MAIN CONFERENCE DAY ONE
26TH FEBRUARY 2019

0830 REGISTRATION & COFFEE

0830 CHAIRMAN’S OPENING REMARKS
General Sir Peter Wall, Chief of the General Staff, British Army (2010–2014)

OUTLINING FUTURE THREAT AND THEATRE REQUIREMENTS AT JOINT STRATEGIC LEVEL

0910 RETURNING TO NEAR-PER CONFLICT: IMPLICATIONS FOR THE COMBAT SUPPORT SERVICES
• Outlining the new operational picture for NATO forces beyond 2020
• Has the return to near-peer readiness overhauled the role of the combat support services?
• Can host nation support for overseas troops continue to be relied upon for future operations?
• The need for interoperability across tri-service capabilities and international force boundaries
Lieutenant General Tyrone Urch, Commander Home Command and Chief Royal Engineer, British Army

0950 PANEL DISCUSSION: ENSURING INTEROPERABILITY BETWEEN LOGISTICAL AND ENGINEERING COMMANDS TO SUPPORT THE COMBAT FORCE
• Has the return to near-peer operations changed the logistic and engineering requirement of the modern force?
• How has the combat support requirement changed as the combat force restructures to counter peer-level threat?
• What are the key requirements for the combat support network to ensure sustained capability of the wider force?
• Is a multinational support network a viable option to address funding and prioritisation challenges?

1030 MORNING COFFEE AND NETWORKING

1110 MODERNISATION PROGRAMMES OF THE ROMANIAN LAND FORCES
• Outlining the structure and remit of the Romanian Engineer Corps
• Outlining the Romanian modernization programme to 2027
• Steps to maintaining capability alongside International partners
• Incorporating the Romanian engineers into the NATO force structure
Brigadier General Gheorghe Soare, Commander 10th Engineer Brigade, Romanian Land Forces

1150 MAINTAINING MOMENTUM WITHIN THE MANOEUVRE FORCE
• Balancing the requirement for sustained momentum with the risk of operational overreach within the joint force
• Ensuring a connected and complete supply chain to sustain the force and the force momentum
• Communicating with the combat support team effectively at all command levels
• Identifying the infrastructural requirements across the extended supply chain from HQ to the force
Brigadier General Maiocco, Deputy Commanding General, 21st Theater Sustainment Command and Commanding General of the 7th Mission Support Command, US Army

1230 NETWORKING LUNCH

1330 FORCE MOBILITY ENGINEERING STREAM
MANAGING SKILL FADE AND LOSS IN COMBAT ENGINEERING
• Accounting for capability loss across the Austrian Engineering division
• Steps to mitigating skill fade and skill loss through consolidating engineering capabilities
• Adjusting engineering roles to cover gaps in capability
• Building support with external partners to counteract the impact of force reduction
Colonel Alfred Zaruba, Director of Evaluation Engineer Division, Austrian Federal Ministry For Country Defense

FORCE MOBILITY LOGISTICS MANAGEMENT
LOGISTICS COMMAND AND CONTROL IN THE DIGITAL AGE
• Incorporating data management systems into the logistics supply chain
• Utilising big data and AI to enhance supply chain control and visibility
• Scaling joint force logistics capability to support an integrated international force
• Reconfiguring force logistics to support the manoeuvre force
Group Captain Paul Aggett, Director Joint Logistics Futures, Australian Department of Defence
### 12 (FORCE SUPPORT) ENGINEERING GROUP: ROLES, REMIT, CAPABILITY
- Outlining the roles and responsibilities of 12 Engineer Group within the Army Force structure
- How will 12(FS) EngGrp deploy on future operations? How has this altered the group structure?
- Demonstrating current and required capabilities within the Force Support Group
- What support does the FS group require from other service departments to fulfil its role and remit?

*Colonel Tom Marsden, Commander, 12 (FS) Engineer Group*

### MOMENTUM LOGISTICS: SUPPORTING THE AGILE FORCE IN THEATRE
- Modelling the return to mobile force warfare from a logistical context
- What are the implications on mobility for the logistics command?
- Challenges and solutions to the problem of force overreach
- Maintaining the extended supply chain required to sustain manoeuvre force capability

*Lieutenant Colonel Martin Hornhues, Head Concept & Doctrine, Bundeswehr Logistics School*

### MILITARY ENGINEERING INTERACTIVE DISCUSSION GROUP: SUPPORTING INITIAL FORCE MOBILITY IN THEATRE
Drawing on the discussions and conversations from throughout the day, the Interactive Discussion Group session is designed as a ‘deep dive’ into some of the core challenges and problems raised, discuss and assess possible solutions in a closed door environment amongst peers and experts in the field of Military Engineering

*Session led by: General Sir Peter Wall, Chief of the General Staff, British Army (2010–2014)*

### MODERNIZING MANOEUVRE SUPPORT THROUGH R&D
- Recent S&T advancements in remote assessment of infrastructure
- New technologies in Airfield Damage Repair and maintenance
- Designing river prediction systems for gap crossings
- Enabling Seaport Repair Tracking through predictive analytics

