



A330 MRTT

Strategic Tanker Transport Capability (STTC)

DEFENCE AND SPACE

INDUSTRY ENGAGEMENT SESSION 15th JUNE 2021

For Public Release

AIRBUS

Industry Engagement Session

- Introduction to Airbus
- Introduction to the A330 MRTT
- Sourcing procedures at Airbus
- Notes on Industrial and Technological Benefits (ITB)
- Way-forward

Industry Engagement Session

Content

- Introduction to Airbus
 - Airbus Overview
 - Airbus Defence and Space
 - Airbus in Canada
- Introduction to the A330 MRTT
- Sourcing procedures at Airbus
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Airbus is an international leader

Airbus is the largest aeronautics and space company in Europe and a **worldwide leader across three businesses**. The company has aircraft final assembly lines across Asia, Europe and the Americas.



Commercial Aircraft



Defence & Space



Helicopters

12,000
direct suppliers globally

180
locations

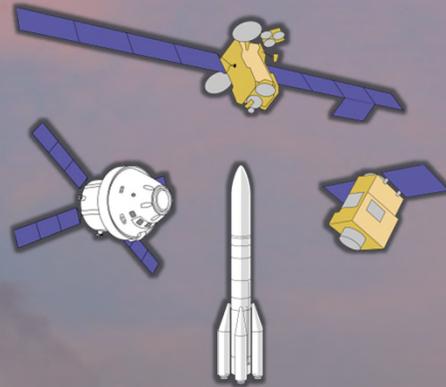
From the sky to cyberspace – Our portfolio



- A400M
- A330 MRTT
- C295
- Eurofighter
- Air Services



Military Aircraft

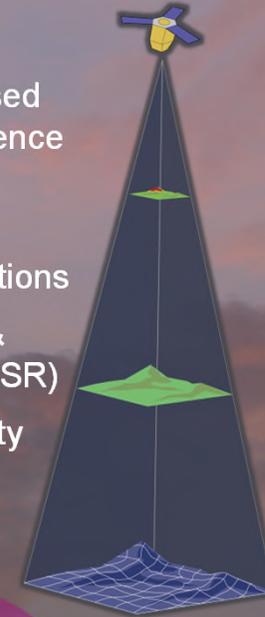


- Telecommunication Satellites
- Earth Observation Satellites
- Navigation Satellites
- Orbital and Space Exploration Infrastructure
- Science Missions
- ArianeGroup (Launchers)



Space Systems

- Satellite-based Geo-Intelligence Services
- Secure Communications
- Command & Control (C5ISR)
- Cybersecurity
- Security Solutions



