

ROYAL SIGNALS INSTITUTION



promoting professional dialogue, recognising technical achievement



2 Signal Regiment
Lieutenant Colonel Tom Skinner R SIGNALS
23 July 2025

2 SIGNAL REGIMENT JOURNEY TO THE ALLIED REACTION FORCE

SCOPE

Ser	Activity	Lead
1	Context - Validation pathway to Allied Reaction Force (ARF) - 1 Jul 24 - Underpinning CIS Principles - Operational vignettes from STEADFAST DART (STDT) 24	Lt Col Tom Skinner
2	219 Sig Sqn - Remotely Enabled Nodes (RENs)	Sgt Wyncoll
3	214 Sig Sqn - Adapting to 7X as the ARF BCT - Increase in agility & survivability from LINOTYPER to CERB to STDT	Lt Churton Fairman
4	215 Sig Sqn - Using RENs to enable GOC's Tac - Power / Building / Internet Bearer of Opportunity - Rear-basing WF in Network Management Control Centre	2Lt James Holt & LCpl Foster
5	Final Remarks + Questions	Lt Col Tom Skinner

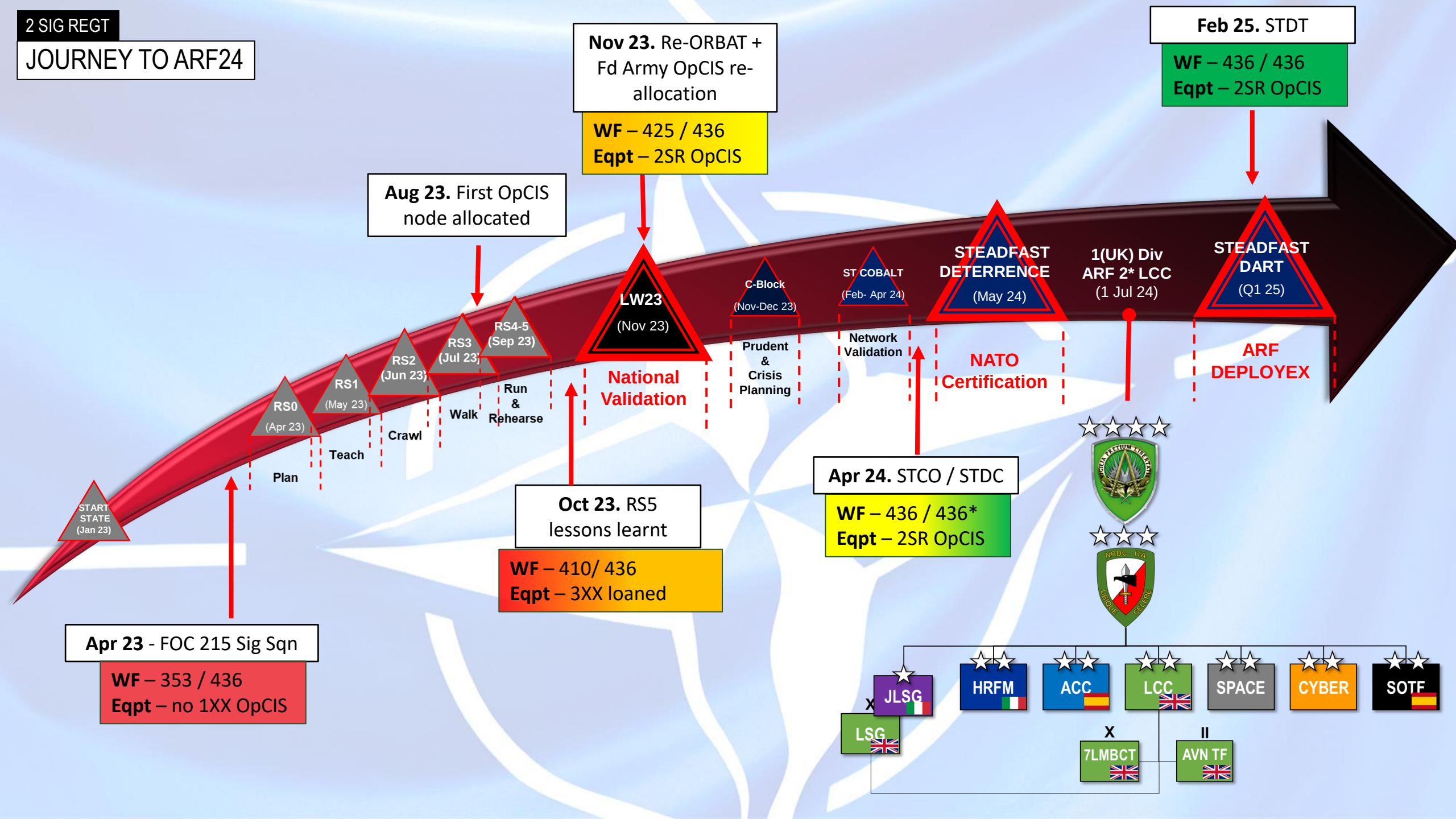


- **Benefits of journey through ARF**
 - **Underpinning CIS principles.** Taking lessons from Ukraine; principles included survivability, agility, distribution, dispersal, data exploitation and train as you fight.
 - **Tripled PoP capacity.** How, due to limited conventional CIS, 1 (UK)XX as the ARF Land Component Command have exponentially distributed and dispersed the VeVA network to sensors and deciders not previously connected.
 - **Survivability through innovation.** How soldier led initiatives enabled moving away from military bearers; ↑ lethality on the battlefield. Rear-basing CIS ↑ agility allowing 1XX to 'be first' to the fight.



