

Learning in the Lean Aerospace Initiative

**LAI Research Team Presentation
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LAI Phase III

Learning Goals

“Deploy knowledge of lean practices to facilitate and enable change”

“Extend and enhance the collaborative nature of the project”

Purpose of the Learning Study

- To find out how government & industry are learning through LAI activities
- To seek patterns and shared issues among the members
- To explore ways that learning in LAI could be enhanced
- To create a preliminary model for consortium learning

Methodology

- **Consultant observed three meetings:**
 - Product development, January 2000
 - Lean supplier, January 2000
 - LAI Annual Plenary, March 2000
- **20 interviews were conducted with industry and government and LAI staff members**

LAI Has a Established a Viable Learning Process on Lean

- Building awareness of lean principles in the organization
- Creating a major knowledge resource on lean
- Building a common aerospace language about lean

Multiple Definitions of Knowledge Exist in LAI

- **Academia** considers that knowledge derives from the objective collection and analysis of data, and is expressed as research products
- **Industry** argues that useable knowledge must in the form of how-to guides; it must be implementable
- **Government** believes that knowledge exists as a set of deliverables that should occur at an agreed level of quality, cost, and timing

Time and Timing Impact Learning Capacity

- **No time for learning (day job factor)**

“we're not able to devote as much time to the learning and to the activities as we could or should”
- **Timeliness of reports and guides**

“I think timeliness is very important...it's a matter of setting objectives and guidelines. If the objectives for LAI are that we'll have everything on the Web [for the conference], people will work to that.”
- **Timing of workshops**

“if they could spread [the workshops] out a bit better and more time in between them”

Networking Is a Key Benefit of Participation

**“It's the interaction that takes place when you go to the meetings that to me is a real deliverable.”
[Government member]**

“You absorb new knowledge and information from working with others” [Industry member]

“The other thing is one of the big benefits for me of going to the LAI conference is I meet all the other people from [my company] who are doing stuff.” [Industry member]

Barriers to Knowledge Sharing and Dissemination

- **Underutilization of research reports**
- **Industrial competition**
- **No mechanisms for learning from failure**
- **Other structural barriers**

Discussion

- **How does this information impact you?**
- **Do you see connections between the themes?**
- **Does the data tell you anything about collaboration?**
- **What about change in the aerospace industry?**

Multiple Learning Levels

Cross-Organizational - Potential for industry change

Organizational - Potential for strategic change

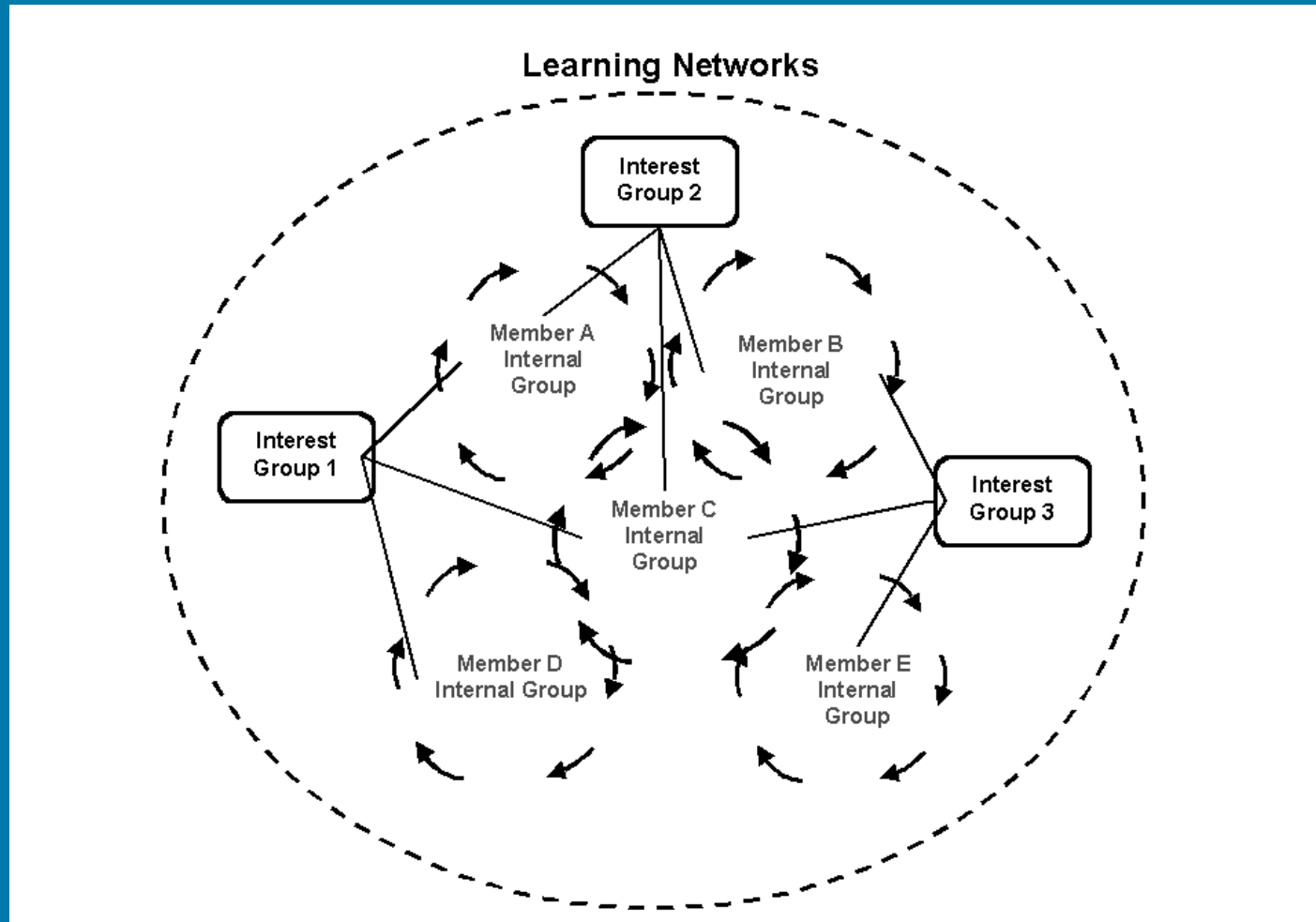
Team/group - Potential for tactical change

Individual - Potential for personal change

LAI IS
STRONG
AT CROSS
AND ORG
LEVELS

POTENTIAL FOR
GAINS ON
GROUP AND
INDIVIDUAL
THROUGH
INTERNAL
GROUPS AND
OWNERSHIP

A Proposal for LAI: The Learning Network Model



The Learning Network

Learning at all levels:

- **the network as a whole**, dealing with enterprise-level learning
- **the interest groups**, dealing with the cross-organizational and org level of learning
- **the internal groups**, dealing with the group and individual levels of learning

Critical Success Factors for LAI

- Focus on building the internal groups
- Disseminate and rotate from the interest groups
- Create individual ownership through membership roles and responsibilities
- Balancing virtual and F2F interactions
- Implementation teams & site visits

Ongoing Challenges & Further Research

- Mediate the multiple definitions of useful knowledge that exist in LAI
- Bridging different notions of time and timing in LAI
- Enhancing the value of networking in LAI
- New approaches to dealing with the barriers to knowledge creation and dissemination
- Engaging in mutual discovery as a collaborative effort