



SOLAKONFERANSEN
Skandinavisk luftfartskonferanse

THE SOLA CONFERENCE 2017

SOLA, 19th September 2017

Roberto Garavaglia, SVP Strategy



AgustaWestland Products

Leonardo Helicopters 2016 Key Financial Results



USD¹ Bn

4.05 Sales

4.05 Order intake

11.6 Order Book

0.4 EBIT [10.8% ROS]

0.3 Net Profit

Yesterday Finmeccanica, Today **Leonardo**

HELICOPTERS

AERONAUTICS



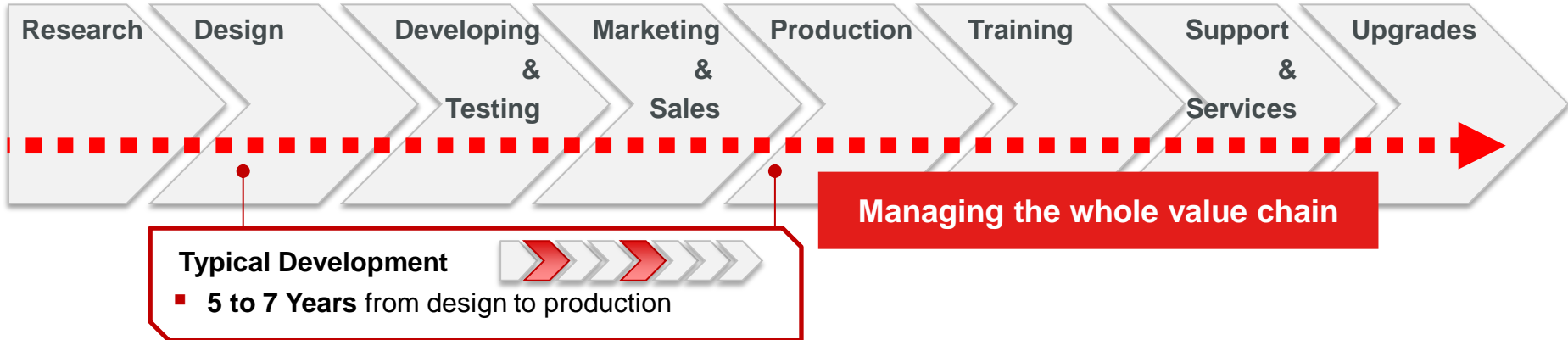
SPACE

ELECTRONICS, DEFENSE & SECURITY SYSTEMS



1. Officially released results in Euros

Leonardo Helicopters: Overview



- » Comprehensive Product Range
- » **Dual use** helicopters
- » Family concept **AW139, AW169, AW189** based on a common design philosophy and certification safety standards

