Welcome
Tactical Data Link (TDL) Training & Development – ADF Defining A New Way

TDL Summit

Canberra Convention Centre

12 November 2018

Introduction – Paul Czajkowski (ski)

- Retired Royal Air Force 22 years
- 1990 RADAR & TDL user within tri-service environment
- 2005 16 Air Assault Brigade
- 2007 MIDS ISTAR Officer
- 2009 Joint Data Link Management Organisation (JDLMO)
- 2012 Civilian ☺ to instruct and support TDL at NATO, UK & National DLMCs
- Test & Evaluation

ADF Challenges

The quality of our people is the foundation of Defence's capability, effectiveness and reputation[1]
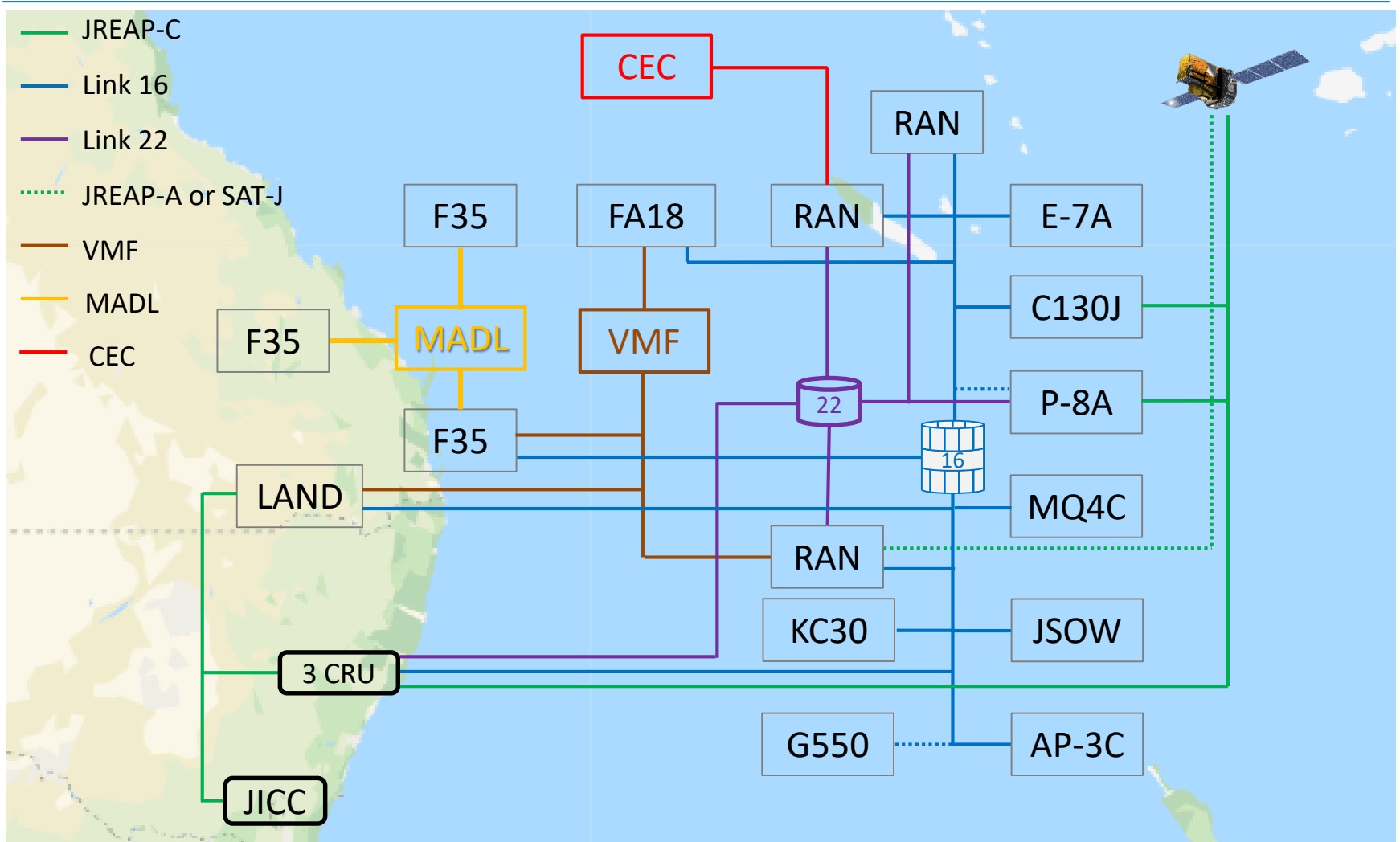

