

Team #4:

Mechanical Parts

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4. Mechanical Parts: Scenario Description

- POTUS just announced a revised Afghanistan strategy for deploying 30,000 additional troops to the region
- As a result, the Army is planning to deploy two additional Infantry Brigade Combat Teams (IBCTs) with approximately 4,500 personnel and equipment along with:
 - 600 HMMWV variants (e.g. M1141s, M1151, M1152s)
 - 120 Blackhawks
 - 200 Chinooks
 - 100 Apache helicopters.
- In order to enable campaign's momentum along with continuing to strengthen and build partnerships, the decision was made to deploy the two BCTs...**ASAP!**

So what do we do?

4. Mechanical Parts: Caveats

Armament

- However, a majority of the HMMWV variants require armor upgrades to the turrets and doors along with installation of latest Counter-IED system
- Upon arrival in country, IBCTs will be directed to proceed to their onward movement and integration location throughout the Combined/Joint Operations Area. Once the BCTs arrived at the designated location, the Task Force Commander will employ immediately
- Because of the increasing IED threat, the HMMWV upgrades must take place also

Aviation

- Aircraft are available along with critical spares for this mission; however, it depletes all critical spares in region.
- In order to replenish the critical spares in the region, 50% of critical items in Europe and North America will be taken to zero levels (no safety stock)
- In order to replenish the critical spares in Europe and North America, the DoD releases a \$1 billion worth of orders to the prime contractors to manufacture those parts. Considerations:
 - Seventy (70) percent of the parts are not manufactured by the primes
 - Ninety (90) percent of the parts manufactured by the supply chain have not been purchased in ten years.
 - DoD wants safety levels replenished in Europe and North America ASAP (preferably within six months)

So what do we do?

Apply SCRM process principles (identify, assess, mitigate, and manage) to answer the question: **How can the DoD & Industry better plan for sustainment during Acquisition phase?**

1. What are the sustainment risks/issues associated with your scenario? (List in priority of severity)
2. What proactive sustainment activities would help mitigate risks or resolve issues?
3. For each proactive sustainment activity:
 - a) List the information you need during Acquisition phase to plan for sustainment.
 - b) List any anticipated systemic constraints or barriers.
 - c) Describe how you can maintain accurate information throughout the system lifecycle?
4. What are the differences in the way we treat repairable versus consumable items?
5. What are the differences in the way we treat systems that are already in Sustainment phases?

1. What are the sustainment risks/issues associated with your scenario? (List in priority of severity)

- HMMWV/Counter IED

1. Need to know the usage demand/requirements
2. Funding availability, timing and procurement process
3. What is the prioritization of upgrades?
4. Are there kits available for purchase or must they be built? (assume the IP exists for kits)
5. Is in-house installation capability available or does it have to be outsourced?
6. Where is it put on the HMMWV?
7. How do we get the kits into the theatre?
8. DPAS?

1. What are the sustainment risks/issues associated with your scenario? (List in priority of severity)

- Aviation (funding is available)

1. Are qualified suppliers available?
2. How long will it take to ramp up production?
3. Is raw material available?
4. Is tech data available? Manpower? Tooling?
5. Contracts exist?
6. DPAS honored?
7. Chain of custody?

2. What proactive sustainment activities would help mitigate risks or resolve issues?

- HMMWV/Counter IED/Aviation
 - Keep prefab kits on hand or access to the IP
 - Keep the industrial base warm/incentivized
 - Government/OEM must know their supply chain
 - Modify the production/ supply chain process
 - Identify critical items and their ability to be produce
 - Identify process and product owners
 - DPAS implemented

3a. For each proactive sustainment activity:

a) List the information you need during Acquisition phase to plan for sustainment.

b) List any anticipated systemic constraints or barriers.

c) Describe how can you can maintain accurate information throughout the system lifecycle?

- Know tech data, requirements (DTLOMPS-F), funding, time frame
- Prioritization and missions
- Design robustness in to the supply chain

3b. For each proactive sustainment activity:

- a) List the information you need during Acquisition phase to plan for sustainment.
- b) List any anticipated systemic constraints or barriers.
- c) Describe how can you can maintain accurate information throughout the system lifecycle?

- New missions/threats
- Shortage of material, sources and manpower (attrition) - DMSMS
- Budget/funding constraints
- Proprietary information
- Facility availability
- Priorities/DPAS

3c. For each proactive sustainment activity:

- a) List the information you need during Acquisition phase to plan for sustainment.
- b) List any anticipated systemic constraints or barriers.
- c) Describe how can you can maintain accurate information throughout the system lifecycle?

- Plan for extended life cycles
- Plan for interoperability
- Plan for tech insertion and product improvement
- Communication/IT
- Item (life-cycle) managers that are responsible for sustainment
- Create a collaborative environment that is supported by contracts

4. What are the differences in the way we treat repairable versus consumable items?

- Consumables may have a short life-cycle
- Repairables have a managed life-cycle
- Do we need to move towards more consumables
- Funding for repairables is handled differently
- Two different supply chains
- Repairables have more IP issues

5. What are the differences in the way we treat systems that are already in Sustainment phases?

- Do not adequately plan or fund for sustainment
- Organizations may change from production to sustainment
- Manage readiness for sustainment phase
- Manage priorities in sustainment phase
- No aggressive incentive to improve
- Loss of engineering support in the sustainment phase

Team Summary & Insights

- Intellectual property access is an issue
- Priorities must be determined and maintained
- Surge and sustainment need to be established
- Need to incentivize industry to stay in DIB and warm
- Implement DPAS in the DIB
- Incentivize industry to actively manage the life-cycle
 - Cost reduction
 - Performance improvements

Appendix 1:

October 2015 Workshop Findings

- Sound decisions are impeded by lack of supply chain visibility;
- Total supply chain mapping early in process could facilitate better decisions;
- Supply chain ownership changes throughout process and is not clearly defined, nor is the decision authority;
- Technical data package ownership should be addressed in program's initial acquisition plan but may not need to be purchased in the initial phase;
- Flexibility is constrained by available suppliers with proper credentials, but supplier qualification is beneficial even if it results in reducing the supplier pool;
- Malicious actions against the supply chain need to be considered as part of acquisition plan;
- Partnerships reduce risk and cost but must be carefully constructed early in process; and,
- Effective decisions should be made on a cost-benefit outcome, and should be added to our next workshop.