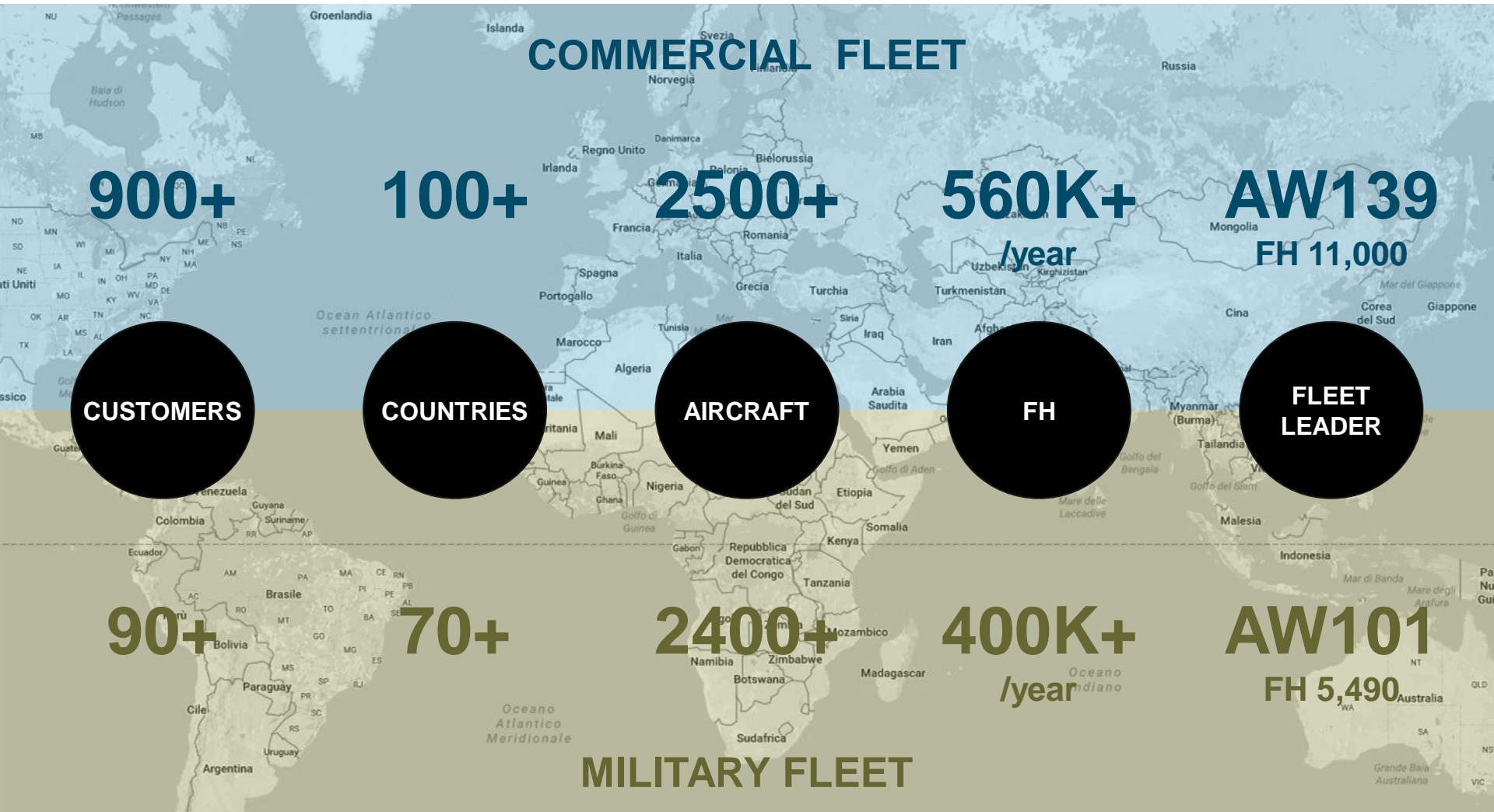


- » Innovative Technologies including **AW609 TiltRotor** and **Rotary-wing Unmanned Air Vehicles (RUAV)**



- » Delivery of Customer Support & Training integrated programmes

Leonardo Helicopters: Worldwide Presence



Fixed Wing vs Helicopters: two Worlds Apart?



AIRPLANE Configuration Design:

- Role based, very optimised and stable configuration
- Almost manufacturer-independent: index of a very consolidated development

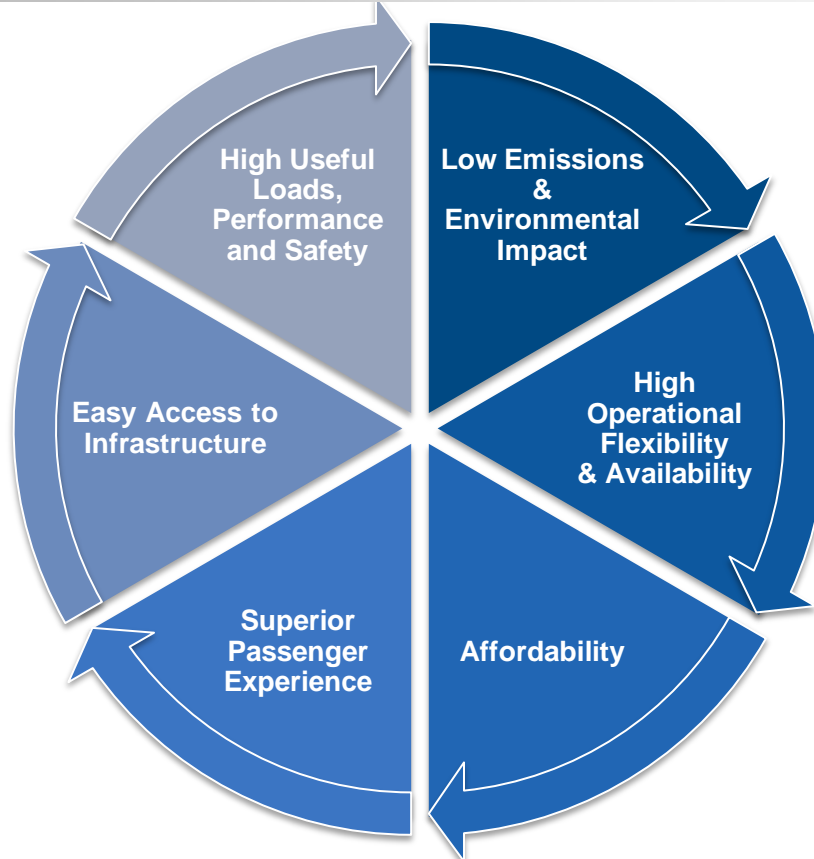
HELICOPTER Configuration Design:

