# MARSHALL

### First to the future

Current solutions & SMART deployable infrastructure to enable the forward presence

### Lee Doherty

Sales & Business Development Director Europe



- Marshall is an independent, family-owned UK company with a diverse portfolio of businesses and a shared commitment to keeping our customers moving forward.
  - Whether that's supporting global armed forces to deliver mission-critical activities, keeping the UK distribution industry on the road, creating new, sustainable communities where people can live and thrive, or developing the next generations of industry talent we are incredibly proud to have been **building extraordinary futures** since 1909.
  - Headquartered in Cambridge, we currently employ around 2,000 people across locations in the UK, Northern Europe, North America and the UAE.

### BUILDING EXTRAORDINARY FUTURES













## New Global Operating Model

#### Global Market Presence - proximity to our customers



#### Global Business Lines - focussed on portfolio delivery



Standalone Business

Property

Futureworx

Skills Academy

### **MARSHALL**



## **Global Operations**

### UK

- Cambridge HQ new facility by 2025
- New location within Cranfield. Aerospace centre of excellence by 2028
- Digitalisation and "next gen" technology

#### European Hub

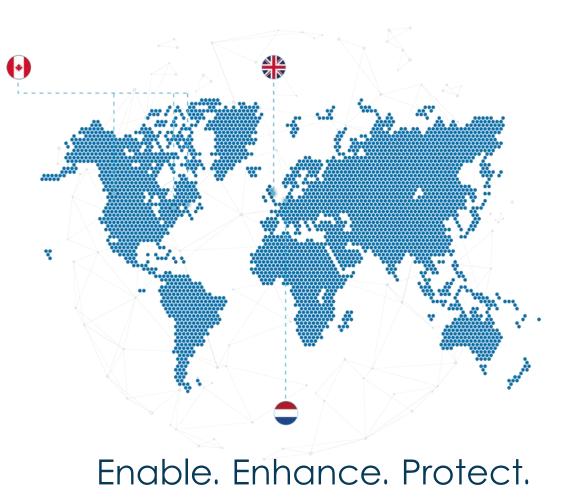
- Field Service Support facility in NL
- Supporting European customer base
- Tailored solutions for new markets

### North America

- Investment in New Brunswick facility
- Greensboro North Carolina new Aircraft maintenance and engineering facility
- Hi-volume/low-cost production techniques
- Greater flexibility and competitiveness

### Supply Chain

- Expanded local and international supply chain
- Strategic supply chain partnering and resilience
- Risk reduction and obsolescence management





### Context – Pre Ukraine



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### Fast Forward... Revised high threat multi-domain battlespace

- Threat forward and depth
- GBAD and Counter Air demand
- UAS/C-UAS
- C2 open and urban
- Stockpiling
- "Storage" readiness
- Forward repairs and manufacture
- Medical
- Interoperability
- Standardisation
- Spiral development





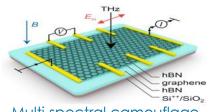


## Ukraine Lessons – Combat Re-prioritisation



Rapid mobility & automation











UAS & Counter air threat



Logs & medical configurations



Secure C2 & op resilience



### **MARSHALL**

## In the Air

- Lockheed Martin approved C-130 B-H Hercules Service Centre and first C-130J Heavy Maintenance Centre.
- Major capability enhancements such as avionics upgrades, refueling probes, fuselage stretch plugs, Centre Wing Box replacements, flying test beds, tanker conversions.
- Advanced structures and materials such as fuel tanks, refuelling probes to trim panels, helmet components, propellers, payload carrier systems and special mission radomes.
- Today, supporting a portfolio of 18 C–130 operators across 4 continents.









## Lilypad – Autonomous Systems

A ground-breaking ecosystem of multiple resident autonomous Beyond Visual Line of Sight UAVs.

Lilypad utilises AI and navigational sensors to create a world-leading integrated capability, providing dynamic and on-demand offshore inspection services.

