



JOCOTAS

Strategic Alliances: Government & Industry

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Overview

- ***JOCOTAS: Technology Vision***
- ***Total Life Cycle Involvement***
- ***Alliances with Industry: Purpose***
- ***Strategic Alliances: What makes a success?***
- ***Working with the Government***
- ***Shelter Systems: Direction & Future***
- ***Questions & Answers***

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JOCOTAS: *Technology Vision*

- *JOCOTAS Charter, Purpose*

- Advance the state of the art in shelter design and shelter ancillary equipment
- Search for common solutions to identified user needs
- Eliminate duplication of shelter RDT&E
- Share information and expertise to solve shelter problems
- Promote evolutionary change



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Total Life Cycle Involvement



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Alliances with Industry: *Purpose*

- *RDT&E*
 - Science & Technology
 - Subject Matter Expertise
 - Intellectual Capital
 - Problem Solving
 - Design
 - Modeling & Simulation
 - Test & Validation
 - Optimization
- *Fielding & Sustainment*
 - Continuous Product Improvement
 - Manufacturing Technologies
 - Reduction in Life Cycle Cost
 - Reliability & Maintainability
 - Availability

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Successful Strategic Alliances

- ***Complimentary capabilities***
- ***Mutual benefits***
- ***Legal/contractual means in place***
- ***Fulfill an identified need/capability gap***
- ***Validated technologies in a relevant environment***
- ***Shared/reduced cost***

Example Success Stories

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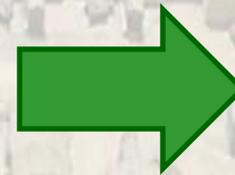
Space Heater Convective



- *Replaces dangerous fuel-fired heaters used inside tents*
- *Leverages thermo-electric generator technology for combustion and air-handling*
 - *First to supply forced hot air without an external engine-driven power supply*
- *Optimized for military use*
 - *60% improvement in combustion efficiency*
 - *Simplicity in design, ruggedized*
 - *Operates on full range of liquid fuels*



Flexible Photovoltaics



- *Renewable Energy: Silent power generation from the sun in a flexible form*
- *Developed through Small Business Innovation Research effort and optimized for the DOD*
- *Joint Service applications*
- *Technology transition to commercial applications*

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ULCANS



Ultra-Lightweight Camouflage Net System

- *Provides the Warfighter protection from visual, near infrared and broad band radar protection*
 - *Enhanced operational performance with greatly improved human factors*
- *Developed through an alliance and type-classified*
- *Two validated industry suppliers to meet DOD performance specification*

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Utilis USA: Folding Frame

- Patented European Technology Brought to the US
 - Small, Hub Zone Business
- Validated against DOD shelter performance standards
 - Aberdeen Test Center, MD
 - Snow, Wind, Rain, Durability, Extreme Temps
- Joint Expeditionary Collective Protection Family of Shelters
- Technology Transition



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Airbeam Technology

- Initiated through Small Business Innovation Research
 - Follow on development and customer-funded efforts
- Load Bearing Pressurized Fabric Structures
- Advances Over Commercial Inflatables
 - Seamless Tubular Fabrication
 - High Pressure → Reduced Diameter & Surface Area
 - Optimized Design through Modeling and Simulation
- Optimized for DOD shelter technical performance demands



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Expeditionary Force Provider

***C-17 with Entire 150- Soldier Camp
Heading to Afghanistan***



***Two Air-Supported TEMPER Shelters
on Pallet***



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Net Zero + JCTD

- Leverage Energy Savings Technologies
- Provide Various Solutions
- Quantify Added Value
- Transition Plan
 - PM Force Sustainment Systems
 - Joint PM Collective Protection
 - Army Medical Department
 - Commanders



Solar Covers Block 60% of Radiant heat. Modular from 900 sf to 10,000 sf



Aerogel Silica Mesh Insulation



Air Cell Insulation



Electroluminescent Lighting System



Shelter LED Lighting with Ambience



Small Tactical Airbeam Tent Deployed as Force Provider 150 Soldier Base Camp



PowerShade (1 - 3KW) also blocks 90% of radiant heat



BB2950 Battery charger for Comms and Sensors



QUADrant units & Balance of Systems converts DC to AC and stores reserves

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Net Zero Plus - Test Site

Strategic Alliance Opportunities

- *Problem Solving*
- *Demonstration & Validation*
- *Technology Optimization*



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Working with the DOD

- Federal Business Opportunities
 - www.fbo.gov
- Natick Soldier RD&E Center Broad Agency Announcement
 - <https://www3.natick.army.mil/ssbaa.htm>.
- Small Business Innovation Research
 - www.sbir.gov
- Cooperative Research and Development Agreement
 - Legal agreement to conduct R&D and Technology Transfer
- Comparative Testing Office
 - <http://www.acq.osd.mil/cot>
- Technology Investment Agreement
- Test Service Agreement

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Questions?

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