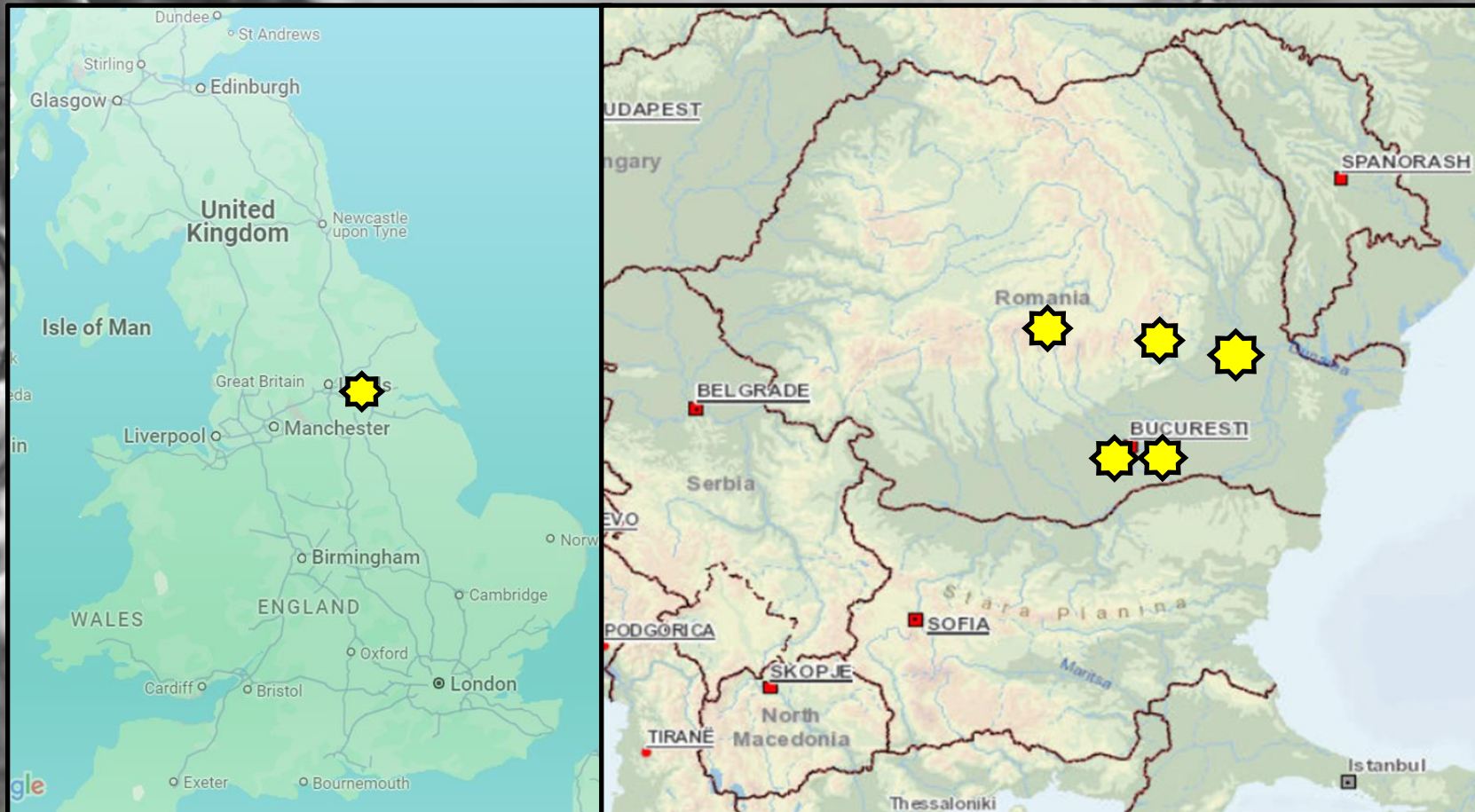
2 SIG REGT

JOURNEY TO ARF24

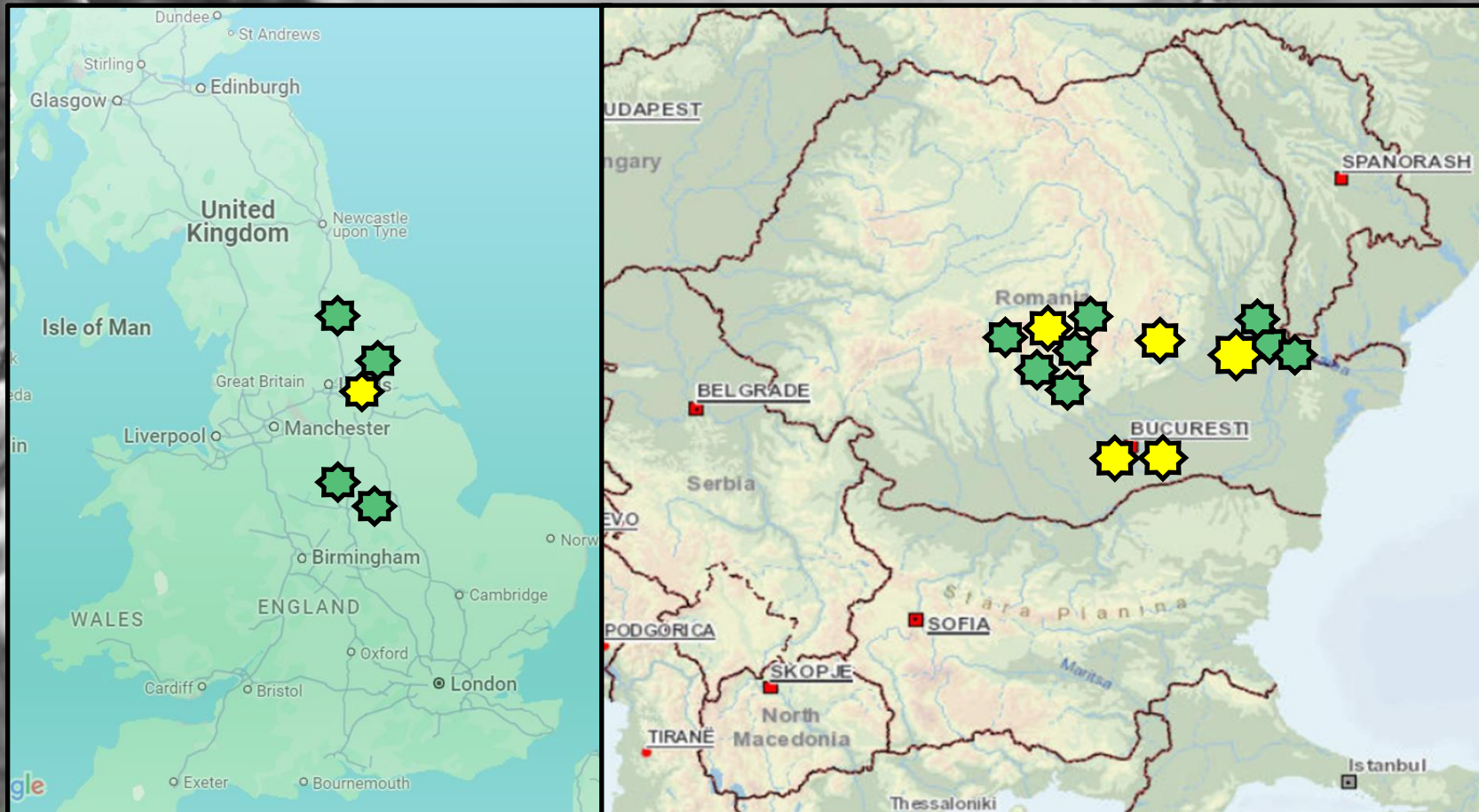


- **Survivability** - frequent movement & discretion, rather than heavy protection & CP standardisation.
- **Agility** - using low-SWaP commercial equip, exploiting existing buildings of opportunity & deploying Remotely Enabled Nodes (RENs) allowed CPs to move & re-establish within 90 minutes.
- **Distribution** - networks were extended to firm-based SMEs & down to battle group level.
- **Dispersal** - CP functions were replicated across multiple locations without additional enabler demands. This approach improved C2 survivability by decentralising critical functions - distributed and dispersed command and control (D2C2).
- **Train as you fight** - validation exercises used the same deployable CIS capabilities intended for actual deployment.

