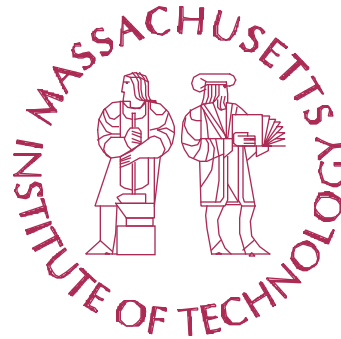


Lean Aerospace Initiative Plenary Workshop

Making Lean Work for People



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- **Congratulations for focusing on the people & organizations**
- **Review lessons from other industries**
- **Illustrate the keys to sustainability: A case study**
- **Discuss implications for LAI**



Congratulations

- **Choosing people and organizations as a focus for phase III**
- **Recognizing the importance of the workforce as a partner**
- **Emphasizing the need to address the interest of all stakeholders**



An Historic Step for:

- **The Air Force**
- **The Industry**
- **The Workforce and Unions**
- **MIT and other University Partners**

“Never before in the U.S. have these stakeholders joined together in a project of this scale to implement a shared vision for strengthening a key industry and its workforce through a research and implementation effort focused on how people work.”



A Brief Historical Tour

30 years experience implementing new work systems:

- **1960s-80s: Motivation focused experiments with job enrichment--fizzled**
- **1980s: Quality & productivity focused work systems—more enduring**
- **By 1994: Diffusion reached approximately 38% of establishments**



Results - Evidence from:

- **Autos**
- **Steel**
- **Telecommunications**
- **Airlines**
- **Apparel**
- **Medical Equipment**
- **Office Equipment**
- **Semiconductors**



Results for Firms and Workers

- **Higher productivity and quality**
- **Impacts on workers: Direct effects for participants and “survivors”**
 - increased training and skills
 - some evidence of increased wages
 - higher job satisfaction
- **But accompanied by downsizing and displacement -- part of restructuring so we don't know about its effects on workers who left or were laid off**



Results for Unions

- **Early skepticism reflects union avoidance legacy of early efforts**
- **Local experimentation clarified how to make it work for workers**
- **Current view: A strategy for promoting worker and industry effectiveness**
 - **UAW statement of principles**
 - **IAM high performance work system elements**



A Case Study: Xerox/UNITE Partnership, 1980 to Now

- **Started in 1980 as jointly negotiated and governed EI process**
- **Broadened to address work systems, quality, outsourcing, and employment security**
- **Sustained through 2 CEO and 2 union leadership transitions**
- **Supported by information sharing -- semi-annual “Summit Meeting”**

“We can trust them. They do what they say.”

“We want the partnership to continue but we have to make it work for us.”



Making Innovations Work for Workers and Industry

Experience based principles:

- **Joint ownership and governance**
- **Systemic changes**
 - work systems
 - HR/employment practices and collective bargaining
 - strategic level information sharing, consultation, planning
- **Customer driven**
- **Culture change must support changes in practices**



Implications for LAI: Requirements of the Actors

Sustained commitment from:

- **Government - key customers**
- **Industry executives**
- **Union leaders**
- **University partners - researchers and educators**



Implications for LAI: Requirements of the Actors

New leadership skills and capabilities:

- **Leadership through information sharing and teaching**
- **Co-management - integrating labor, customers & suppliers, communities, etc.**
- **Union leadership requirements: substantive knowledge and skills in balancing participation, representation, and union democracy**



Implications for LAI: Requirements of the Actors

Dispute resolution systems

- **Anticipating and facing periodic crisis - pivotal events**

Research that documents the effects

- **NUMMI and IMVP effects**

Plan for Shared Learning and Diffusion

- **Avoiding islands of innovation - the “Saturn Effect”**

Address the Achilles Heel

- **Managing the sources of instability that threaten job security and sustained change**



A Vision for the Future

Opportunity to build industry, enterprise, and workplace institutions to utilize skills, job information, and manage the risks of instability associated with individual programs and enterprises.

How can we do this in:

- **Airframes**
- **Engines**
- **Avionics**
- **Space and Missiles**