

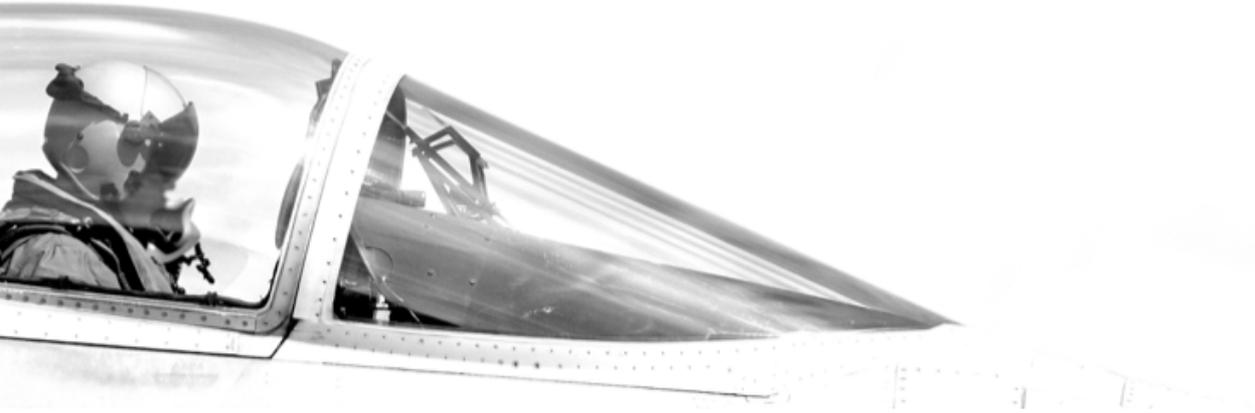
Live Air Training in a Synthetic Environment

