

# BAE Systems

## Air Capital Markets day



All statements other than statements of historical fact included in this statement are forward-looking statements. Such forward-looking statements, which reflect management's assumptions made on the basis of information available to it at this time, involve known and unknown risks, uncertainties and other important factors which could cause the actual results, performance or achievements of BAE Systems or the markets and economies in which BAE Systems operates to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. BAE Systems plc and its directors accept no liability to third parties in respect of this statement, save as would arise under English law.

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# Welcome

## Safety, Health and environment

- There are no planned fire alarms
- In the event of a fire or other event requiring evacuation
  - Distinct alarms will sound
  - Quickly and calmly proceed to the nearest lighted EXIT sign
  - Follow egress routes and directions from emergency personnel
- Toilets
- Photos and phones

# Agenda

- Introduction 08:15
- Air Overview 08:20
- Q&A 08:50
- Market Overview (KSA) 09:05
- Market Overview (Middle East / UK & Europe) 09:25
- Q&A 09:45
- Break & Refreshments 10:00
- MBDA Overview 10:20
- Market Overview (US) 10:30
- Market Overview (Australia) 10:45
- Q&A and close 10:50
- Tours: 11:20
  - Air Labs: Support & Training
  - Air Labs: Mission Support
  - Future Combat Air System
  - Air Works: Factory of the Future
- Lunch 12:30
- Tours (continued) 13:30
- End 14:30

Charles Woodburn  
Chief Executive



# Introduction

- Second in series of Investor events following on from Electronic Systems in 2018
- Focus today on the Air Sector – our largest sector at £6.7bn sales and 12.8% margin in 2018
- Sector formed from start of 2018 under leadership of Chris Boardman
- High performing business - aim to demonstrate
  - Value drivers of the sector
  - Longevity and diversity by market, product and capabilities
  - On-going investment in key technologies and capabilities
- Chance to see a range of products and service offerings and meet with management and employees

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## 2018 Financial Performance

<i>(£m / £bn backlog)</i>	Sales	Underlying EBITA	Margin	Cash Flow	Order Backlog
Electronic Systems	3,965	606	15.3%	431	5.4
Cyber & Intelligence	1,678	111	6.6%	85	1.9
Platforms & Services (US)	3,005	210	7.0%	(30)	5.4
Air	6,712	859	12.8%	666	27.4
Maritime	2,975	209	7.0%	67	9.0
HQ	350	(67)		(226)	0.1
Eliminations	(278)				(0.8)
	<b>18,407</b>	<b>1,928</b>	<b>10.5%</b>	<b>993</b>	<b>48.4</b>

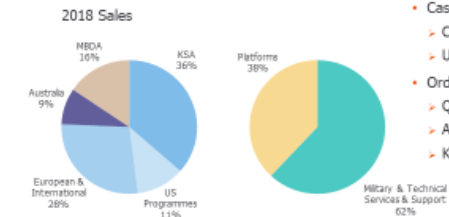
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## Air

	2018	2017 <sup>(1)</sup>
Sales	£6,712m	£7,210m
Underlying EBITA	£859m	£967m
Margin	12.8%	13.4%
Cash flow	£666m	£832m
Order backlog	£27.4bn	£19.5bn

- Sales down 7%
  - Typhoon production for Europe, KSA, Oman largely complete
  - F-35 ramping to plan
  - Middle East support volumes
- Margin performance includes 70bps benefit on Typhoon Oman completion
- Cash flow
  - Consumption of KSA receipts from 2017
  - Utilisation of advances / new Qatar advance
- Order backlog on awards for
  - Qatar Typhoon & Hawk
  - Australian Hunter Class
  - KSA Typhoon support continuation



(1) Restated for the adoption of IFRS 15

23

# BAE Systems

## Air Sector overview

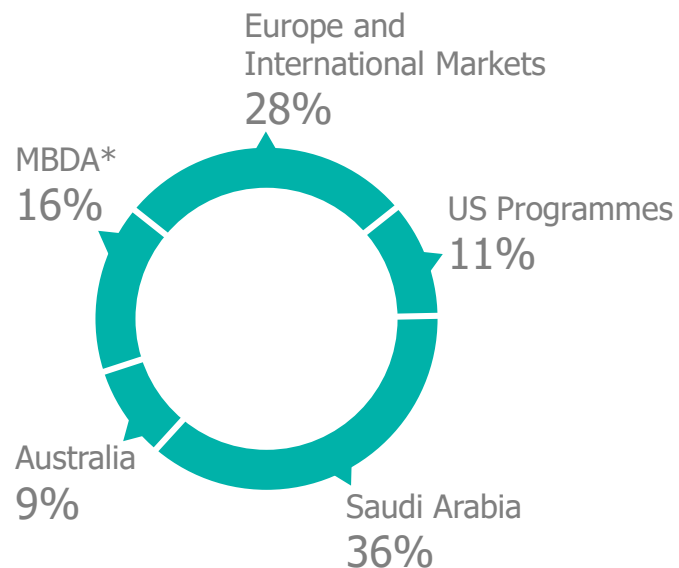
Chris Boardman  
Group Managing Director  
Air



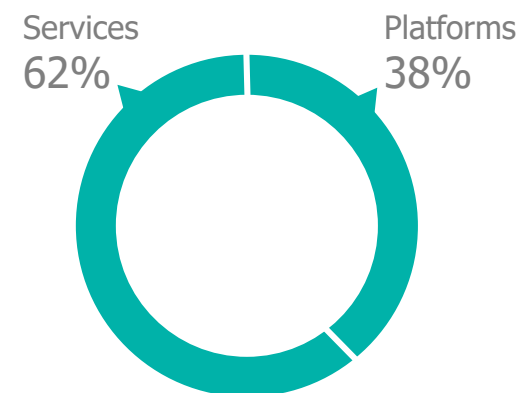
## Air Sector overview

- An **international** market and **customer led** sector
- Strong **technology pedigree**
- History of working in close **collaboration** and **partnership** with our customers
- Skilled and **experienced** workforce
- Contributing to **national economies** and priorities

2018 Sales: £6.7bn



Platforms and services (%)



\*Represents sales from BAE Systems shareholding in MBDA Joint Venture

# Air Sector lines of business



## Europe & International

Andrea Thompson

**28%** of sales - £1.9bn

- The heart of our collaborations in Europe: Tornado and Typhoon
- The core of our international offering
- Providing training and training systems to multiple nations

## Saudi Arabia

Andy Carr

**36%** of sales - £2.4bn

- Prime contractor to UK Government, providing wide array of products and services to RSAF and RSNF
- Established and developing a defence industrial base in accord with Vision 2030

## US Programmes

Tom Fillingham

**11%** of sales - £0.7bn

- Partner of choice on the F-35 programme; growing our sustainment work
- Support services to US Navy and Marine Corps through
- US AV8-B and T-45 Goshawk programmes
- Seeking partnerships with US companies looking to grow their international footprints

## MBDA

Antoine Bouvier

**16%** of sales - £1.1bn

- 37.5% interest in the European MBDA joint venture (alongside Airbus and Leonardo)
- Prime contractor delivery of missiles and missile systems

## Australia

Gabby Costigan

**9%** of sales - £0.6bn

- Upgrade, training and support programmes across the air, maritime and land domains
- Delivery of Australia Hunter Class frigate programme
- Focus on F-35, Hawk support and training