- Manufacturer peculiar configuration
- Specific role dictate configurations
- Development maturity still on-going

Closing the gap to fixed wing is still a highly “creative” challenge

How do we approach the future?

Technology-Driven Enablers



From the only way to the best way

Key Technology Enablers



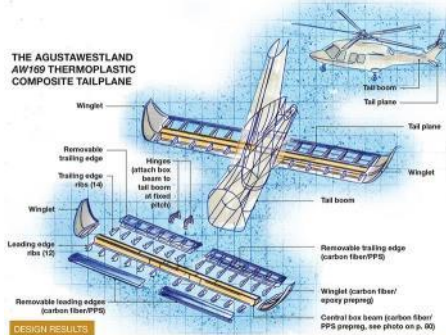
Multiplatforms NAV/COM/AFCS integration, GNSS based procedures



All WX / hostile environment capabilities through advanced system integration & integrity, Low pilot workload



Advanced technologies, health/usage monitoring, flexible maintenance programs for cost reduction

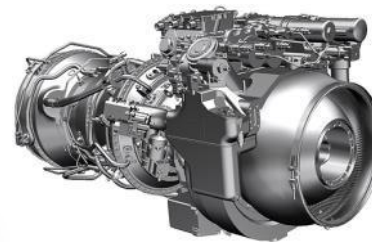


Recyclable techs, low emissions (noise, CO2, NOx, waste)

DRY RUN



Intrinsic/embedded safety features



Clean, silent, reduced maintenance power plants, electric technology



Innovative advanced configurations

Rotorcraft Sector: Giving Credit to Safety

1. Design and Operations rules must go hand in hand proportional to the specific risk

Lack of a common Risk model driving both

2. Give credit to «Over and Beyond» safety respect to the minimum

Safety is an investment, not a cost

3. Incentives

Improved vehicles with more recent certification basis have to be incentivised



The Future is Here: New Gen Helicopters, Fast Rotorcraft & RUAV



AW609
TILTROTOR



Next Generation
Civil Tiltrotor



SD-150 'Hero'



SW-4 'Solo'

A high-angle, dynamic shot of an AW189 helicopter in flight, banking sharply to the right. The helicopter is white with red accents on the rotor hub and landing gear. The background shows a coastal landscape with green fields, a town, and a body of water. The rotor blades are blurred due to motion.

AW189

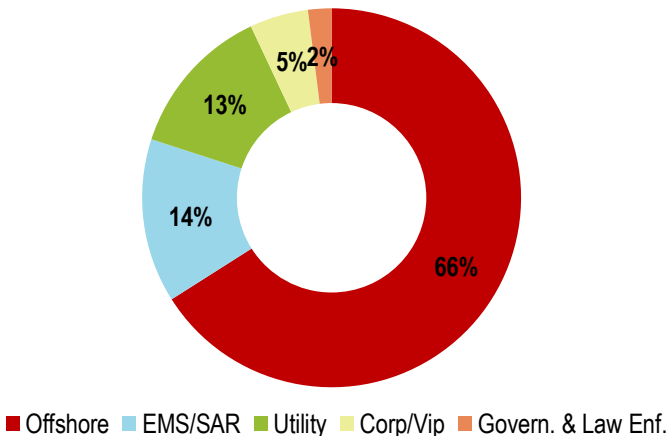
Latest Generation Capability

Designed for long range, all-weather, day and night, deep water missions typical of Offshore operations, maximising operational capability and minimising cost