NATO MSG-184 Symposium

Towards Training and Decision Support for Complex Multi-Domain Operations

Michael Jebautzke

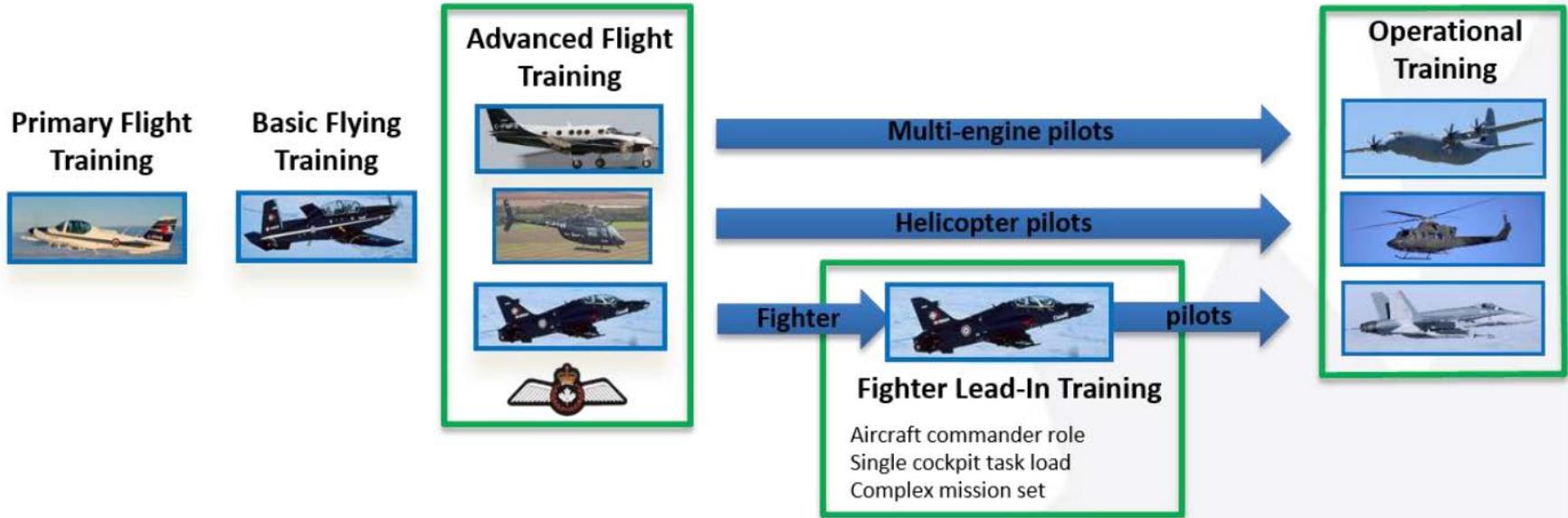
Amsterdam, 21st October 2021



Addressed Topics

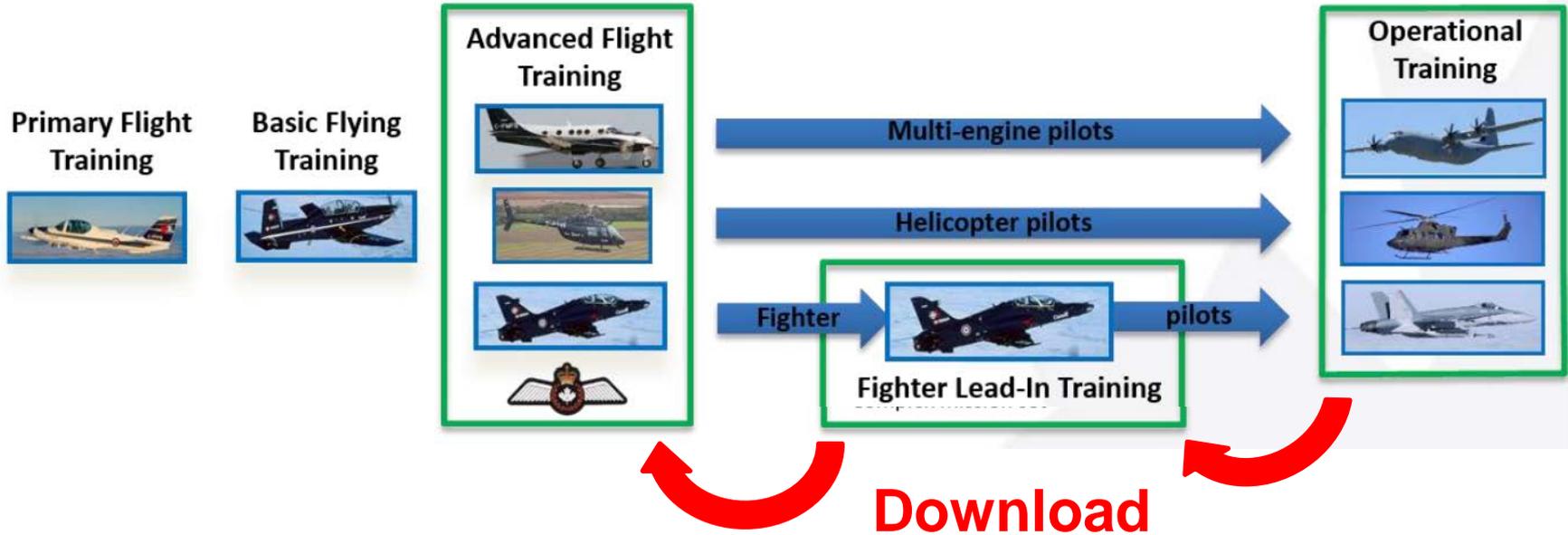
- **Live Air Training Trends**
- **Enabling Blended Training**
- **Remaining Challenges**