## Chief Operating Officer

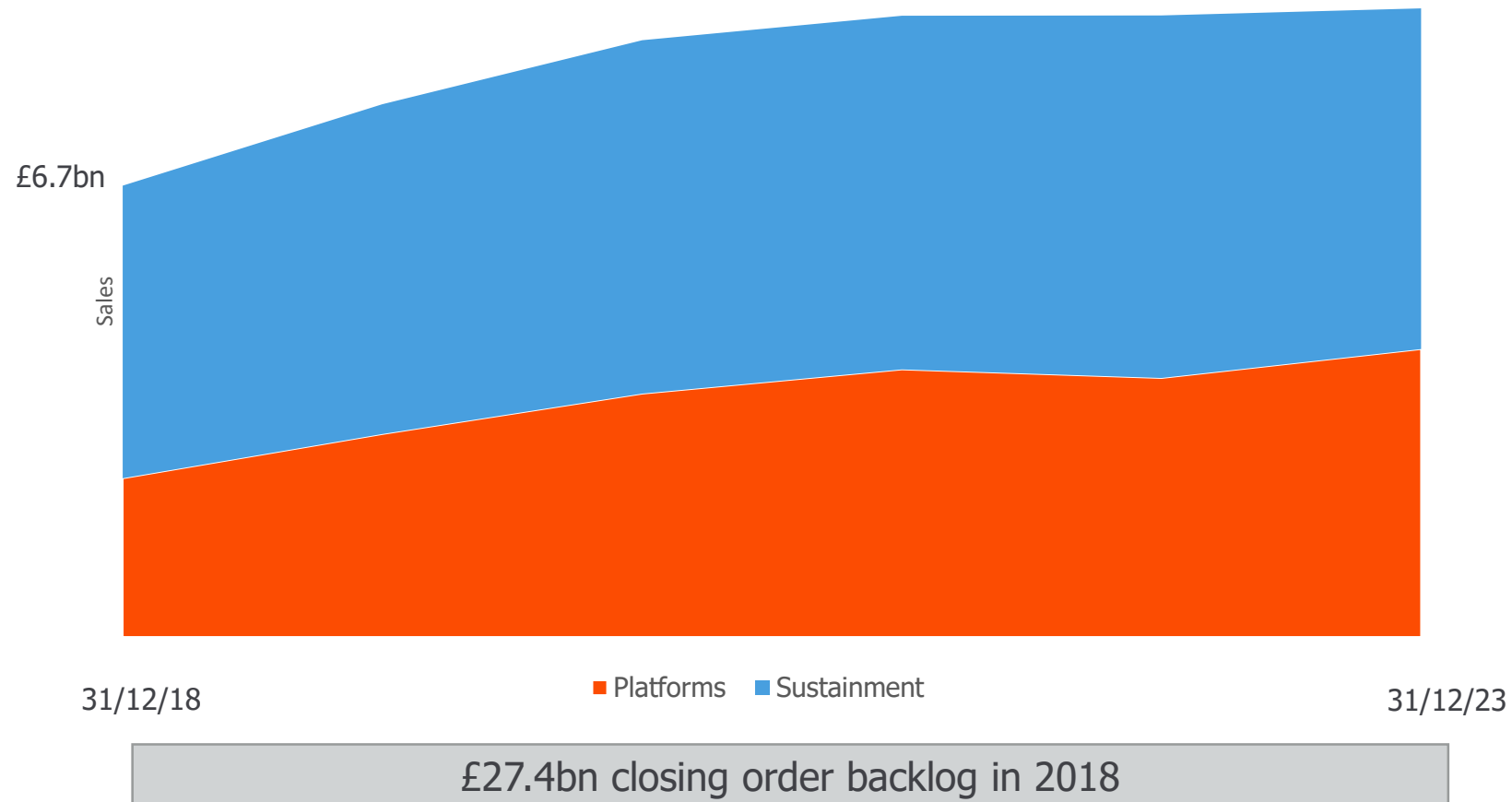
### Chief Operating Officer

Martin Taylor

- Responsible for Air operational capability, including manufacturing, engineering, IM&T, project management
- Accountability for Defence Information and Regional Aircraft businesses
- Driving FCAS campaign activity

## A balanced portfolio in the Air Sector

Anticipated sales – BAE Systems estimates\*



\* Subject to geopolitical uncertainties

# A balanced portfolio in the Air Sector

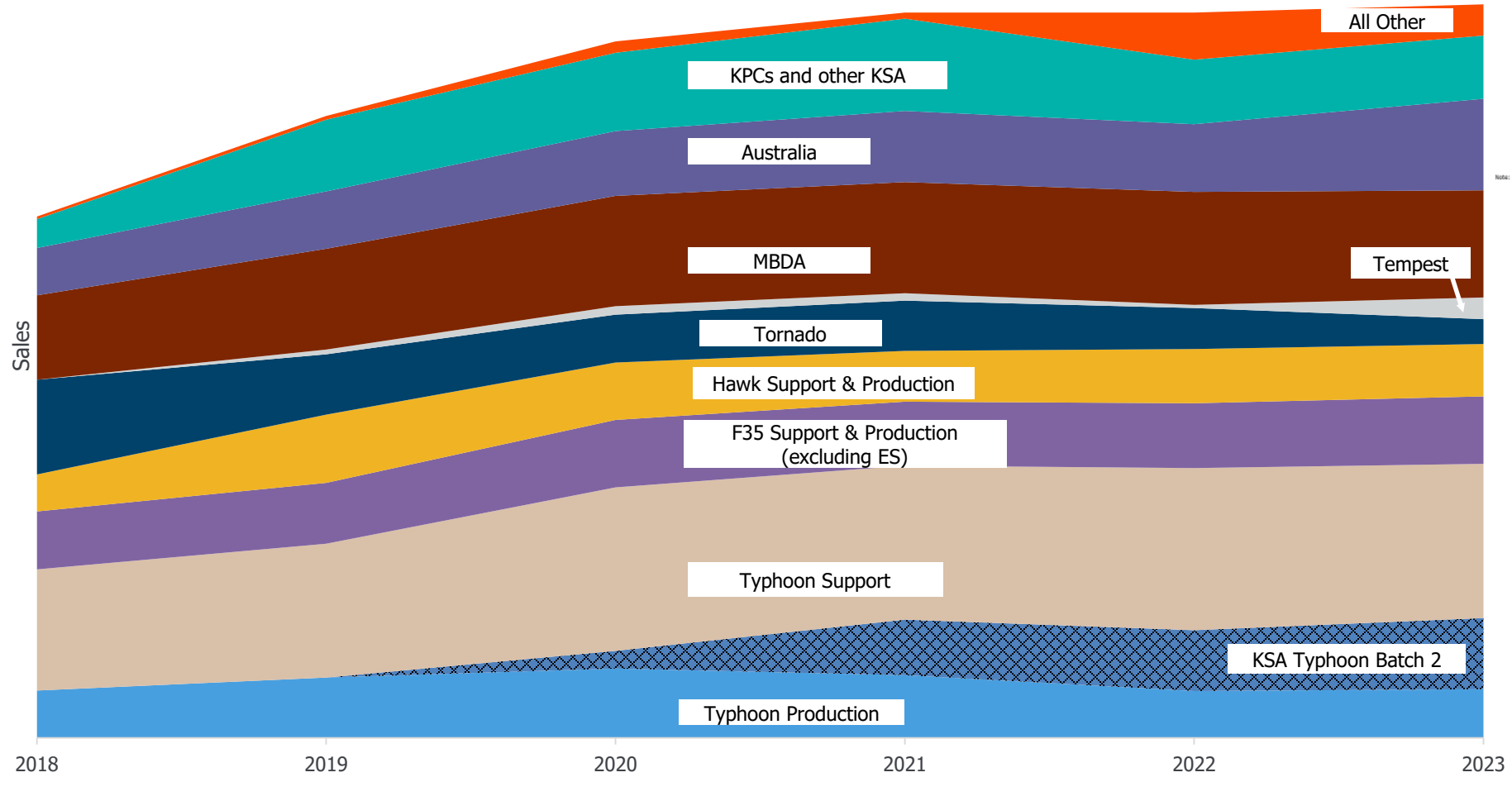
Anticipated sales – BAE Systems estimates\*

## Key franchises and programmes Air - £6.7bn - 2018

- Typhoon Production (9%) 5 year sales outlook
- Typhoon Support (23%)
- F-35 Production & Support (11%)
- Hawk Support & Production (7%)
- Tornado Support (18%)
- MBDA (16%)
- Australia (9%)
- KSA Typhoon Batch 2
- Qatar stabilises outlook post 2018 to early 2020s
- Further orders secured would either extend or enhance profile
- Global fleet still increasing, ongoing upgrades
- Oman in place, Qatar support and training package
- KSA order backlog extended; export licences
- Production ramp to 2020 full rate of c.150 pa
- Support - initial packages won; global fleet growing
- Long-term support contracts stable
- KSA and Qatar production to early 2020s
- UK out of service 2019 – c.£0.1bn impact
- Good growth from existing order backlog which increased further in 2018 to c.£1.7bn
- Long term upgrade and support business stable
- Overall business expected to double in 5 years due to Hunter Class Frigate programme ramp up

