An examination of the current operational environment indicates that future manoeuvre forces must be prepared to fight and win in an increasingly high threat environment. As seen in ongoing counter-insurgency and hybrid conflicts, threats to the vehicle are increasing in both scope and size. Traditional threats and new threats that have come on the scene, such as a new array of anti-armour capabilities, from the cost effective and lethal RPG-29, to the latest generation of anti-tank guided missiles (ATGM), capable of defeating most of the passive protection available to today’s combat vehicles.

Simultaneously, the threat posed by high intensity conflict and near peer adversaries has never been more credible. With both the proliferation and use of NATO’s combat vehicles now being challenged and even exceeded by those of many potential adversaries, proactive measures must be taken to ensure the highest level of protection possible for combat vehicles and their crews.

Taking place on November 13th and building on the fruitful discussion of active protection systems (APS) at last year’s Future Armoured Vehicle’s Survivability 2017, SMi presents a focus day exclusively dedicated to this important capability.

Drawing on the experience and recent activities of leading programme managers from the armed forces and national defence research, the meeting will aim to deliberate national efforts to integrate APS into existing fleets, the architectures necessary to support integration, efforts to ensure system safety, STANAG 4686 standardisation and much more.

Importantly, the meeting will guarantee the support of technical experts from the leading solution providers, covering the latest hard/soft kill systems, sensors, data processing, munitions and countermeasures.

TOPICS COVERED WILL INCLUDE:

- National efforts to integrate APS into existing fleets
- The architectures necessary to support integration
- Technical expertise from industry leaders, covering the latest hard kill/soft kill APS, threat detection/tracking and countermeasures
- Efforts to ensure system safety and minimise collateral damage
- STANAG 4686 standardisation

FUTURE ARMOURED VEHICLES SURVIVABILITY 2018

PRE-CONFERENCE FOCUS DAY | 13th November 2018

Maximising Development and Integration of Active Protection Systems

9.00 am – 5.00 pm | 13th November 2018 | Copthorne Tara Hotel, London, UK

Chaired by
Mr. Tom Newbery, Active Protection Research Technical Authority, Platform Survivability Group, DSTL, UK MoD

www.asdevents.com - www.asdevents.com/event.asp?id=18893
8.30 Registration and Coffee
8.50 Chairman’s Opening Remarks
Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army

KEYNOTE ADDRESSES
9.00 Modernising the Armoured Fleet to Maximise Troop Survivability and Enhance Protection in Future Engagements
- Recent requirements for improved protection and mobility on the battlefield
- Utilising the NGCV and better equi to fight in dense urban terrains
- Addressing the weight dilemma and weighing all options to enhance crew and platform survivability - Smaller vehicles - Taking the humans out - AI Integration - Active protection systems?
- “Radical ten-fold improvements in technology” – what the army modernisation strategy means for survivability
Brigadier General Christopher LaNeve, Commanding General 7th Army Training Command, US Army Europe

9.30 Maximising British Armoured Vehicle Survivability With Science and Technology Support
- Adopting new cutting-edge technology to protect platforms - Active protection systems - Sensors and signature management - Countermeasures to flying threats
- Developing the MUSS as part of the technology demonstrator programme and enhancing MBT survivability - Results and feedback from the shot detection system [Acousonic] integrated into the AJAX
Lieutenant Colonel Simon Routledge, SO1 Land Systems, DSTL, UK MoD

10.00 Gold Sponsor Presentation Reserved for Leonardo
Presentation details TBC
Mr. Guy Davies, Capability Manager - Vehicle Systems, Leonardo

10.30 Morning Coffee

INDUSTRY EXPERT UPDATES
11.00 Reinforcing Survivability of the UK Armoured Infantry Brigade with the new AJAX AFV
- Review of the requirements for the AJAX platform
- Utilising modular survivability technologies to counter current threats and allow for future adaptations
- Considering the experiences and needs of the end user for armour design and integration
- Latest testing outcomes, lessons learned, and room for improvement
Mr. Mark Dean, Chief of Design Engineering, General Dynamics UK Limited

