**Group K**

**Space Logistics Regulations, Policy and Guidance**

*Group Leader*
Dr. Olivier de Weck, MIT

*Group Facilitator*
Mr. William A. (Andy) Evans, USA [SOLE]

*Group Scribe*
Mr. Matthew Silver, MIT
Session Overview

Scope
- A discussion that covers the ‘what, where, when, how many, and how-to’ issues of space logistics regulations, policy and guidance.

Goals
- Identify and define the key issues and impacts of logistics on space regulations, policy and guidance — so that these implications can be reflected in design requirements, cost estimates, mission architecture development, etc.

Organization
- Identify the important issues (starter list + attendee participation)
- Pick the “top 3” issues/topics relevant to each exploration mission type
Discussion Points

- Space Logistics Regulations, Policy and Guidance
  - Are there any in existence today?
    - If so, are they adequate?
  - What should be implemented and/or changed for missions to the moon and Mars?
  - Who should initiate/mandate these regulations/policy?
  - Best practices?
Top 3 Issues

- **Acquisition, Regulations, and Policy**
  - Contracts, PBL, Interfaces, NPDs & NPRs
- **International Regulations Policies and Protocols**
  - Different ways of doing things in different nations: Barter system, Astronaut Training
  - Standards and protocols for foreign participation
- **Lack of Integration of Policies**
  - National Space Policy Objectives, NASA Space Policy Objectives, National Security
  - Infrastructure Development vs High Tech acquisition
  - Need for strong system integrator
Need for effective requirements and specifications

What can be put into a design specification?

PBL and how do you flow this into contracts?
  - i.e Metrics based performance arrangements

Need for consistency in supportability regulations requirements

Impact of design and procurement approach on logistics and supportability

Contractual decisions/actions should be based on purely technical grounds rather than political
Acquisition, Regulations, and Policy (2)

- **NPDs (NASA Policy Directives)**
  - Set forth principles to strategically manage agency

- **NPRs (NASA Policy Requirements)**
  - Often confusing/open-ended directives and requirements
    - Not always clear who is responsible -- programs versus projects
    - Stove pipes hinder collaborative demand planning and commonality

- Policies often encourage “push” – based logistics
  - Increases stockpile and waste

- Need to revise NPDs and NPRs
Contracts should include options / flexibility
- Performance-based contracting versus need for commonality

Treat space-system appropriations as infrastructure rather than high-tech
- Changes expectations in Congress
- Select parts of mission
International Regulations Policies and Protocols (1)

- Cultural issues with respect to Space Station
  - Ex: different ways of doing things in different nations
  - Barter system
  - Astronaut Training

- Standards and protocols for foreign participation
Lack of Integration of Policies (1)

- Mil PRF 49506 and the DOD 5000 series regulations are not being consistently applied across systems (DOD)
  - Wiggle room even within standards
  - High personnel turnover – 2 to 4 years
- Need for early recognition of integration and supportability
- Need for Standardized interfaces early in design process
  - Difficulty standardizing in multi-national settings from design to end-use
  - Need for interface control docs (ICDs) and configuration control board early in exploration program
Lack of Integration of Policies (2)

- Need for strong leadership
- Disconnect between perception of program and state of technology
- Stove pipes and insulation of NASA enterprise
- Sacrifice potential technical advances due to cultural and budget issues
  - Hardware, practices, processes, etc
Lack of Integration of Policies (3)

- Industrial base issues
  - Other nations often ahead in hardware, practices, processes
  - Tension between using proving TRL 6-9 tech and processes versus developing wholly new tech

- Need to develop supplier/industrial base policy for long-term logistics approach
  - Need for modular open system architecture and commonality
  - Flexible rather than proprietary
  - Need to sustain supplier interest through long-term program

- Need for broader understanding of logistics
  - Who do the policies apply to?
Lack of Integration of Policies (4)

- Lack of visibility and real-time information
  - Web-based system may help
  - Problem of fractured databases
  - Need to identify and have visibility for commonality
## Issues vs Missions

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