Note: numbers in brackets represent percentage of 2018 sales for sector – other air programmes of 7% make the balance

£6.7bn



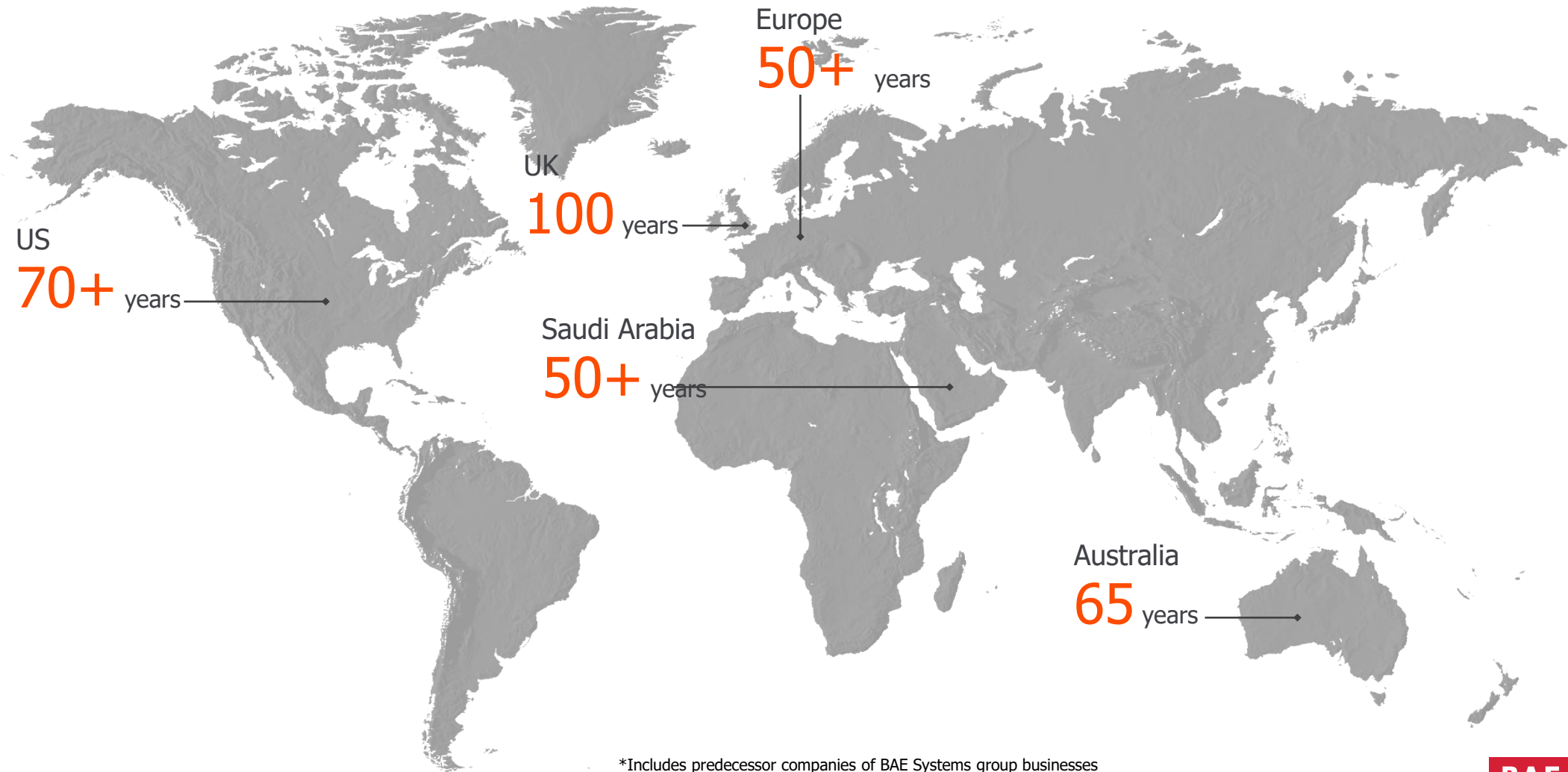
\* Subject to geopolitical uncertainties

## The global Air market

- A sector defined by **collaboration and partnerships**
- Shaping **customer needs**
- **Evolving threat** landscape



## A trusted partner for over 100 years \*



\*Includes predecessor companies of BAE Systems group businesses

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# 6 decades of collaboration and international market leadership

## Develop into US Programmes



## UK Strategic Intent

### National Programme



### European Collaboration



### Future Collaboration



## International Markets



KSA



Australia



India



Malaysia



Oman



Qatar

## Planning for the future

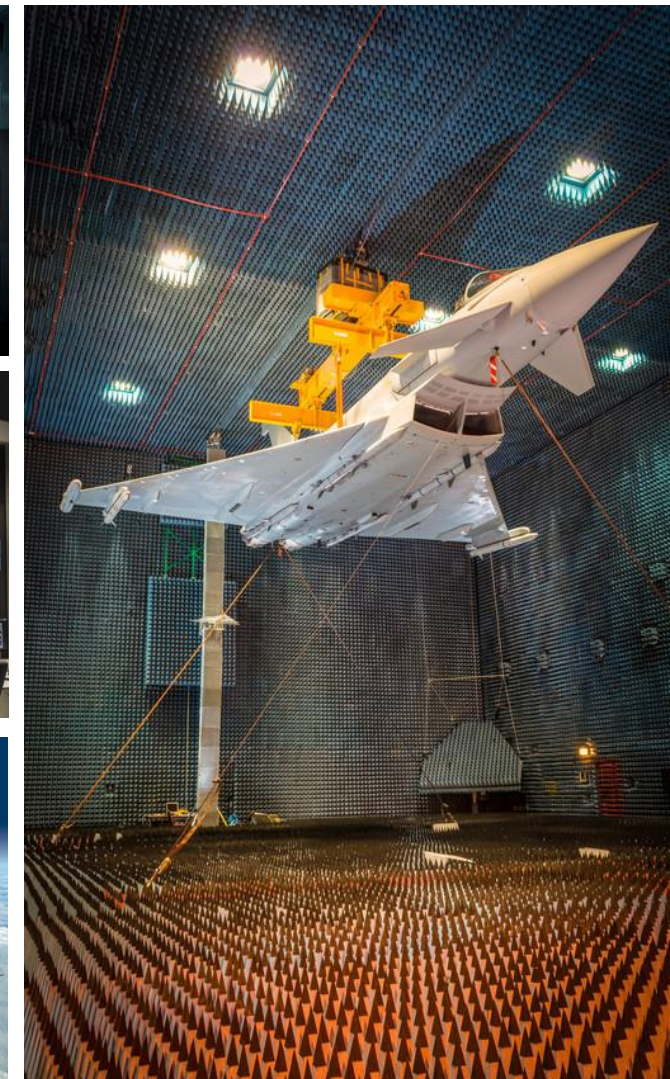
Delivering today and preparing for tomorrow

We invest in and manage our key assets

- Unique facilities
- Talented and highly skilled workforce
- Critical skills, technologies and capabilities; excellence in engineering and world class manufacturing
- Attracting and investing in the next generation
- Targeted R&D

Embracing technology for future advantage

- Unmanned
- Space
- AI & autonomy
- Augmented human performance



# Summary

## Air sector lines of business presentations

- Saudi Arabia, Andy Carr
- Europe & International, Andrea Thompson
- MBDA, Dave Armstrong
- US Programmes, Declan Holland
- Australia, Martin Taylor

## Air Labs tour - retaining our competitive advantage in service provision

- The synthetic / live training mix
- Aurora – operational mission support, planning for the warfighter

## Air Works tour - securing 6<sup>th</sup> generation Combat Air capability and beyond

- Future Combat Air System
- Factory of the future





# Q&A Session 1



# BAE Systems in Saudi Arabia

**Andy Carr**

Managing Director BAE Systems Saudi Arabia and CEO Saudi Arabia



## BAE Systems in Saudi Arabia

- **53 years** supporting the Kingdom of Saudi Arabia
- **Prime Contractor** to the UK-KSA Government-to-Government Agreement
- Delivering two programmes – Saudi British Defence Cooperation Programme (**SBD**CP) and **Salam** (Typhoon)
- Over **70% Saudi** nationals
- Four **local** joint venture companies in the Kingdom