Current Pilot Training Concepts

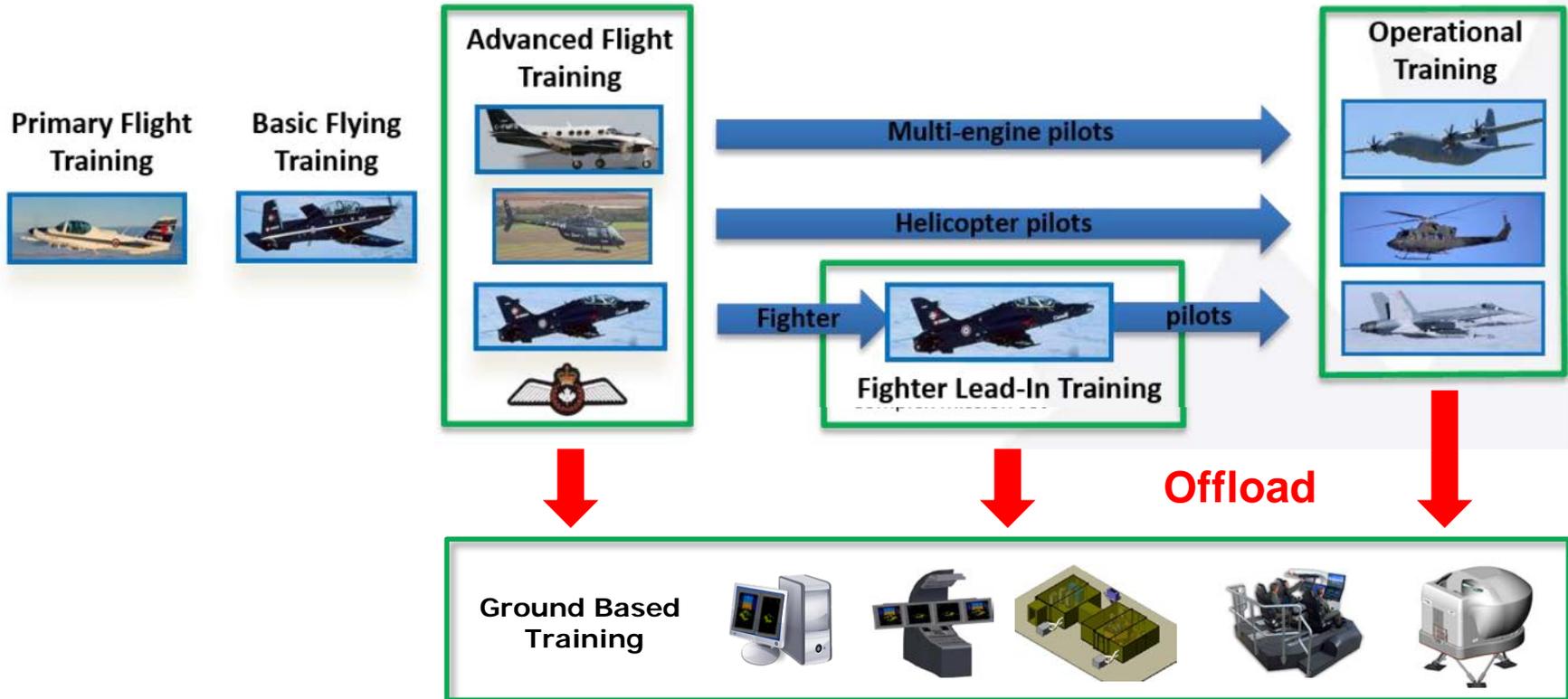


Reference of Source:
Courtesy of the Public Services and Procurement Canada
Future Fighter Lead-In Training (FFLIT) RFI (W6369-210262/A)