Australian Government

Department of Defence

➤ Defence White Paper 2016 identified a need for the ADF to become more effective by applying more **joint** force

➤ Introduction of new platforms, capabilities and technologies will create new challenges

1-Australian Government Department of Defence 2016 Defence White Paper - People

Multi TDL Network – 2020+

Legend:
- JREAP-C
- Link 16
- Link 22
- JREAP-A or SAT-J
- VMF
- MADL
- CEC

Nodes: CEC, RAN, F35, FA18, RAN, E-7A, MADL, VMF, C130J, F35, F35, P-8A, 22, 16, LAND, MQ4C, RAN, KC30, JSOW, 3 CRU, G550, AP-3C, JICC

ADF TDL Current Challenges

Many TDL challenges to be overcome

| Link 16 Enhancements	MIDS BU 2	MIDS-JTRS
Frequency Remapping (FR)	✔	✔
Crypto Modernisation (CM)	✔	✔
Enhanced Throughput (ET)	✔	✔
Concurrent Multi-Netting (CMN-4)	✘	✔
Concurrent Contention Receive (CCR)	✘	✔
Further Capabilities	✘	✔

ADF TDL Current Challenges

- Introduction of the F-35A Joint Strike Fighter (AIR6000 Phase 2A/2B)

- Utilises MIDS Link 16, Variable Message Format (VMF) & Multifunction Advanced Data Link (MADL) capability

- Existing Australian VMF capable platforms – RAN & F/A-18 Fleet
  - Interoperability ☹

- VMF v Link 16 for the provision of Digitally Aided Close Air Support (DaCAS)

Link 22

- Link 22 is a secure BLOS TDL system allowing transfer of tactical data and connecting multiple units
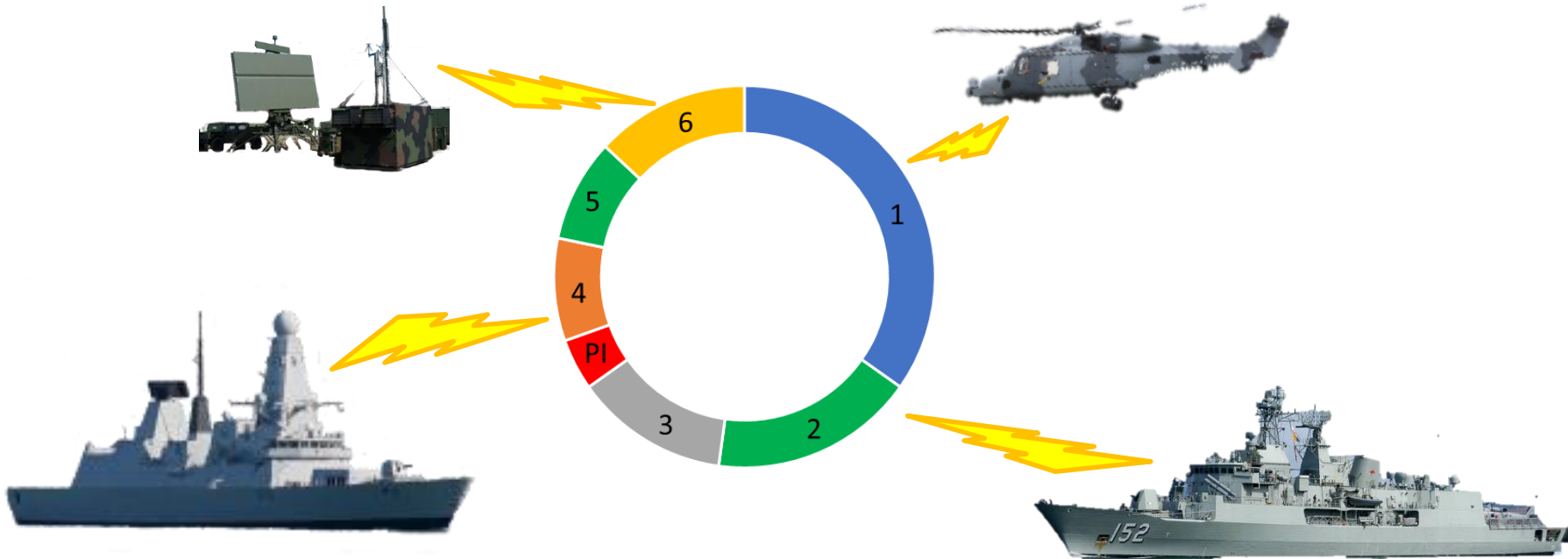
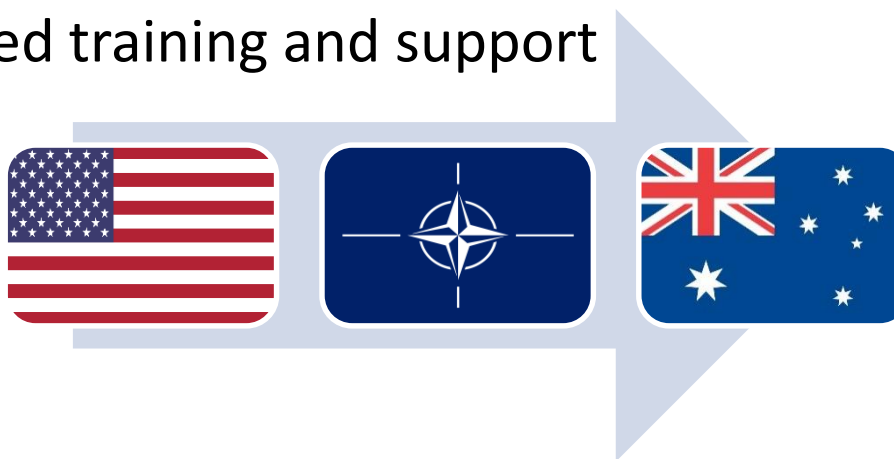- Complements Link 16 and replaces Link 11

