



Welcome

LS³ Industry Day
12 NOV 08

Dave Neyland
Director, Tactical Technology Office





What is DARPA?



The Defense Advanced Research Projects Agency is the central R&D arm of the Department of Defense with the primary responsibility to conceive, explore, and demonstrate breakthrough system concepts and the most advanced technologies.





DARPA Technical Offices



Director, Tony Tether
Deputy Director, Bob Leheny

Tactical Technology

Dave Neyland
Steve Walker

Air/Space/Land/Sea Platforms
Unmanned Systems
Space Operations
Laser Systems
Precision Strike

Strategic Technology

Barbara McQuiston
Larry Stotts, Brian Pierce

Space Sensors/Structures
Strategic & Tactical Networks
Information Assurance
Underground Facility Detection
& Characterization
Chem/Bio Defense
Maritime Operations

Defense Sciences

Bob Leheny (Acting Director)
Leo Christodoulou

Physical Sciences
Materials
Biology
Mathematics
Human Effectiveness
Bio Warfare Defense

Information Processing Techniques

Chuck Morefield
Charlie Holland

Cognitive Systems
Command & Control Systems
Computer Language Translation
High Productivity Computing
Sensors & Processing

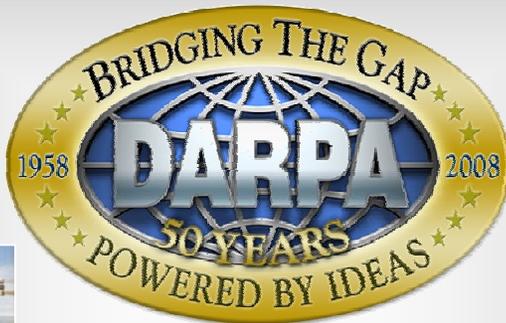
Microsystems Technology

Greg Kovacs
Dean Collins

Electronics
Photonics
MEMS
Algorithms
Integrated Microsystems



DARPA Accomplishments



1960



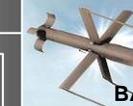
1970



1980



2000



1990



TTO Thrust Areas

Directed Energy Systems

Precision Strike

Unmanned Systems

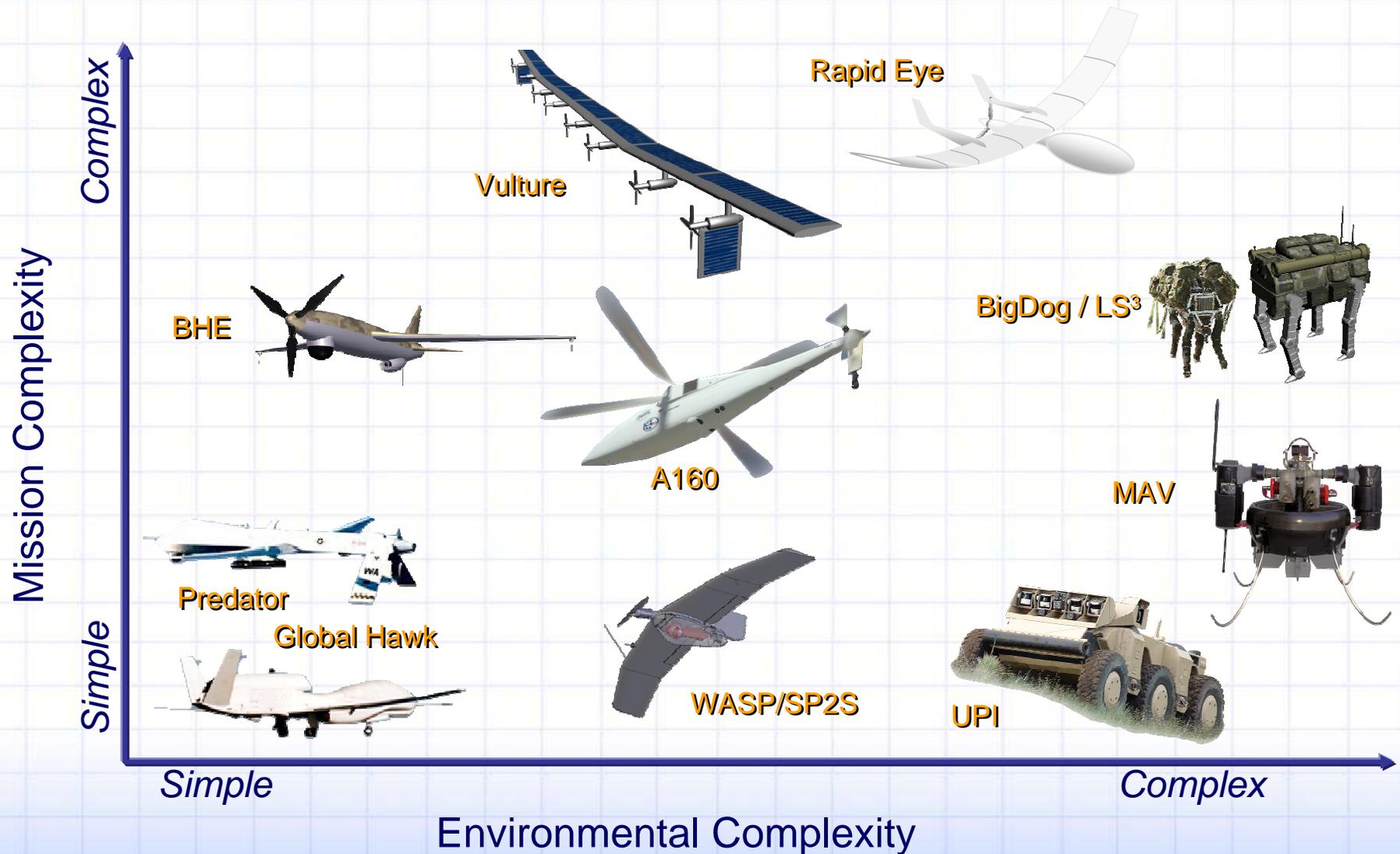
Space Operations

Air/Space/Land/Sea Platforms



Unmanned Systems

DARPA has led the unmanned vehicle revolution





DARPA and Legged Squad Support System (LS³)



- **DARPA continues to research novel robotic systems to enable new DoD capabilities**
- **DARPA has demonstrated the initial technical feasibility of quadruped capability in the BigDog effort**
 - USMC a partner in the concluding phase
 - Completes a DARPA DSO, then TTO investment
- **LS³ moves DARPA from the demonstration of technology feasibility into the demonstration of a system capability**
 - LS³ has aggressive system, subsystem, and integration technical requirements
 - Effort includes many considerations of eventual system needs for a DoD service product
 - Many complementary concepts and technical challenges to consider (e.g. arms)
 - First concern yourself with a strong LS³ bid

