Team #3:
Government Custom Electronics

Team Leads:

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3. Custom Electronics: scenario description

Scenario:

- We are the program management office, (PMO) charged with designing, developing, testing and deploying a new, state-of-the-art DOD system responsible for Identifying, Assessing, Mitigating and Managing Cyber Threats within the DOD supply chain landscape. This system will have a life-cycle of approximately 15 years and must be designed to integrate multiple technology upgrades, be it hardware or software, over its' program life. The program is in its early stages of the Acquisition Life Cycle(DODI 5000.02).

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

- Speed of Technology/Obsolescence 5
- Unforeseen Software and Hardware Vulnerability 4
- Sole/Single Sourcing of suppliers 3.5
- Dynamic Threat Events 3
- Component Compatibility 3
- Sustainable Workforce 2

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

- Speed of Technology/Obsolescence 5
  - Use a trusted/accredited supplier for critical components—for multiple risks
  - Utilize Modular Design approach
  - Utilize FPGA's where possible to repurpose/expand capabilities
  - Maintain "Innovation-Sandbox" Test bed throughout the program life cycle
- Unforeseen Software and Hardware Vulnerability 4

  - Utilize Rigorous testing with Red Team
- Sole/Single Sourcing of suppliers 3.5
  - Regular Supplier visits and Scenario Planning, Risk Response Planning
- Dynamic Threat Events 3
  - Utilize rigorous testing with Red Teams
- Component Compatibility 3
  - Utilize Modular Design approach
- Sustainable Workforce 2
  - Education & Training

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?

- Cost profile of Incubator Test System
- List of Trusted Accredited Supplier
- Technology Forums/Roadmaps
- Red Team Budgets
- Obtain Source Code if possible
- Supply Base Data….Finance, Production, Risk Mgmt

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?

- Limited supply base capability
- Acquisition Complexity of entire program
- IP Management
- Costs

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?

- Robust Project Management Techniques
  - Stage Gate Approach
  - Milestone Approach
  - GO-NO-Go
- Use of Taggents throughout the system

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

- NA…….No consumables

Team #3 Summary & Insights for a Government Custom Solution

- Pace of Technology/Obsolescence is greatly increased
- Single/Sole Source Supplier Risk
- Workforce Development risk is increased in a customer development program
- In Sustainment Phase…
  - As the program matures, we could move from being Proactive to Reactive in terms of risk management
  - Some risk management options would no longer apply/or become less effective
  - As the program matures the cost of sustainment could increase