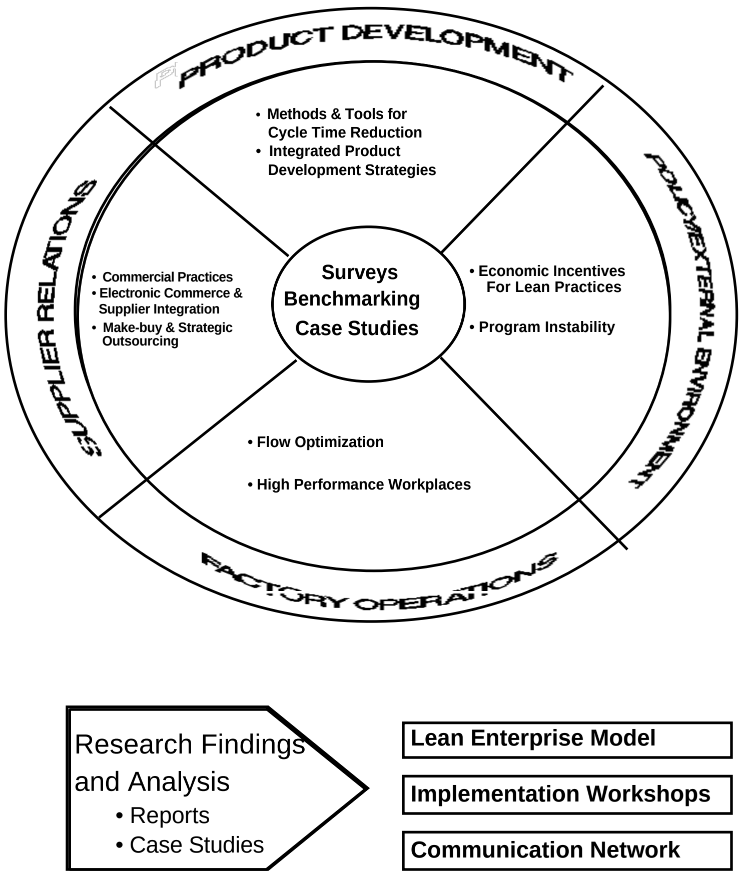
- Ideas and issues in one topic area quickly came to involve issues in other topic areas, which points to the highly integrated and interdependent nature of implementation.

This report is organized around the major design elements of the session. Part II features an overview of the Workshop itself, including the objectives, design and agenda. Part III features the three case studies, while Part IV summarizes the discussions within the five break-out groups. Part V summaries the key messages of the luncheon talk on “Strategies for Managing Change,” and Part VI features a list of predictable disconnects and potential ways of addressing them. Finally Part VI provides some reflections of the participants and identifies planned follow-up activities.

Much of the report is in the words of the participants themselves – based on what was recorded on flip-charts at various points in the session. In many cases, the lists have been included as they were generated by the group, with minor editing to spell out abbreviated words and turn some sentence fragments into complete phrases.

Part II: Workshop Overview

Since most of the participants were unfamiliar with the structure, goals and nature of LAI, the workshop began with a brief introduction and overview of the Lean Aircraft Initiative. The presentation on LAI described the overall research process as shown in the following diagram:



Since the Lean Enterprise Model is one of the major products and also a summary of the research from Phase I, a quick overview of the framework was introduced:

<u>Lean Enterprise Model (LEM)</u>

- **Meta - Principles**
  - Responsiveness to Change
  - Waste Minimization
- **Enterprise Principles**
  - Right Thing at Right Place, Right Time, and in the Right Quantity
  - Effective Relationships within the Value Stream
  - Continuous Improvement

    - Optimal First Delivered Unit Quality
- **Enabling Practices**
    - Identify and Optimize Enterprise Flow
    - Assure Seamless Information Flow
    - Optimize Capability and Utilization of People
    - Make Decisions at Lowest Possible Level
    - Implement Integrated Product and Process Development
    - Develop Relationships Based on Mutual Trust and Commitment
    - Continuously Focus on the Customer
    - Promote Lean Leadership at All Levels
    - Maintain Challenge of Existing Processes
    - Nurture a Learning Environment
    - Ensure Process Capability and maturation
    - Maximize Stability in a Changing Environment

To aid the LAI consortium members in the implementation of the LEM principles and practices, a joint industry-government-labor-academia IPT was formed in September 1996 with the following goals:

1. Facilitate implementation of lean practices within consortia member organizations
    - Design and hold implementation workshops
    - Consortia members teach each other about implementation
    - MIT facilitates and serves as catalyst to further learning
2. Document change strategies for lean implementation
3. Work with focus teams to define implementation related research

As a result, the workshop was designed to achieve the following objectives:

- Explore common concerns and shared experiences with the implementation of high performance work systems in all participating organizations
- Use three case examples to stimulate discussion on the implementation of high performance work organizations
- Generate data on specific experiences regarding the issues of:

Leadership	Measuring progress	Skill development
Rewards and Incentives	Diffusion	

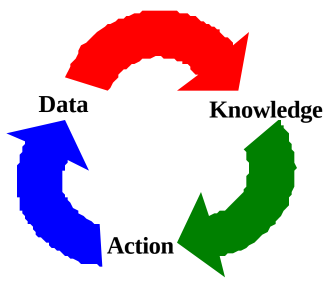
- Summarize workshop learnings for the Lean Enterprise Model
- Foster a learning environment characterized by open sharing, respect for each other's views, willingness to discuss difficult issues, and appreciation for sensitive and confidential information

From the introductions, it became clear that the participants spanned a wide range of high performance work organizations, including:

- Union-management partnerships
- Worker-management involvement in represented and non-represented settings
- Wide range of off-line teams (employee involvement groups or quality circles)
- Wide range of on-line teams (self-directed and lean teams)

The concepts of "off-line" and "on-line" teams were highlighted and explained, with the former referring to teams that are set up as an "add-on" to the work system and the later set up as "integral" to the way work is organized. It was also pointed out that the workshop featured participants from firms who were direct competitors, pairs of customers and suppliers, and settings featuring newly merged organizations. It was stressed that it would be important to be sensitive to these differences, but that the range of participants would also be a source of new ideas and alternative perspectives.