*Dr David Pittman, Director, US Army Engineer Research and Development Center*

### THE AUTONOMOUS LAST MILE RESUPPLY PROGRAMME
- An overview of the Autonomous Last Mile Resupply (ALMR) programme
- Challenges of building autonomy and Artificial Intelligence into the supply chain
- Defining the ‘last mile’ within a fluid theatre of operations
- Routes to deploying the ALMR system across the UK MoD

*Mark Darvill, Innovation Partner, Defence and Security Accelerator*

### CHAIRMAN’S CLOSING REMARKS AND END OF CONFERENCE DAY ONE

‘Good opportunity for networking and interesting talks about recent developments in logistics’

*Chief of Transformation, Bundeswehr*

‘Networking time proves again and again to be seriously value added’

*Rich Edwards, J5, Plans and Policy, JIDO*
### GAINING AND EXPLOITING BATTLEFIELD FREEDOM

#### 0830  REGISTRATION & COFFEE

#### 0850  CHAIRMAN’S OPENING REMARKS
General Sir Peter Wall, Chief of the General Staff, British Army (2010–2014)

#### 0900  THE CASE FOR CHANGE; ADOPTING A NEW METHOD OF WAR FIGHTING IN THE FUTURE
- Arguing for the need to conduct warfare differently
- “Achieving new things, in new ways, in new environments”
- Understanding the seismic shift in the roles, tasks and capabilities of Combat Support

Brigadier Kevin Copsey, Head Future Force Development, UK MoD

#### 0940  PROVIDING COMBAT SUPPORT TO ENSURE MOBILITY ACROSS A WIDE SPECTRUM OF OPERATING ENVIRONMENTS
- Providing close gap-crossing and bridging support to deployed battle groups
- Determining emerging technical requirements to increase power projection and advance Enhanced Forward Presence
- Assessing recent acquisitions, procurement plans, and modernization programme
- Examining current research and development initiatives to avoid ‘skill fade’

Major General Angus Fay, Assistant Chief of the Defence Staff (Logistics), UK Ministry of Defence

#### 1020  MORNING COFFEE AND NETWORKING

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<tr>
<th>INFRASTRUCTURAL MILITARY ENGINEERING STREAM</th>
<th>SUSTAINING THE FORCE IN THEATRE: DEFENCE LOGISTICS STREAM</th>
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<td><strong>ARMOURED ENGINEERING EXPERIMENTS IN URBAN ENVIRONMENTS</strong></td>
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- Understanding the challenges to maintaining force mobility from an engineering perspective |
- Balancing gap-crossing capability with enhanced mobility |
- Maximising mobile support across light and medium capability |
- Mobility in context: maximising mobility enablers to enhance support to the combat force |

*Major Clodia O’Neill, Project Officer for Programme CASTLE, Royal Engineers*

| ESTABLISHING A LOGISTICS SUPPLY CHAIN TO SUPPORT INTERNATIONAL FORCE DEPLOYMENT |
- Understanding the pressures on managing an international supply chain |
- Managing and deploying assets to support the global deployment model |
- Forecasting the logistical requirements of an unknown theatre and rapid deployment requirements |
- Managing the supply chain to minimise the deployment to engagement timeline |

*Colonel Eddie Corrigan, Defence Logistics Concept and Force Development Assistant Head, Ministry of Defence*

| BACK TO BASICS: INFRASTRUCTURAL REQUIREMENTS TO SUPPORTING AND MAINTAINING THE FORCE |
- Examining the Irish experience in international assistance missions |
- Investing into research and development programmes to advance barrack design |
- Differentiating between requirements for peacekeeping and humanitarian missions |
- Outlining future operations for the Irish Defence Forces Engineer Corps |

*Colonel James Burke, Director of Engineer Corps, Irish Defence Forces*

| ARTIFICIAL INTELLIGENCE AND ITS POTENTIAL IMPACT ON COMBAT SUPPORT |
- Outlining current Artificial intelligence uses in the civilian sector |
- Steps to repurposing existing AI systems into the defence network |
- Understanding the potential impact on AI on the Combat Support Services |
- Understanding the potential implications of incorporating AI in the military |

*Mr Stuart Young, Head, Centre for Defence Acquisition, Cranfield University*
1220  LESSONS LEARNT FROM SUPPORTING HUMANITARIAN OPERATIONS
- An overview of the British Army’s Engineering support to the UN Mission in South Sudan
- Coordinating with humanitarian and civil partners to deliver success overseas
- Lessons identified from 21 Engineer Group deployment during Operation Trenton
- Applying these lessons to the wider military context

**Lieutenant Colonel Sam Hughes, Commander 21 Engineer Group, British Army**

1320  NETWORKING LUNCH

1420  CONTEXTUALISING THE FUTURE OPERATING THEATRE
- Understanding operating and training challenges of future operations at large scale in the complex, urban environment
- Assessing the utility of heavy armoured engineer vehicles in future theatres, and the possible use of a mobile support urban warfare fleet
- Managing route proving capability – balancing the IED threat with momentum requirement
- Going underground – will offensive and defensive subterranean operations return to the engineering skillset?
- Maintaining, sustaining and protecting the force – the challenges of living and operating in complex urban environments
- Countering a dispersed mobile force – potentials of drones and robotics in counter-mobility operations