بي أيه إي سيستمز السعودية للتطوير والتدريب  
BAE Systems Saudi Development and Training



شركة الإلكترونيات المتقدمة  
Advanced Electronics Company



## Our **presence** in Saudi Arabia

### SBDCP

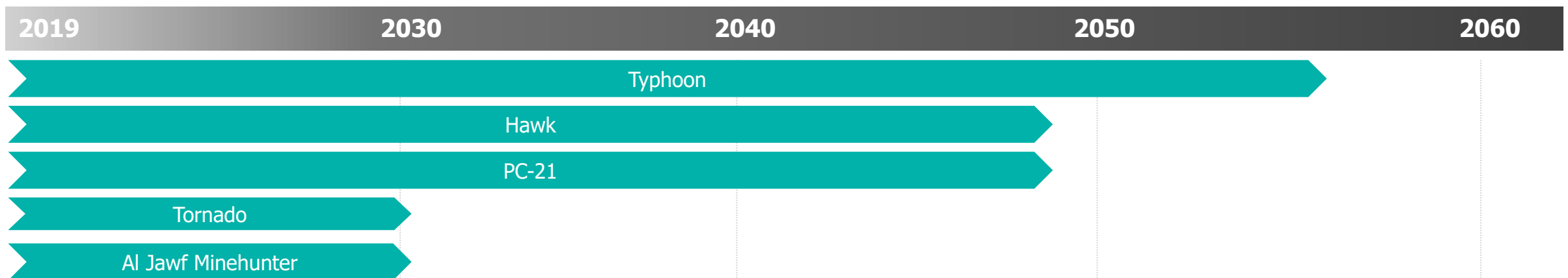
- End-to-end Pilot and Technician training
- Hawk in-Kingdom assembly and supply
- Hawk support
- Tornado support
- Naval minehunter support
- Weapons
- Spares, repairs and logistics
- Facilities

### Salam

- Typhoon support
- Typhoon capability upgrades
- Weapons
- Facilities

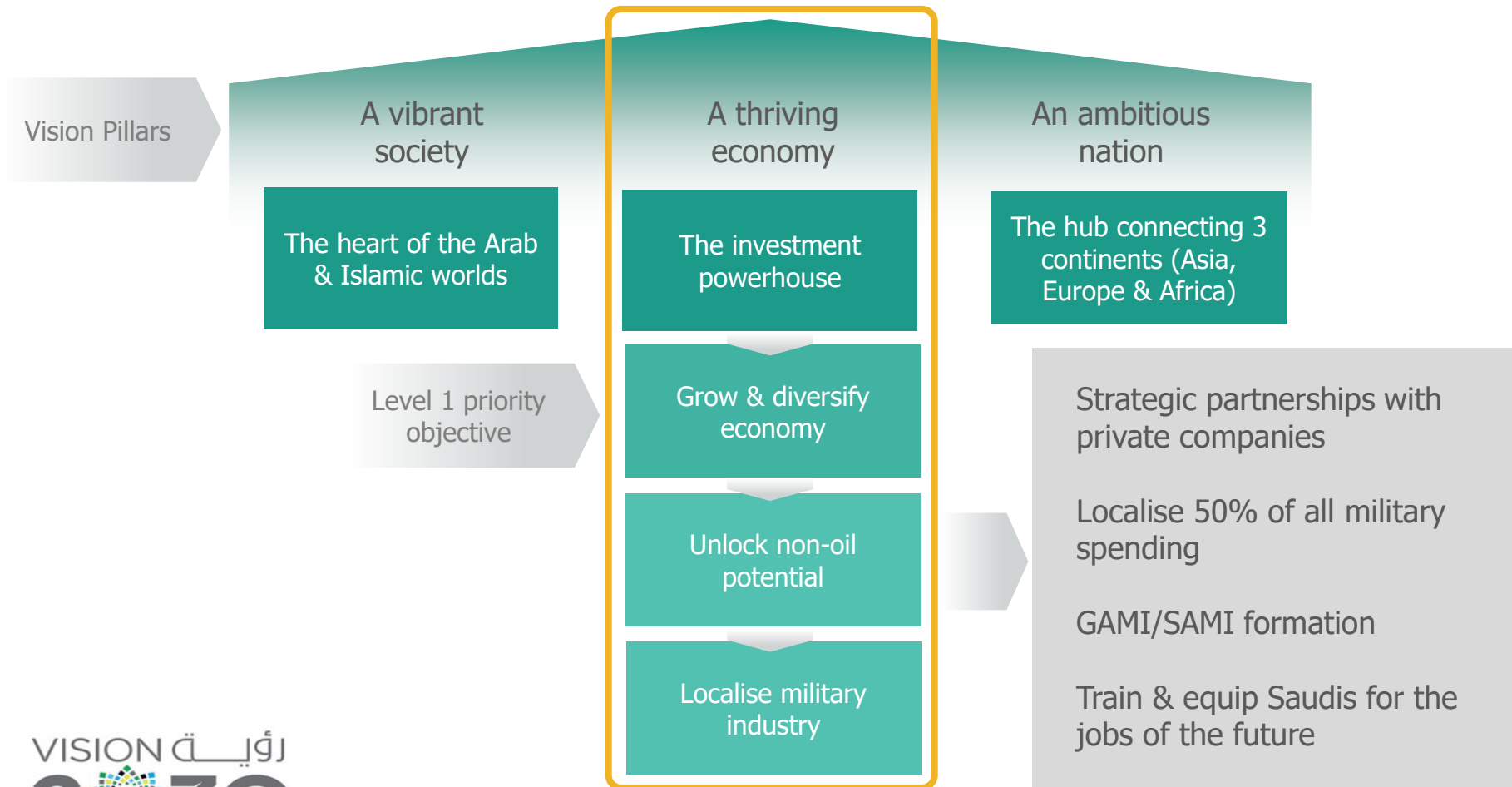


### KSA platform out of service dates





# Saudi Arabia's Vision 2030



## Evolving market partnerships



*The Vision aspirations aim to localise 50% of the defence and security spending by 2030, and create sovereign defence and security capability.*  
 - HRH Crown Prince Mohammed bin Salman Al Saud



# KSA / UK Defence Cooperation

## Alignment to Saudi Arabia's Vision 2030

- New market **dynamics** and strong renewed focus on industrialisation
- We are well positioned, with a portfolio of capable and established **Saudi companies** that have been an important part of our 50 year history in Saudi Arabia and have become a critical part of **Saudi sovereign capability**
- We have been **investing** in our **portfolio companies** for over a decade
- We are strengthening these companies even further as we work in support of the goals of **Vision 2030**
- **Government to Government** agreements underpin everything we do in Saudi Arabia under the SBDCP and Salam Programmes, including our drive to support industrialisation



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بي أيه إي سيستمز السعودية للتطوير والتدريب  
BAE Systems Saudi Development and Training



# KSA / UK Defence Cooperation

## Alignment to Saudi Arabia's Vision 2030

### Development of new capabilities in Saudi Arabia

SAMI's business divisions align with **our expertise**, providing **future opportunities** and opening up possible new markets

### Creation of high quality jobs

Investing in education and **training & development** supports localisation of our programmes and will grow a **skilled Saudi** workforce for the future

By 2030 we expect to be sustaining **>35,000** jobs



### Technology transfer

**Transferring technology** and **capability** will facilitate localised contract delivery and local content

### High percentage of local content in all our programmes

We are committed to more than 60% of our contracts delivered by **Saudi industry** by 2022, growing to circa 80% by 2030

### Localisation of contract delivery

We have created local capability in training, supply chain, IT and electronics and we will consider **new joint venture** companies covering work such as aircraft production and maintenance