AW189: Leading the Super Medium Class

150+ orders & options
15 countries worldwide
36 aircraft in service
29000+ FH
growing 1100+ FH/month
(in service, excludes prototypes hours)
3600+ FH Fleet Leader

AW189 Orders Summary



GHC (4)



BEL AIR (2)



BRISTOW (10)



WESTSTAR (1)



VNH (2)



FAS (2)



VICI (1)



AAR (2)



LCI (3)



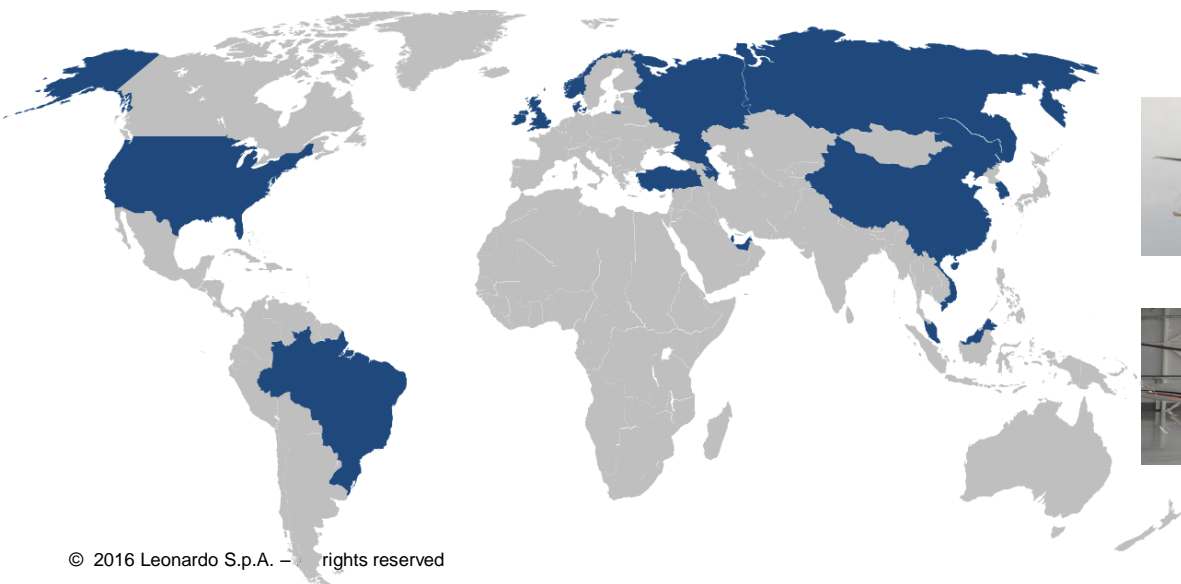
ROSNEFT (2)



ERA (4)