From the outset, a learning cycle was introduced to reflect an underlying theme for the workshop. The cycle reflected the fact that the workshop would involve a series of cycles where data drives knowledge, which guides action, creating more data and another cycle.



Hence, the agenda was designed to ensure interactive learning in ways that best incorporate the extensive experience across the participants. As such, the workshop featured a series of formal presentations, small group sessions, evening activities, full group reports and discussion.

Workshop Agenda

February 5, 1997

7:15 Continental breakfast and registration (45 min.)
8:00 Brief overview, objectives, expectations and introductions (with 2-3 min. team presentation on reasons for attending) (60 min.)
9:00 Case presentation #1: Boeing Rocketdyne and UAW Local 887 (75 min.)
10:15 Break
10:30 Small group discussion ("deep dive" into case #1) (90 min.)
12:00 Luncheon keynote talk: "Strategies for Managing Change" (75 min. plus 15 min.)
1:30 Case presentation #2: Texas Instruments (75 min.)
2:45 Break
3:00 Small group discussion ("deep dive" into case #2) (60 min.)

4:00 Small groups report back to full group/response by presentation teams (45 min.)
4:45 Wrap-up of day 1 and evening assignment (15 min.)
5:00 Adjourn
6:00 Dinner and “evening assignment” -- with teams matched by implementation issues

February 6, 1997

7:30 Continental breakfast and registration (30 min.)
8:00 Feedback on “evening assignment” (60 min.)
9:00 Case presentation #3: Pratt and Whitney WPB and IAM Local 971 (75 min.)
10:15 Break
10:30 Small group discussion (“deep dive” into case #3) (60 min.)
11:30 Brief report back to total group/response by presentation team (30 min.)
12:00 Lunch: Team assignments (75 min.)
1:15 Completion and posting of team implementation issue forms (30 min.)
1:45 Small group analysis of data on team implementation issue forms and preparation of presentations (75 min.)
3:00 Break
3:15 Small groups reports (5-7 min.) on implications for LAI (60 min.)
4:15 Wrap-up of workshop (including feedback for workshop two) (45 min.)
5:00 Adjourn

Participant Expectations

From the outset, all participants were asked their expectations – given the objectives and the design. The following list was developed through brainstorming with the full group.

- Share information
- Learn from experiences of others
- Learn from others and listen
- Learn how to “create” and invest resources
- Learn good ideas and share good news
- Learn how to invest in people rather than lay them off
- Do more partnering with labor and management
- Benchmarking and understand how to improve the process through startup and leveling out phases
- Learn how to increase partnership and “empowered” feeling throughout the organization
- Share lessons learned – successes and failures
- Learn a lot
- To explore metrics – learn to do it better and increase performance
- Learn to move beyond performance plateaus

- Learn/share from a government perspective
- To better understand and inform leadership

Part III: Case Studies

Case Study #1: Boeing Rocketdyne and UAW Local 887

The joint team of management and union presenters outlined steps in a participative process at Rocketdyne which included the conditions that stimulated the change, the visions, components of the program and measures by which the process is evaluated.

This case features large, older unionized manufacturing facility facing deep competitive pressures. The initiative around employee involvement has roots in discussions during 1990 collective bargaining, when there was a growing recognition that new work systems were required if the company was to be able to bring in new work and preserve jobs. An Employee Involvement Philosophy, centered on three "cornerstones" (training, employee empowerment, and teamwork) was developed and the initial contract language was created. In 1993 negotiations, the contract language was finalized. The partners presented an elaborate vision statement which outlines goals and measures for success as well as strategies for achieving them.

One key feature of the Boeing Rocketdyne program is the Quality Culture Initiative, which centers on five questions:

1. Who is my customer?
2. What are my Customer's expectation?
3. How am I measuring myself against those expectation? (metrics)
4. How am I doing against those metrics?
5. What am I doing to improve?

Each employee needs to be able to answer these questions since Boeing Rocketdyne is a metric-driven organization. In fact, the president is quoted as saying, "In God we trust, all others bring data."

Training is one of the cornerstones of the program and is jointly designed. The training program has three main phases.

> **Phase I** is Team Leader Candidate Training which is 16 hours of training that workers must complete on their own time in order to be eligible to become a team leader. The training offers a realistic preview of the job as well as an introduction to the skills needed for problem-solving, to run meetings and use consensus decision making.
>
> **Phase II** is Team Leader and Team Manager Training. This 20 hour training block is required after people have been selected for either role. It provides more in-depth discussion of roles and responsibilities, building peer relationships, in-depth problem-solving, quality process, problem-solving tools and techniques, and team conflict resolution skills.

Phase III Is 24 hours of Team Training for every employee which provides an overview of Team Roles and responsibilities, techniques for empowering the workforce, conflict resolution, decision making, and problem-solving. To date, 58 teams (866 workers) have been trained and 140 team leader/managers. Customer satisfaction with the training exceeds 3.75 on a 5 point rating system.

Following the general overview of efforts at Boeing Rocketdyne, members of the Atlas and Delta Valves, Injectors, and Turbopumps Team presented the work they are doing. They began with the problems which motivated the initial team efforts, reviewed the specific training they each went through and then introduced the 9 step model for team building. This development process was aimed at "trying to develop a culture and understand a process." It is modeled on the larger organizational process and is a feedback system in which each step is developed and then reviewed. In addition, the team presented a sample of the metrics used to pursue quality and productivity goals.

Participant Response to Case #1

Participants asked detailed questions about training class sizes, how to define empowerment, who develops the training, what are the duties of leaders and managers, what is the role of the stewards, do teams have budgets, and what about outsourcing.

The answers highlighted important points such as the current return of laid off workers, an instantaneous reward system for use by all employees, a reduced grievance level, and a total budget consciousness that reaches to even the smallest items such as paperclips.

When the participants moved into the small group sessions their first agenda item was to record responses to the presentations. The following is a compilation of comments from five different small groups.