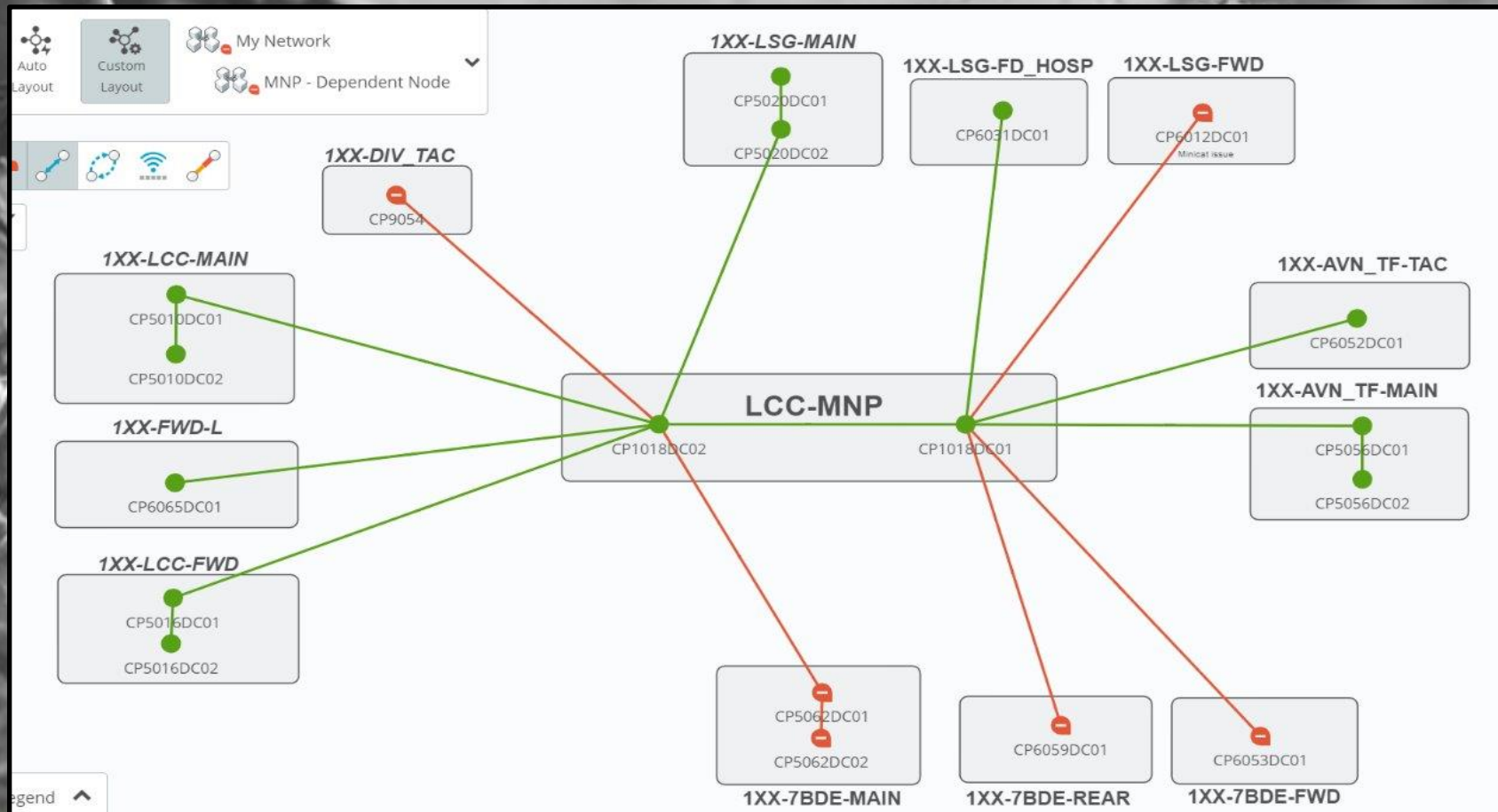
- Problem set for STDT – requirement for 18 VeVA Points of Presence (PoP) for C2 laydown

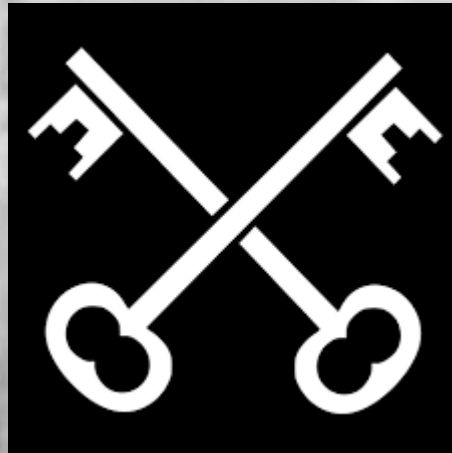


- Problem set for STDT – requirement for 18 VeVA Points of Presence (PoP) for C2 laydown
- Creation of Remotely Enabled Nodes – tripled capacity for deployed PoPs and facilitated MN interoperability
- VeVA network down to BG level – UK FEs plus Esp, Fr, Rou (x 2)
- Rear-basing hardware and WF through use of the Network Management Control Centre – increased agility