# Air Sector Europe & International

**Andrea Thompson**

Managing Director Europe & International



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## UK & Europe

### European Collaboration

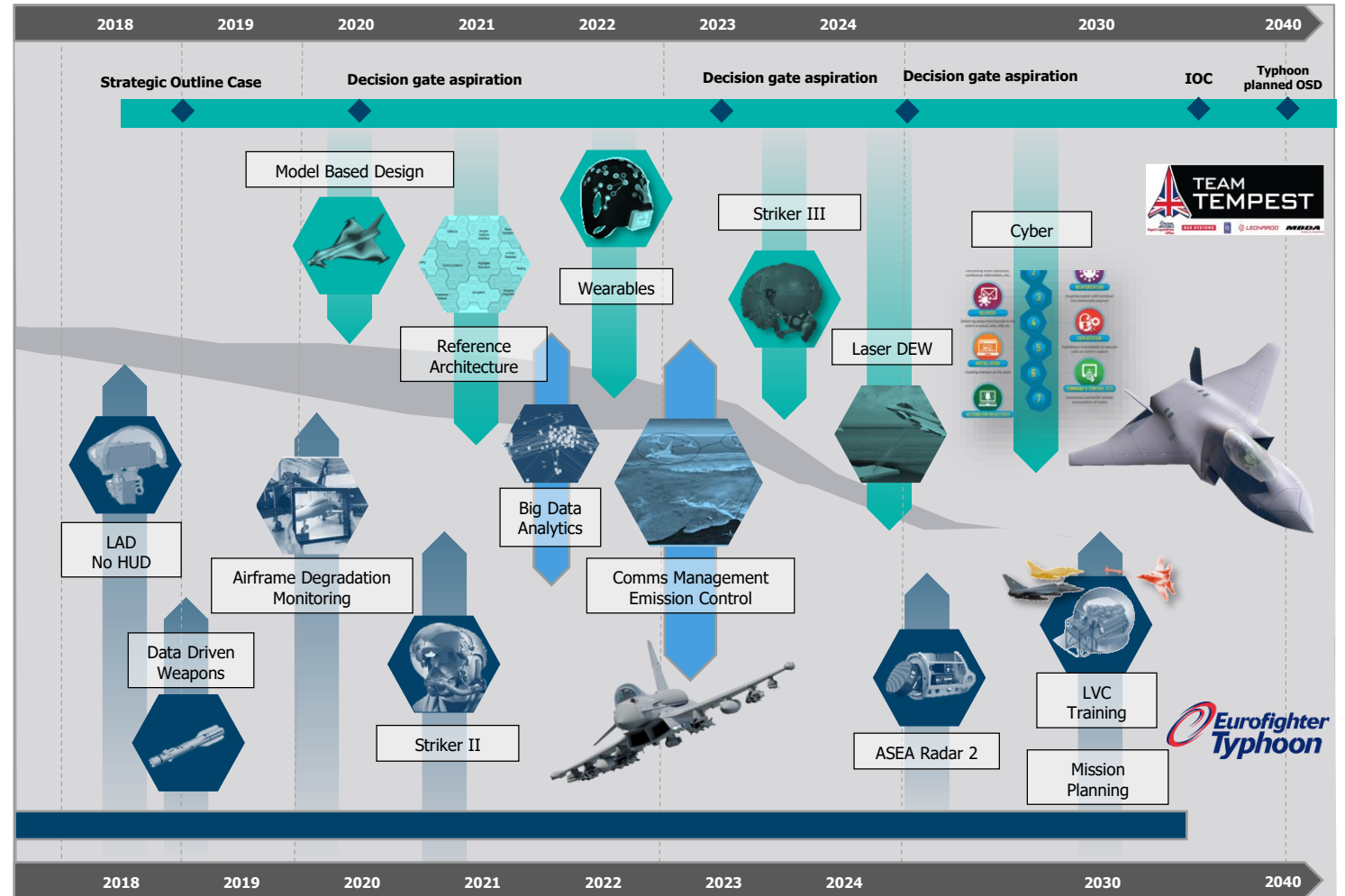
- We have been at the heart of Military Air collaboration for **60 years** and we are driven by **European collaboration**
- Our **lead nation status** provides longevity in Typhoon production and long term engineering sustainment, allowing us to **continually enhance capability**
- German procurement process commencing, Spain considering further procurement, additional **opportunities** being pursued
- UK and Italy continue to **invest in capability**



# Product capability development

## Development Agility

- We are **developing capabilities** faster than ever before, providing a competitive advantage in the export market e.g. radar, Storm Shadow, Meteor
- Our **technology development** on Typhoon accelerates maturity for Tempest and FCAS



## Service capability, enduring partnerships

- TyTAN (Typhoon Total Availability eNterprise), a 10 year **support** arrangement from the RAF (entered into in 2016), performing well
- Delivered accelerated **capabilities** through the Centurion programme, enabling the RAF to drive **planned savings** from Tornado
- RAF **customer confidence** in us provides a key competitive advantage on the international stage
- Our strong performance in **support and training** has allowed us to secure export opportunities KSA, Oman and Qatar

**“ One of the most important things about Project Centurion is the way that we’ve worked together, collaboratively, it truly has been a whole force contribution ”**

Air Marshal Julian Young, Chief of Materiel – Air, RAF



## Combat Air capability and training services across the Gulf

### **Kuwait**

Campaign for an Air Training Service

### **Bahrain**

Possible future Hawk sale opportunity

### **Qatar**

Future opportunities for additional aircraft, training and support

### **Oman**

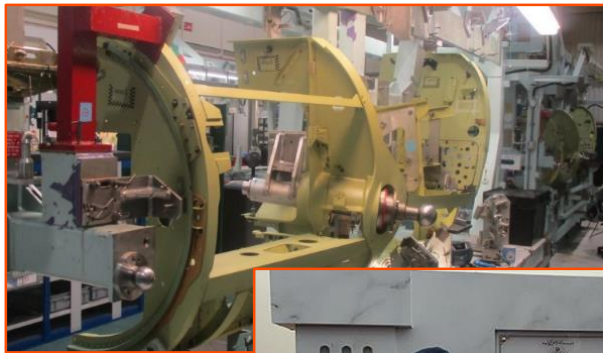
Future opportunities for additional aircraft, training and long term support

# Qatar mobilisation



# Strengthening our **partnerships** across the Gulf

## Qatar



Typhoon Front Fuselage Assembly



Technical Institute foundation ceremony



Ground Crew Training (Cohort 1 - RAF Cosford)