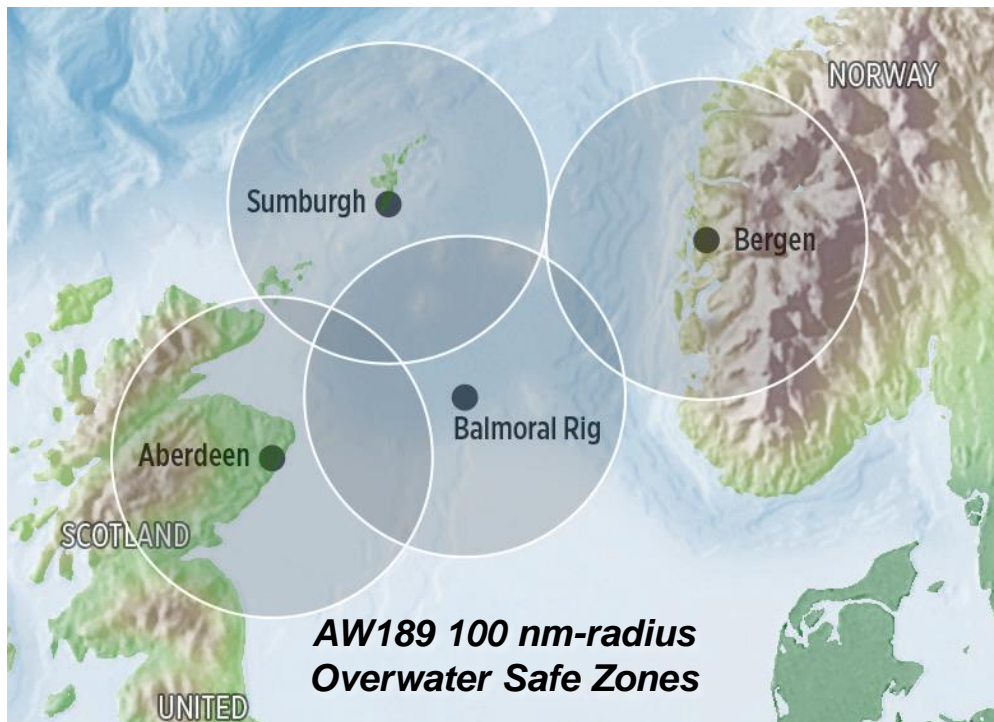
DAW (1)



AW189: Raising the Safety Benchmark

AW189 unique 50 min MGB dry-run
allows new operational & planning capabilities (**ETOPS concept**)

**Main Gearbox Design:
the Bow Tie approach**

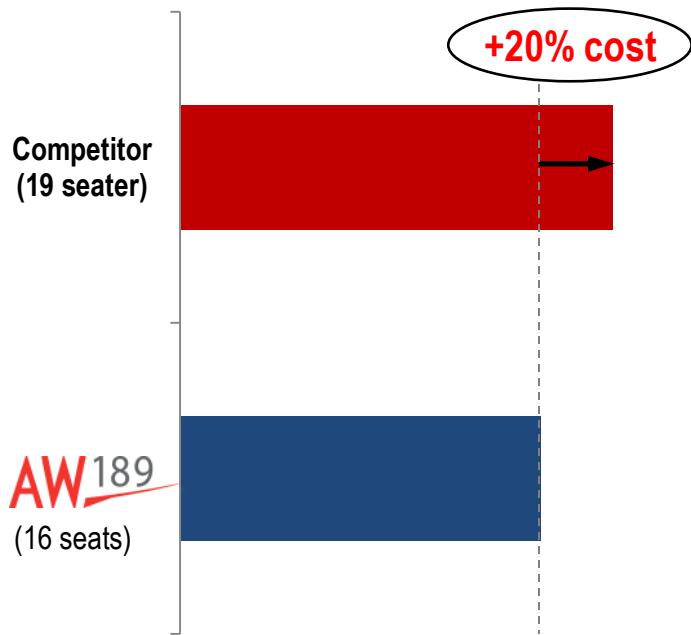


**The only helicopter exceeding the latest certification / OGP standards
with the unique 50 min dry-run capability and Full Ice Protection**