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219 SIGNAL SQUADRON

SGT WYNCOLL

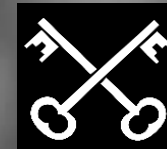
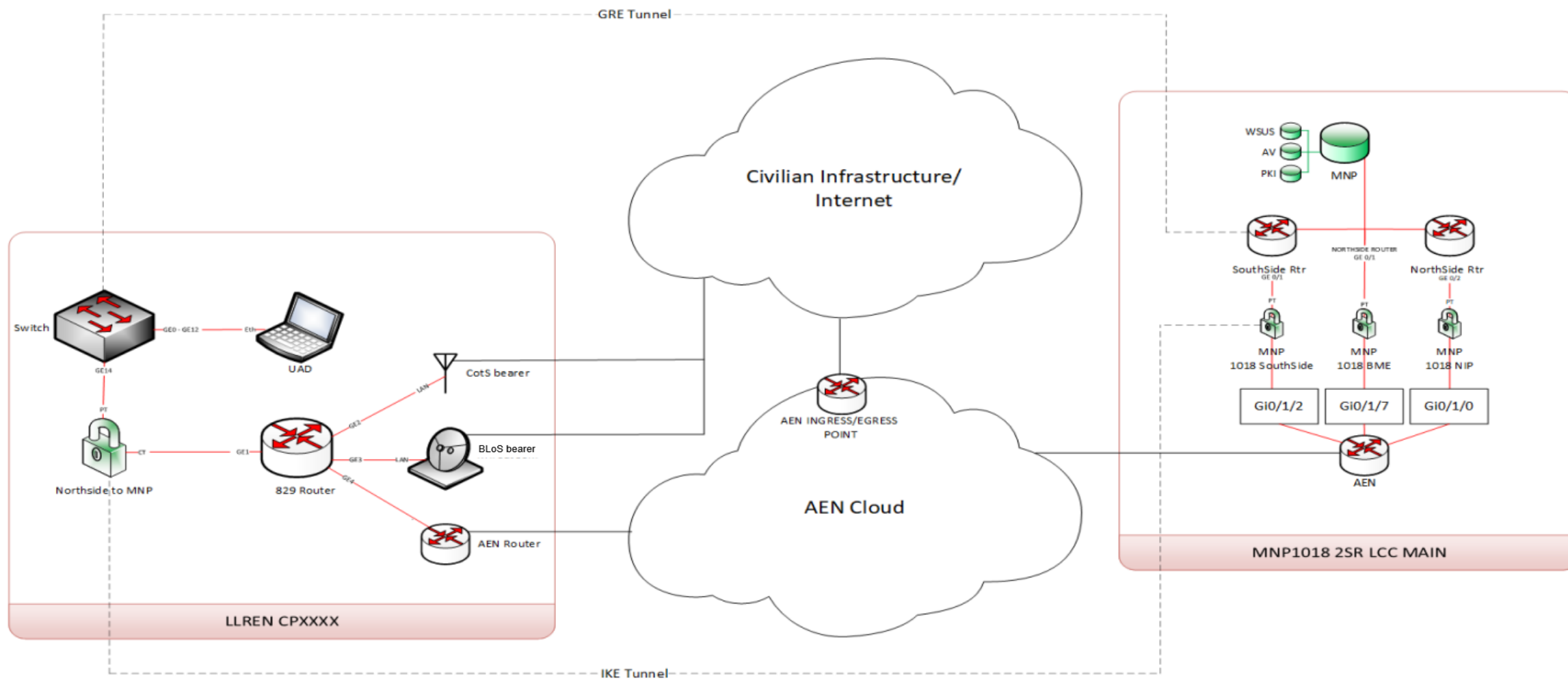


Remotely Enabled Nodes (RENs)

- Improvised variant of OpNET Blue providing access to MS and NS working environment and FAS applications for Staff Officers.
- “Plug and play” style configuration. Allows RENs to be used by anyone if they have a connection back to the UK.
- Small scale node that pulls all services from the MNP.
- Equipment required:
 - 1x Cisco 3560-CX 14 port switch
 - 1x Cisco IR1821-K9 router
 - 1x Mini-Catapan
 - 4x Dynabook laptops



RENS



Operational Benefit

- Simplicity. Ease of operation allows RENS to be deployed by a wider cohort of Units.
- Agility. Fast setup and teardown compared to most other OpCIS capabilities.
- Low digital footprint compared to other OpNET variants. Hub and spoke topology.
- Versatility in role. Can be incorporated from Main down to Forward HQ.



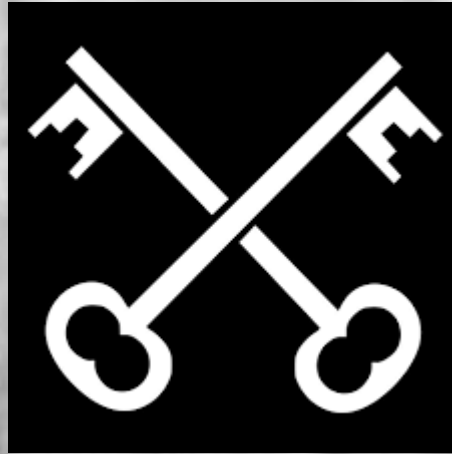
Equipment

- Housing. Size vs durability.
- Availability of physical kit. Mini-Catapults and IR 829s.
- Kit breaking when deployed. Requirement for spares packs.
- Turnaround post-deployment.

Training

- Lack of formal documentation i.e. SOIs/User handbooks.
- G6 familiarity from Non-R SIGNALS operators.





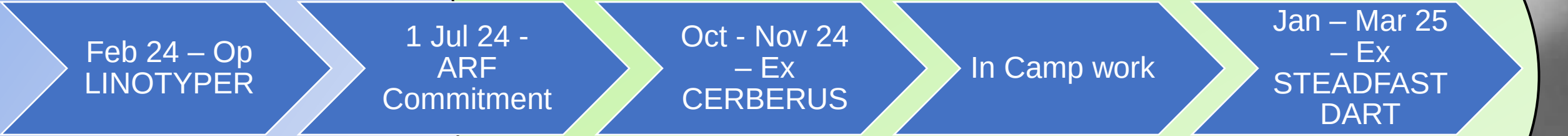
214 SIGNAL SQUADRON

LT CHURTON FAIRMAN



214 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

TIMELINE

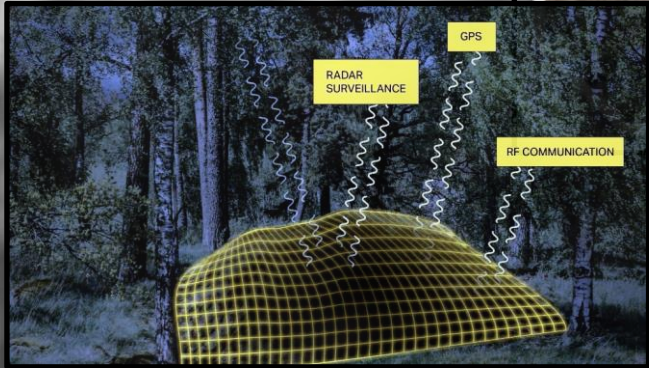
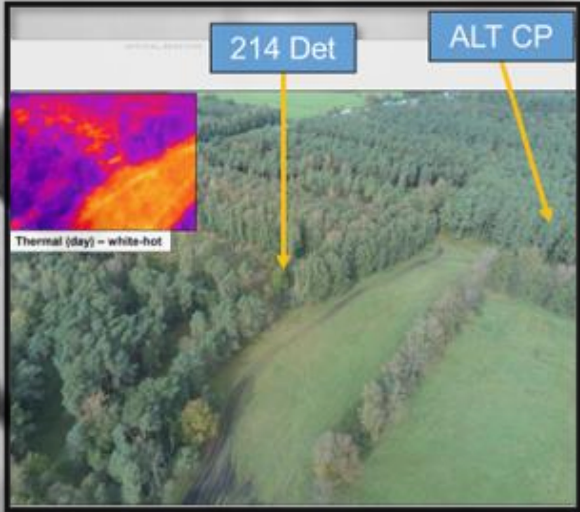


214 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

EX CERBERUS 24



Reduces visual signature from white StarLink dish.



