

Aeronautical Systems Center

AFA Technology Symposium

26 September 2008



Technology Challenge Panel
Aeronautical Systems Center

U.S. AIR FORCE

Lt Gen Jack Hudson
Commander
ASC

Integrity - Service - Excellence



Bottom Line



- **The Air Force must prevail in today's and tomorrow's war as part of a joint, coalition team—**
 - **In a fiscally constrained environment**
 - **In a world of rapidly changing, globally available technologies**
 - **With tightly integrated capabilities**
- **Need to leverage technologies and focus investments to maximize warfighter capability**
- **Imperative: We owe a consistent AF message**

Still working the consistent priorities across all time dimensions and domains



ASC



Mission Statement

Deliver affordable, sustainable capabilities to our warfighters--Air Force, joint service, allied and coalition partners--on time and on cost and to work the priorities of the Secretary of the Air Force, Chief of Staff of the Air Force, AFMC Commander and the Service Acquisition Executive

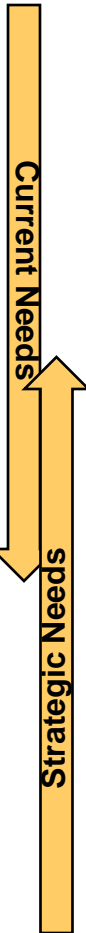
- **Diverse portfolio with multiple customers**
- **Point of integration for multiple domains**
- **Respond to urgent requirements, emerging needs and influencing future concepts**



Supporting ASC Tech Needs



TIMEFRAME	CHARACTERIZATION	ORGANIZATION	VENUE
<u>Near Term</u> w/in FYDP, ~ 0 – 6 yrs	Current Needs; - Approved Key Performance Parameters (KPPs) - Cost or Sustainment Challenges	Programs & Current Prime/Vendor with AFRL	- PEO-TEO Review - Applied Technology Council (ATC) - Independent Research & Development (IRAD) - Small Business Innovation Research (SBIR)
<u>Mid Term</u> 2 FYDPs ~ 7 - 12 yrs	Future Needs; - Master Capability Library/Concepts of Operation - MAJCOM Strategic Management Plans - Requirements Analysis & Maturation (RAM)	HAF/A5, MAJCOMs, Materiel Command XRs, with Programs & AFRL	- Capabilities Review and Risk Assessment (CRRRA) - Functional Area Analyses & Assessments (FAA/FNA) - PEO-TEO Review - ATC - RAM efforts
<u>Far Term</u> 13+ years	Future Opportunities; - Focused Long Term Challenges - Beyond CRRRA - RAM	AFRL with COCOM/ MAJCOMs, AF/A5, Materiel Command XRs	- Capabilities Planning & FLTCs - RAM efforts



Address All Timeframes to Better Leverage Tech Investments



ASC Strategic Interest Areas



Interoperability/ Communication	Open architecture application, data links compatible with stealth platforms, airborne message routing, multi-level security, etc.
Intelligence, Surveillance, and Reconnaissance	Open architectures, multi spectral (EO/IR, SIGINT, RF, acoustics, all weather capabilities)
Unmanned Aerial Vehicles	Open architectures, multiple operations/common control, autonomous air refueling, etc.
Susceptibility reduction/ Reduced vulnerability	Signature reduction, radar, acoustics, heat, etc.
Directed Energy	Protection & Application
Position, Navigation, Timing	Alternatives to Global Positioning System
Alternative and improved power sources	Lightweight, Efficient, High Power, non-hydrocarbon based systems
Pilot/Vehicle Interface	Armor, Helmets, human performance,, etc.
Sustainability/Reparability/ Availability	Sustain Air, Space, Cyberspace capabilities, thermal management



ASC Current Tech Needs



Pri	SHORT TITLE	CSAF/SECAF Priorities						DISPOSITION	C O R E	P O M	I R A D	S B I R
		S Y S A	S Y S B	S Y S C	S Y S D	S Y S E	S Y S F					
1	Tactical Navigation & Adverse Weather Op Capability	X		X		X		Multiple SBIRs wrt brownout technologies in work will provide partial solution				✓
2	Capability to Detect & Avoid Wire Strikes	X		X				Multiple SBIRs wrt brownout technologies in work will provide partial solution				✓
3	Increase AC Wiring BW Throughput & Data Mgmt		?	?	?		?	Industry support needed	✓	✓	✓	
4	Lightweight Night Imaging	?				X		Partial viable tech solution			✓	✓
5	LO Maintainability				X	X	X	Partial viable tech solutions	✓	✓	✓	✓
6	Improved Crew Armor	X						Prime currently using IR&D funds			✓	
7	Oxygen Sensor in Fuel Tank	X	?				?	Multiple SBIRs in Phase II				✓
8	Data Link Transmissions	X	?		X	X	?	Tech solutions achieved and a mutually agreeable way ahead has been developed	✓	✓	✓	
9	Advanced EO/IR Sensor Capabilities	X			?	X		(suspended discussion - source selection sensitive)				
10	Heat Load Management					X	X	Industry support needed			✓	✓



Points of Contact



- **AF Independent Research and Development (IR&D) Program Office**
 - AFRL/XPP, Mr. Giovanni Pagán, (937) 656-9176
afri.hq.irdpm@wpafb.af.mil
- **AF Small Business Innovation Research (SBIR) Program Office**
 - AFRL/XPP, Mr. Stephen Guilfoos (937) 656-9021
- **ASC Office of Research and Technology Application**
 - ASC/XR, Mr. Tom Graves, (937) 255-0071
- **ASC Acquisition Technology Planning**
 - ASC/XRC, Ms. Gail Steele, (937) 255-1722

Other sources:

- <http://www.fedbizopps.gov/>
Broad Area Announcements
- <http://dodsbir.net/> / <http://www.sbirstrmall.com/Portal.aspx>
Department of Defense (DoD) / Air Force SBIR program



Bottom Line

- **The Air Force must prevail in today's and tomorrow's war as part of a joint, coalition team**
 - **We owe you a consistent AF message**
 - **We need responsive and innovative technology ideas from you...**
 - **Stable and mature technologies**
 - **Available when needed for integration**
 - **Affordable**

Need to leverage technologies to deliver and sustain warfighter capability



Questions?