- System architect
- Design, manufacture and test of deployed infrastructure
- CAA authorised flight operator
- Data capture and analytics

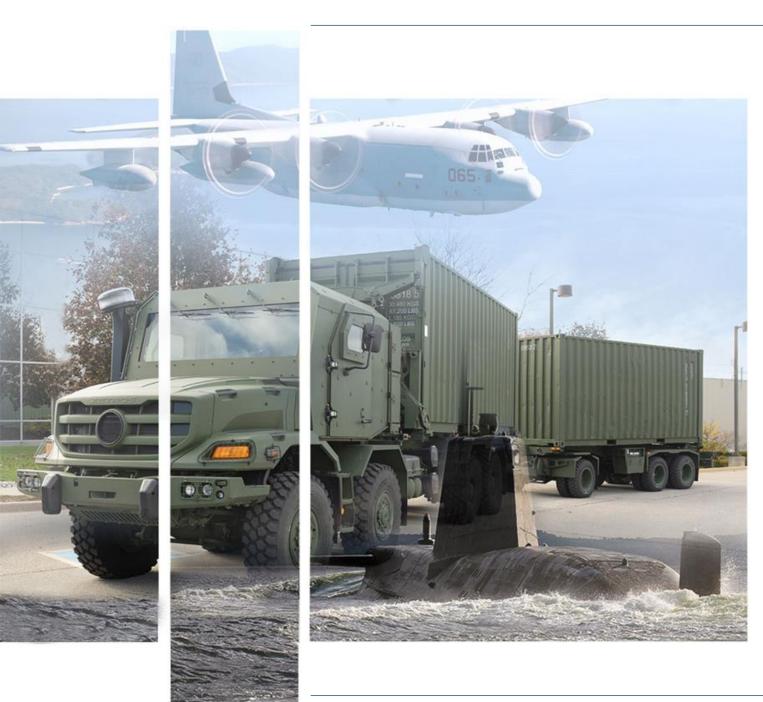






Other applications such as ISR, perimeter inspections, search & rescue, border security.





### **Muti Domain Focused**

- Deployable Infrastructure
- Vehicle & Platform Integration
- Advanced Structures & Materials
- Power Solutions
- Engineering, Support & Training



## Deployable infrastructure – base platforms





### Deployable infrastructure – product ranges

C2



Core Infrastructure (Maintenance, Storage & Support)





Medical

C4ISR



### Secure Ammunition Storage and Transport





Weapon platforms and bespoke transportation racking Ammunition & Explosive storage









Front Line transportation 7000 Flat Racks manufactured.



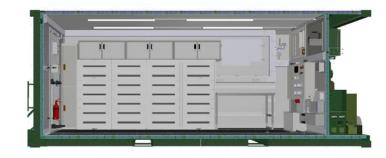


### Mobile Battle Damage Repair



#### Heavy Duty Repair Workshops

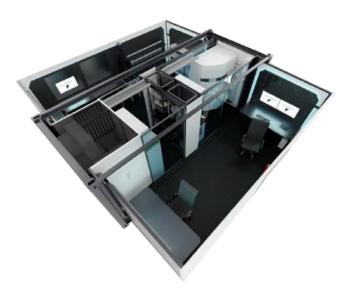
Configured to environment Combined with Beam shelters Fume ventilation





#### Maintenance Shelters

NASAMS capability example Includes avionics and systems Clean forensic style layout