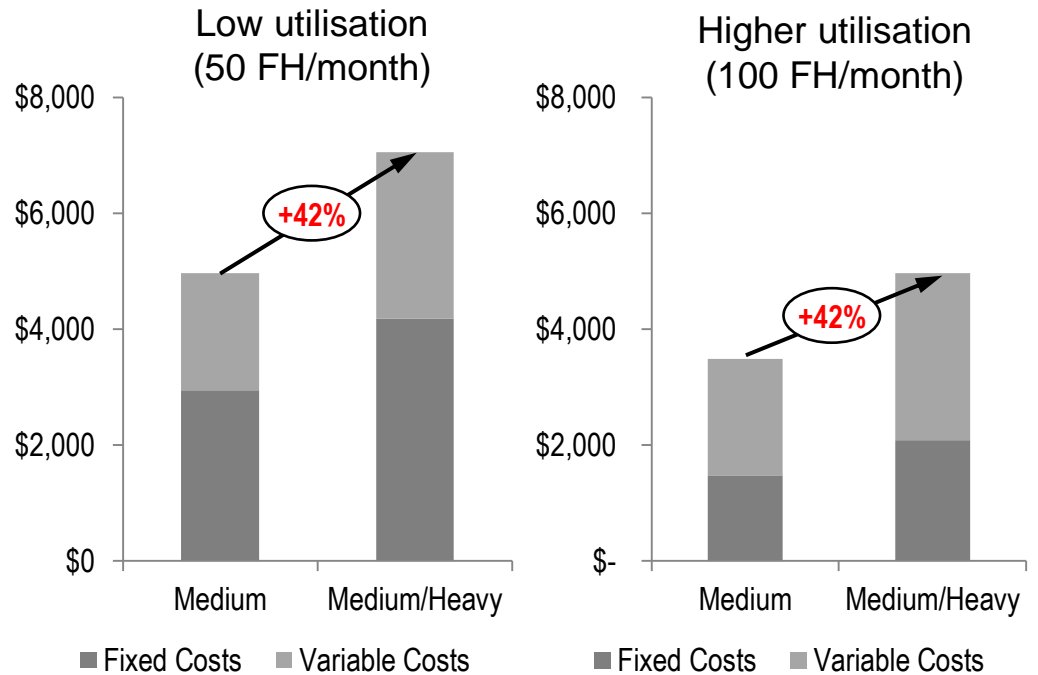
AW189: Affordability and Attractiveness



Total DOC per seat-mile



Total DOC per FH by Weight Class



AW189 is more affordable than heavier 19-seaters and is a flexible solution for both long and short distances

Total DOC includes: Ownership, Insurance, Crew, Fuel & Lubricants, Maintenance Costs
 DOC factors are calculated as average of typical offshore helicopters
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AW189: Chosen to Deliver SAR Missions in the UK



SAR Configuration

- Dual rescue hoist
- Comprehensive medical suite
- Full icing protection
- 4-axis autopilot with SAR Modes
- Advanced NVG Glass Cockpit
- Integrated Mission Console & Sensors Suite
- Surveillance Weather Radar
- Multiband Communication Suite
- Multi-beacon Direction Finder

Meeting long-range, high endurance requirement for SAR missions in the most demanding operational, environmental and weather conditions

AW189: New Product Enhancements

Major Achieved / Ongoing Developments

- ✓ SAR and VIP configurations
- ✓ LIPS / FIPS
- ✓ OPLS System
- ✓ Improved OEI capabilities
- ✓ Improved Category A PC1/PC2e from oil rigs
- ✓ High-capacity baggage stowage and cabin stowage options
- Optimized airframe and new enhanced role equipment
- Automatic oil rig approach
- RNP 0,3 all phases of flight
- FCOM



LIPS / FIPS: Limited / Full Ice Protection System

FCOM: Flight Crew Operating Manual

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AW139

Simply No Rivals



The market-leading intermediate twin-engine helicopter. The benchmark for safety design features, performance capabilities and productivity in challenging multi-role operations all over the world.

AW139: the Consolidated Benchmark in the Oil & Gas

1030+ aircraft sold
862 aircraft in service

72 countries

~260 Customers
~ 1.900.000 FH



ALASKA & CANADA



NORTH SEA



KAZAKHSTAN



INDIA & PAKISTAN



GULF OF MEXICO



MEDITERRANEAN SEA



MIDDLE EAST



MALAYSIA



BRAZIL



NIGERIA



WEST AFRICA



AUSTRALIA &
NEW ZEALAND



ARGENTINA

315 helicopters (37%) in service in Oil & Gas since 2005
52% of intermediate helicopters delivered in the Oil & Gas in the last 10 years are AW139

AW169

Next Generation Versatility



Ideally suited to the demanding offshore mission, capable of carrying up to 10 passengers in comfort and safety. Exceeding the latest regulatory requirements.

AW169: Certification completed, getting into the Market

160+ aircraft

42 aircraft in service

26 countries

6.500+ FH (+3.500 FH on flight tests)

~70 Customers

**Three AW169s set
for Norwegian offshore operations**



“The new agreement will provide us with a safe and good helicopter service, at a lower price than the current agreement.”

