



The integration of advanced materials, manufacturing processes, tooling, and fixturing will result in reductions in gross weight, vibration, interior noise, and life-cycle costs as well as increases in mission range, survivability, and operational availability. These improvements are made more affordable due to significant reductions in labor and in operating and support (O&S) costs.

## Drive System Technologies

- Advanced gear and bearing steels
- Laser fabricated (cut and welded) housings
- Laser probe workpiece positioning
- Ausform finished gears and bearings
- Intelligent noncontact measurement of spiral bevel and face gears
- Gear noise control
- Design for power density

## Health Usage Monitoring System Technologies

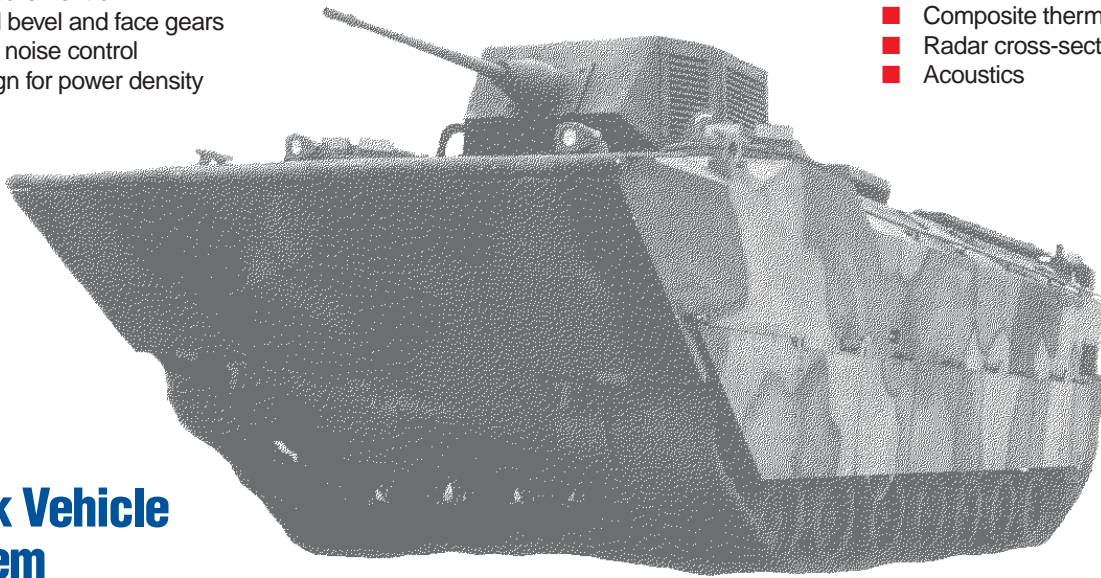
- Condition-Based Maintenance
- Distributed diagnostic system architectures
- Embedded engine predictive diagnostics
- MMI for troubleshooting and diagnosis

## CBR Technologies

- Photon-based cleaning of CBR agents
- Laser-based cleaning of CBR agents

## Signature Reduction Technologies

- Composite thermal tiles
- Radar cross-section reduction
- Acoustics



## Track Vehicle System Technologies

- Lightweight HS materials
- Laser cladding and heat treating

## Structural System Technologies

- Armor systems
- Materials and design

## Powertrain Technologies

- Performance prediction
- Rapid prototyping
- Drive shaft laser balancing
- Condition monitoring
- Wear-resistant coatings via cold gas dynamic spraying and EB-PVD
- Spray formed HT aluminum alloys
- Localized laser HT and cladding for wear and corrosion resistance

## Repair Technology

- NDI technologies (shearography)
- Coating application and removal
- Component repair methods (laser cladding)