Autonomous System Technologies

Providing the Soldier with superior situational awareness

Robotics is a Dual-Use Technology

- *Military convoys*
- *Automated highways*

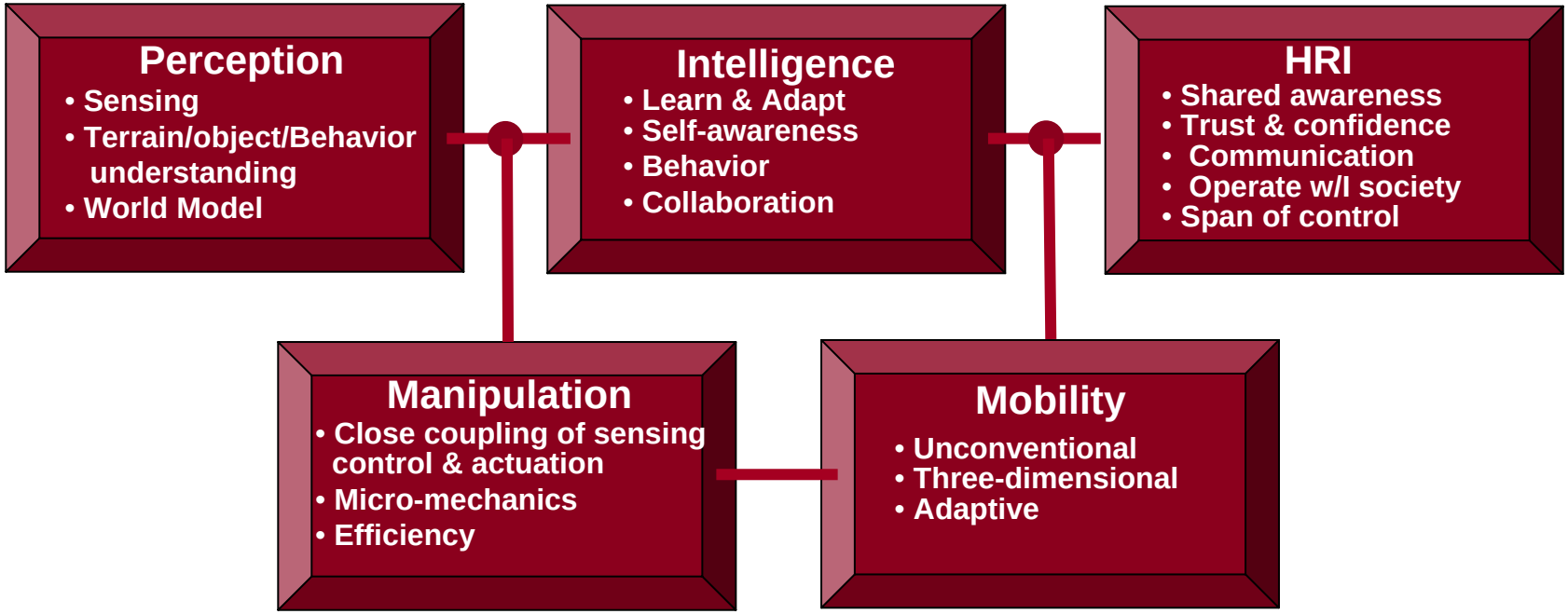
- *Reconnaissance in buildings*
- *Search & rescue in confined space*

- *Automating Rear-area logistics bases*
- *Flexible automation of factories*

- *EOD robots*
- *Robots for first responders*

ARL Robotics Research

Key technologies required to achieve our vision are:



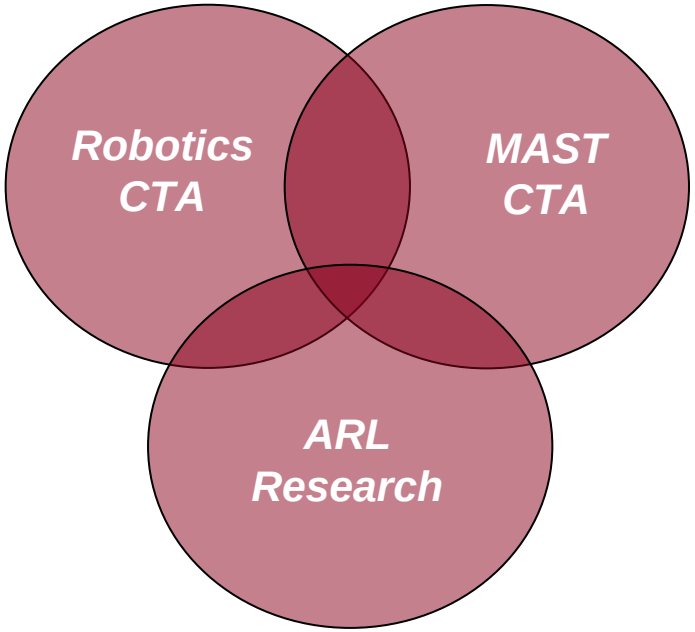
These will be supplemented by a number of supporting technologies with wider applicability

- Micro-electronics
- Power/Energy sources/storage/transmission, propulsion
- Image understanding/ATR
- Network Communication
- Materials & Structures
- Cognitive science, Psychology, Biology

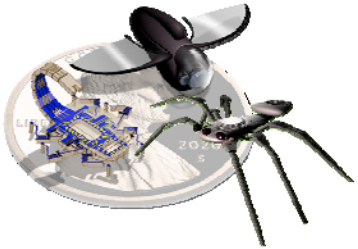
ARL Robotics Research

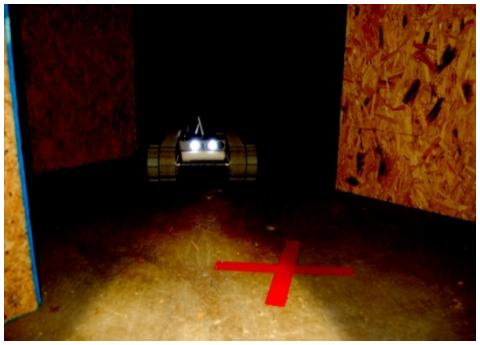
ARL sponsors wide-ranging collaborative research

- Perception
- Intelligence
- Human-Robot Interaction
- Dexterous manipulation & unique mobility



- Microsystem mechanics
- Microelectronics
- Processing for autonomous operation
- Integration
- Power





- Army Research Office
- Computer & Information Sciences Dir.
- Human Research and Engineering Dir.
- Sensors and Electronic Device Dir.
- Vehicle Technology Dir.