Link 22 Challenges

➤ Concept of Employment (CONEMP) & Operations (CONOP)

➤ Understanding platform capabilities

➤ OPTASK Link Message = Link 22 Network Design
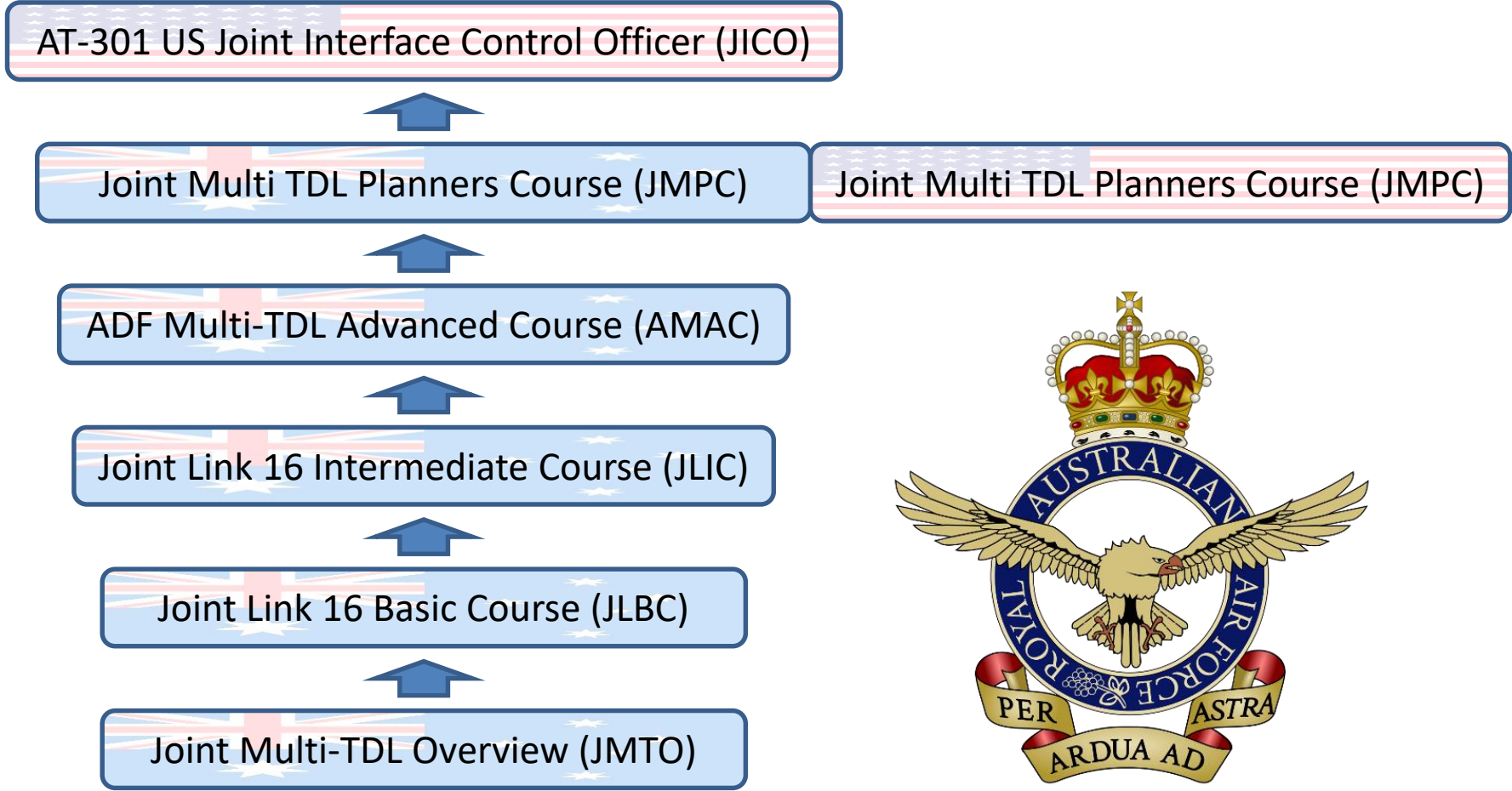
➤ Balanced training and support