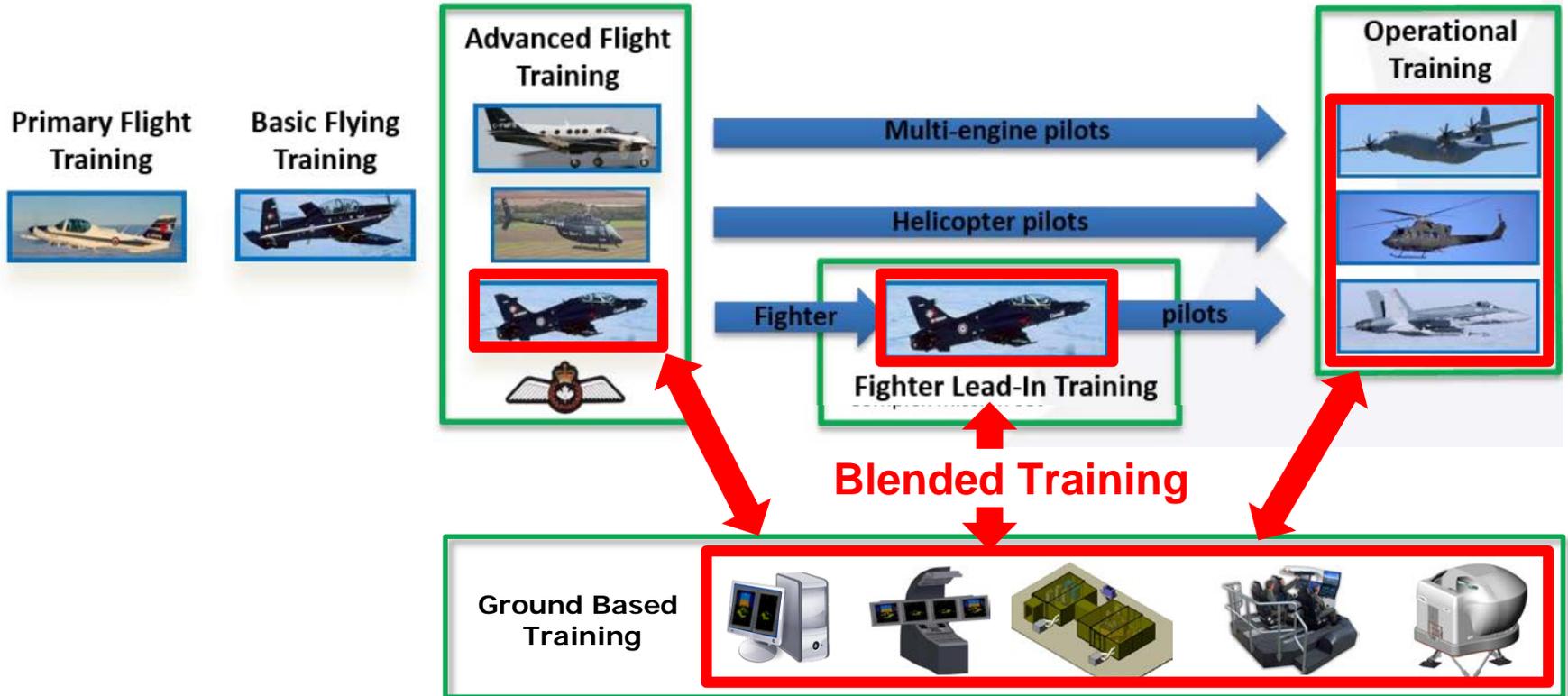
Future Pilot Training Concepts - Download



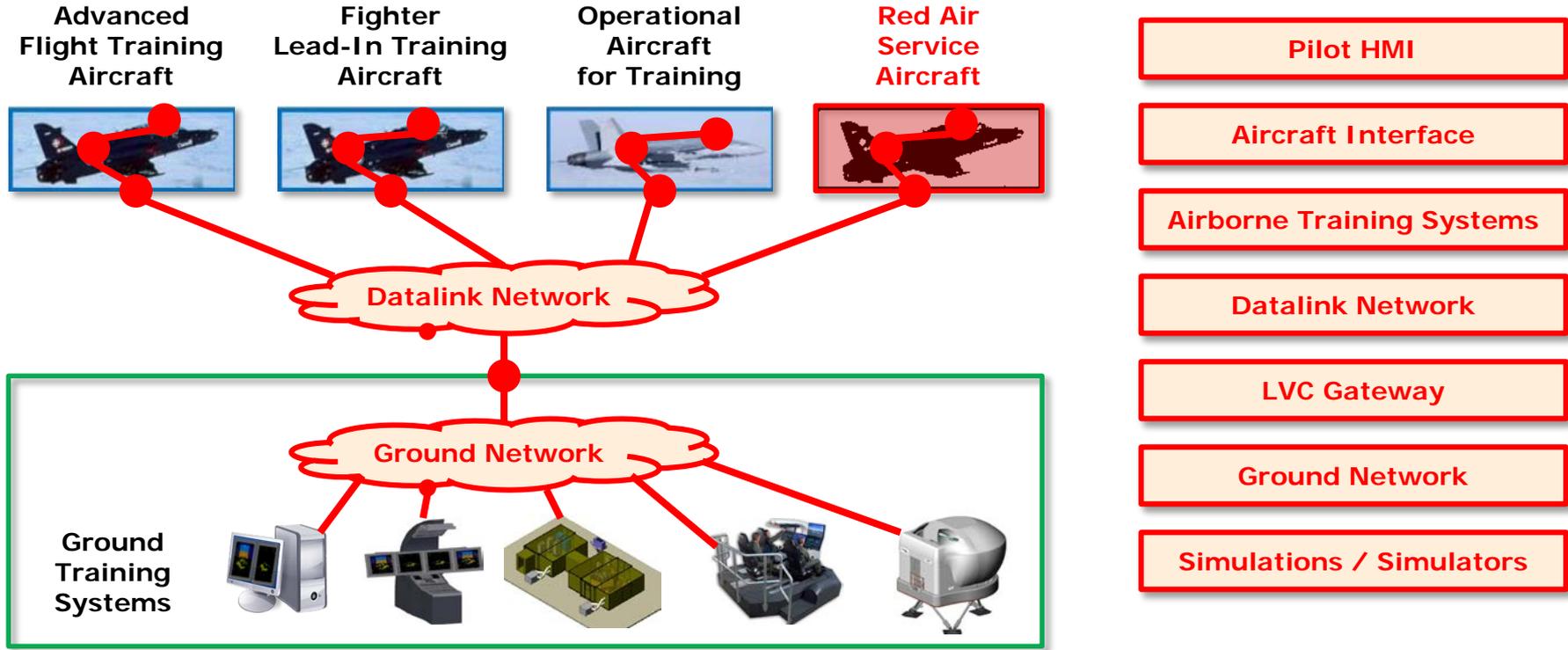
Future Pilot Training Concepts - Offload