Thermal sheeting to reduce heat signature.
Barracuda cam nets to reduce electronic emissions.

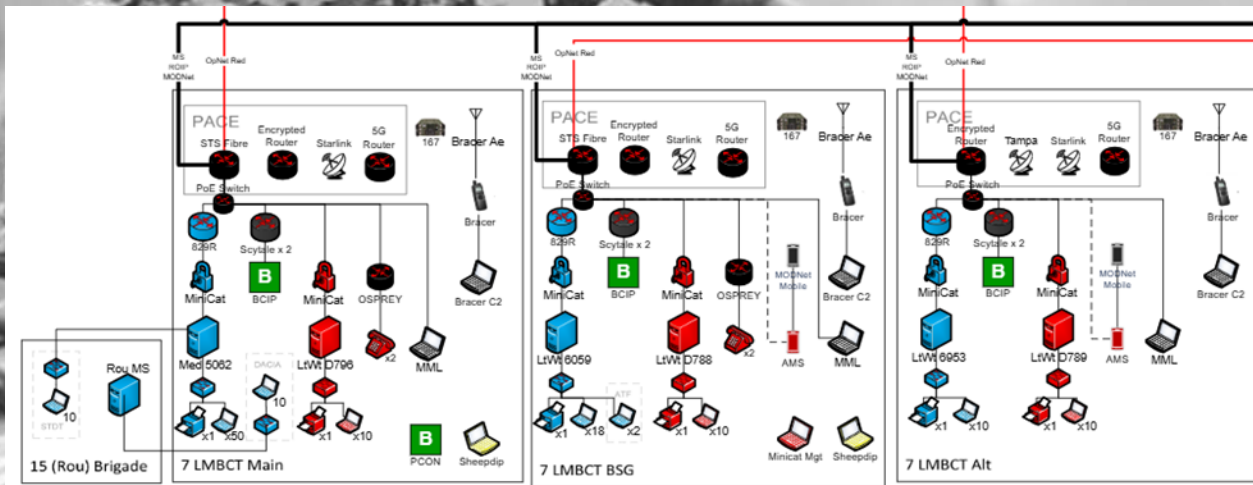


214 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

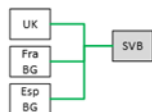
EX STEADFAST DART 25



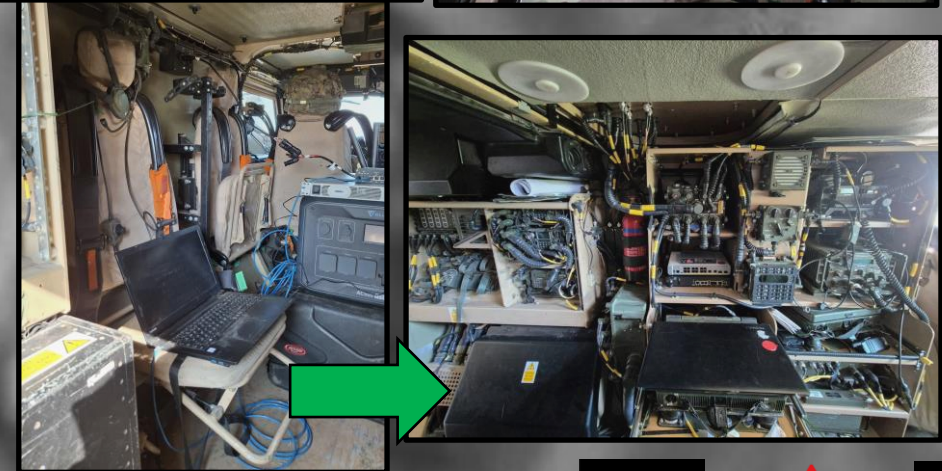
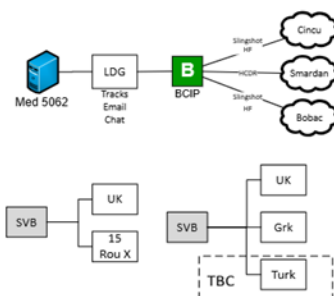
Development of 7X TAC
– now utilises a REN,
plans for smaller power
solution



7X Alt (Cincu)



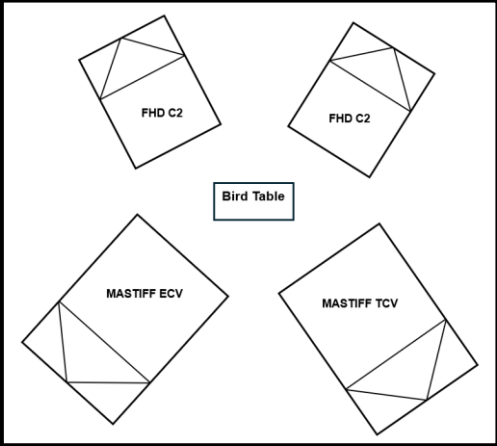
7X Main (Smardan)



214 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

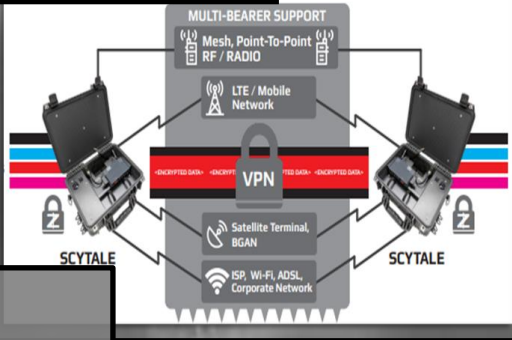
WHAT'S NEXT?

Agile, survivable, PM FWD HQ



Roller-tube masts –
easy to assemble,
more compact

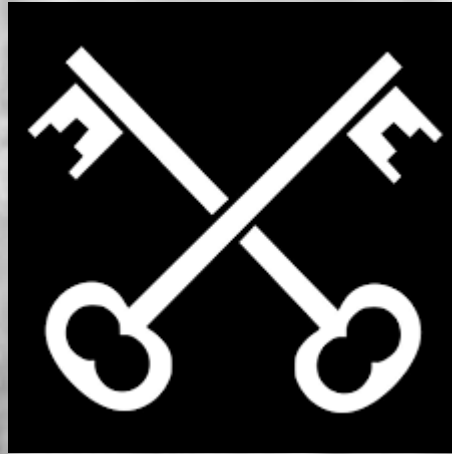
CHALLENGE – procurement



SCYTALE –
resilient, secure
BLOS capability,
provides ROIP for
BOWMAN
systems

CHALLENGE –
limited availability,
reliance on cloud
service
connections





215 SIGNAL SQUADRON

2LT JAMES HOLT & LCPL FOSTER



215 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

INTRODUCTION



2Lt Holt Sabre Tp OC.

