



Ground and Sea Platform COI



Overview:

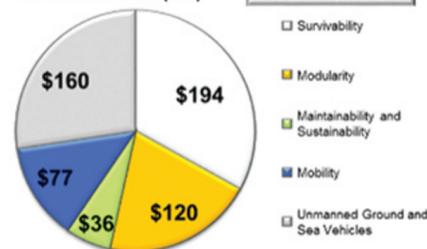
The GSP COI provides a forum for discussion of topics associated with a broad range of platform science and technologies for both ground and sea systems. The portfolio examines concepts in modularity, survivability, mobility, maintainability/sustainability, and unmanned ground/sea vehicles as the primary emphasis areas.

Steering Group:

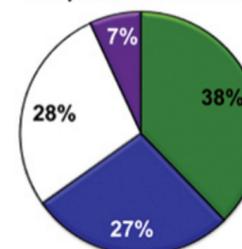
Dr. John Pazik (USMC) Dr. Rich Carlin (Navy) Dr. Jennifer Hitchcock (Army)

DoD Investment Profile FY 2015

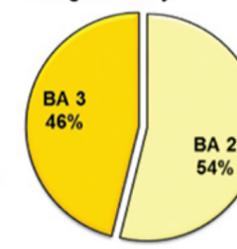
COI Sub-Areas (\$M)



Component Investment



Budget Activity



SURVIVABILITY

Provide protection to ground and sea platforms and their occupants while maintaining and enhancing ability to accomplish mission through development, evaluation, integration, maturation and testing of technologies integrated into the platforms.



Platform centric approaches to threat defeat including active protection (hard and soft kill), ballistic protection, and hazard

protection to include blast, shock, and fragmentation hazards and directed energy weapons.



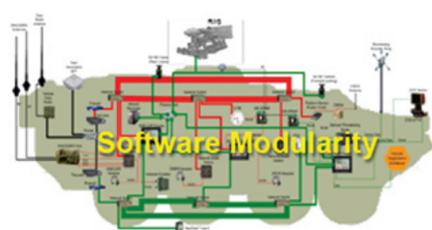
Gaps and Opportunities: Improved survivability performance against higher threats at lighter weights and lower cost. Improved cross-service collaboration in M&S

MODULARITY

Standardize and design interfaces, subsystems, and components that allow functional elements to be used across or within platforms.



Flexible designs for multi-mission adaptability, interoperable components and payloads, and platform infrastructure.



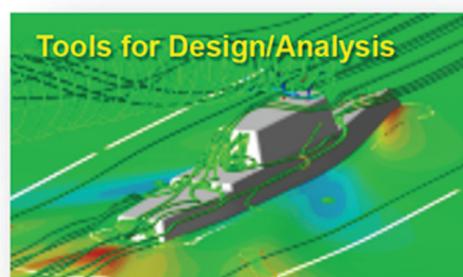
Gaps and Opportunities: Modeling & Simulation or Capabilities Based Assessment tools to define what degree and type of modularity is most beneficial for a given system/platform.

MOBILITY

Focus on improving the mobility / maneuverability of ground and sea platform systems over all operational environments.



Sea stability during intense maneuvering, land stability in aggressive terrain, high efficiency powertrain components, fuel economy, technologies enabling increased power generation, and amphibious maneuvering.



Gaps and Opportunities: Analytical/computational tools and associated V&V to quantify the mobility contribution to combat effectiveness

MAINTAINABILITY and SUSTAINABILITY

Reduce life cycle cost, reduce logistics burden, increase reliability, and provide timely support of ground and sea platforms.



Structural health monitoring, sustainment analysis tools, networked sustainment command and control, and high reliability structures and components.



Gaps and Opportunities: Inefficiencies in lifecycle management & logistical sustainment

UNMANNED GROUND & SEA VEHICLES

Mature and integrate optionally manned competencies into ground and sea platforms to enhance force structure operational capabilities.



Conversion technologies for manned/unmanned operation and advanced unmanned vehicle development and integration concepts.



Gaps and Opportunities: Formal methods for Test, Evaluation, Verification and Validation and interoperability standards for unmanned platforms

Opportunities For Industry Engagement:

- Michigan Defense Exposition (MDEX) 21-22 April
- NDIA Ground Vehicle Systems Engineering & Technology Symposium (GVSETS), 4-6 August 2015, Novi, MI
- Modern Day Marine Exposition; 22-24 Sept 2015, Quantico, VA

- ONR BAA Announcement # ONRBAA15-001; Expeditionary Maneuver Warfare & Combating Terrorism Department (Code 30)
- 2015 Naval Future Force S&T EXPO; <https://www.youtube.com/playlist?list=PLI5XITgRxSsEKfrauDAYKLx1EiaC-cl46>