Future Pilot Training Concepts – Blended Training



Enabling Blended Training



Blended Training Elements

Pilot HMI

Aircraft Interface

Airborne Training Systems

Datalink Network

LVC Gateway

Ground Network

Simulations / Simulators

Airborne Training Systems

Pilot HMI

Aircraft Interface

Airborne Training Systems

Datalink Network

LVC Gateway

Ground Network

Simulations / Simulators

IAI:
EHUD
RAIDS
FPR

<https://www.iai.co.il/p/ehud-aacmi>



Collins Aerospace
DRS:

JSAS
TCTS II
P6 CTS

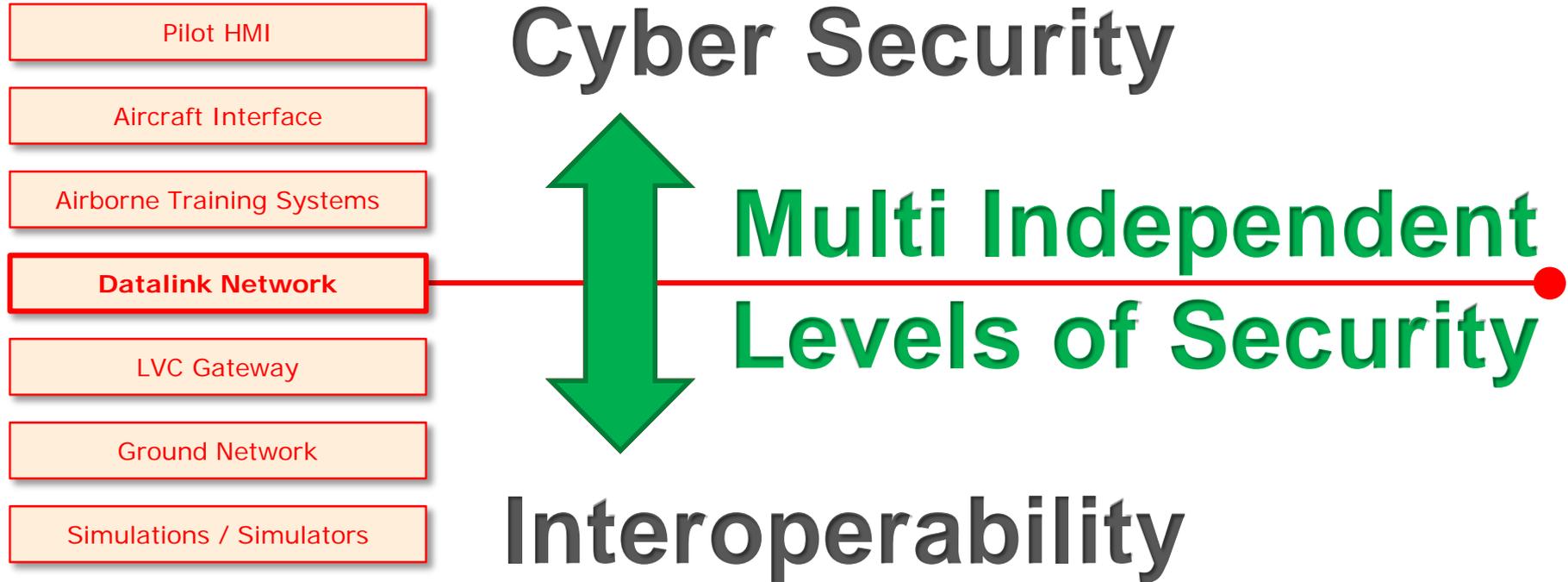
Cubic
DRS:
P5 CTS



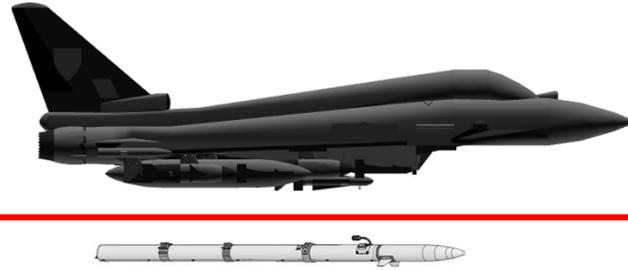
<https://www.cubic.com/solutions/training/air-combat>



Datalink Networks



Aircraft Interface



Pilot HMI

Aircraft Interface

Airborne Training Systems

Datalink Network

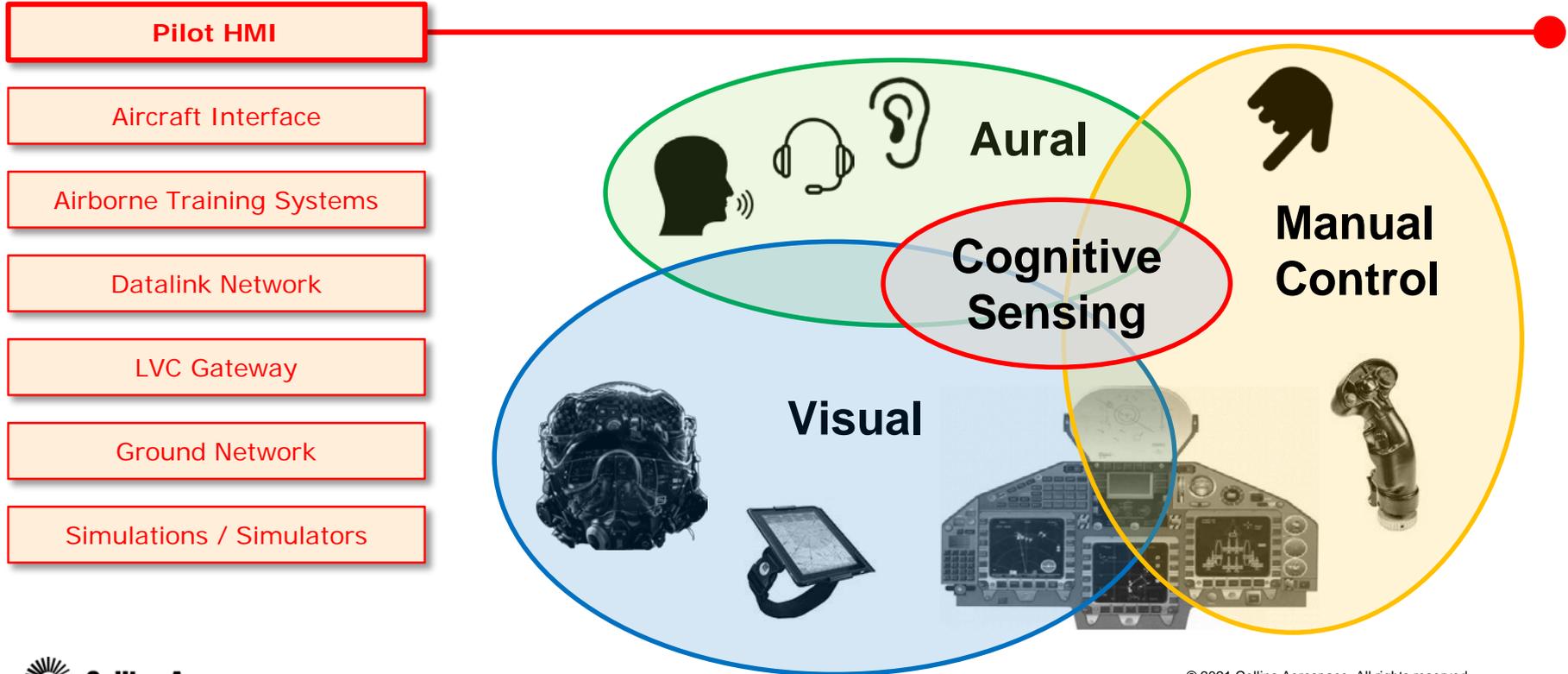
LVC Gateway

Ground Network

Simulations / Simulators

Level	Integration	Aircraft Modification
0	Power only	No
1	Analog / discrete	No
2	Digital 1-way	No
3	Digital 2-way	Yes