How have we made 1st
(UK) XX FWD CP more
agile.

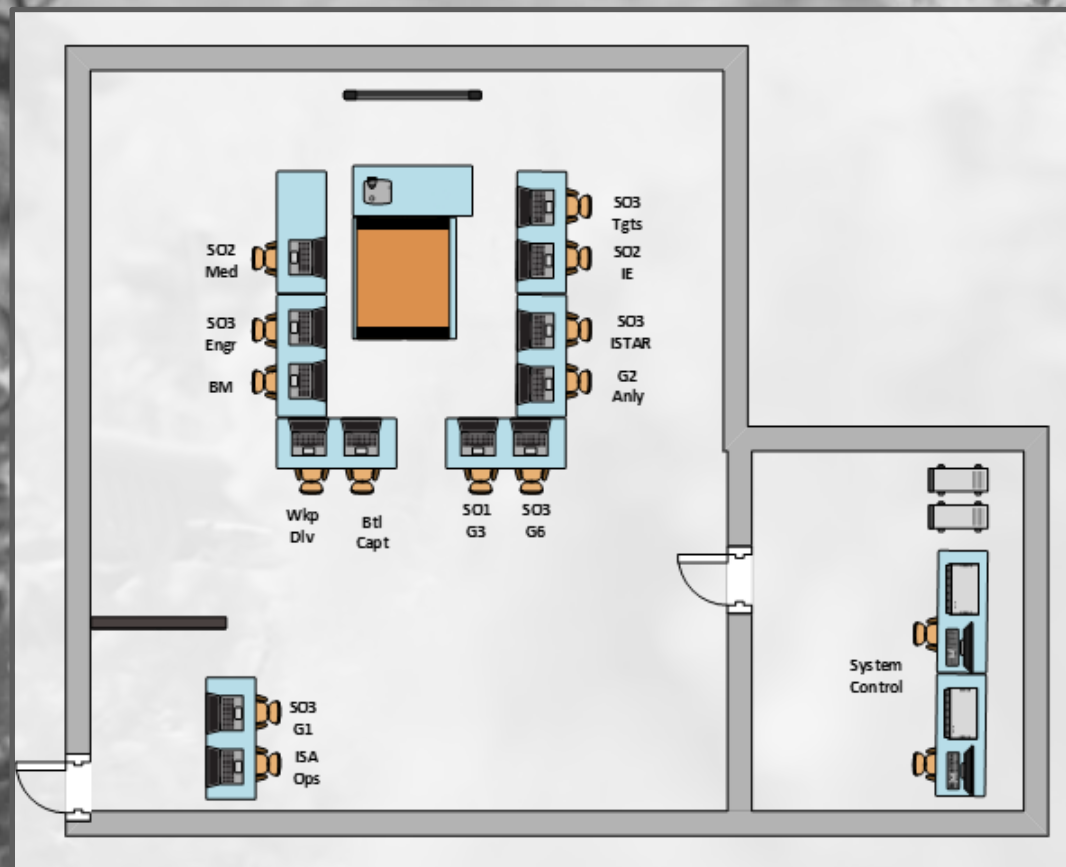


215 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

AGILITY

215 Sqn – 'Agility'

1st (UK) Div FWD Con
2 (Light)

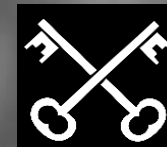
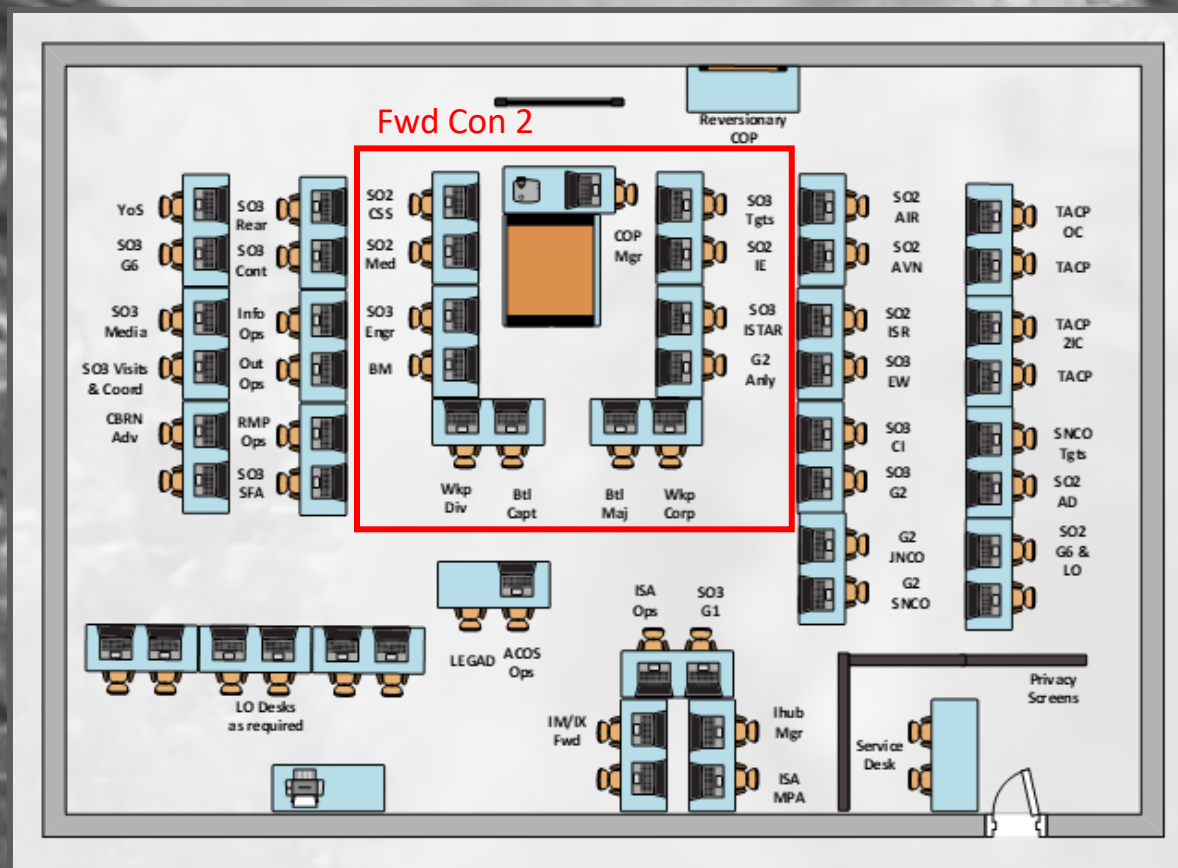


215 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

AGILITY

215 Sqn – 'Agility'

1st (UK) Div FWD Con
1 (Heavy) + Con 2
(Light)