11.30 Presentation Reserved for Gold Sponsor

12.00 Enhancing the Fennek Command and Control Vehicle’s Survivability
- Protective requirements for the Fennek platform
- Enhancing platform survivability with enhanced blast protection, increased stealth, and all-round situational awareness
- Mitigating risks of detection and penetration with high terrain adaptability and long range engine technology
- Managing survivability and weight: future areas of development and foreseeable developments in the platform’s protection suite
Mr. Axel Scheibel, Chief of Survivability Engineering, KMW

12.30 A Systems Integrator’s Approach to Survivability
- Integration of new technologies
- Optimising Performance
- Enhancement of Vehicle Capabilities
Dr. Chris Dent, Head of Research Technology, Lockheed Martin UK

1.00 Networking Lunch

PROTECTING ARMOURED PLATFORMS AND CREWS FROM CBRN THREATS
2.00 Delivering Future Ready CBRN Protection for the British Armoured Vehicle Fleet
- Emerging requirements for enhanced protection against CBRN threats
- An update on the developments in the UK CBRN Equipment Capability Plan
- Rein-integrating the FUCHS area reconnaissance and survey vehicles into the British Land Forces
- Ongoing programme programmes and foreseeable challenges in fending off chemical and biological threats
Mr. Ian Matthews, CBRN Delivery Team, DE&S, UK MoD

2.30 Sponsor Presentation Available

3.00 Protecting Vehicle Crew against CBRN Threats Through the Development of Enhanced Chemical and Biological Defence Systems
- Emerging requirements for enhanced protection against CBRN threats
- Developing new cutting-edge detection and neutralisation technologies
- Maximising R&D and driving new material designs
- Ongoing research and foreseeable challenges in fending off chemical and biological threats
Mr. Daniel McCormick, Deputy PEO Operations and Modernisation, JPEO CBD

3.30 Afternoon Tea

MILITARY PANEL DISCUSSION
4.00 MILITARY PANEL DISCUSSION Developing Armoured Vehicle Protection to Better Adapt to Emerging Threats
- Emerging threats in recent armoured vehicle deployments
- Adapting to the shifting security environments and the evolving nature of warfare
- Balancing unconventional vs conventional threats
- Q&A Session
Lieutenant Colonel Simon Routledge, SO1 Land Systems, DSTL, UK MoD
Lieutenant Colonel Paddy Bond, Commanding Officer, Armoured Trials and Development Unit, British Army
Lieutenant Colonel Kartheinz Boenke, Authorized Representative for MRAV BOXER and BV 206, II-Combat, ACCDC, German Army
Mr. Daniel McCormick, Deputy PEO Operations and Modernisation, JPEO CBD
Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army

INFANTRY FIGHTING VEHICLE SURVIVABILITY
4.45 Improving Armoured Vehicle Protectability through Enhanced Blast Protection and Antitank Training
- Recent requirements driving armour developments and blast protection for Estonian Defence Forces platforms
- How infantry training and technical specialisation help identifying the requirements for improvements in the Estonian armoured forces
- Focusing off mid- and long-range guided antitank guided missile systems
- Foreseeable improvements in blast protection to fend off IED and airborne threats
Lieutenant Colonel Tarvo Luga, Inspector of Infantry, Estonian Defence Forces

5.15 Developing Armour while Maintaining Light Weight and High Mobility — LAV III
- Requirements for enhanced armoured protection for the LAV III
- Armour add-ons and weight considerations
- On-board electronics and how enhanced situational awareness directly improves protection and survivability and consequentially allows for reduced physical armour
- Adapting to emerging threats and technology proliferation such as IEDs and new generation explosive launchers
Lieutenant Colonel Brian Corbett, Section Head - Armoured Vehicle Systems, Canadian Armed Forces

5.45 Chairman’s Closing Remarks and Close of Day One
Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army
**FUTURE ARMoured VEHICLES SURVIVABILITY 2018**

**Day Three | 15th November 2018**

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**8.30** Registration and Coffee

**8.50** Chairman’s Opening Remarks
- Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army

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**KEYNOTE ADDRESSES**

**9.00** Armored (Light) Infantry Vehicles within the German Army - Situation and Further Development of the MRAV BOXER, Light Airborne Platform and Oversnow-Vehicles
- The current main armoured platform of the GEA light infantry
- The MRAV BOXER, illustrating its current role and the way ahead in regards of further requirements and development
- Remarks on the light airborne platform and the BV 206 Hagglunds Fleet and their way ahead
- Lieutenant Colonel Karthheinz Boenke, Authorized Representative for MRAV BOXER and BV 206, II-Combat, ACCDC, German Army