Connected Intelligence

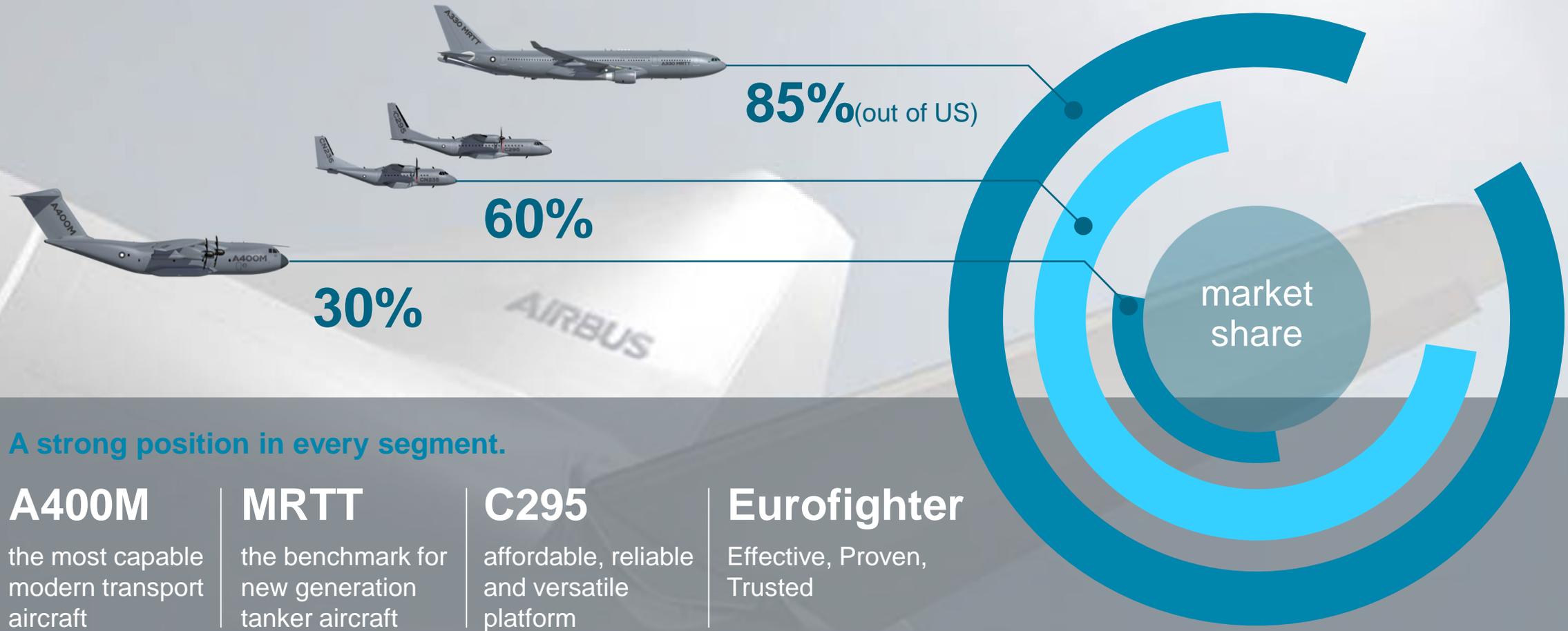


- Unmanned solutions for airborne intelligence, surveillance, reconnaissance and combat missions



Unmanned Aerial Systems

At the very top – our Military Aircraft.



A strong position in every segment.

A400M

the most capable modern transport aircraft

MRTT

the benchmark for new generation tanker aircraft

C295

affordable, reliable and versatile platform

Eurofighter

Effective, Proven, Trusted

AIRBUS IN CANADA

3,800 EMPLOYEES

23,000+
INDIRECT JOBS

665+
CANADIAN SUPPLIERS
ACROSS THE COUNTRY



LOCATIONS IN CANADA

Waterloo ON | Fort Erie ON | Ottawa ON
Mirabel QC | Montreal QC | Lunenburg NS



*Projects with Canadian expertise clusters related to artificial intelligence, autonomous flight, materials, electrification and multi-disciplinary research projects with NRC, with applications to aerospace.

Fixed-Wing Search and Rescue Aircraft Replacement project

- Recent major DND primary contractor
- \$2.4Bn FWSAR contract announced in December 2016. \$4.7Bn total value including all contract options.
- Airbus is the “single point of accountability” prime contractor for all aspects of the FWSAR project
- FWSAR deliverables include:
 - 16 CC295 “Kingfisher” aircraft;
 - Advanced mission equipment, sensors and avionics; &
 - 20 years of In-Service Support
- Teamed with Canadian industry leaders:
 - Airpro
 - PAL Aerospace
 - CAE
 - Pratt & Whitney
 - L3 Wescam
- First CC295 delivered to Canada in 2019



Lessons Learned from FWSAR will benefit STTC

Conclusion

- Airbus is a large company and has complex processes to follow;
- Our Procurement and Offset (ITB) teams are used to working with suppliers including in Canada – FWSAR being a prime example;
- These teams have the lead to find potential Canadian partners and suppliers to offer the best solution and value to Canada; and
- Our goal today is to present the A330 MRTT and how you can be part of the STTC ITB concept.