Erik Blom, director of pilot services, NCA

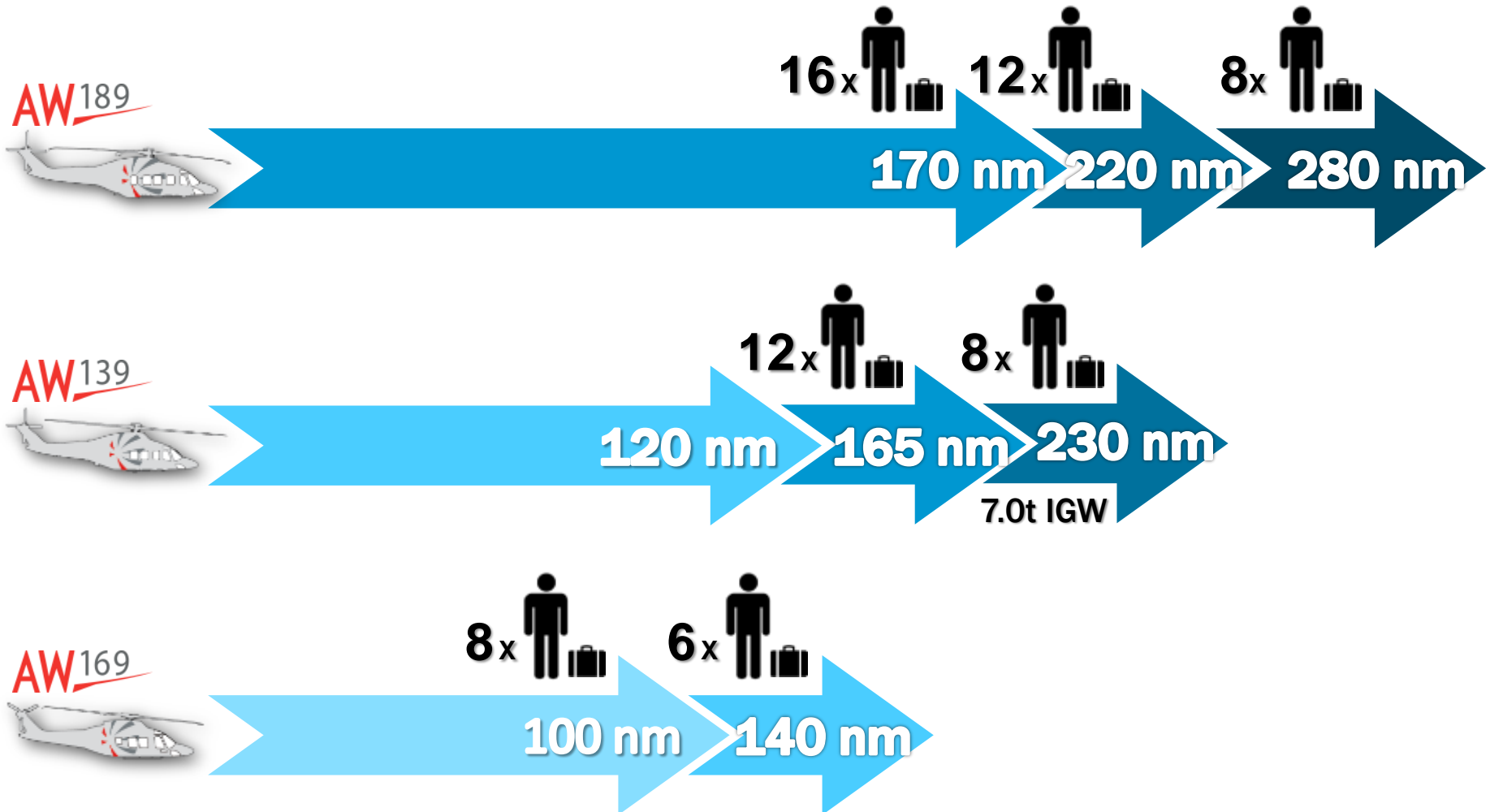
**All-weather helicopter for
Swiss Air-Rescue Rega**



“With the new rescue helicopter, we will be able to extend our scope of operations and in the future come to the aid of more people in distress than ever before.”