- encouraging
- levels of incentives available
- tied to performance metrics
- people were motivated
- saw similarities that reinforced our own efforts - confidence building
- seemed too good to be true
- heartened by cohesion and candor
- continuous process
- issue of adjusting metrics across life cycles of teams
- this is a case where the change initiative was framed at the collective bargaining table
- the five questions are a key institutionalizing force in the system
- issues of reintegrating people who have been on layoff

- the answers to the five questions may/will change over time and that is critical

Case Study #2: Texas Instruments - Metal FAB Sherman

The Texas Instrument group comes from a plant in Sherman, Texas with a history of teams that goes back to the early 1980s. It is a nonunion setting with an elaborate structure of inter-dependent teams. They project that their teaming efforts will continue and employees will become increasingly self-directed, even though they are already an industry benchmark along this dimension. This history began with "fire" fighting teams that handled individual urgent problems, moved through understandings of experts such as Juran and Deming, quality circles, and SPC implementation teams. A period of team burnout based on lack of leadership support and narrow focus was followed by renewed efforts that introduced cell teams and self directed work teams (SDWT). The success of these efforts lead to pilots in other locations. In 1992, Texas Instrument received the Malcolm Baldridge National Quality Award. The latest efforts have included group level strategy teams and the Star Point program.

The Sherman location has lead the way in this successful teaming effort. The team structure is as follows:

1 Quality Improvement/Leadership Team (QIT)
4 Responsibility Centers
21 Manufacturing Production Teams (SDWT)
4 Manufacturing Support Teams
2 Administrative Support Teams

The teams average eight members, all utilize the "star point" methodology, and use the Oregon Production Matrix (OPM) to set/track team goals.

The operation of the teams are integrated at the team level via the star point program. Star Points are groups of non-core tasks that are performed by one member of a SDWT. These star points are standardized across teams so they may interact across team boundaries to solve global issues. The six areas represented by the star points are: Cost, Training, Scheduler, Quality, Safety, Coordinator.

The people in the star point roles have specific tasks to perform and meet twice a month to go over issues and send minutes of the meeting to management. Individuals fill the positions for at least one year. Easy-to-read manufacturing operating instructions (MOI's) outline the purpose, policy, brief descriptions, detailed descriptions of responsibilities, length of term and training required for each Star Point. Each team has access to a set of manuals that cover all this information. Each team of Star Points has a sponsor who serves as a resource to help resolve issues and conflicts that the teams can't handle.

At the systems group level there is a Total Quality Management Strategy that outlines the vision, values, mission, fundamental objectives, thrusts, metrics, and goals of the facility. Metal Fab Sherman has established business objectives that each team is challenged to meet or negotiate a different set of goals.

The Oregon Productivity Matrix (OPM) links the business strategy to the mission statement. It is a method for teams to measure continuous improvement and combines measures into one index. Metal Fab Sherman adopted OPM's following a benchmarking tour of Boeing's Defense and Space facility in Corinth, Texas in 1992.

Team members have a wide range of responsibilities. As one of the presenters put it, "Years ago my basic job was to come in, go to my machine, make a quality part, and go home. I had a supervisor to make happy but now, look at all the things we do." Three areas of empowerment were named: social, technical, administrative. Topics in each area such customer interface, peer appraisal, work scheduling, overtime decisions, and personnel selection would be outside the range of normal duties for most workers. Empowered Business Teams (EBT's) use a development matrix the provides a systematic approach to assessment of key capabilities, identifying development opportunities, defining training resources, coordinating activities, and periodic reevaluation of progress toward plan objectives. This is a five stage process.

Customer satisfaction is a core goal for TI employees, each of whom is expected to ask critical questions about the customer/supplier relationship at every level. Records are kept of the contacts that are made with both internal and external customers. Internal information flow is regular and detailed.

Training is a second core activity with a minimum goal of 40 hours per year per person. This includes 12 hours of mandatory safety training. Teams determine their training needs based on a survey of core skills and the EBT matrix assessment. Each person is responsible for an individual training plan as well as the scheduling and attendance at this training. Teams keep track of the cross-training that has occurred within the team. A variety of self-paced and multimedia training is available on site.

One of the current areas that TI is focused on is peer appraisal. Supervisory jobs were redesigned which created a need for teams to take on this task. The program was design by a representative group from within the facility which was chartered to design a replacement process for the individual performance review that existed. The peer appraisal system is based on contribution to team goals, is a closed loop process, and is conducted annually prior to compensation evaluation. This has been a difficult process because "sometimes this is a touchy subject." Teams have the authority to zero out pay increases for members. As one presenter put it, "If I told you that peer appraisal was easy, it would be a fib." There are many other opportunities for team recognition such as bonuses, display cases and announcements to peers. These activities also help develop the level of trust needed to work through serious issues such as peer appraisal in the team.

In conclusion, the presentation team discussed some of the lessons they have learned.

- A strong top level sponsor is required to define and create a case for action, a visions, a transitional infrastructure, metrics, and strategy.
- Don't empower without creating capability.
- Recognize before you start that you may have to change everything.
- Every action taken in relation to the people in the firm must be based on the demonstration of the organization's valued behaviors or guiding principles.

Participant Response to Case #2

Questions from the participants highlighted their interests in the presentation of this long-standing mature program:

> How do you select Star Point coordinators? Answer: "We migrated the supervisors out and teams selected the coordinators."
>
> What suggestions do you have for success? Answer: "Walk the talk - do what you say!"
> "Every team had to go through trust building and it was painful."
>
> How do you assure that one team's decisions aren't dysfunctional for others? Answer: "If one team succeeds and others don't then there is no bonus."
>
> How did you communicate with managers before you eliminated their jobs? Answer: "I've worked myself out of three jobs and you don't have to fear working yourself out of a job." "We didn't spend enough time with middle managers and supervisors and some did quit, but many are in support positions."
>
> What is the next step after the 5 step development matrix? Answer: "That's why we're here!"