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A330 MRTT: The Benchmark

Multi Role

AAR, Transport, Cargo, Strategic Gov. Transport, MEDEVAC

More

Fuel offload, cargo, range, PAX than any of its competitors

Combat Proven

In service with 7 major Armed Forces, operating intensively in the Middle East region

Interoperable

With all type of receivers (US & EU)



A330 MRTT True Multi-role

- Provides **secure and cost-effective** transport for Government Ministers and the Royal Family
- Alongside this role, the aircraft **remains ready for other tasks such as air-to-air refueling, personnel and cargo transport.**



70 tonnes of Fuel at 1250 nm and 1 hour on Station

The largest Fuel Capacity

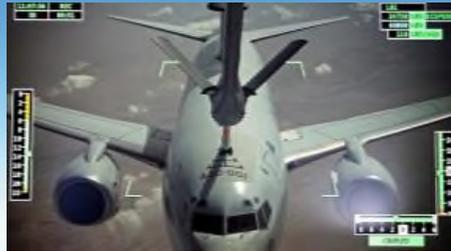


111 tonnes of Fuel

- Basic Fuel Capacity, inherited from **A330-200**
- **No Extra Fuel Tanks**
- **Less structural modification impact** due to commonality with existing civil platform



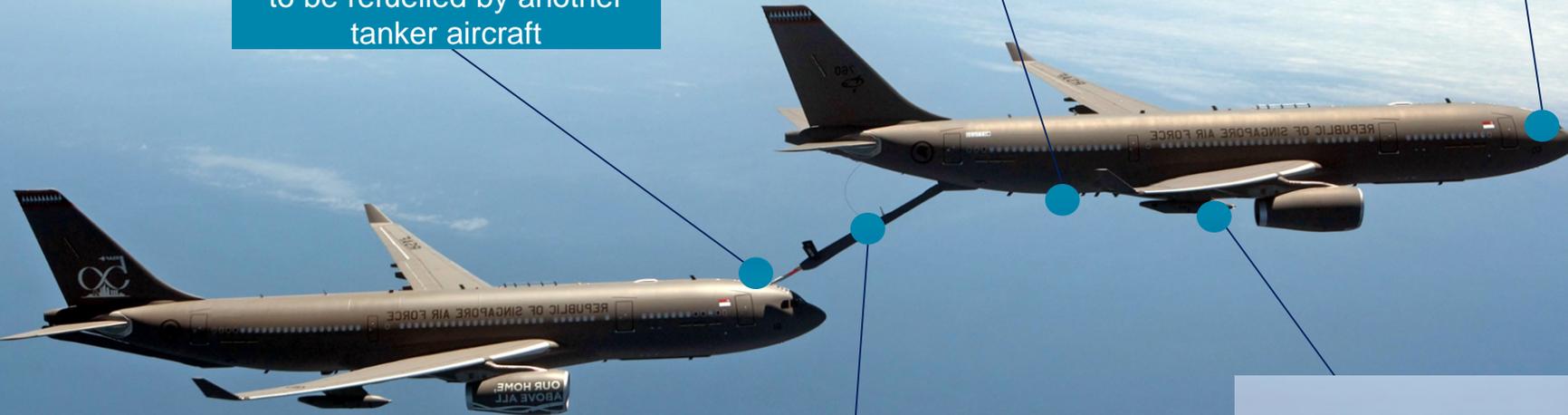
[OPTIONAL]
UARRSI
to be refuelled by another
tanker aircraft



Enhanced Vision System
with 3D technology / Day
and Night and Adverse
Weather



Air Refuelling Console
to control and monitor
AAR operations with 3D
technology



Aerial Refuelling Boom System
to refuel aircraft with a receptacle
(e.g. F-15, F-16, F-35, MRTT, AWACS)



Two (2) under-wing pods
to refuel fighters with a probe

AAR Systems

- **Boom and Pods** are part of the baseline
- **Refuelling console** located in Cockpit for an optimum crew coordination
- **State-of-The-Art and proven in operation Enhanced Vision System**



Air Refuelling Console (ARC)

- Located in the cockpit, behind the pilots seats for crew coordination & situation awareness
- Second seat to facilitate training and observation for an instructor
- 3 panoramic displays to provide wingtip-to-wingtip refuelling views
- High resolution, colour, 3D image and video display