### Additive Manufacture/3D Printing Effective partnering Composites and metal Lessons of Oil & Gas sectors

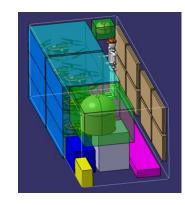




### UAV System Exploitation









#### UAV / Drone Class 2

**Revised** layouts

Integrated C2

Workshop & spares

#### **UAV Class 1**

Modular Containerisation

Rapid deployment / recovery

Separate C2

#### R&D SMART Storage & Launch

LANCA equivalent

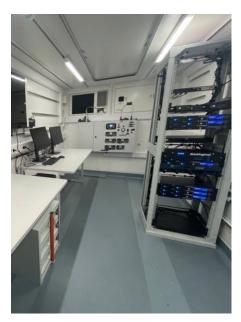
Multiple options

HUMS & asset tracking





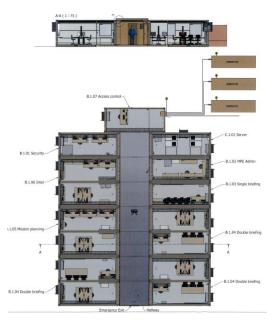
### C2 & Command Posts



Command & Control

Specific C4I configuration

Through Life value



#### F35 Air HQ

Fully enclosed Noise attenuation





#### Army Command Posts

Integrated with comms providers Mix EMC/non-EMC containers





EOD Command Post UK GASKET Command Post UK / NI Secure environment





### Vehicle Integration



LVM Canada



Explosive Ordnance Disposal



MONGOOSE S9







NASAM Support





### Platform Integration



Ground Based Air Defence



Radar Management Containers



Laser Directed Energy Weapon -DragonFire



Imagery Exploitation Ground Station



Simulators' Environment





## Through-Life Support Services

- Support Solution Design & Delivery
- Field Support & Service Engineering
- Supply Support
- Availability & Capability Management
- Training Services
- Technical Information





### MARSHALL



## SMART System Management & Fleet Communication



#### Marshall Health and Usage Monitoring System (HUMS)

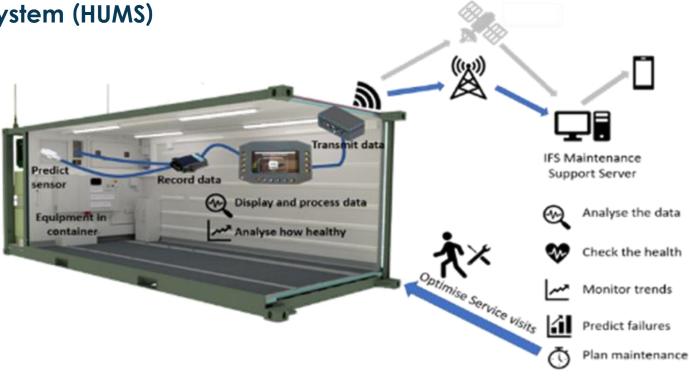
Remotely monitor and control your systems from one central location.

Plan and manage the movement and availability of equipment.

Automatic turn off and power up of connected systems.

By exception reporting to avoid detection.

Reduce energy use and peacetime costs.







## Technology Roadmap Priorities and Development



Digital Transformation

> MBSE VR design



Mobility

Automated loading Self Levelling



Ballistic Standard Modularity

NATO configs Interoperability



Logistic Footprint

Solar Power Container Micro Grid



Systems Class 1 and 2 Multi Domain

UAV





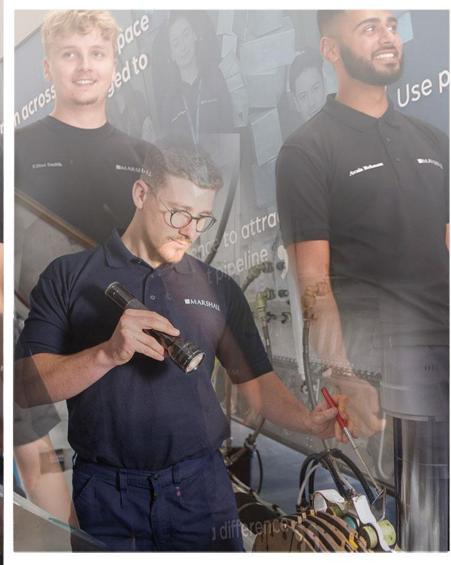
### Power Solutions & Development

# Embrace latest SMART developments and technologies

- Solar
- Electric
- Wind
- Hydrogen
- Hybrid
- SMART containerised microgrids
- Energy storage developments
- Sustainable fuels







### Skills and training

Closing the skills gap through:

- Skills Summit
- "Flight Path" (STEM outreach)
- Future skills

### Apprenticeships we offer

- Level 2
- Level 3
- Level 4
- Apprentice support

### Aviation training

- Technical
- Regulatory
- Health and safety





## New global digital facilities – Manufacturing and MRO







## UK

Alconbury Weald

## Canada

New Brunswick

**USA** Piedmont Triad International Airport







# Speak to us on stand #39

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