Reactions in the small group sessions also reflected an appreciation for the experiences that had been shared by the TI team:

- enlightened - attention to detail re: process (team matrix)
- alignment with organizational objectives
- top down driven initiative
- success aided by non-union environment
- experience shows
- choices made based on cultures
- middle manager issues

- comment on machinist who early on didn't what anything to do with the teams and his team made him the coordinator -- and he turned out to be a strong supporter
- issue of being willing to "work yourself out of a job" -- which requires substantial top level support
- the machining team is run as one team across all three shifts -- which raises coordination issues
- where there is slack, we check with others to see if they need assistance and even call other sites to see if they want to off-load work -- with authority to do this located at the team level
- next steps -- are we at a plateau? We are now doing our own hiring within the team, which is new

Case Study #3: Pratt and Whitney WPB and IAM Local 971

This is an advanced technology and engineering center that designs, assembles, and tests a wide range of rocket and jet engines for military and commercial applications. It is an older unionized facility, opening in 1958, that has seen substantial downsizing, from over 8,000 employees to the present size of 4,900 employees. There are about 750 people who are “touch” labor, represented by the International Association of Machinists (IAM). Florida is a right-to-work state and the IAM is still able to have 90% of the machinists organized.

The facility is located in West Palm Beach, Florida on 7,086 acres with approximately 2.5 million square feet of air conditioned space in 22 buildings. The facility produces a variety of products and has seen a major change in how they manufacture those products. For example, recent engineering design changes “eliminated 70% of the tools needed for upkeep in the field.”

A drop off in the business and interviews with their internal customers which revealed that other suppliers were far more capable in terms of delivery, cost accounting, flexibility, and other dimensions served as a wake-up call for the operation. The other element which prompted to establishment of a labor-management partnership was the culture of the workforce. The people were intelligent and skilled but had not had to exercise much flexibility. There were 430 very specialized job classifications.

The prospect of upcoming collective bargaining was an opportunity to explore the idea of establishing a joint partnership. The first step was to explore the idea with a key content expert in another division, followed by extensive benchmarking. Many workplace “structures” were, including the establishment work cells.

The idea of partnership and getting the union involved caused “a lot of hand wringing at first.” It was not clear what it meant to partner even after they decided to do so. Credit is due to the local union president for helping set a tone that allowed change to move forward. Benchmarking was one tool used to discover what the options were. Among the sites visited were Hughes, FMC, Bath Iron Works, and the Hartford Symphony. Training, both internally provided and received off site, also played an important role in moving the change forward.

The presenters discussed the Three Force Model that they have developed which moves away from a traditional US versus Them approach. The Three Force Model is intended to encourage win-win processes by developing a clear understanding of the common goals that can be identified beyond the goals of the individual parties.

A list of beliefs and core operating principles were established jointly. Although mutual respect and trust are “a major hurdle to get through” and “didn’t always happen in the past,” they feel they are beginning to create opportunities for them to develop. Progress is evident in the outcomes of the 1996 negotiations in which an expanded contract was ratified, support teams were established in four areas (work design, skills development, compensation, job preservation), and partnership language was added to the contract.

Among the outgrowths of this negotiated plan are greater efficiencies for the company and skills development opportunities for workers. Work is moving forward more slowly in the area of compensation because as one presenter said, “We’re not in a big rush to do the wrong thing.” Community outreach and involvement has lead to the development of machining training in the high school which is available elsewhere in South Florida.

There are still issues to be resolved around trust and mutual interests, creating a sense of urgency among the members, not using the process as a weapon, and balancing the needs of the union as well as management. Involvement of the entire work force is very important and the team acknowledged that it was easy to shift back to the old ways of doing things.

The grass roots approach has been effective as has joint problem solving. The cautious implementation of changes has proven successful. These successes are balanced by concerns about the need for more communication, getting involvement from first line supervision, and understanding how vulnerable the initiative is to the strategic aims of other levels of the company. In this context, next steps include completion of the validation process analysis, development of an implementation strategy, and approval from both sides, including a ratification vote by the local IAM membership.

Participant Response to Case #3

The presentation led to a number of comments among audience participants who were wrestling with comparable launch and implementation issues. In addition, two points of clarification were raised:

What is the status of the grievance procedure? Answer: “There has been a 25% reduction in grievances in the past two years with only six cases going to arbitration since 1991.”

Was there a visionary leader in this change process? Answer: “It was mostly a grassroots effort.”

The comments in the small group sessions also reflected a strong interest in the grass roots activities:

- issue of compensation/monetary rewards is still open
- commitment/perseverance required in grassroots is much greater
- job preservation focus is interesting/unique
- high number of job classifications may be an opportunity
- very impressed with the benchmarking - depth and breadth
- written partnership is monumental
- IAM HPWO class was helpful
- three force model drives consideration of both sides on any given issue
- champion versus impetus for change
- union leadership supportive to save jobs for future
- partnering with local schools -- they will continue to offer what industry needs
- case put together skill development program that includes: career development, onsite & offsite training (3 hours/week paid) to support new work design, need to broaden skills of assembly/test people
- financial reward for completing training = associate degree $2500 + pay of training in stock, BS degree $5000 + pay of training in stock (stock encourages ownership feeling)

Part IV: Analysis by Themes

At various points in the Workshop, the participants broke out into five groups organized around each of the following themes:

Leadership
Skill development
Measuring progress
Rewards and Incentives
Diffusion

Participants self-selected which group they would be in – with the constraint that teams should ensure coverage of as many groups as possible among their members.

When the groups came together for the first time, their initial brainstorming was around defining what their topic meant. At three times – after each case presentation – the groups brainstormed reactions to the cases and shared parallel experiences among themselves. Finally, the groups produced specific action recommendations for leadership. This section summaries the key points discussed by each group.

Leadership

The group on Leadership first highlighted some of the many dimensions of leadership, especially the importance of leadership at many levels. They examined a number of key leadership issues, including leader selection, leader roles, and reporting relationships.   As well, various models of leadership were highlighted, including team leaders, department leaders, and IPT leaders. One interesting question raised was whether an organization could have salary personnel reporting to a union team leader. Among key leadership challenges, the group highlighted integration from IPT to the shop floor, alignment across levels, and consistent metrics. The issue of continuity in the face of leadership turnover was also seen as a key issue.