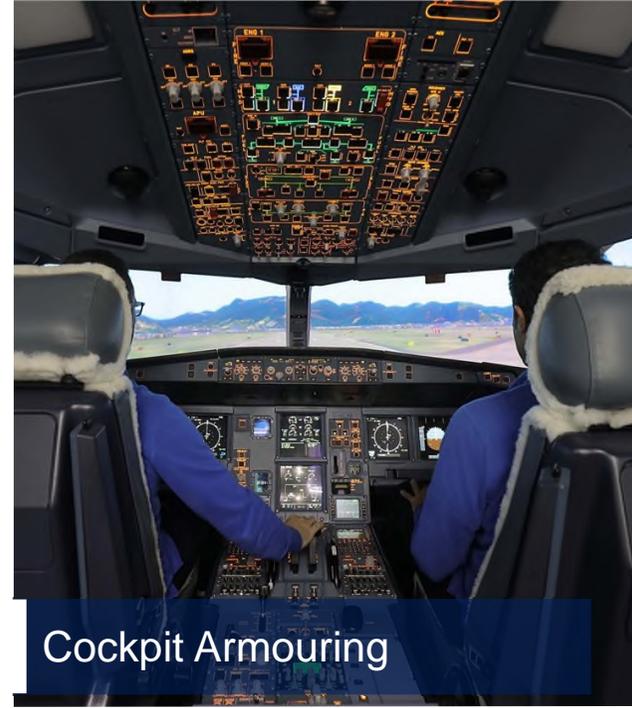
The Enhanced Vision System (EVS) is the only state-of-the-art vision system in operation today



Quick Reaction Alert, 5 minutes



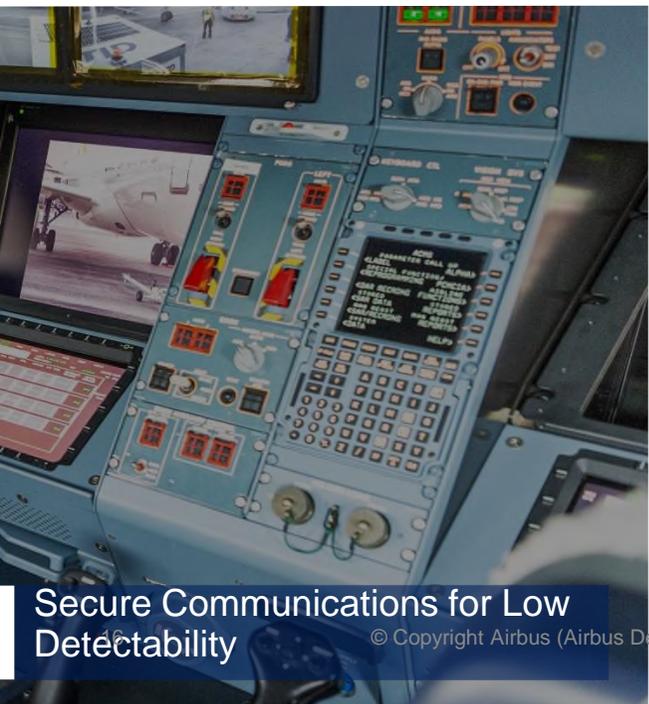
Self-protection DIRCM*
*Directed Infrared Countermeasure



Cockpit Armouring

Combat Ready: Threat Avoidance & Self-Protection

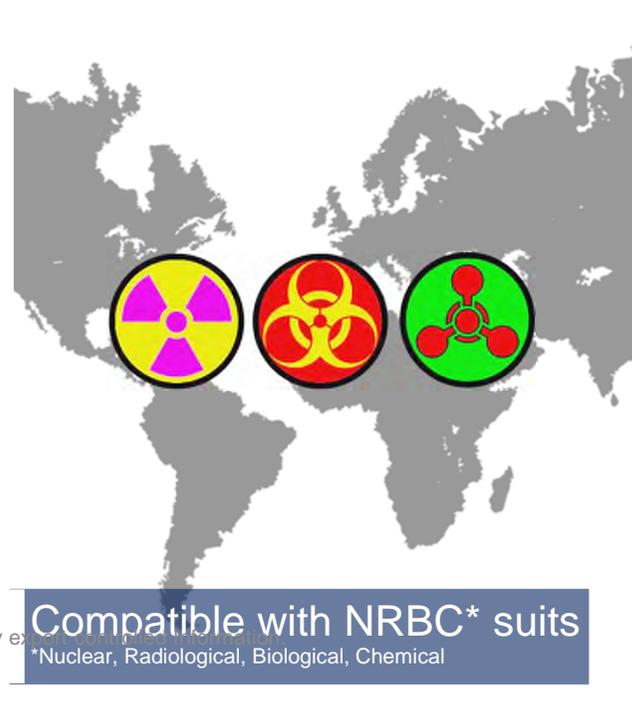
- Permanently deployed in threat environment since 2014
- Self-Protection Systems together with fully integrated Mission Systems providing combat survivability
- Interoperable and connected with all forces in the threat area



