

Aerospace Sustainable Manufacturing Workshop Template Draft

Breakout Discussion: Supply Chain Risk Management

OBJECTIVE: 3 teams that will continue on-going collaboration around defined project

DELIVERABLE: One project definition and template information that the team is willing to invest time and effort into pursuing. Identify potential funding sources and best plan of approaching that source. ID a team leader that will pull the team together on regular bases to continue collaboration on the project toward a White paper / Proposal and ultimate funding and execution.

Supply Chain Risk Management

The complexities of aerospace supply networks, along with the growing threats of diminishing resources and potential disruptions to sustainable manufacturing at product, process and system levels, present both an imperative and an opportunity for improved risk assessment, avoidance, mitigation and economic opportunities. There are multiple aspects of this challenge, including: 1) the management of risk and uncertainty in the production of parts and components, the management of processes, and the integration of components into products/systems, 2) the protection of critical supply of foundational raw materials from those anyone could intentionally disrupt and cause harm, 3) the protection of supplies and supply chains from the impact of natural calamities such as storms, floods, natural resource shortages, fire or from terroristic actions and plans, and 4) the economic opportunities that can be identified within supply chains that are operating sustainably such as materials management/material efficiencies/recycling/reuse.

The objective of this breakout discussion is to discuss and then address both strategic and tactical risks and opportunities relating to issues impacting the aerospace industry and its global and domestic supply chains. This discussion will be designed to provide specific recommendations on projects, models and activities that can be pursued to understand and manage the risks and opportunities involved in a wide range of aerospace products and parts/components that utilize critical materials such as rhenium, beryllium, or titanium. Importantly, the discussion will address life-cycle thinking and needed approaches to address and manage those risks and opportunities from life-cycle planning to end-of-life management.

At the workshop, the group will assess the needs for improvement in supply chain management, and will propose approaches and solutions to meet the needs. The solutions will be grouped and prioritized, and a list of potential projects that can be pursued will be developed to address the prioritized issues. Some of the needed potential solution areas are described below:

PROJECT TEMPLATE

Project Title	Resilience and Sustainability in the Aerospace Supply Chain
Project Objective	Create a process that facilitates timely recovery from disruptions to the supply chain that impact the aerospace industry’s ability to deliver products and services.
The Need (Gap) (What is the business case for doing this project?)	There is presently no activity in the aerospace industry that addresses the opportunity for supply chain resilience and sustainability recognizing challenges facing the industry such as regulatory mandates and other business requirements.
Project Deliverable(s)	<p>Create a user-friendly management tool for aerospace companies that will help them address vulnerabilities and capabilities within their supply chain model.</p> <p>Develop a mentoring and education program targeted at the aerospace industry supply chain that could emulate a targeted program like EPA’s E3 program to improve the resiliency and sustainability.</p> <p>Simulation demonstrations using industry test-beds</p>
Project Workflow Steps and duration of each step	<p>Workflow:</p> <p>Development of a secure interoperable framework; Information security framework – link to sustainability & resilience</p> <ul style="list-style-type: none"> • interoperable framework for data sharing across disparate systems on an as-needed basis for sustainable manufacturing performance management in the supply chain

- What data?
 - Product design
 - Environmental/sustainability (metrics)
 - Contractual
 - Social
 - Other
- AS9100 Standard

Identifying Risks

- Disruption Management (Unknown-unknowns)
 - Business continuity planning
 - Study recovery of Japanese automotive industry to tsunami/earthquake
- Operational Risk Management
 - Sole-source suppliers
 - Changing regulatory requirements
 - ex REACH/ROHS/WEEE

Investigate current capability

Identify adaptability opportunities in the aerospace supply chain

- Business continuity planning
- Voluntary and non-mandated regulatory responses
 - ex (compliance becomes a strategic advantage inside g)
- Material management activities/projects

Develop systems to quantify the total value of pursuit of opportunity for protection and recovery management

- Return to norm; minimize time to recovery

	<ul style="list-style-type: none"> • Leverage opportunities; can be better for gaining business <p>Develop the capability to map the supply chain and asses risk and resilience readiness</p> <p>Next Steps</p> <ol style="list-style-type: none"> 1) Outline 2) Ask for people who want to be a part of the project 3) White paper 4) Broad Agency Announcement (BAA) search for funding vehicles
“Best Guess” Cost	
Team Members that are willing to continue working this project toward a funding source.	<p>Team Composition</p> <ul style="list-style-type: none"> • SMEs (have OEMs identify): mfg.com, NCDMM, TechSolve • MRSI, DOE, Homeland Security, DoD, EPA EnergyStar, • UK, tOSU
Project Approach/ Guidelines	See “Workflow” section
Participant Names and contact info	
Capable Technology Providers	