GENERAL DYNAMICS
Land Systems–United Kingdom

Capability & Technology Roadmap

Capability Areas	Capabilities & Technology Innovation Areas	We do this	We can develop
Data Analytics, AI & Information	Health & Usage Monitoring Systems		
	Prognostics		
	Vehicle Sustainment		
	Condition Based Maintenance Predictions		
	Automatic Target Detection, Recognition & Identification		
	Sensor Fusion		
	Navigation / Routeway Planning		
	Sensor/Shooter Linkage		
	Voice Detection/Recognition Systems		
	Speech Recognition Systems		
	Real-Time Language Translation Systems		
	Automatic Target Tracking		
Materials Science & Advanced Materials	Signature Reduction Materials i.e. thermal, radar etc. signature reduction		
	Smart Materials		
	Protective Materials & Armour		
	Mass-Saving Materials		
	Adhesives, Seals and Binding Technologies.		
Communications, Networks & Information Systems	Time Sensitive Networking (TSN)		
	Communications Systems		
	Messaging and Telecommunications Technology		
	Global Positioning Systems		
	Anti-Jammers		
	Denied, Disconnected, Intermittent and Limited Bandwidth Environment Solutions		
	Satellite Communications		
	Network Switches		
	Fibre Optic Networks		
	Command & Control Systems		
	Battlespace Information Acquisition and Processing		
Chemical, Biological, Radiological & Nuclear (CBRN)	CBRN Detection & Sensing Techniques/Systems		
	CBRN / Collective Protection Systems (ColPro)		
	Seals		
	Decontamination Techniques/Technologies		
	CBRN Countermeasures		
	CO (Carbon Monoxide) Sensors		
	CO2 (Carbon Dioxide) Sensors		
Electronic Architecture, Computing, Software & Cyber	Cyber Defensive Aid Systems		
	Firewalls		
	Network Security		
	Android Tactical Assault Kit (ATAK)		
	Ruggedised/Military Environment Computers/Processors		
	Ruggedised/Military Environment Laptops		
	Ruggedised/Military Environment Tablets/PDAs		
	Displays		
	Control Panels		
	Control Handles		
	Data Distribution Service		
	Video over Ethernet		
	Video Compression Technologies		
	Quantum Computing		
Explosives & Energetics	Battle Damage Reduction Techniques		
	Armour Systems Research		
	Ballistics Research		
	IED Detection Systems		
	Mine Detection Systems		
Electro-Optics, Electro-Magnetics and EM Environment	EMP Protection Systems		
	Magnetic Signature Management/Reduction		
	Electrical and Electric Field Detection		
	Electro Optic Counter Measures		
	Radio Frequency Detection		
	Jammers		
Human Sciences incl. Human Factors & Augmentation	Seats / Harnesses		
	Generation of Potable Water		
	Head Up Displays / Goggles		
	Human Health Monitoring/Status		
	Human Incapacitation, Suppression Systems		
	Crowd Control Systems		
	Telemedicine Technologies		
	Casualty Location Systems		
	Anti-Vibration Devices		
	Vibration Monitoring Systems		
	Human Factors Engineering/Research		
	HCI Techniques/Technologies		
	Driver Aid Systems		
	Guidance Systems		
	Environmental Control Systems		

Category	Subcategory		
Propulsion, Engines & Powerplants	Electric Drives & Motors		
	Engines		
	Transmissions		
	Auxiliary Power Units		
	Hybrid-Electric Drives		
	Fuel Systems		
	Engine Control Systems		
	Engine Management Systems		
Power, Batteries & Electrical Systems	Power Distribution Systems		
	Power Switch Nodes		
	Intelligent Power Management Systems		
	Batteries		
	Battery Management Systems		
	Portable / Mobile Power Systems		
	Power Generators		
	Power Regeneration Systems		
	Electrical Protection Systems		
Survivability Systems, Protection Systems, Armour & Camouflage	Active Protection Systems		
	Adaptive Camouflage Systems		
	Adaptive Signature Management		
	Armour Systems		
	Mine Protection		
	ATGW Protection		
	IED Protection		
	Thermal Signature Management		
	Acoustic Signature Management		
	Fire Detection & Suppression Systems (Internal& External)		
Robotics, Autonomous Systems & Human-Machine Teaming	Unmanned Ground Vehicles		
	Unmanned Aerial Vehicles / Drones		
	RF Links		
	Telematic Control System		
	Robotic Control Systems		
	Optionally Manned Systems		
	Free Space Optical Communications (FSOC)		
	Autonomous Driving Systems		
Sensors & Sensing Technologies	Weapon/Sniper Detection & Identification		
	Helicopter Detection & Identification		
	UAV/Drone Detection & Identification		
	Target Direction, Range and Position Finding		
	Radar Systems		
	LIDAR		
	Proximity / Collision Detection Systems		
	Obstacle Avoidance Systems		
	Acoustic Detection Systems		
	Laser Warners & Laser Detection Systems		
	Motion Detection Systems		
	Optical Detection Systems		
	Retro-Reflection Detection Systems		
	CBRN Detectors		
	Thermal Imagers / FLIR		
	Low Light Cameras		
	Sighting Systems		
	Day/Vision Camera		
	Local Situational Awareness		
	Navigation (incl. Inertial Navigation) and Guidance Systems		
	Optics		
	Boresights		
	Orientation Sensing		
	Meteorological Sensors		
Weapons	Complex Weapon Integration		
	Fire Control Systems		
	Gun Control Systems		
	Weapon/Missile Launchers		
	Remote Weapon Systems		
	Turrets		
	Remote Turrets		
	Laser Target Designators		
	Laser Beam Riders		
	Dazzlers		
	Stabilisation Systems		
	Directed Energy Weapons		
	Ballistic Weapons		
	Direct Fire Weapons		
	Optical Warners		
	Attack Drones		
Vehicle Systems	Braking Systems incl. Electric Brakes		
	Window/Sensor Obscuration Cleaning Systems		
	Hydraulic and Pneumatic Systems		
	Final Drives		
	Wheels		
	Tracks incl. Composite Rubber Tracks (Continuous & Linked)		
	Drive-by-Wire Systems		

	Active Suspension Systems		
	Steering Systems		
	Cooling Systems		
Synthetic Environments	Virtual Reality Systems		
	Augmented Reality Systems		
	Training Environments		
	Simulators		
	Motion Platforms		
Systems Engineering & Integration	Digital Engineering		
	Digital Twins		
	Model Based Systems Engineering		
	Modelling & Simulation		
Testing & Evaluation	Data (incl. Video & Audio) Recorders & Acquisition		
	Sensors		
	GPS Time Synchronisation		
Obsolescence	Obsolescence Management & Obsolescence Management Systems		