Secure Communications for Low Detectability



Tactical scenario integrated in cockpit displays



Compatible with NRBC* suits
*Nuclear, Radiological, Biological, Chemical

AIRCRAFT SYSTEMS OPTIONS

Many options can be included as part as the A330 MRTT configuration. Some examples are:

- Advanced Self-Protection Suite
- Cockpit Armouring
- UARRSI
- Increased Maximum Take-Off Weight
- Military Oxygen System (provides oxygen to the flight crew)
- Wide-Band SATCOM and / or SBB L-Band SATCOM
- External Quick Start to support scramble missions
- CAT IIIB Autoland





SMART MRTT

SMART MRTT project is born from Airbus DS' continuous **innovation mindset** and with the objective of pushing even further A330 MRTT's **leading edge capabilities**.

The project aims to develop this capacities in three different areas:

1. Automatic air-to-air refueling (**A3R**)
2. Hose and Drogue operation in **Covert** mode
3. Enhanced maintenance and troubleshooting of the military systems (**EMAS**)



Enhanced Connectivity

A330 MRTT's size, role flexibility and operational location turn the aircraft into the **ideal platform to perform C2 missions**

In-theatre Relay between assets in the area of interest, extending current Link 16 relay and radio retransmission capabilities.

Reach Back Connectivity between the operational theatre and the remote HQ/CAOC.

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Sourcing Team at Airbus Americas



Airbus engages with suppliers that

Shares information

- Tell me your story.

Are Lean and Efficient

- Focus on continuous improvement

Do their homework

- Understand the Canadian market and customer

Understand Airbus

- Be familiar with our procedures and way of working

Are Global competitors

- What do you bring to the table?

Deliver operation excellence

- Show that you go beyond “*on-time, on-quality and on-cost*”

How to be an Airbus Supplier

- Be an Airbus Supplier www.airbusiness-academy.com
- Airbus Supplier site www.airbus.com



- Potential Supplier Identification Questionnaire
Internal evaluation for potential Suppliers
- Your local Point of Contact: ruben.tauste@airbus.com
Airbus Americas Procurement Team

