

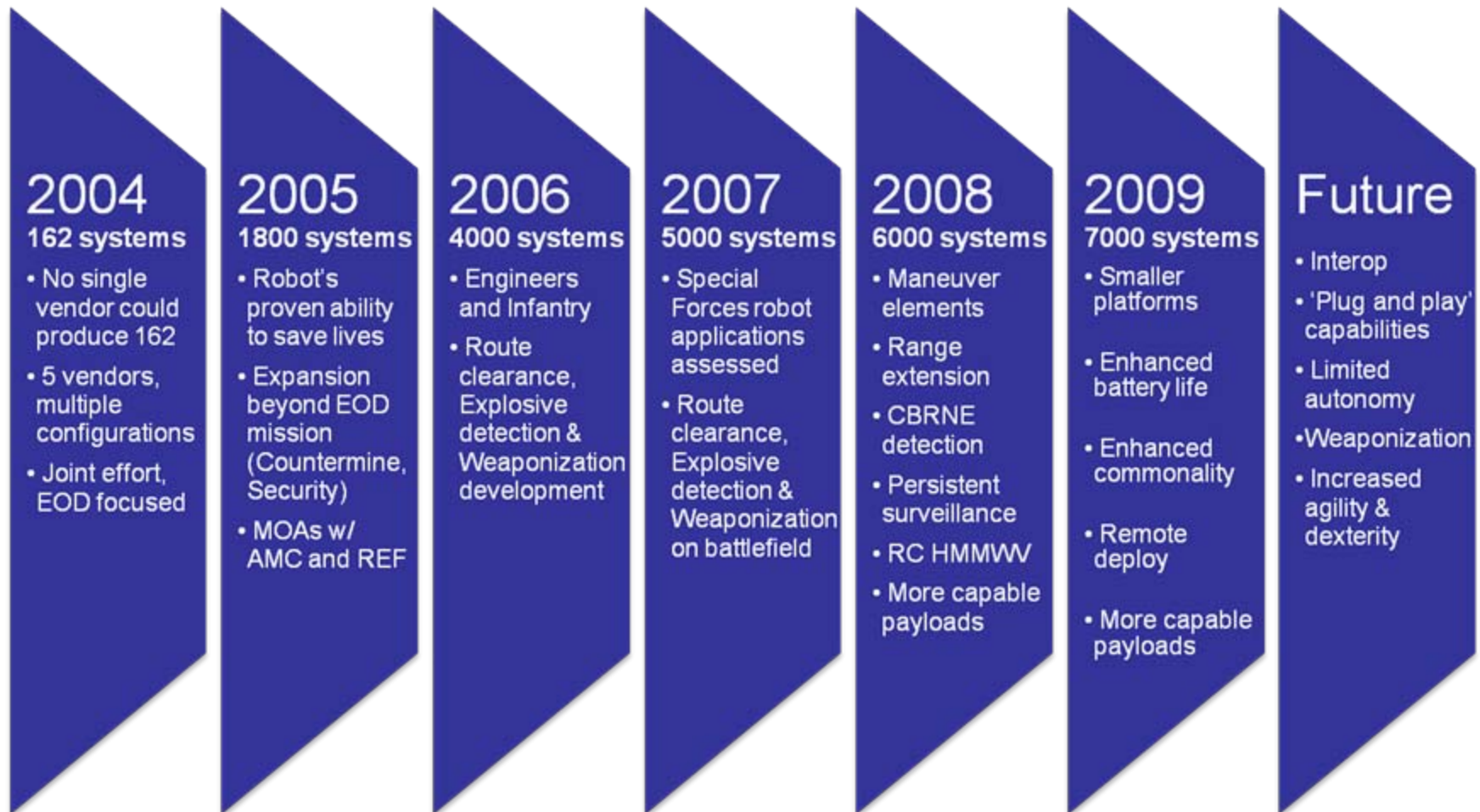
Dual Use Material Developers Panel



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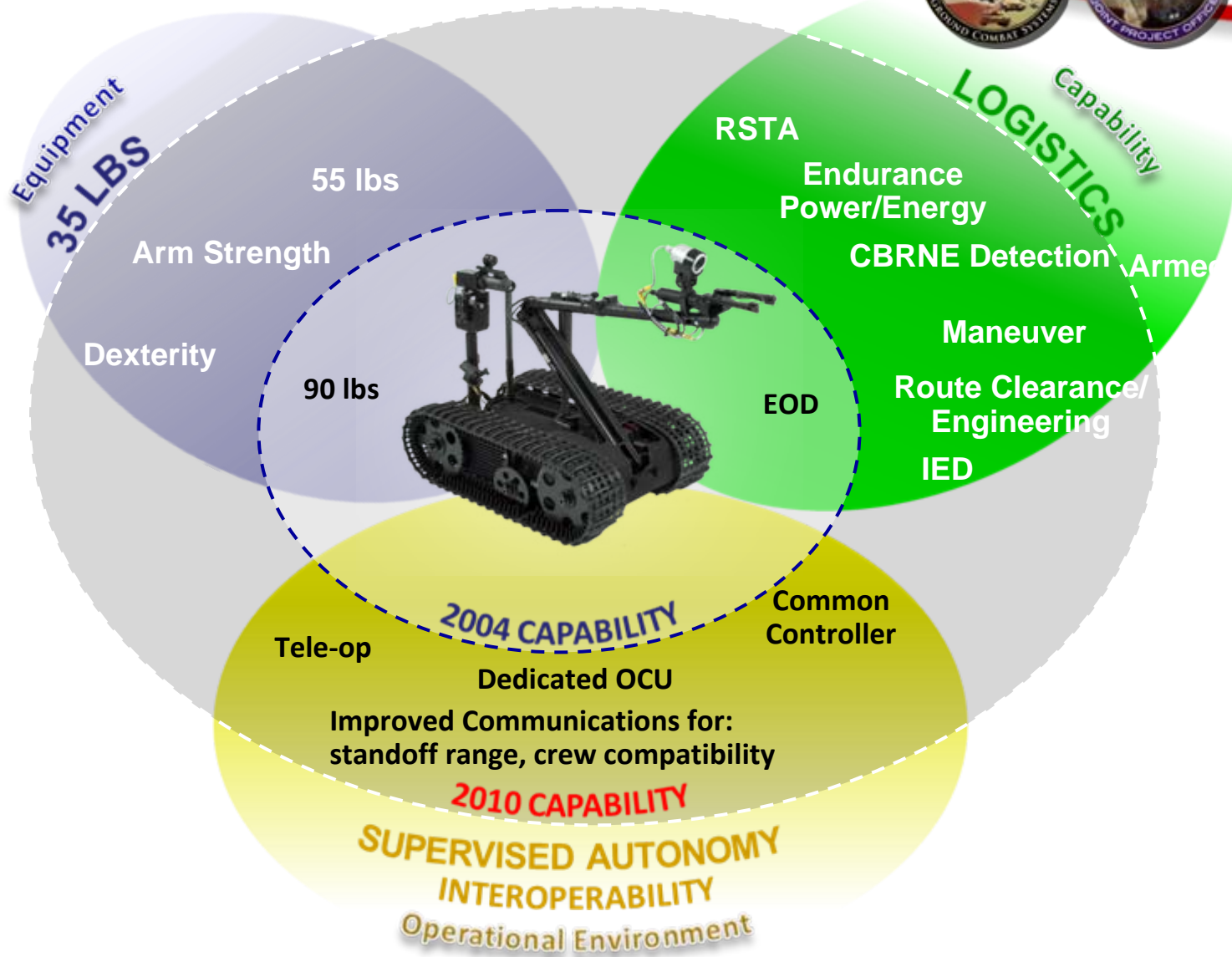
Evolution of Ground Robotics in War



Sustainment, Modernization, Interoperability and Modularity



Robotic Modernization



Enhancing Warfighter Capabilities

Joint Robotic Repair and Fielding JRRF



BACKGROUND

- The Joint Robotics Repair and Fielding (JRRF) Activity established in mid 2004.
- Provides maintenance, supply and training for all Joint Service Non Standard Equipment Robotics.

MISSION

- Provide in-Theater Support for Joint Service Theater Provided Equipment (TPE) Ground Robots.
- Single “one-stop-shop” for fielding, sustainment, training, assessment and total asset accountability for all robotic systems in theater.

SUPPORT

- Current JRRF operations
- Embedded repair teams to remote units
- Pre-deployment support capability at Combined Training Centers
- 13 JRRF detachments world wide



Training, Sustainment, Assessment, and Accountability



RS JPO Systems

- Based primarily on ONS / JUONS requirements
- Commercial-off-the-shelf / modified-off-the-shelf
 - Commercial radios
 - Commercial components
 - Non MIL-STD
 - Obsolescence
 - Configuration control
- Procured under ‘Rapid Acquisition’
 - REF and JIEDDO lead
- Provide immediate capabilities
 - 70 to 80% solutions



Dual Use Technologies

- **Obstacle detection & avoidance**
 - Military: pedestrians, terrain and man-made obstacles
 - Civilian: automobile safety technologies – active cruise control
- **Autonomous navigation**
 - Military: resupply, dynamic path planning
 - Civilian: automobile safety technologies – active cruise control
- **Increased communication range**
 - Military: increased standoff
 - Civilian: command post (DHS/1st Responders), wireless networks
- **Multi robot control**
 - Military: one controller/many robots, manning levels
 - Civilian: warehousing
- **Interoperability**
 - Military: agile mission response
 - Civilian: USB ports, iPhone
- **Improved battery technologies / fuel cells**
 - Military: longer life, reduced soldier load
 - Civilian: fossil fuel dependence