What does this mean and why am I doing it?
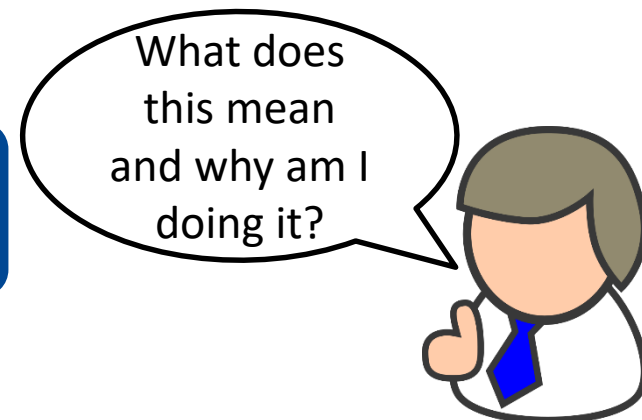
Link 22 Challenges

- Network Management is largely an automated process but….
  - Congestion Management, Connectivity & Relay & Routing Management………….*how does it really work??*

- Link 22 Manager has to be equipped with a high degree of knowledge of how Link 22 exactly works

- Operationally critical that both operators and managers are trained to the appropriate level

- Understanding the technology early should assist in defining these levels

Current RAAF TDL Training

AT-301 US Joint Interface Control Officer (JICO)

Joint Multi TDL Planners Course (JMPC)

Joint Multi TDL Planners Course (JMPC)

ADF Multi-TDL Advanced Course (AMAC)

Joint Link 16 Intermediate Course (JLIC)

Joint Link 16 Basic Course (JLBC)

Joint Multi-TDL Overview (JMTO)

Current RAN TDL Training

AT-301 US Joint Interface Control Officer (JICO)

Joint Multi TDL Planners Course (JMPC)

Joint Multi TDL Planners Course (JMPC)

ADF Multi-TDL Advanced Course (AMAC)

Tactical Data Link Coordinator (TDC)

Current ARMY TDL Training

| Joint Multi TDL Planners Course (JMPC) | Joint Multi TDL Planners Course (JMPC) |

ADF Multi-TDL Advanced Course (AMAC)

Joint Link 16 Intermediate Course (JLIC)

Joint Link 16 Basic Course (JLBC)

Joint Multi-TDL Overview (JMTO)

Current U.S JID TDL Training

Nova Systems

AT-301 US Joint Interface Control Officer (JICO)

⬆

AT-201 Link 16 Planner

⬆

AT-220 Link 16 Unit Manager

AT-102 Multi-TDL Adv Joint IO (MAJIC)

⬆

⬆

AT-101 Link 16 Joint IO Course

AT-401 Executive Course

ADF Alignment to US JID TDL Training

Nova Systems

AT-301 US Joint Interface Control Officer (JICO)