## Bahrain



Bahrain BAE Systems STEM workshop

## Oman



100% Oman Typhoon Availability KPMs Achieved In Quarter 1



## Q&A Session 2

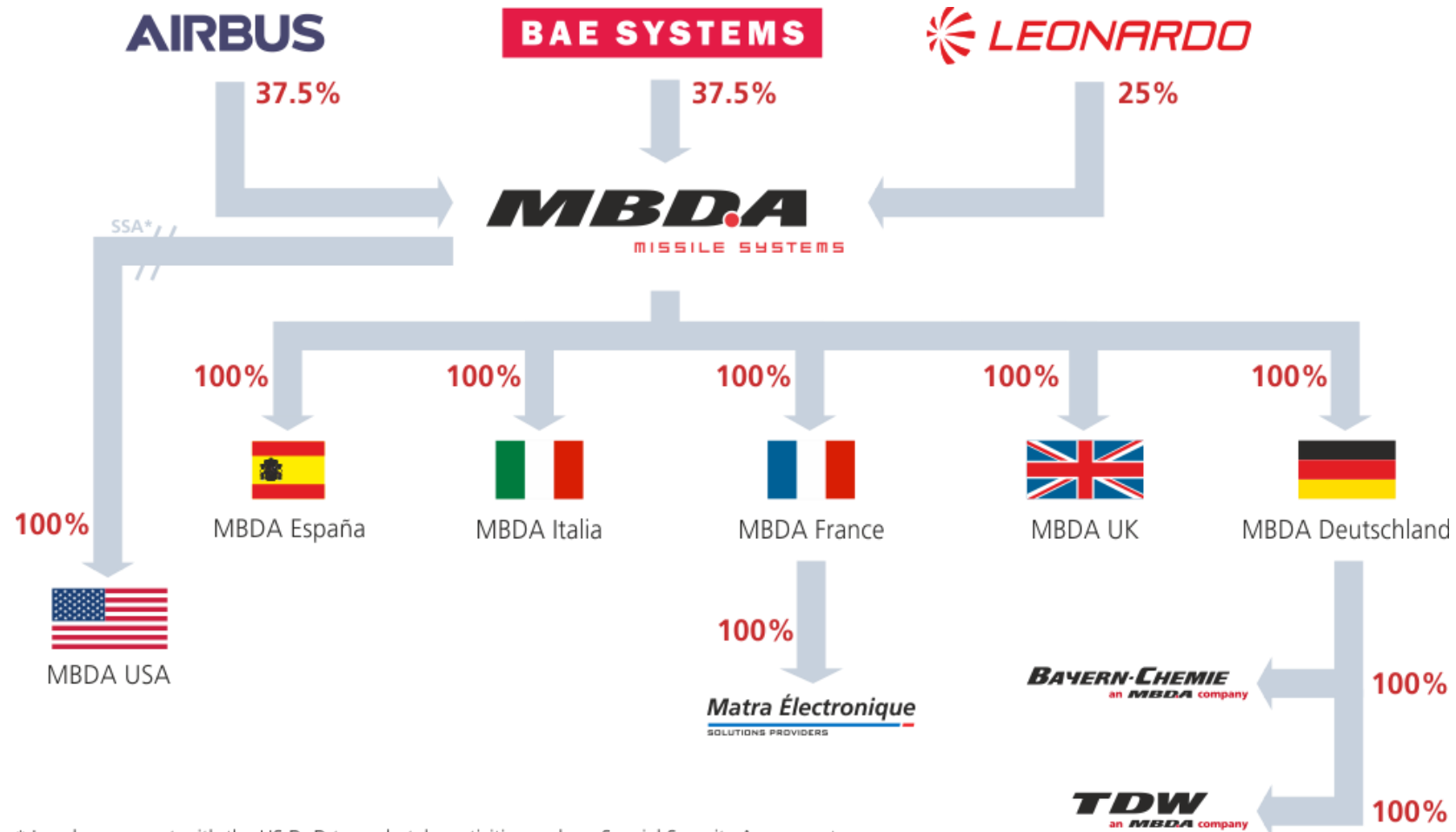


# MBDA Missile Systems

**Dave Armstrong**  
BAE Systems Group Business Development Director



## Proven European collaboration



\* Legal agreement with the US DoD to undertake activities under a Special Security Agreement and to have confidentiality authorisations to conduct classified activities in the United States

## Strong product portfolio

A balanced portfolio across domains

Air Based Air Defence	40%
Ground Based Surface Attack	5%
Air Based Surface Attack & Naval Based Surface Attack	27%
Ground Based Air Defence & Naval Based Air Defence	26%
Ballistic Missile Defence	2%

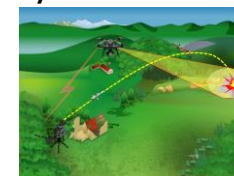
**Global weapons sales market €22 bn.**  
**MBDA market share 18%**

Product evolution, new capabilities and disruptors

Enforcer



Lynkeus



METEOR CEP



CAMM ER



FC/ASW



MQRAD



FCAS/Tempest



TLVS



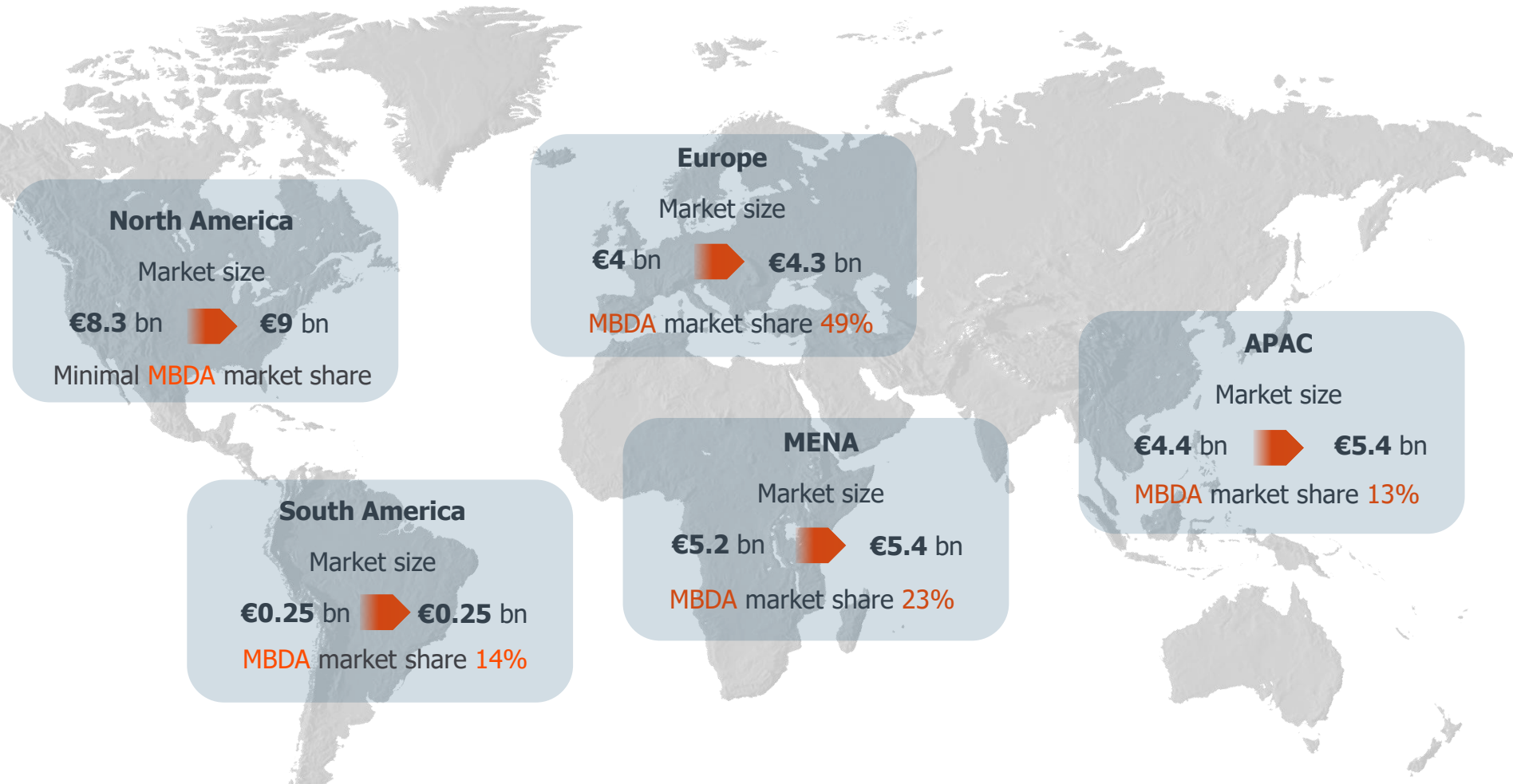
Laser



Aster B1NT



## Growing our market share



**MBDA aspiration : grow beyond 18% market share**

- Potential - med/long term

# A strong position

## Strategy

- Provide sovereign assured capability to UK, France, Italy, Germany and Spain
- Continue to be a leader in European defence co-operation
- Be the alternative choice to the US on the international market

## Performance

- Strong financials: good order backlog, steady EBITA performance
  - €17.4bn order backlog in 2018\*
  - €4.0bn Order Intake in 2018\*
  - €3.2bn Revenue in 2018\*
- Securing new domestic products and developing new European co-operation programmes
- Positioned within European future combat air strategies

## BAE Systems as Shareholder

- Able to support nationally and internationally
- MBDA products coupled with BAE Systems platform sales
- Future defence capabilities will be more integrated with platform

An aspiration to grow market share in a **growing market**

\*Represents all shareholdings in MBDA, including BAE Systems shareholding of 37.5%