The following is a summary of the key insights they generated:

- Management as enforcer ⇨ management as enabler
- Leadership is a verb
    - Shared by all, not only traditional leadership roles
    - Focus on bottom line: sustainable, improving organization performance
- Impetus for change can come from any level
    - Grass roots to CEO
- Need to develop champion network of senior leadership
    - Provides continuity
    - Involves all functional groups

- Includes union leadership

The group emphasized that leaders can be at multiple levels, recognizing that the top levels are more influential but it is possible to start in middle and/or at a grass roots level. If the latter is the case, a network of champions are needed to enable the lower level leaders. They also noted that a network was critical if the operation is merged or acquired by another organization. In developing such a champion network, the group recommended:

- identify people who make the difference
- road show to key people
- connect to where the work begins, i.e., engineering
- identify union facilitator
- train key people
- show bottom line results
- use one champion to influence network
- agree that all key people are on board or you will not move ahead
- assure key elements that need to be on board, especially design, HR, finance (metrics)
- demonstrate success in one area

Measuring Progress

The group on measuring progress began by creating a definition of their topic area to focus their discussions:

> We are concerned with clarifying where we are now, where we want to go and how we measure progress in getting from here to there. The measures must be linked and aligned across different levels, reflect the priorities of different stakeholders, and match the characteristics of different work operations (production, procurement, design, etc.). Measuring progress involves different dimensions including changes in culture, performance (cost, quality, schedule and safety), training and employment/growth.

The group then explored the key lessons learned from the three case presentations and their own organizations. In summing up their deliberations, they noted:

- In order to hold a team accountable against a metric -- the team needs to have an understanding of the metric, training in the required skills, budget and other necessary and appropriate authority necessary to make improvements against the metric. It's a two-way process of teams owning the metrics and leaders empowering the teams towards improvements. Note: Managers will still be accountable, but also dependent on teams which is difficult.
- Application of training in team process skills, culture change indicators and areas of empowered decision making needs to be tracked on the floor and linked to daily

operations -- for example, using a skills training matrix to tack scrap, ability, and use of specific skills.

- Linkage - alignment of goals and measures doesn't just happen -- it requires a process where goals set at any level are communicated to other levels as part of goal formulation and where disconnects surfaces at other levels are fed back to adjust original goals. Further the same dynamic is involved in the link from goals to metrics. Note: There are further issues around alignments and linkage between labor and management, between customer and supplier, or among other share holders combinations.
- Providing team level performance feedback on a core set of measurables is essential. Provide team level data in an existing organization usually requires a major redesign initiative in all the relevant support functions (quality, safety, finance, materials, etc.). Set realistic expectations and make concrete commitments in just what data will be forth coming and when it will come. This is an ongoing issue as teams become more capable.
- In order to be sure you are measuring the right things, it requires a process involving input from multiple stakeholders at multiple levels -- with periodic review.
- Keep the number of measures simple and meaningful -- in a format that is understandable.
- Establish baseline measures and then be sure to use them as a basis for measuring improvement. At the same time be aware that there are political and power issues that accompany the setting of baseline measures. Political problems require political solutions.
- There is a fundamental function between the importance of optimizing the whole and the importance of individual/team accountability.

Skill Development

The group on skill development explored a broad range of training and development issues in both blue- and white-collar areas. They were particularly concerned about how to sustain training in a downsizing environment. To this they noted, “Training and facilitation is needed. If it seems expensive, try ignorance. Organizations will either pay for training or they will pay for scrap and rework.”

In reflecting on the case presentations and their own experiences, the group emphasized the importance of the team leader and the need for training and support for people in those positions. They also discussed the importance of training both soft and hard skills and the need to included all support functions, especially skilled trades.

The following is a summary of the key insights they generated:

- Employees need more information/knowledge about business and how their work processes impact bottom line
    - Expect employees to take responsibility for own development
    - Company provides support and resources
- Need to have evident senior management commitment to training and skill development
    - Should know what's available to be able to communicate about it
- Need to have a skills development strategy, plan, and resources
    - Present and future training needs
    - Career development and greater employability for employees
    - Training tied to new, approved job descriptions
    - Support for versatility and multiskilling, including combining support skills
    - Recognize or reward getting secondary skills

Rewards & Incentives

The group focusing on rewards and incentives identified a broad range of potential rewards, including recognition, career progression, publicity, and thank yous. Reflecting on their own experiences, several noted that their reward structures were very bureaucratic, one requiring up to 16 signatures. It was fairly easy to identify what was wrong with current rewards and incentives, so the group focused on recommendations on how to design and implement SMART (Specific, Measurable, Attainable, Relevant, and Trackable) rewards. Their list of recommendations and key insights included:

- Consistency is key
    - Management /leadership buy-in
    - Clearly defined selection criteria
- Rewards should be:
    - Valued by employee and by organization (i.e., tied to metrics)
    - Intrinsic and extrinsic
    - Tie to “desired behaviors”
- “Involvement leads to commitment”
    - All stakeholders should be involved in design, selection and implementation
- Rewards are in addition to base pay
- One size does not fit all

In implementing rewards, they emphasized that the implementation process must include:

- Communication -- 5 W's
- Consistency in application
- Education
- Instantaneous

- Stakeholder involvement

Diffusion

Since there was some confusion as to the scope of diffusion, the group began by creating a definition of their topic area to focus their discussions:

> Diffusion is a basic strategic element that communicates, disseminates, and transfers: knowledge, lessons learned, process, boundaries and values. The diffusion mechanisms used are dependent on the cultural or structural differences of the stakeholders.

The group noted that communication, training and trust are critical elements of diffusion. Their discussions also lead them to the conclusion that successful diffusion results in employee empowerment and dismantling of traditional bureaucracies. The latter is necessary because it is typically one of the barriers to diffusion. In reflecting on their own experiences, they noted the difficulty in getting past security, flexibility and trust issues.

