Bringing Today’s Military Technologies to our ECC Industries

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Overview of the Partners

**Lockheed Martin**
- Core Business Areas:
  - Aeronautics
  - Information Systems & Global Solutions
  - Missiles & Fire Control
  - Mission Systems & Training
  - Space Systems
- 112K employees
- $45.6 B revenue 2014
- 70 countries worldwide

**WorleyParsons**
- Hydrocarbons, Infrastructure, and Minerals & Metals
- 34K employees
- $7 B revenue
Early Idea Screening & The Partnership

- Our first 12 months together
- Thorniest issues facing our industries
- Skunk Works involvement
- Compare strongest needs & existing capabilities
- First target areas:
  1. Asset Integrity
  2. Data management, modeling & visualization
  3. Remote logistics support
Stalker Unmanned Aerial System (UAS)

Advantages from military service
- Portability, Ease of Launch, Endurance, Sensors
- Stalker Video
- Photo 1 – onboard discernment – pickup vs car vs Humvee

Technology Evolution & Market Demand: VTOL
- Video 2 VTOL
Creating an asset’s “Point Cloud” from multiple sensors and types

“Rosetta” combines and interprets the data

Automated anomaly detection

Applying F-35 design and simulation tools
  - Constructability considerations in the model

Human stress evaluation for turn-arounds or during construction

Visualization for erection sequencing & clearances
Human Stresses Monitoring
Insert the WP model of the water treatment facility and the use of modeling and visualization??
Remote Logistics Support

Aerial Re-supply …..(ARES)

- DARPA program to be brought to commercial sector
- Unmanned, autonomous delivery of 3000 lb payload
- First flight for US Marines by yearend 2015
- Joint Industry Program (JIP) by LM & WP launched to adapt to offshore & remote applications
Insert ARES VIDEO or Photos
Remote Logistics Support

Hybrid Airship
Prototype built and concept proven
20, 90 & 500 ton versions to be built
No runway needed; truly remote or offshore capable

- DARPA program to be brought to commercial sector
- Unmanned, autonomous delivery of 3000 lb payload
Hybrid standard video – how long is it? 2 mins max....
Summary

What are YOUR greatest industry challenges?
Skunk Works may have or can develop the solution
New adaptations of existing military technologies is underway