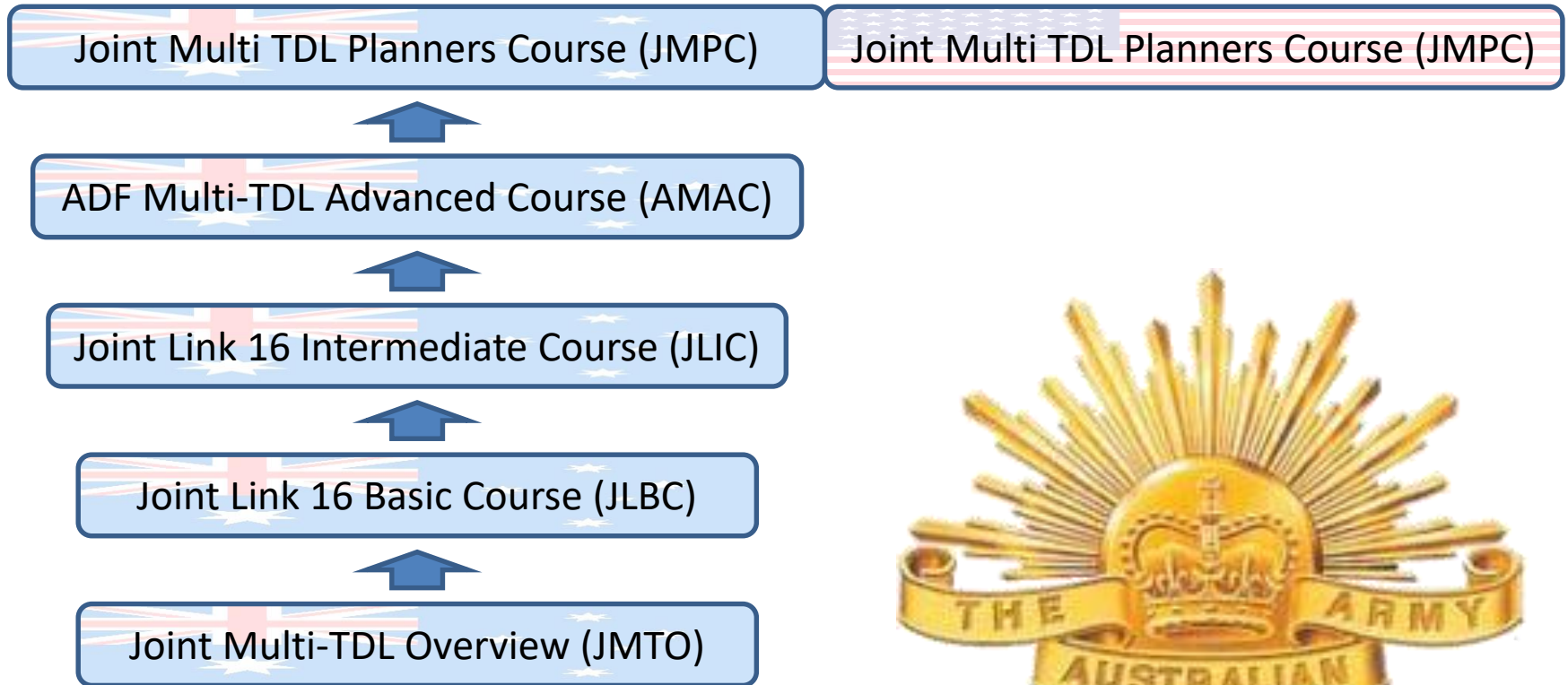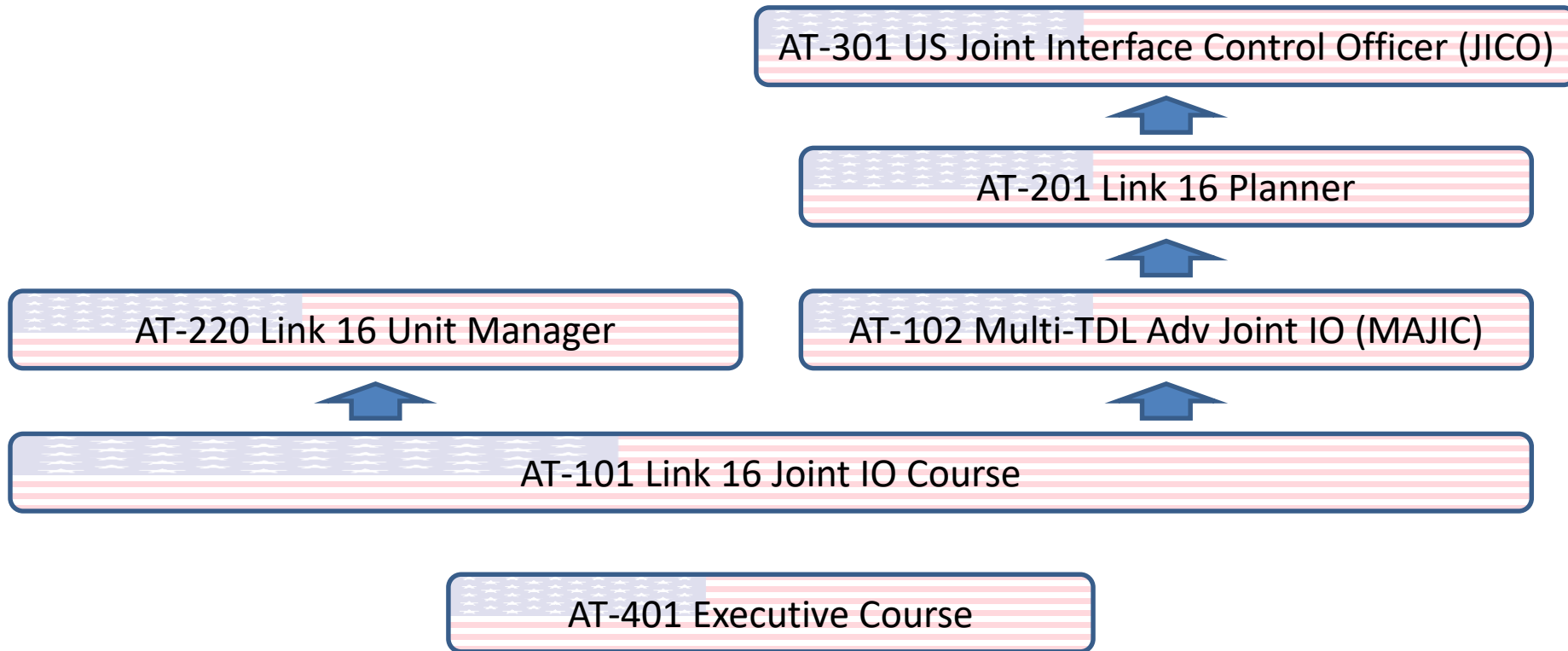Joint Multi TDL Planners Course (JMPC)