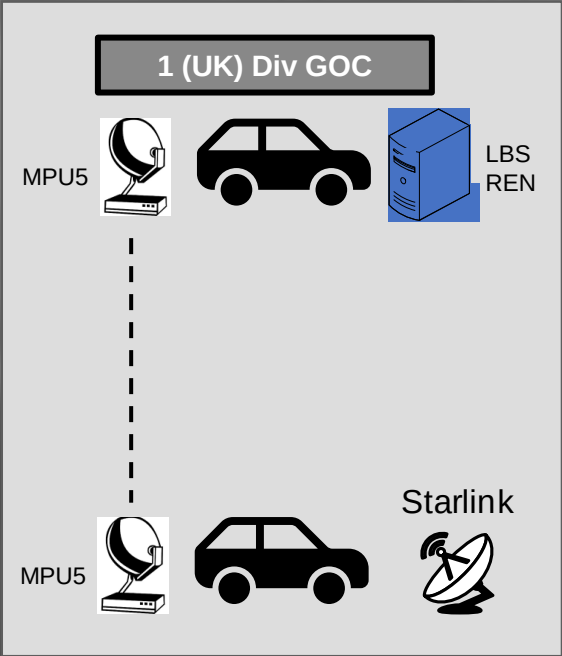
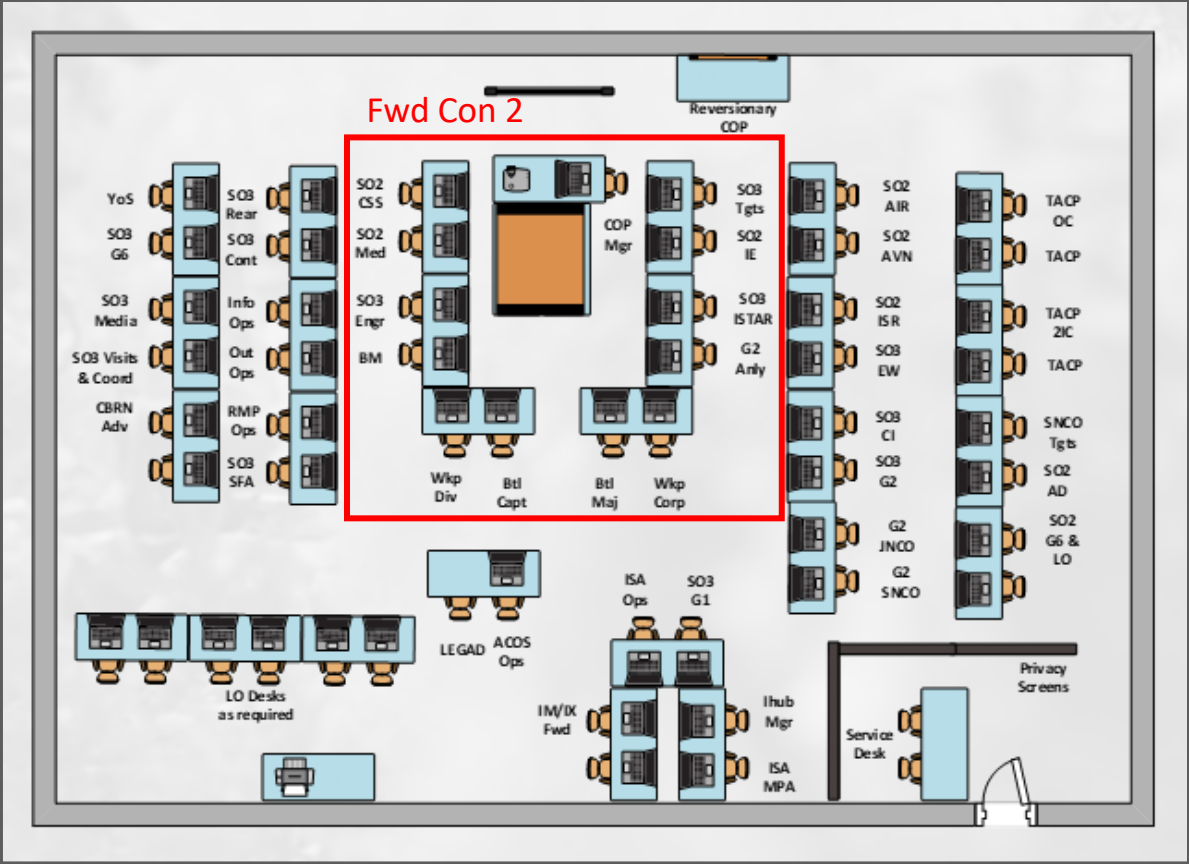


215 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

AGILITY

215 Sqn – ‘Agility’

1st (UK) Div FWD 1
(Heavy) + Con 2 (Light) +
GOC TAC



215 SIG SQN JOURNEY TO THE ALLIED REACTION FORCE

AGILITY

215 Sqn – 'Agility'

What makes us agile?