**9.30** Session Reserved For Sponsor

**10.00** Maximising Protection of The Turkish Armoured Vehicle Fleet
- Current Turkish armoured vehicle protection suite
- Current capabilities
- Path towards vehicle protection systems technologies
- Developing armour and threat detection capabilities
- Lieutenant Colonel Kerim Serkan Simais, Specialist-Land Platforms, SSM, Turkish MoD

**10.30** Morning Coffee

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**BLAST PROTECTION AND ARMOUR DEVELOPMENT**

**11.00** Survivability — Fire protection on Military Vehicles
- Mr. Christian Manthey Dipl. Ing., Technical Marketing Manager, UTC Aerospace Systems

**11.30** Improving Armoured Vehicle Protectability through Enhanced Blast Protection in the Austrian Protected Vehicle Fleet
- Recent requirements driving armour developments and blast protection
- How the integration of new platforms – GD PANDUR, IVECO GMF, KMW DINGO – will enhance the overall survivability of the Austrian armoured vehicle fleet
- Adapting to technology proliferation to enhance all-round blast protection and anti-tank missile survivability
- Foreseeable improvements in blast protection to fend off IED and airborne threats
- Colonel Christoph Philipp, Staff officer, Austrian MoD

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**INDUSTRY PANEL DISCUSSION**

**12.00** INDUSTRY PANEL DISCUSSION
- Multifaceted Approaches to Armoured Platform Survivability and Enhancing Buyer-Seller Cooperation
  - What are the solution providers’ key areas of activity and priorities within the survivability domain?
  - Providing comprehensive survivability and touching upon all layers of the “survivability onion”
  - Requirements for enhanced buyer-seller cooperation
  - Q&A Session
  - Mr. Mark Dean, Chief of Design Engineering, General Dynamics UK Limited
  - Mr. Jens Schroeter, Senior Director, Engineering, General Dynamics European Land Systems
  - Mr. Axel Scheibel, Chief of Survivability Engineering, KMW
  - Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army

**12.45** Networking Lunch

**AVOIDING DETECTION WITH INCREASED STEALTH AND ENHANCED SIGNATURE MANAGEMENT**

**1.45** Optimising Threat Detection and Stealth with the Fennek Light Armoured Reconnaissance Vehicle
- Supporting land operations with the through enhanced reconnaissance capabilities
- The reconnaissance role of Fennek within mechanised force structure
- Ensuring survivability with optronics: NBC protection, night vision, thermal, CCD day camera and laser rangefinder
- How recent upgrades of the Fennek and retrofitting to the latest JFST 1A3+ version will enhance reconnaissance capabilities, ultimately improving survivability in deployments
- Captain Mark Hoving, Staff Officer, Royal Netherlands Army

**2.15** Sponsor Presentation Reserved for INTRACOM Defense Electronics
- Presentation details TBC

**2.45** How Signature Management and Enhanced Sensor Capabilities Support Crew and Vehicle Survivability
- Optimising optronic sensor performance for threat detection purposes
- Functioning and delivering results in an environment of interference
- How radars and optics with advanced image and signal processing support timely threat detection and neutralisation
- Feedback and lessons from recent signature management technologies testing at the FOI
- Dr. Hans Karls, Senior Researcher, Department of Antennas and Signatures, Swedish Defence Research Agency (FOI)

**3.15** Afternoon Tea

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**FUTURE LAND CAPABILITY DEVELOPMENTS**

**3.45** Future Materials for Passive Protection and Passive Armour Configuration
- Passive protection requirements
- New materials researched and the significance they hold for survivability
  - Synthetic biology for ceramic armour
  - Nanoceramic armour
  - Silicon carbide
- Tackling the weight - mobility dilemma
- Managing passive armour configuration

**4.15** Chairman’s Closing Remarks and Close of Main Conference
- Brigadier (ret) Ian Cameron-Mowat, Former Head of Force Protection, British Army