# Air Sector US Programmes

Declan Holland  
Vice President US Business



## US Programmes snapshot



Over 2,000 people in UK and US

Sales split by customer: 96% USA, 4% UK

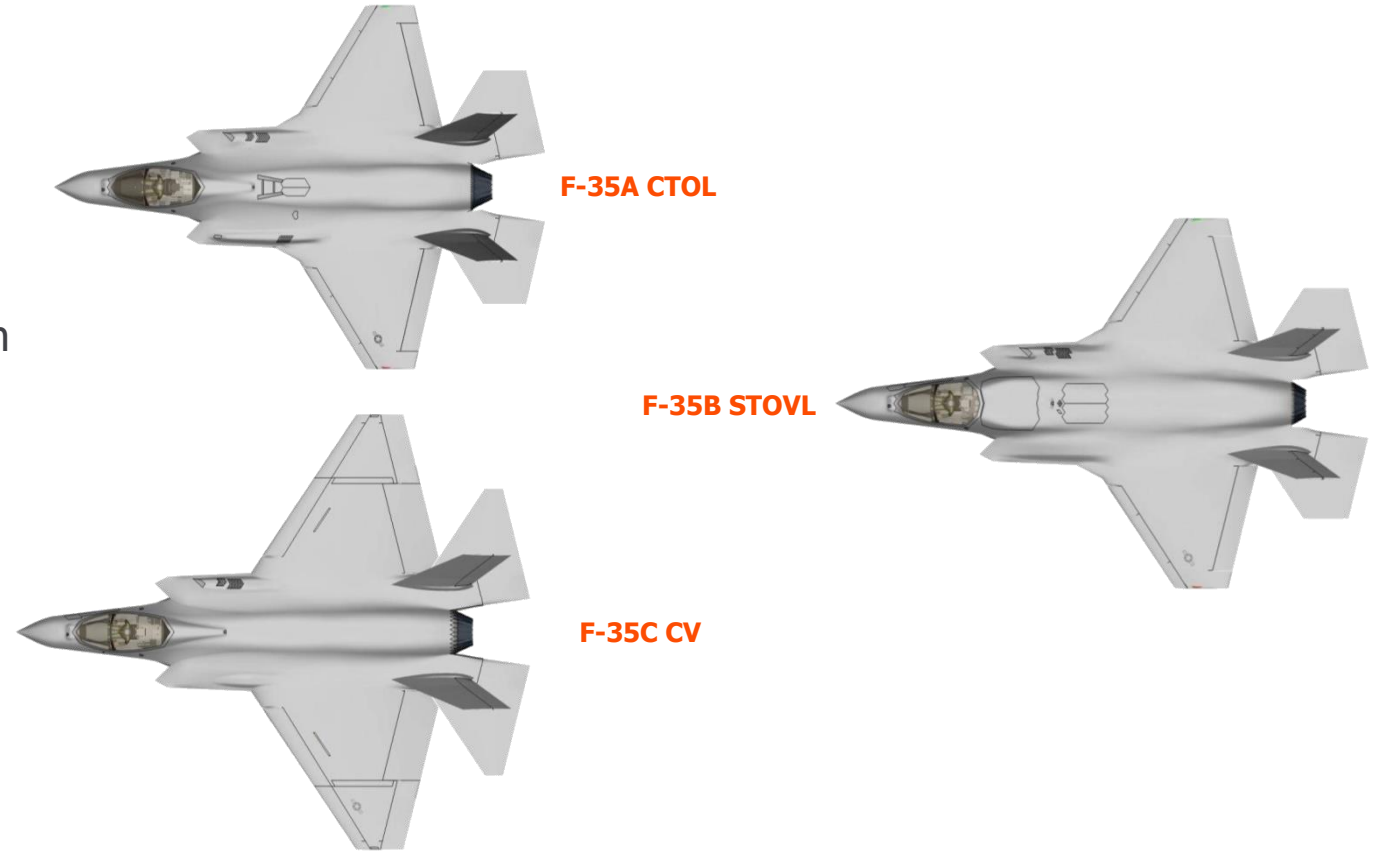
F-35 production ramping up - full rate anticipated in 2020

Range of F-35 sustainment services provided in the US, Europe and Pacific regions

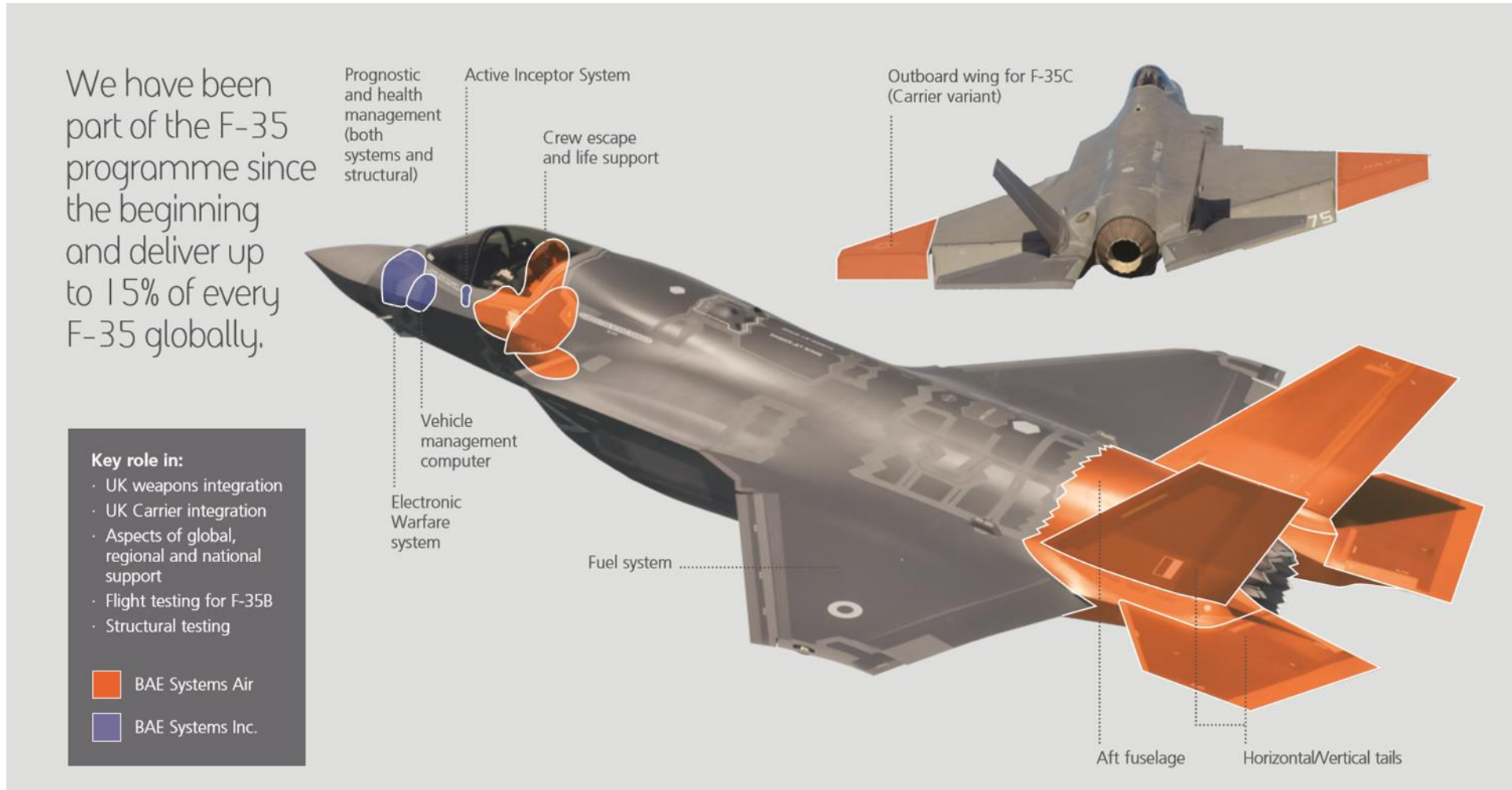
Supporting other US platforms - Harrier AV-8B and Goshawk T-45

## F-35 programme

- F-35 is the **largest defence programme** in the world
- US lead with **eight international participant nations** – UK, Italy, Netherlands, Australia, Canada, Denmark, Norway and Turkey
- Lockheed Martin is aircraft prime contractor, with partners Northrop Grumman and BAE Systems
  - Pratt & Whitney is prime contractor for propulsion
- **Three F-35 variants**
- Israel, Japan, South Korea, Belgium and Singapore have selected F-35 under FMS (Foreign Military Sales)
- Current programme of record **>3,300 aircraft** globally



## Our role on the F-35 Lightning II programme



## Our role in the F-35 **global support** solution

Aircraft in service – Today: ~ 400, 2020: >600

Supporting Lockheed Martin/Joint Program Office to deploy global sustainment capability

Regional hubs and support services being established in Europe and Asia/Pacific

Sealand Support Services Limited (joint venture) sustaining operations in Europe and globally from 2021

Activities progressing at RAF Marham

Support to UK Carrier Strike Group



## Well positioned for **future sustainment** opportunities

- **Growing global fleet** - over 2,000 aircraft by 2030
- Depot maintenance, repair, overhaul and upgrade
- Consumable spares to F-35 operating bases globally
- Supporting the UK customer
- **Exploiting existing UK capability** into the international market
  - TyTAN
  - RAF Marham support and training model
- Established relationships with the **US services**





# Air Sector Australia

Martin Taylor  
Chief Operating Officer



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## BAE Systems Australia

Since 1953, we have worked purposefully to create a unique **domestic capability** that is today an integral part of a **stronger**, more sovereign Australian industry, and one that is better able to deliver the **unique solutions** the nation needs.