Building of
Opportunity

Power of
Opportunity

Internet Bearer
of Opportunity



Higher power
capacity, lower
lift requirement

Faster setup /
teardown, lower lift
requirement

Increased
bandwidth, more
bearer redundancy

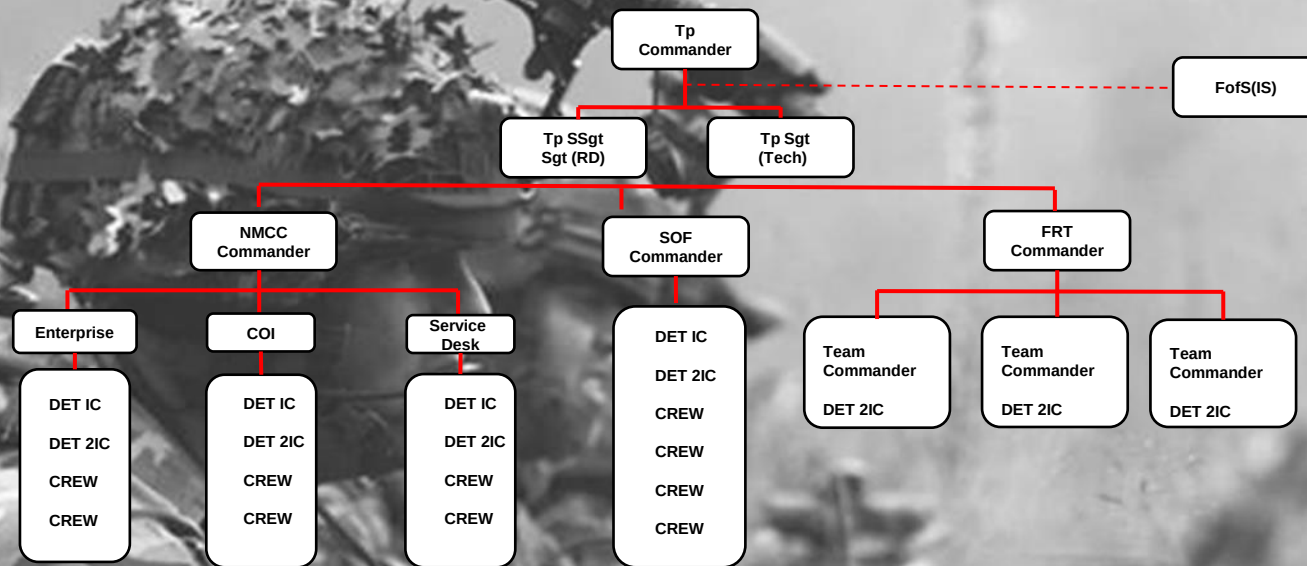
Operational Benefit

- Simplicity. Use what is available. Acquire kit in theatre. Smaller footprint due to lack of G4 tail.
- Agility. Fast setup and teardown. Low lift requirement.
- Better camouflage. Reduced EMS, optical and IR emissions. Enhances survivability.
- Higher data bandwidth providing data-rich services to staff users.



2 Signal Regiment

Network Management Control Centre



Rear Based SMEs

A. NMCC Creation. Learned lessons from MAB NMCC on best practice.

B. Centralise SQEP. Pooled limited SMEs centrally enabling fight through complex faults (L2.5 Support).

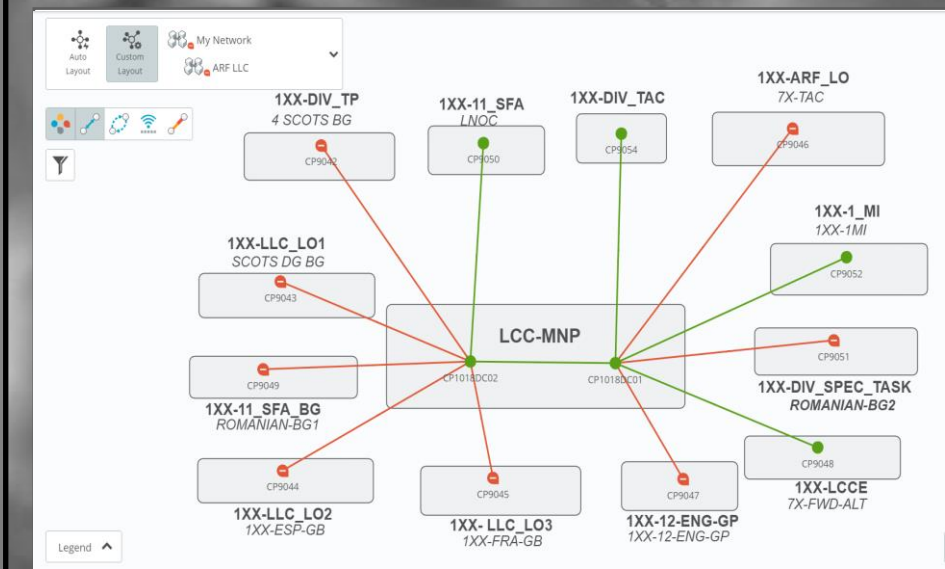
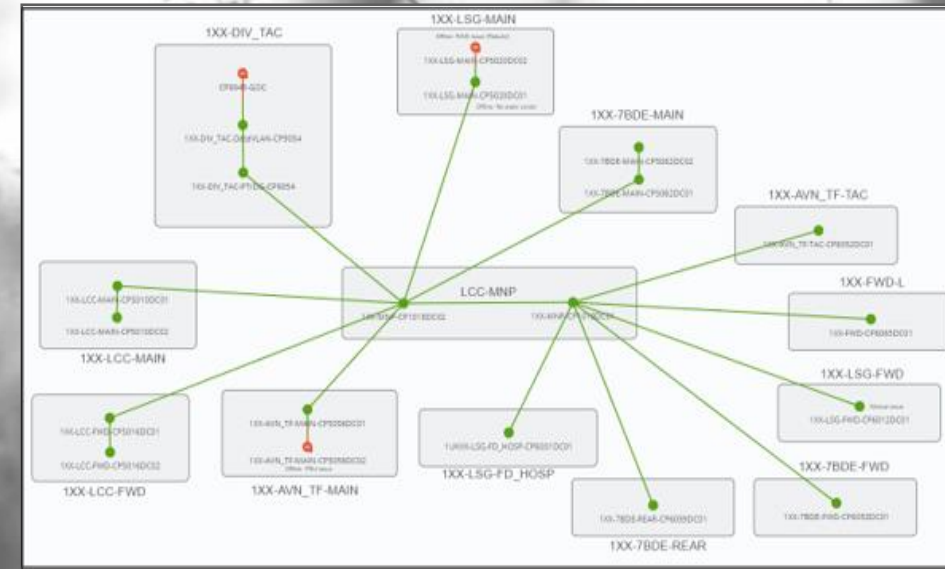
C. Remote Access. High-Capacity Bearers enable remote access to rectify fault.

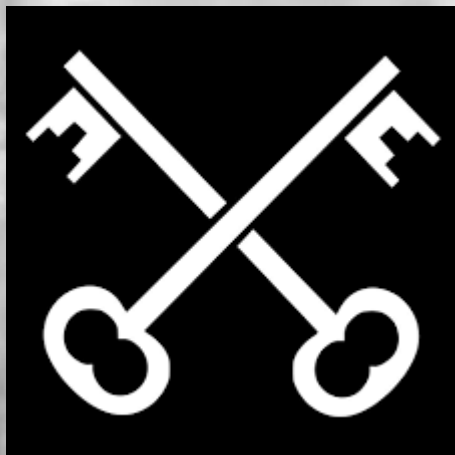
Software Advantage

A. Total SA. What's Up Gold (WUG) enabled total overview of the network.

B. Precision Fault Finding. Software enables the NMCC to identify the exact cause of the issue.

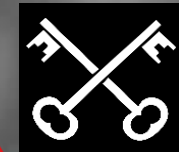
C. High Priority Users. Software enables us to view VIP users access down to individual UAD.





FINAL REMARKS

LT COL TOM SKINNER



- **Tactical:**

- 18-month ARF journey has helped developed significant KSE in NATO CIS.
- Common goals and NATO investment to enable innovation.
- “NATO always”:
 - Hugely rewarding to unit: NTT rate from 12.8% to 4.6%
 - Application Managers – deconfliction between G6 and relevant G1-9 Branch Staff leads

- **Operational:**

- Opportunity to pass on lessons to SOCC26
- Enhancement of FLF – utilising SQEP to provide wrap for CIS and Div PoP

- **Strategic:**

- ARF perfect vehicle for CIS to enable development of lethality and enhance capability
- Stepping stone in developing C2 to become a Warfighting Division under a Corps



QUESTIONS