Knowledge, People & Risk

Breakout Session # 1204
Edward W. Rogers, Chief Knowledge Officer, NASA-GSFC
John Milam, President, Dynamis LLC

Date       Tuesday, April 14, 2008
Time       10:45-11:45
Knowledge, People & Risk

- NASA's mandate is to take risks to go into space while applying our best knowledge
- Only people apply knowledge to risk
- To apply knowledge to risk, people must be fully engaged in the mission and organization
- They have to trust that the system works
- So, how can we make it work better?
NASA's Knowledge

- Scientific Insights from Research
- Engineering Wisdom from Experience
- Project Management Skills
- Safety and Team Consciousness
- Institutional Support and Collaboration

The Role of Contracting at NASA

- 80% of NASA's budget goes to contractors
- Contracting is a critical aspect of space missions. Large complicated contracts with no 'do-overs' allowed
- Often few players; specialized skills
NASA Learning Philosophy

- Create Conversation Opportunities
  - Instill workplace practices of conversing
  - Force the articulation of stories
    - Explanation of events; consequences
    - Requires fleshing out context of decisions
  - Collect in the form of Case Studies

Why Stories and Case Studies?

- Technical Engineering Obstacles
- Integration Challenges
- Team Deliberations and Decisions
- External Circumstances
- Partnerships and Relationships
- Policy, Procedure and Safety Concerns
Three Challenges for Sharing

- What shows people what to share?
- What equips people how to share?
- What motivates people why to share?

Personal Knowledge Strategies are Determined by Organizational Members’ Implicit Theory of Knowledge Utilization.

Increase Internal Depth Perception

If people have a good grasp of what the organization is all about they will be more likely to openly share and communicate with each other.

I can see how what I know matters to others.
Keep Communication Open

If people are satisfied with the communication systems and processes in place they will be more likely to openly share and communicate with each other.

I am hearing the whole story, and if I take the time to speak something happens.

Reward Fairly (and Punish Fairly)

If people perceive the organizational employment game to be fair and open they will be more likely to openly share and communicate with each other.

If I work hard, it matters.
The NASA GSFC Learning Architecture

Pause And Learn
- Adapted the AAR process for use inside NASA.
- Piloted with several projects
- Kept it simple
- Showed how it can deliver value

WHITE PAPER
Pause And Learn:
Adapting the Army After Action Review Process to the NASA Project World at the Goddard Space Flight Center

Developed at the
NASA Goddard Space Flight Center
Knowledge Management Office

By
Dr. Edward W. Rogers

May 26, 2004
Revised May 18, 2004
Knowledge Sharing Workshops

- Team to Team
- Within the Center
- Panel Discussions of What Happened?
- Mission Success Celebrations
- Topical Concerns/Cross Cutting Issues
- Outside (Public) Conferences

Life Cycle of a Case Story

- Write your own case studies
- Identify the learning and embed it in stories
- Involve key people in telling them
The MSES II Recompete Story

- Very Strong Stakeholders
  - Internal Customers
  - Embedded Contractors
- A Challenge to “Do the Right Thing”
- A Surprising Result
- The Lessons Learned

Fixed Price vs Cost Plus

- TDRSS Acquisition Case Study
  - Same Issues Today
  - Same Arguments For and Against
- The Case Study Panel
  - Procurement
  - Legal
  - Project Office
Learning Practices Build Trust

- Pause and Learn at the Team Level
- Workshops at the Center Level
- Cases at the Agency Level
- Publishing (ASK Magazine and Academic)
- The Sequence is Essential for Preserving Trust and Building the Relationships that Foster Sharing at all Levels

Success!