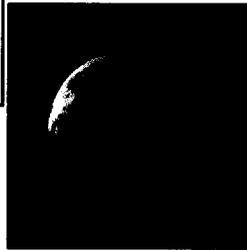
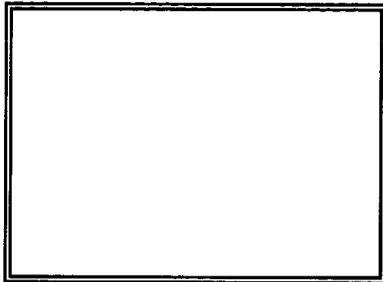


JPL/Aerospace Ongoing Collaboration



GOAL OF COLLABORATION:

To better serve the Nation's space programs through collaboration, achieving significant impact and measurable benefits to NASA and Air Force programs

JPL/Aerospace Collaboration

Working together with NASA

Mars Exploration Rover project, Mars Reconnaissance Orbiter project,
Dawn project, Advanced Studies and Concept Development process

Working together with SMC

Independent Readiness Review Teams, Space-based Radar Program,
Transformation and Development Directorate

Working together to improve the Nation's Space Program

Technology Exchange Workshops

Program System Engineering – Developing the Discipline

Systems Engineering Revitalization/Upgrade

Risk Management Working Group



JPL/Aerospace RM Working Group

Guiding principles

Risk is the forward-looking aspect of project/program management

Risk management should support better project/program decisions

Goal to “improve the practice of risk management”

Periodic Workshops on key issues:

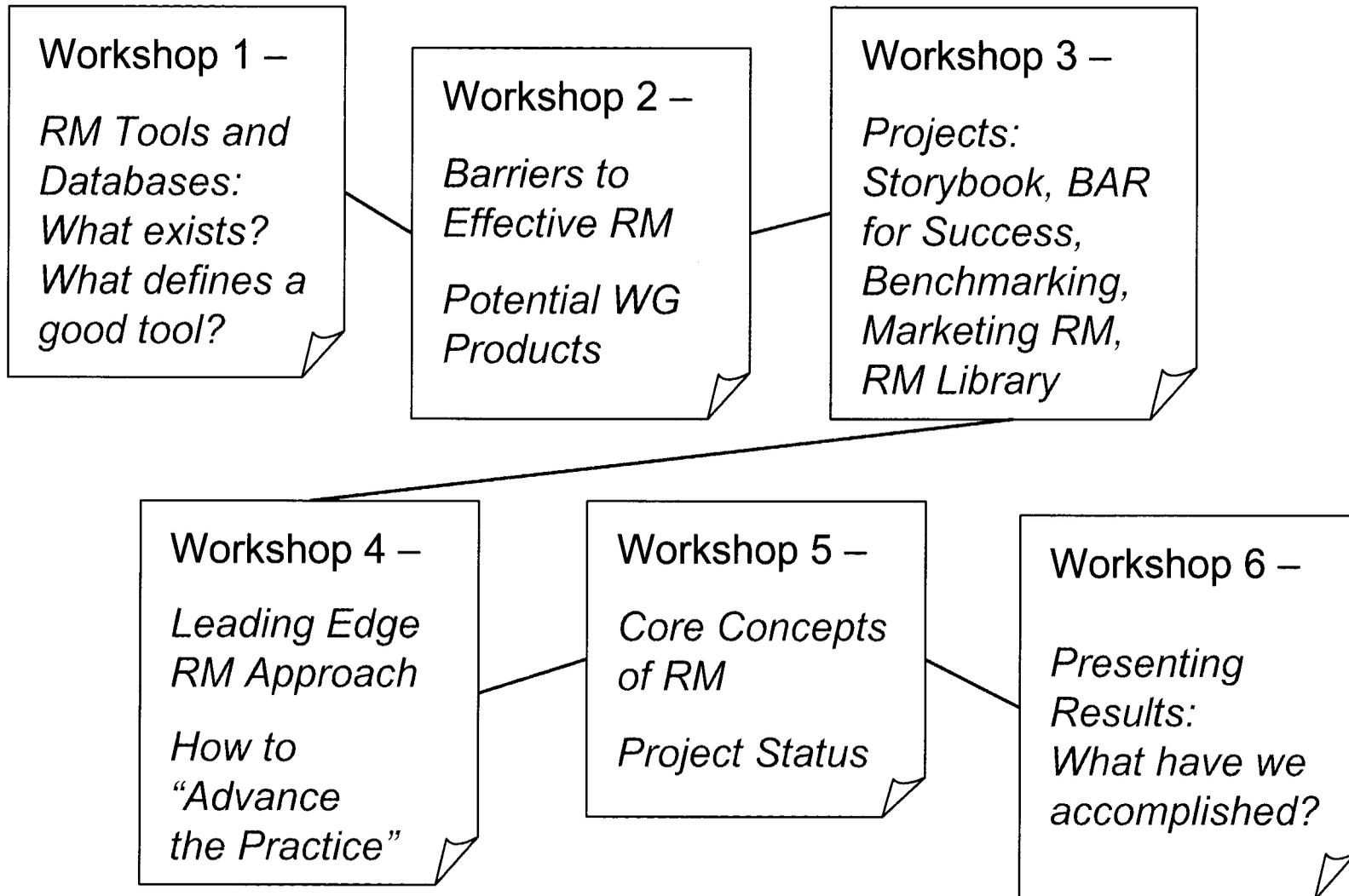
Discuss common RM issues common

Identify common RM practices

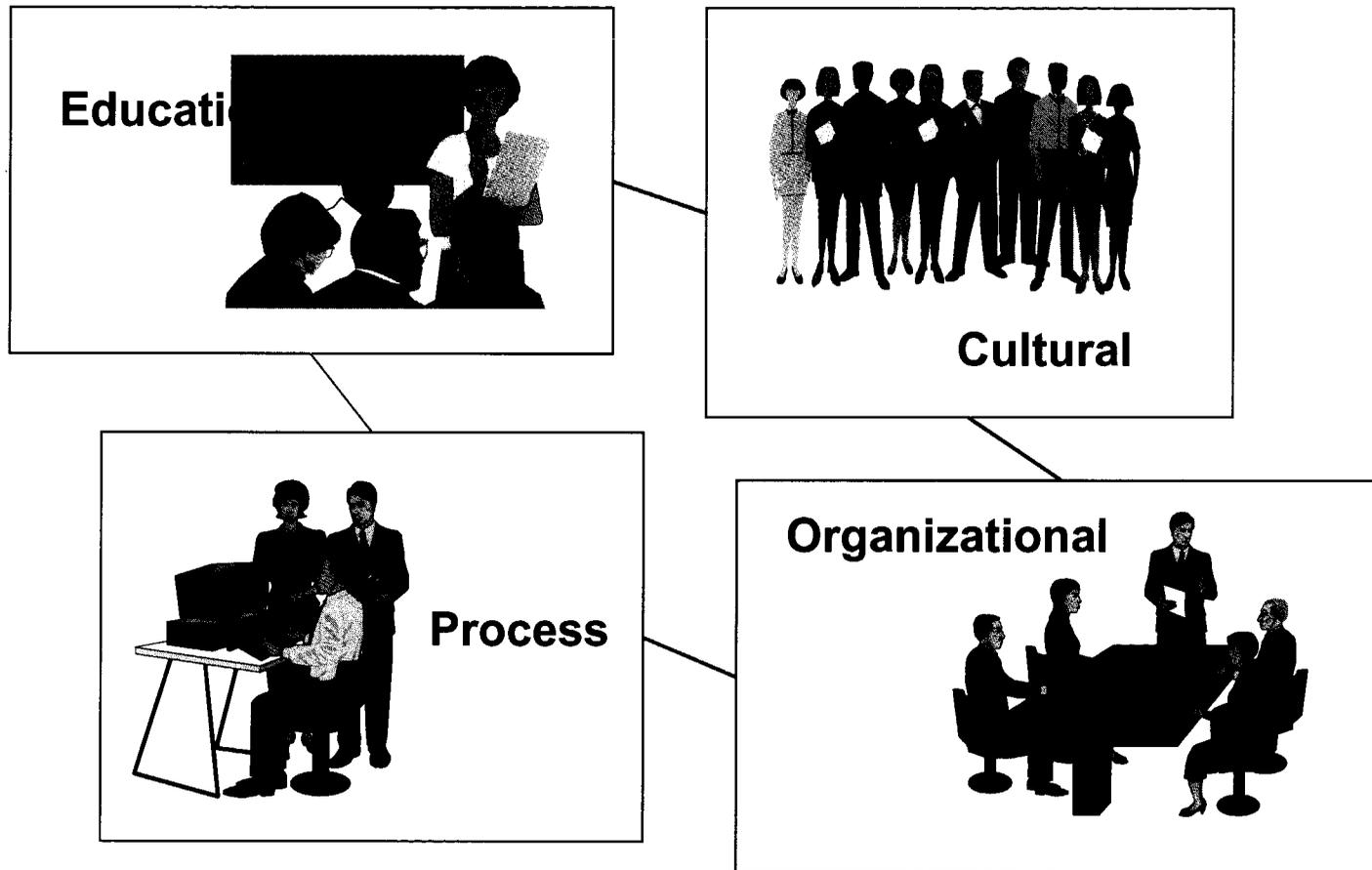
Create products and recommendations



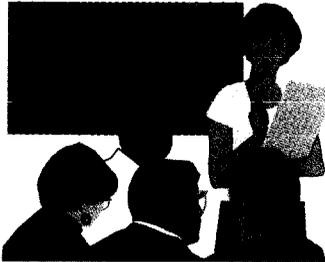
Workshops



Barriers to Effective Risk Management



Educational Barriers to Effective RM



- Most risk management is “guidelines” -- difficult to teach something (with authority) that is not universally accepted in a standard way
- Risk management is still evolving – hard to demonstrate the utility of training in risk management
- Risk management success stories have not been well communicated (or even well documented)
- No process for training new or inexperienced program/project managers in risk management

Organizational Barriers to Effective RM



- Complex systems require a disciplined RM approach that is not appreciated by many program/project managers
- Organizational goals and personal goals may not be aligned -- incentives are not appropriate for mission success overall
- Organizations desire to “please the customer” -- who may have unrealistic desires
- Senior management does not see the value of RM because they have not been presented with evidence that it pays off



Cultural Barriers to Effective RM



- People get rewarded for solving problems, not for preventing them
- Risk management is not considered a discipline (nor seen as having a universal structure related to other engineering disciplines)
- “Engineering mentality” requires a formal, objective risk management approach in order to believe in it