The following is a summary of the key insights they generated:

- Develop a culture that values asking questions by removing fear
    - Promote finding answers
- Value the process and importance of communication and verifying the message
    - Be aware of unclear expectations
    - In a period of change, send a single consistent message
    - The message you think you send is not the message that is received
    - Develop mechanisms to insure that this is happening
- Determine the information necessary to proceed appropriately at each level
- Identify and use your "experts" and insure the "experts" "report" to the right people

Shared Lessons

Each of the company/government/labor groups was asked to identify lessons around what they might do similarly and what they might do differently in given scenarios. There were 5-10 scenarios developed for each of the five themes (Leadership, Skill Development, Measuring Progress, Rewards and Incentives, and Diffusion). We have not included the full scenarios since they are site specific and hence not appropriate for broad circulation. Still, the lessons have broad applicability as the following highlights suggest:

Leadership Do Again:

- Grass roots approach with complete union involvement and obtain local senior management buy-in

- Don’t hesitate to replace personnel who don’t fit or who hinder the process

Leadership Do Differently:

- Push harder to make sure that we are more visible/networked into group and corporate offices
- Use a better screening process for selecting the right individuals for each position

Skill Development Do Again:

- Combine team leader training between two divisions – one was further along in the team process, which gave the candidates an opportunity to look to the future and look to the past
- Work in partnership with the union to re-write existing job descriptions, identify specific skill requirements, develop skill training matrix for each job family group and a training plan for each employee

Skill Development Do Differently

- Broaden training material to include reasons for teams, how teams should be aligned with organizational goals, and specifics on metrics and data gathering.
- Spend time to establish separate union-management committees to work procedures for assessment and training development.

Measuring Progress Do Again:

- During training, employees are required to track or measure their team’s progress and bring the information back to class. In this way, they share the information broadly and learn from each other’s measuring techniques
- Use metrics to manage the business down on the shop floor

Measuring Progress Do Differently:

- As people are recalled and even on the job, the skills need reinforcement or they will be lost. Areas that continue to reinforce, continue to excel. Other areas have slipped.
- Limit the number of metrics with clear, concise meaning and ask teams to participate in their development. More training, communication and education – it is absolutely necessary to achieve buy-in for improvements.

Rewards and Incentives Do Again:

- Use a joint union-management team to design and develop guiding principles to establish an effective rewards and recognition process. Provide structure to the process.

- Use monthly team awards for performance to goals and a supplemental award process giving teams monetary awards to incentivize continuous improvements. Highlight team accomplishments across sites.

Rewards and Incentives Do Differently:

- Do more benchmarking. Educate employees how reward systems need to support business strategies. Educate employees on the value of non-monetary rewards. Tie to desired behaviors.
- Be more aggressive in sharing lessons learned at the team level to all of the site locations to propagate proven methods and reduce redundant practices

Diffusion Do Again:

- Distribute newsletter in person to over 1,000 people in the workplace during daily activities, providing all a chance to give feedback on the spot.
- Line of site assembly flow. Team ownership for product. Support personnel located with/near product; team members in many areas responsible for their move plan.

Diffusion Do Differently:

- More involvement of first-line supervisors. Avoid unilateral communications. Network with senior management. Educate the workforce and support personnel on business strategies, lean practices, etc.
- Don’t wait so long after pilot completes to move forward. Package results of a successful pilot better so documentation “sells” the change.

Part V: Luncheon Address
"Strategies for Managing Change" by Joel Cutcher-Gershenfeld

Within and across organizations, there is perhaps nothing more demanding for managers than the effective implementation of large-scale change initiatives. Within organizations this may involve the launching of new work systems, the re-engineering of operations, or the transformation of existing cultures. Across organizations this may involve the creation of strategic alliances, the imposition of hostile take-overs, or the forging of public-private partnerships. Surprisingly, most managers implementing these initiatives lack the tools to systematically examine the change strategies that are implicit in the various initiatives.

Consider three dominant models for organizational change, which are: 1) Top-down re-engineering; 2) Bottom-up process improvement; and 3) Experimental pilot-diffusion. Too often, changes implemented under any of these models falls well short of the aspirations of the initiating party. Recovery from top-down re-engineering proves unexpectedly difficult. Bottom-up diffusion improves attitudes but fails to generate comparable economic performance improvements. Pilot experiments, even successful ones, fail to diffuse.

The problem here is not the models themselves, but the lack of attention to the negotiated nature of change under any of the three models. This can best be understood by first describing what it means to view change from the perspective of a negotiations lens and then by reviewing the elements of a theory of negotiated change. The analysis builds on research conducted on change initiatives in the context of labor-management relations, as presented in the book *Strategic Negotiations: A Theory of Change in Labor-Management Relations* (Harvard Business School Press, 1994) by Richard Walton, Joel Cutcher-Gershenfeld and Robert McKersie (and other books and articles by these three authors).

A negotiation lens builds on three key, inter-related assumptions. The first assumption is that organizations are composed of multiple stakeholder groups, each with distinct interests. The second assumption is that these interests are mixed-motive in nature – that is that the stakeholders have a mixture of common and competing interests. The third assumption is that change strategies are constructed out of tactical moves or interactions, which may be cooperative or conflictual.

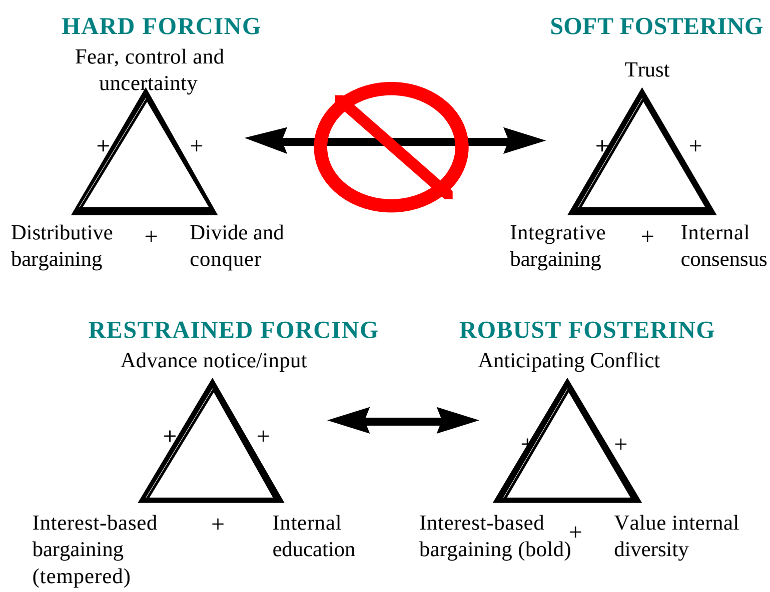
Change, when viewed through a negotiations lens, is revealed as a dynamic process. The initiative may begin from one source, but it can shift back and forth among a number of stakeholders. Further, success in implementing change does not derive from an individual's positional authority or an organization's formal role and status. Instead, the ability to effectively influence change depends on choosing an objective commensurate with bargaining power, which itself can shift over time. Simply put, influence is not a given, but rather it is a capability that is constructed through interactions.