Pilot Human Machine Interface (HMI)



Simulations / Simulators

Pilot HMI

Aircraft Interface

Airborne Training Systems

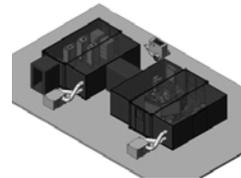
Datalink Network

LVC Gateway

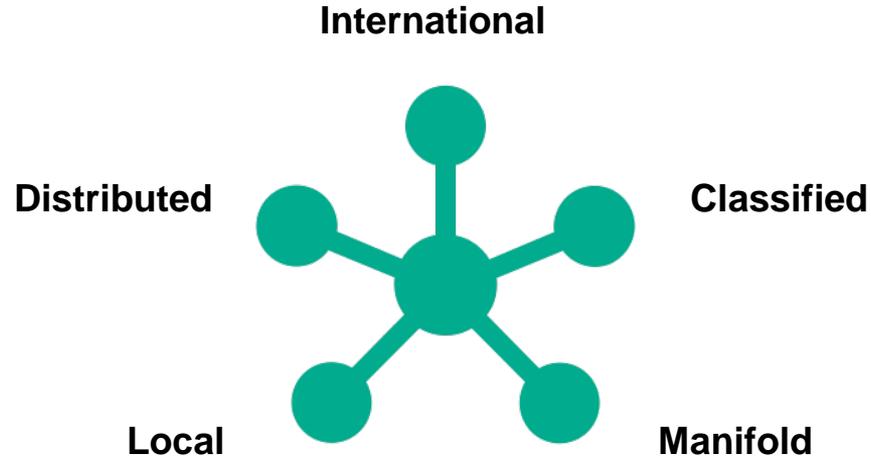
Ground Network

Simulations / Simulators

- **Full Motion Simulator**
- **Desktop Trainer**
- **Computer Generated Forces (CGF)**
- **Weapon / Threat Simulations**
- **Training Facilities**