- Allowing reserves perpetuates the risk-acceptance mentality
- Review panels don’t ask the right risk-related questions



Barriers to Effective RM Process



- Space programs are “non-standard” -- reinforces “non-standard” risk management processes
- Lack of identified measures, units of measurement
- Lack of identified “universal principles”
- RM is not a part of program management standard practice and culture, so cultural inertia prevents process improvement

Working Group Goals



- *Develop advocacy for risk management practice within enterprise management at Aerospace and JPL.*
- ✓ Requires development of enabling processes, tools, presentations, and persuasions to be applied not only at the enterprise level, but also at the project level
- ✓ *Indication of achievement* -- a standard Program Management Council question to project managers such as "Where are the risks in your project, and what have you done about them?"

Working Group Goals



- *Develop and institutionalize effective training in risk management for project personnel who should be engaged in the practice.*

- ✓ Enablers include inducing the "right" people to attend and teaching them "the right stuff"
- ✓ *Indication of achievement* -- when asked about project risks and mitigation at reviews, project management can answer the questions satisfactorily.

Working Group Products

Current Products:

- ✓ *Risk Management Storybook*
- ✓ *Risk Management Plan outline and template*
- ✓ *Risk Management Common Glossary*



Future Products:

- ✓ *Common Risk Management Training?*
- ✓ ?
- ✓ ?