Working across all domains

**Air, sea, land and  
cyber security**

**4,100**   
Employees across Australian business

**30**   
Operational sites across Australia

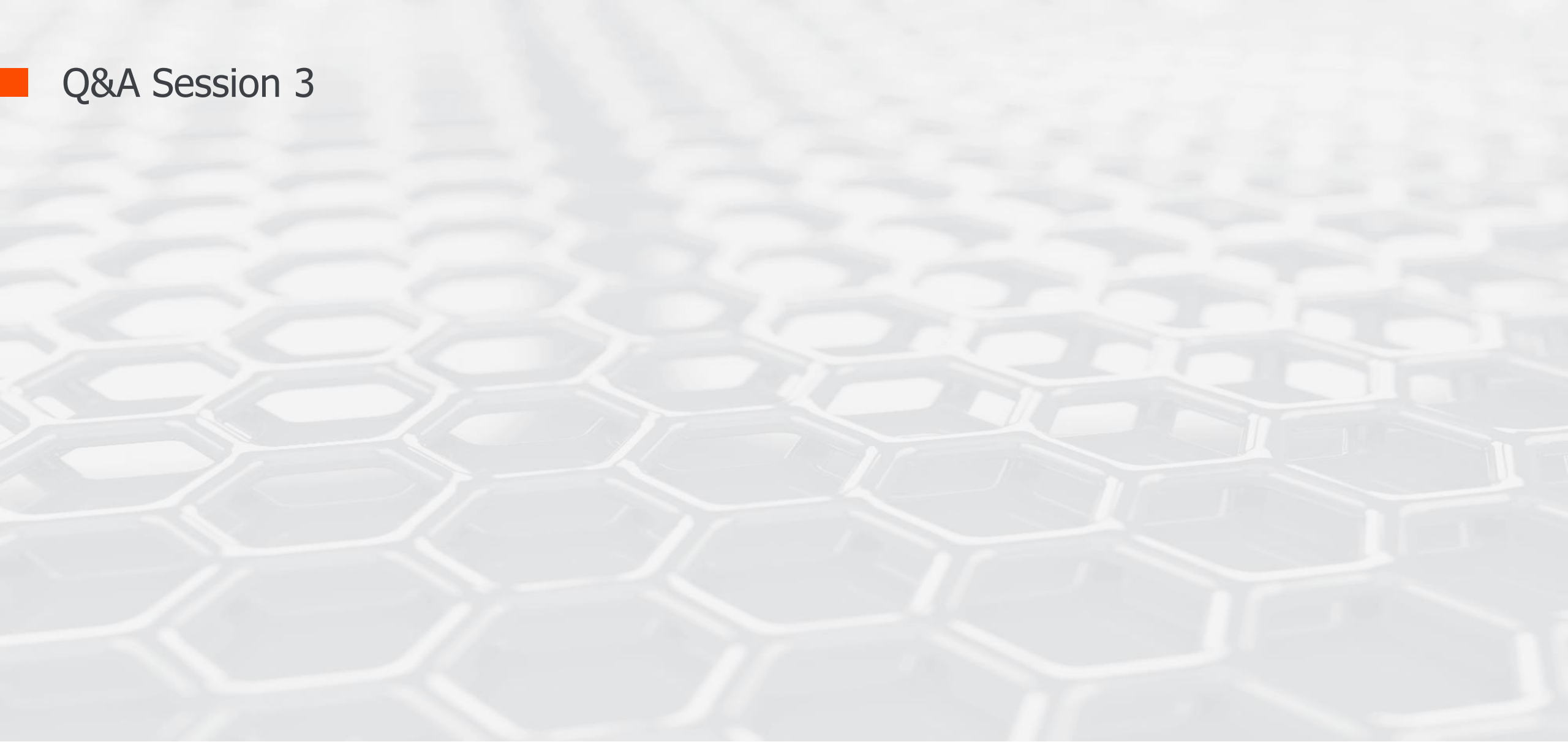
## BAE Systems Australia

- A leading provider of military air capabilities and products and a **trusted partner** to the Royal Australian Air Force
  - F-35 Lightning II manufacture and regional support
  - Air support and training
  - Defense electronics
  - Hawk sustainment
- Intelligence, surveillance and reconnaissance
- Growing Maritime business, including Hunter Class





## Q&A Session 3



# BAE Systems Air Sector

Chris Boardman  
Group Managing Director  
Air



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## BAE Systems Air sector: delivering today, preparing for tomorrow

- Leading market positions
- Broad and balanced portfolio
- Large order backlog
- Experienced management team
- Clear customer focus and enduring industry partnerships
- Leading technologies and capabilities

**A high performing business delivering value for shareholders**



# Tours

Air Labs tour - retaining our competitive advantage in service provision

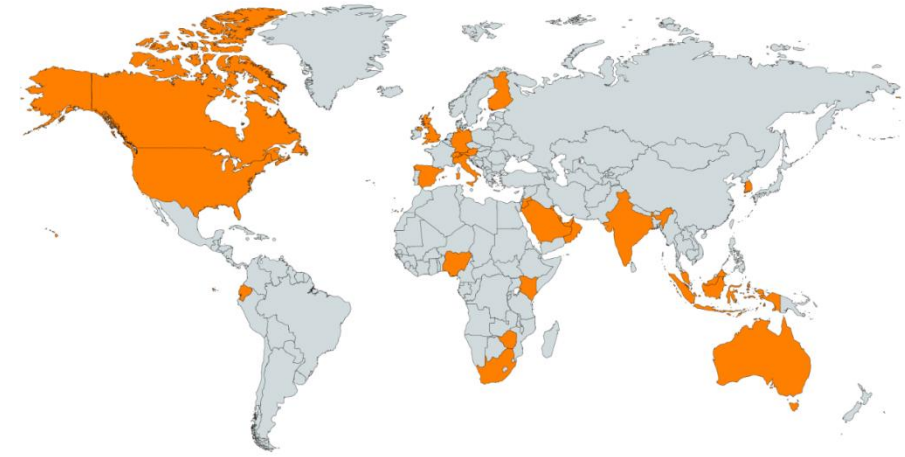
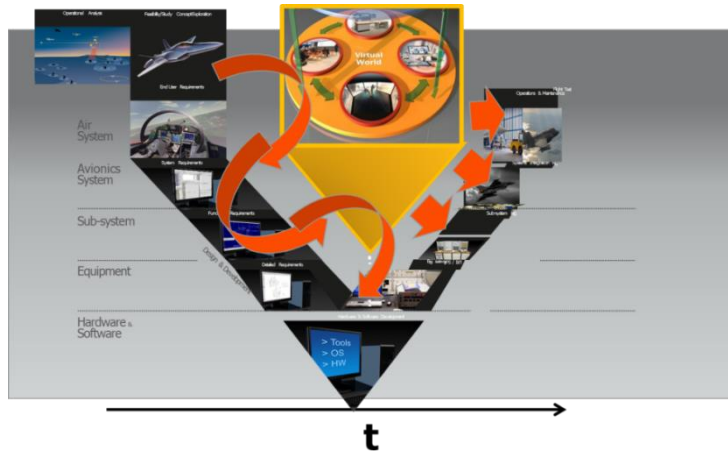
- The synthetic / live training mix
- Aurora – operational mission support, planning for the warfighter

Air Works tour - securing 6<sup>th</sup> generation Combat Air capability and beyond

- Future Combat Air System
- Factory of the future



# Building for the future



# BAE Systems

## Air Capital Markets day



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