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AT-201 Link 16 Planner

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AT-101 Link 16 Joint IO Course
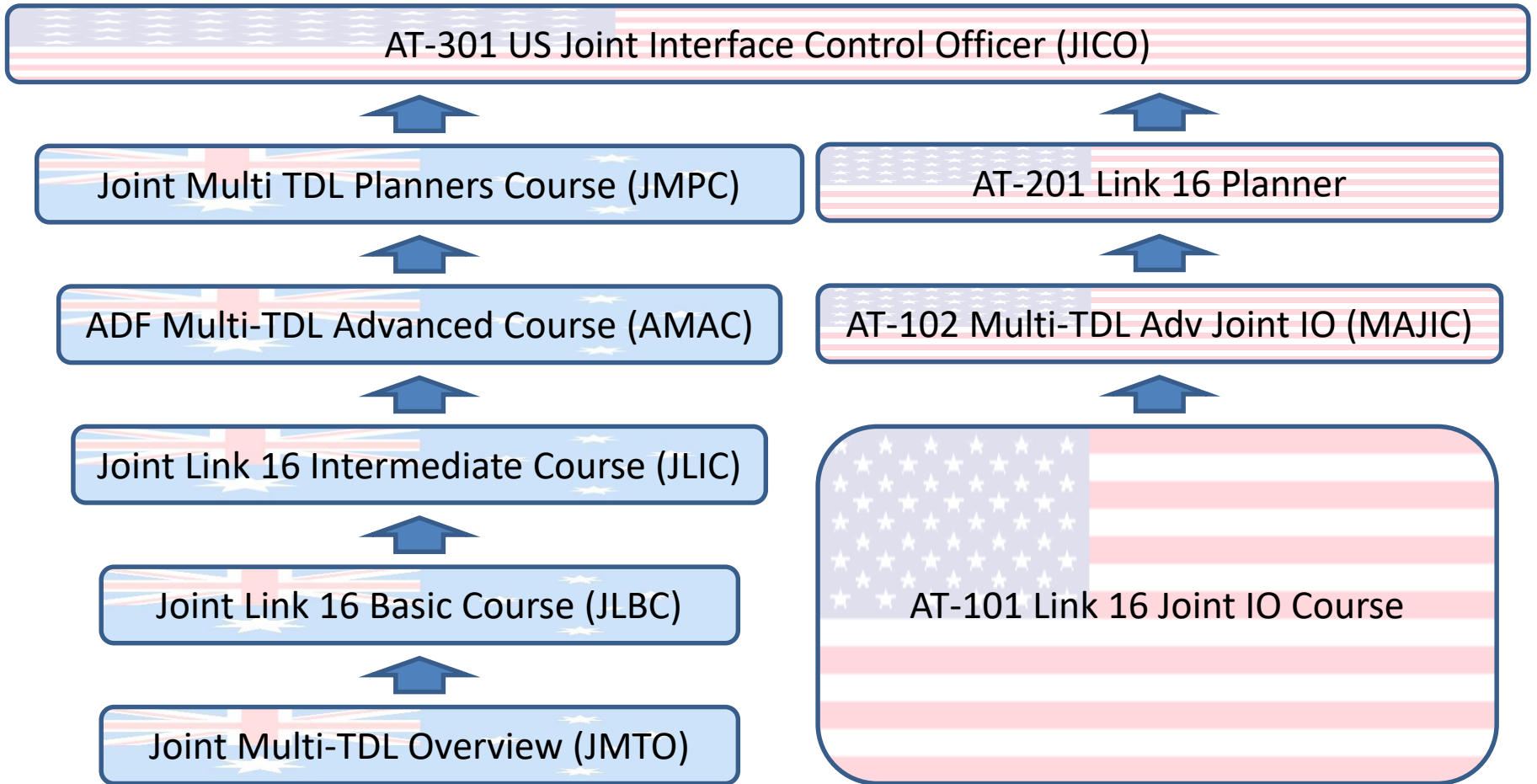
Current NATO Qualification Levels