From this negotiations perspective, resistance to change is often active and rational – not merely passive and emotional. In the face of resistance, a party need not necessarily abandon its own aspirations. It may adjust its expectations or, more likely, enlarge the agenda so as to take into account the interests of other stakeholders not part of the initial formulation of change objectives.

Building from these assumptions and this analysis, a theory of negotiated change points to specific negotiation tactics that add up to negotiation strategies. We highlight two basic strategies, which involve forcing change and fostering change. The process of forcing change is built on certain tactics, as illustrated in chart 1.1, which include a distributive or win/lose approach to bargaining, attitudinal tactics centering on increasing uncertainty and instilling fear, and internal organizational tactics involving building solidarity while seeking to divide and conquer others. The forces of fostering change is built on a contrasting set of tactics, which include an integrative or problem-solving approach to bargaining, attitudinal tactics centering on building trust, and internal organizational tactics involving building consensus within all parties.

Our research on negotiated change suggests that the forcing tactics, at the extreme, can easily become a form of "hard forcing" that risks escalating conflict where recovery afterwards is difficult. Similarly, fostering tactics, at the extreme, can easily become a form of "soft fostering" that builds trust, but leaves parties unable to engage the difficult issues associated with improving economic performance or outcomes valued in different ways by the parties. By contrast, the forms of restrained forcing and robust fostering illustrated in chart below represent strategies that anticipate the dilemmas associated with the more extreme strategies.

Comparing Strategies for Negotiated Change Within and Across Organizations



Linking the negotiation lens back to the three change models discussed earlier, we see the top-down re-engineering is predominantly a forcing strategy. Most managers embarking on re-engineering initiatives focus extensive energy on the tactics associated with the forcing (such as undercutting resistance to change), but relatively little time to recovery afterwards. Our research suggest that this emphasis is likely to have the exact reverse impact. A tactical, rather than a strategic focus during forcing, is likely to trigger escalating interactions leading to increasingly "hard" forcing. Recovery afterwards becomes increasingly remote.

Where time is constrained, some degree of forcing is essential – especially where structural change is desired. But structure alone is rarely sufficient. Process changes are also needed within any new structure. Consequently, we urge a restrained forcing designed to anticipate and support subsequent fostering.

Bottom-up process improvement is predominantly a fostering strategy. Most managers embarking on process improvement focus extensive energy on the tactics associated with fostering (such as building trust), but relatively little time exploring areas of current conflict or potential future tensions. Our research suggests that this emphasis is also likely to have the exact reverse impact. A tactical rather than a strategic focus during fostering, is likely to encourage "soft" fostering based on what end up proving to be overly naïve assumptions of common interests. Tangible change becomes increasingly remote.

Where relationships are important, some degree of fostering is essential – especially where fundamental changes are sought in the processes of interaction. But process changes alone are rarely sufficient. New structural arrangements are typically implied as a result of process improvements. Effective implementation of fostering strategies require a robust form of fostering that anticipates the difficult and potentially conflictual structural issues that are likely to arise as parties engage in collaborative problem-solving.

From a negotiations perspective, the pilot-diffusion model is revealed as depending on a combination of forcing and fostering (sequential or concurrent). In some cases, managers are successful in the fostering around the pilot, but less effective in the forcing associated with diffusion. In other cases, pilots do not get enough fostering (support). In still other cases, they force too hard in the diffusion. Our research points toward a combination of restrained forcing and robust fostering as essential to the pilot-diffusion strategy.

Most large-scale change initiatives feature some combination of top-down re-engineering, bottom-up process improvement and pilot-diffusion experimental models. Many involved sustained activity around all three models. Viewing these models for change through a negotiation lens reveals a set of negotiated dynamics as the root cause of dilemmas under each.

Too much of an emphasis on success in the particular tactics associated with implementation under each of the models risks having the exact reverse of the intended effect. Hard forcing risks hard counter forcing, which may be visible as escalating conflict or less visible as determined non-compliance. Soft forcing risks the failure to generate tangible results. Lack of attention to the complications associated with forcing and fostering that is concurrent or sequential doesn't make the dilemmas any less salient. In order to force structural changes and foster process improvements, strategies of restrained forcing and robust fostering emerge as essential in the management of change within and across organizations.

Part VI: Predictable Disconnects

In implementing high performance work systems there are countless tasks to be accomplished and initiatives to be coordinated. Inevitably, there are “disconnects” or instances where things that are supposed to happen but do not. A portion of the workshop design was specially designed to focus on the dynamics around disconnects.

Five themes were identified for analysis of disconnects. The analysis was done in groups, which consisted of two paired teams from participating LAI organizations. The themes involved situations or issues that cut across all of the case presentations and the five break-out group topic areas. Among the themes examined were:

Workforce acceptance and ownership – reflecting this essential element in the implementation of new work systems

New roles and responsibilities – reflecting a key part of reality for leaders and constituents at all levels

Union and management commitment – reflecting the specific partnership issues in the unionized organizations

Support infrastructure – reflecting the central role of support functions in enabling (and not serving as a barrier to) the implementation of new work systems

Mergers and consolidations – reflecting the fact that many LAI organizations are in various stages of merging and integrating operations

For each topic, the groups were asked to brainstorm elements of a definition, highlight typical disconnects relative to this topic, point out typical “band aid” or “knee-jerk” responses, and then pick one or two scenarios for a closer look at underlying root causes.