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Notes on ITB / Organisation

Manager ITB Canada



Mark Schmidt

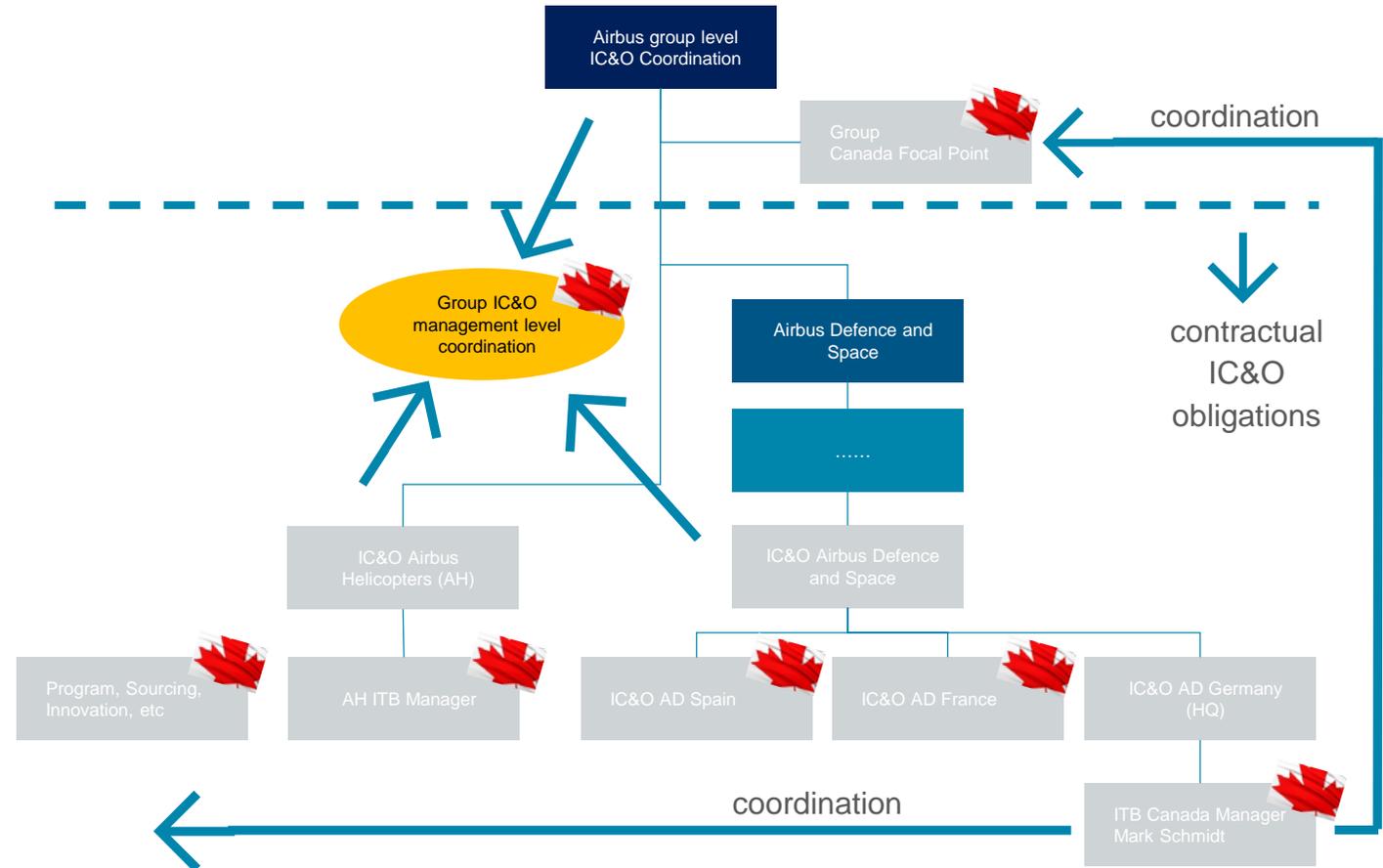
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- aeronautical engineer
- 10 years IC&O experience
- 8 years IRB / ITB experience
 - Airport Surveillance Radars (ASR)
 - Aurora Block IV upgrade, sub to GDMSC
 - Medium Range Radar (MRR), sub to Rheinmetall Canada
 - FWSAR
 - Various campaigns, eg FFCP
 - Hopefully soon to be STTC...
- Supported by a Canada focused team across GE, SP, FR, CAD as well as AH and at group level

Industrial Cooperation and Offset (IC&O) Operational Organisation at Airbus (not an org chart)



Notes on ITB / Key Points to Consider

–AD IC&O is a PMO style organization
(no direct budget or project control)

- Formal link to ISED
- Your PoC for ITB questions or entry to other stakeholders within Airbus
- Your PoC to help structure ITB aspects of transaction submission and reporting
- Airbus internal coordination and leverage

–Transactions should

- benefit Airbus business, ie not just for “buying” ITB credits
- be in an Airbus area of expertise (VP KICs to be considered)
- Continue to offer competitiveness wrt quality/performance, schedule and cost

–ITB is one factor within the internal (bid) selection / decision process

–Concrete ideas welcomed on how to enhance Airbus products and services

–Allocation to Acquisition and In Service Support in line with VP KIC requirements



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Way Forward

- Focused outreach for specific topics
- Bring key MRTT Tier 1 Suppliers into the fold
- General Airbus Supplier engagement events (type and timelines still open due to Covid)
- Request for patience, ITB obligations are not “magic buttons” to create immediate business (some contacts being nurtured for years...)
- Looking forward to some 10 years engagement under STTC ITB



Thank you for your attention!
Merci pour votre attention!