NATO Level 4

↑

NATO Level 3

↑

NATO Level 2

↑

NATO Level 1

↑

National Course(s)

- ➤ Allied TDL Publication (ATDLP)-5.55

- ➤ Emphasis on national qualification

- ➤ Theory, Practical & Live operations

- ➤ Three year proficiency

A Way Forward

➤ **Don't** learn in isolation either by service or TDL

➤ Develop personnel based upon role and not rank

➤ Include simulation and/or live ops at every level

We aim to train operators, not just in procedures, but to increase their judgmental abilities. We do this by placing trainees in truly immersive, relevant, scenarios where they must make judgements that achieve their mission aims

UK Defence Systems Approach to Training (DSAT)

A Way Forward

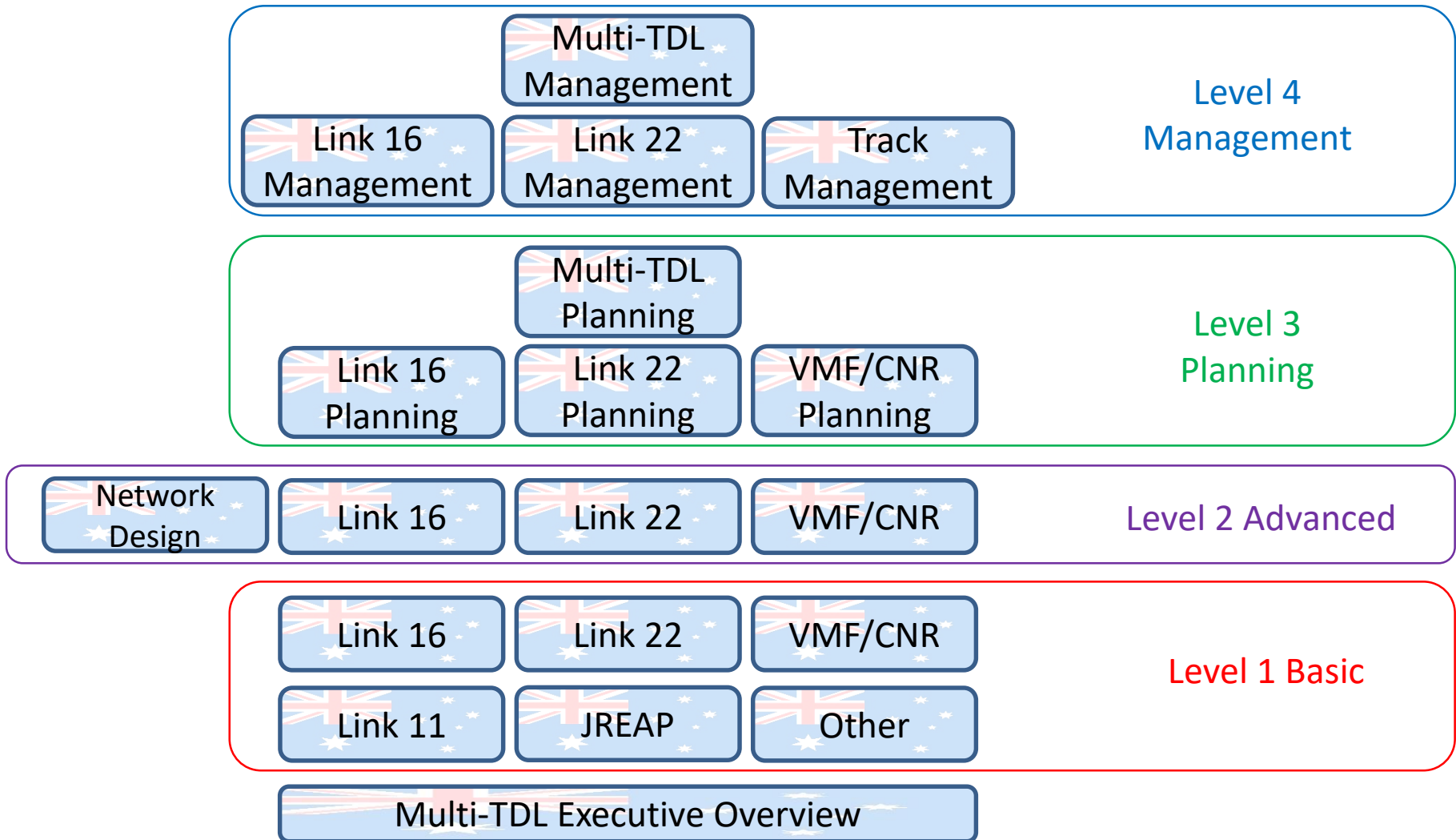➤ Consider a move away from U.S Joint Interoperability Division (JID) training or enable a more collaborative approach