Workforce Acceptance/Ownership	
<u>Predictable Disconnects</u> - champion does not "walk the talk" - lack of clarity with goals - "hollow authority" - unclear decision making process - roles and responsibilities unclear - lack of a mechanism to build and sustain trust	<u>Band Aid/Knee Jerk Reactions</u> - "pep talk" mentality - leadership by designee - executive override of the decision making process - call in the Cavalry when things start going south - blame it on training - bigger banners
<u>Root Causes</u> - poor alignment of goals - fear of letting go (trust) - not tolerant of mistakes - concern for job security	<u>Strategy to Address</u> - healthy goal setting process - continuous review of roles and responsibilities - feedback mechanism in place (institutionalized) - educate and when necessary make personnel changes

New Roles & Responsibilities	
<u>Predictable Disconnects</u> - turf wars - lack of buy-in/trust ⇨ withdrawal - valley of pain is deep and wide - overlap of roles	<u>Band Aid/Knee Jerk Reactions</u> - selfishness - stop short and don't persist - stop everything ⇨ go back to the old way - never addressed ⇨ ignore it and it will go away
<u>Root Causes</u> - lack of clarity & understanding to new roles - lack of vision - lack of communication	<u>Strategy to Address</u> - bring all together to bridge gaps and communicate - conduct expectations workshops

Union-Management Commitment	
<u>Predictable Disconnects</u> - no management commitment - rough managers/union members - communications failures - mistrust - excluding in decision making - convenient partnerships - favoritism - lack of follow-through, especially in training - perception of anything goes - outsourcing	<u>Band Aid/Knee Jerk Reactions</u> - fix symptom vs. process ("it won't happen again) - revert back to old ways/confrontation - strategic amnesia - leveraging the issue - "screw the partnership" - not recognize anyone (response to favoritism) - "your empowered" - "promise security for those who remain" (response to outsourcing)
<u>Root Causes</u> - communication - timing - unclear expectations - misunderstanding - unwilling to listen - resistance to change - Sometimes people who make decisions are not involved in partnership	<u>Strategy to Address</u> - work toward common ground - training - large group communications - agreed process for communications - no false promises - <u>joint</u> communications

Support Infrastructure

Predictable Disconnects	Band Aid/Knee Jerk Reactions
1. drag out the hammer 2. inadequate communication 3. forget that a transition state is necessary 4. forgetting the little things 5. not understanding legal implications 6. non-anticipation of resistance 7. not involving employees in the transition process 8. not having contingencies 9. not assessing what needs to change and prioritizing key areas 10. not using a planned approach to change 11. not assessing progress 12. not understanding others frame of reference during change 13. assuming too early that the change is complete 14. not defining what a successful change will look like up front	1. using ready, fire, aim approach 2. communicating in ways that don't meet employees needs -- F.O.R. 3. telling people to just get over it with understanding cycle of change 4. make sure people get paid & having information contacts 5. bringing in and relying on a legal expert 6. people may drag their feet or sabotage efforts 7. everything is top down directed -- management know best attitude 8. having only one possible way of doing things 9. not planning, managing, and monitoring the change 10. see #9 11. see #9 12. treat everyone the same during the change 13. see #9 14. create an unmotivating vision
Root Causes	**Strategy to Address**
not understanding how the change management process works	1. use a planned approach to change that includes a planning, managing & monitoring phase 2. communicate often and in various mediums, meet face to face with people 3. encourage questions and resistance 4. provide a lot of structure during the transition 5. provide a lot of feedback during the transition -- "how the merger is proceeding" 6. create a vision & define what success will look like 7. admit mistakes 8. deal with the human side, get people involved

Mergers/Consolidations	
Predictable Disconnects	**Band Aid/Knee Jerk Reactions**
- communication -- internal and external - transition issues - integration -- cultural and systems - personnel issues -- rumor mill, morale, productivity impacts - union versus non-union - personnel movement (migration) - loss of key talent - infrastructure -- computer systems, etc.	- transfer freeze - assurances with no information - rumor mill -- informal information search - distrust
Root Causes	**Strategy to Address**
- communication - legal constraints - details not available - lack of trust - lack of plan - management of resources	- timely, candid communication process (how, when, what) - structured planned approach for managing the transition - involvement at all levels - minimize disruptions to sustain today's business

Part VII: Workshop Conclusions and Follow-up Actions

At the end of the workshop, participants were asked to share their lessons learned from the two day workshop, both to the other participants in the concluding session and in written feedback forms. The following are a few of their comments:

- Strong labor-management partnerships are critical.
- It's clear there is not cookbook solution -- each organization has to develop its own approach.
- High performance workplaces are here to stay -- and they touch everyone in the organization.
- There is life after a mistake.
- Issue of leadership takes on a whole new meaning -- we say leadership at many levels here.
- High performance is really grass roots -- it's about making our workplace right for us to do the best we can -- I had always seen it as top down in the past.
- It was very interesting to see how others are experiencing the same problems we have been facing and to gain insight on how they have overcome or plan to overcome these.
- Great Concept! Getting everyone together to feed off each others successes and pitfalls.

Follow-up Actions

As a way to reinforce the workshop learnings, each organizational team was asked to write a report on the workshop for their LAI Executive Board member. In addition, we asked the participants to share other ways that they planned to communicate what they had learned. The following are a few of their comments:

- Hold briefings for people who were not here
- Use data on people here as basis for education that others are facing similar issues
- Communicate the potential that we have seen -- what is possible

In at least one case, there has been a follow-up site visit and presentation between two of the participant companies to share how they have implemented high performance work organizations. Our hope is that this is only the first of many exchanges.

Final Thoughts

Probably the best way to conclude this report is in the words of the participants:

"One of the key elements of the workshop is that both government and industry are being educated at the same level and are being educated to accomplish the same goal, both as suppliers and customers. One of the key elements I've learned is that teaming is a continuous process that requires maintenance and sustained improvement"

-- *Operations manager*

"The workshop was great for us – we're in the infancy stage of team cells, so everything we learned here will be helpful for us. The information is useful for shop floor people as well as upper management. The keys to success are communication and trust. The lessons learned here will lead to developing trust between labor and management. We need to work together."

-- *Labor representative*

This was a very informative and learning conference during which all the participants and facilitators went out of their way to communicate lessons learned to all of the attendees. The openness and helpfulness of all participants was truly outstanding.

-- *Manager*