Ground Networks



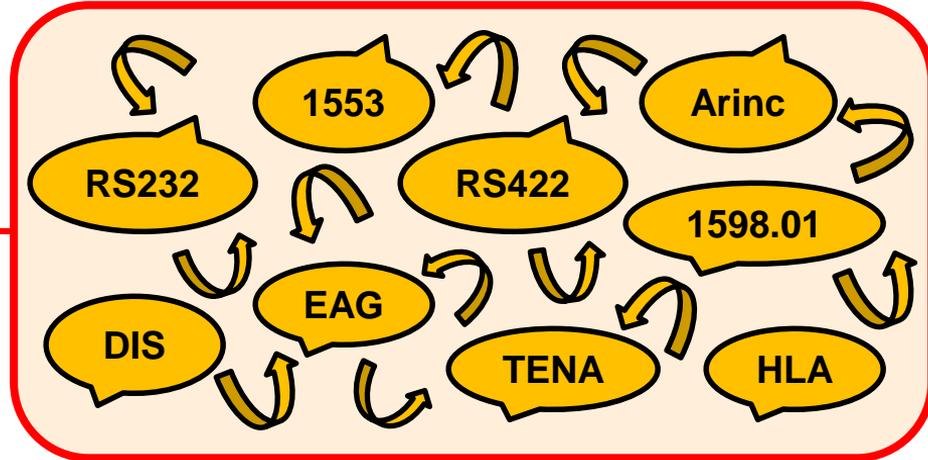
Multi Independent Levels of Security

LVC Gateways



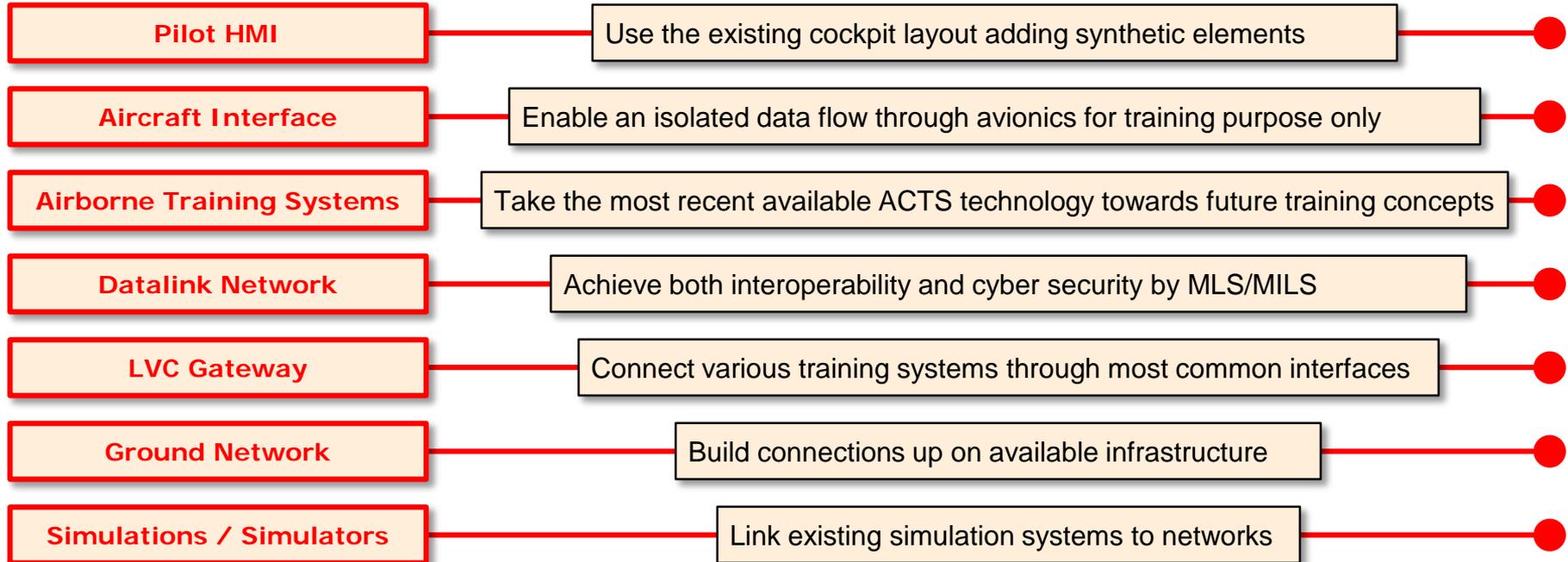
Message / Format Translation

Airborne Systems



Ground Systems

Way Forward Towards Blended LVC Training

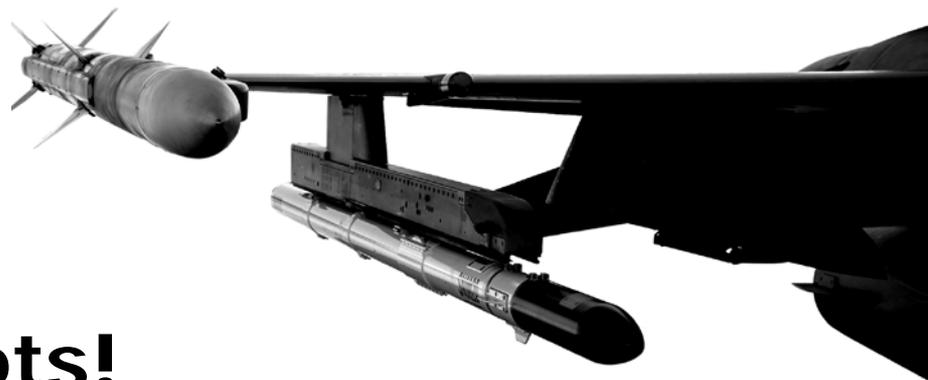
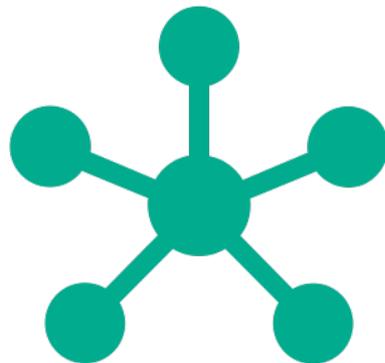


Live Air Training in a Synthetic Environment

Thank you for your appreciated attention!



Time for
questions



Let's connect the dots!