**Brigadier General Matt Bazeley, Commander Royal School of Military Engineering, British Army**

1500  SCENARIO BUILD: SUPPORTING A MOBILE ARMoured INFANTRY BRIGADE DEPLOYED IN THE EUROPEAN THEATRE AGAINST A PEER STRENGTH OPPONENT

The return of NATO and allied forces to conventional operations against a peer threat has heralded a returned emphasis on mobility and momentum on the battlefield. Ensuring the mobile force is able to sustain momentum and capability against peer level opposition places a new strain on the support commander, responsible for ensuring the force is able to operate freely across the battlefield, and maintain a fighting capability to engage and defeat the opposing force on their terms.

Led by **General Sir Peter Wall, Chief of the General Staff, British Army (2010–2014)**, the extended scenario build will play through the deployment phase and ongoing sustainment and support of a brigade deployed in a combat role in the European theatre against a peer adversary. Drawing on lessons identified across the previous conference days, this afternoon session will provide delegates the opportunity to put these lessons into practice, and share approaches and ideas with peers across a range of backgrounds in both Military Engineering and Logistics.

Key challenges addressed throughout the session will include:
- Deploying a brigade level force into a foreign theatre
- Logistical and infrastructural challenges to maintain the deployed force in theatre
- Ensuring mobility of the force, and denying mobility to the deployed

**Session led by: General Sir Peter Wall, Chief of the General Staff, British Army (2010–2014)**

1600  AFTERNOON TEA AND NETWORKING

1630  SCENARIO BUILD: SUPPORTING A MOBILE ARMoured INFANTRY BRIGADE DEPLOYED IN THE EUROPEAN THEATRE AGAINST A PEER STRENGTH OPPONENT contd.

1700  PANEL DISCUSSION: LESSONS IDENTIFIED FROM THE SCENARIO BUILD
- What key deliverables were identified during the ‘scenario build’ session from each group?
- Challenges and solutions presented by the scenario; what were these and how were they approached by each group?
- What changes would the panel make to the force within this scenario to address identified challenges from the exercise?
- How can the lessons learnt in Command and Control of the joint force be applied to individual roles within the force structure?

1740  CHAIRMAN’S CLOSING REMARKS AND END OF DAY 2
ARTIFICIAL INTELLIGENCE, ROBOTICS AND DEFENCE

AI and robotic systems have, over the past number of years, revolutionized the civilian space – with AI and robotics systems incorporated into almost every commercial activity - from major engineering projects, fully automated warehouses and predictive delivery of online shopping.

Looking to take advantage of this overwhelming success in the commercial sector, and faced with increasingly tight funding and reduced manpower, AI and robotic solutions are becoming increasingly seen as a viable solution to major challenges across defence.

Led by the Centre for Defence Acquisition, this session will focus on how AI and robotics systems could be incorporated into the defence network, and what this will mean for military commanders in the future force. Key topics that workshop participants will focus on include:

• How AI and robotics are utilized in the civilian sector
• Practical challenges to introducing these systems into the defence network
• Understanding how robotics and AI systems can be integrated into the existing force structure
• Learning to trust the machine – understanding the human / machine interface in a defence context

By attending this workshop, you will be able to:

• Understand and replicate AI and robotics uses in the civilian space in your defence network
• Identify the challenges to incorporating AI and robotics systems, and assess how to overcome these challenges
• Establish a route map to acquisition and deployment of AI and robotics within the Combat Support Services

Session led: Mr Stuart Young, Head, Centre for Defence Acquisition, Cranfield University

Since joining Cranfield University at the United Kingdom’s Defence Academy in 2008, Stuart has been responsible for the development and delivery of courses aligned to the education needs of the significant changes in defence acquisition activities in the United Kingdom. These include:

• Defence Acquisition Management (DAM) MSc
• Sourcing Strategies and the Industrial Interface Module
• Project and Programme Management Module
• Strategic Management and Introduction to Acquisition Module
• Acquisition Employment Training
• Defence Strategic Commercial Course

His responsibilities also include the development and delivery of the acquisition elements of other courses including the Systems Engineering for Defence Capability MSc and the Supply Chain Management and Logistics Contract Management courses. In addition, he lectures at a number of overseas institutions, and has delivered successful MSc programmes in Malaysia, Chile and Indonesia.

His research activities are focused on the Government-Defence Industry relationship and the associated risk management and decision-making processes. He is also actively involved with advising a number of governments on the development of defence industrial policy and strategy. Stuart is an expert facilitator and has led workshops in various organisations in support of change initiatives within the UK Ministry of Defence and Industry.

Bridging Capability Gaps across NATO sponsored by Acrow Bridging

END OF CONFERENCE

‘Very valuable in establishing a network of specialists on related topics, and excellent at organizing events and getting stakeholders together to discuss topics’

Lloyd Chubbs, SO Environmental Management, SHAPE