➤ Define a wholly Australian Tri-Service TDL learning path

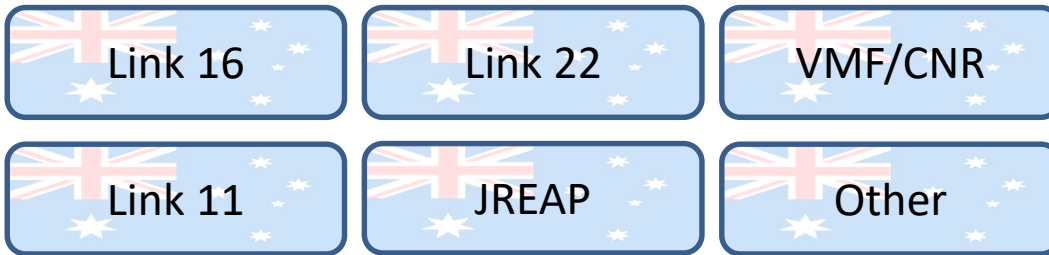➤ Create flexible modular based training

A Way Forward

Level 4 Management
- Multi-TDL Management
- Link 16 Management
- Link 22 Management
- Track Management

Level 3 Planning
- Multi-TDL Planning
- Link 16 Planning
- Link 22 Planning
- VMF/CNR Planning

Level 2 Advanced
- Network Design
- Link 16
- Link 22
- VMF/CNR

Level 1 Basic
- Link 16
- Link 22
- VMF/CNR
- Link 11
- JREAP
- Other

Multi-TDL Executive Overview

A Way Forward

A Way Forward

Link 22

Suggested Modules
System Architecture
Link 22 Networks & Addressing
Initialisation
Messaging
OPTASK Link Segment
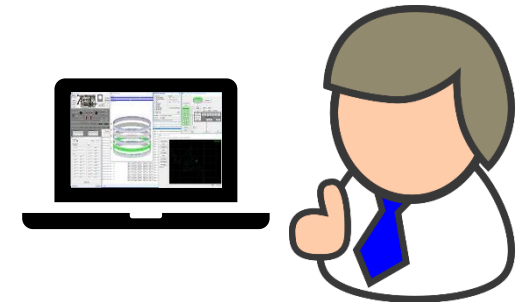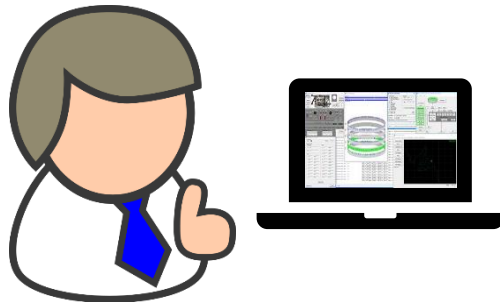
Final Thoughts

- Highly knowledgeable and experienced TDL personnel are employed within Australian Defence and Industry

- Technical simulation solutions exist or are being developed within Australia

- Government is committed to maximising opportunities for competitive Australian businesses; building export potential, depth of skills and diversification for defence industry[2]

2-Australian Government Department of Defence 2016 Defence White Paper - Harnessing Australian Innovation in the Defence Sector

Final Thoughts

"We're only bound by the constraints that our mind places upon our circumstance. If we choose we can step up to the mark"

General Angus John Campbell, AO, DSC

Chief of the Australian Defence Force

Any Questions

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