Ernst Kohler, CEO of Rega

AW Family: Delivering Modular & Affordable Flexibility

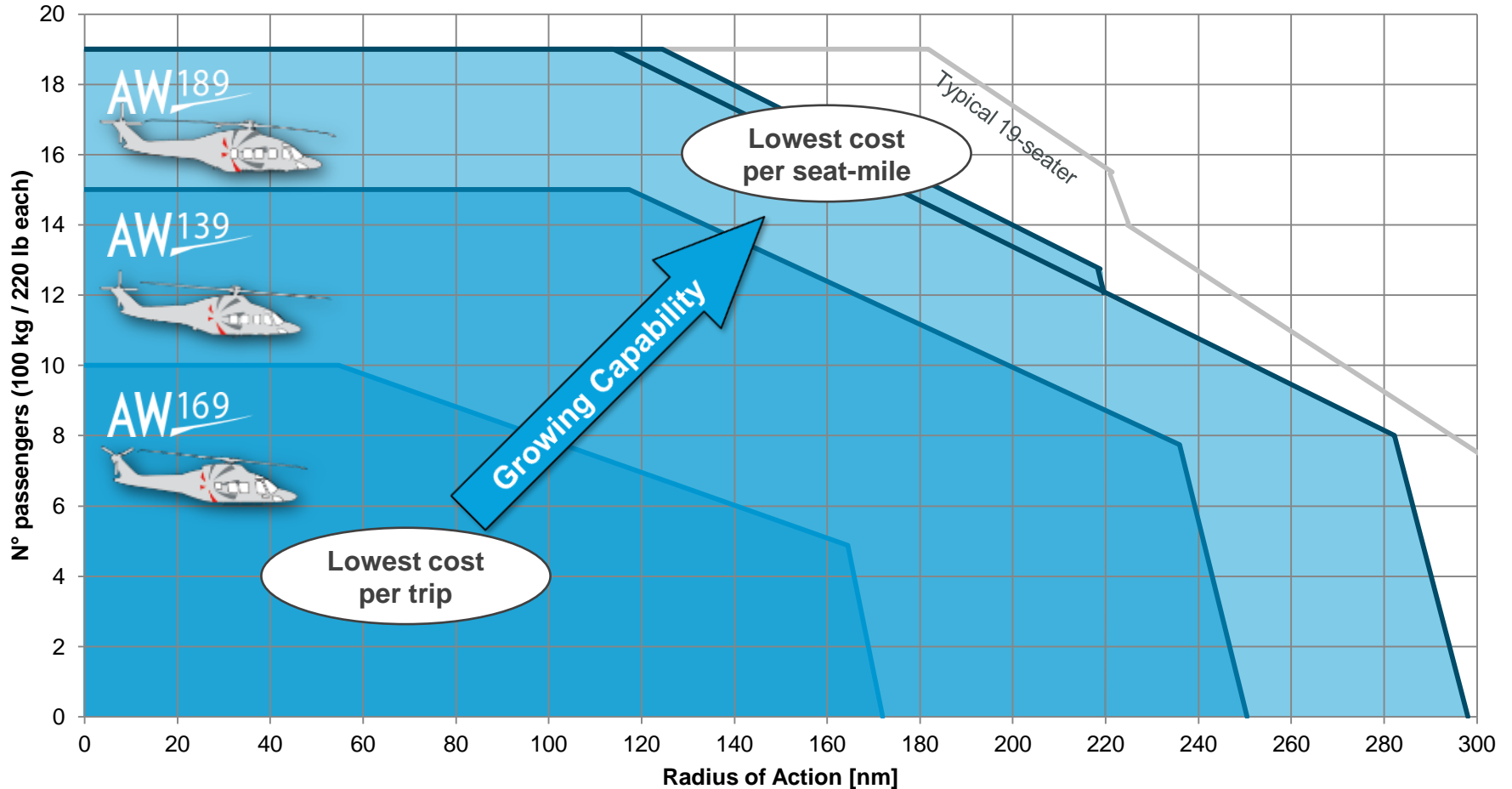


Pax at 100 kg / 220 lbs; JAR-OPS Reserves

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AW Family: Economic Productivity Chart

Lowest cost per seat-mile offering



Assumptions: typical OGP configuration with Air Con, 3000 ft, ISA+20° C, 10% contingency, 30 minute reserves.

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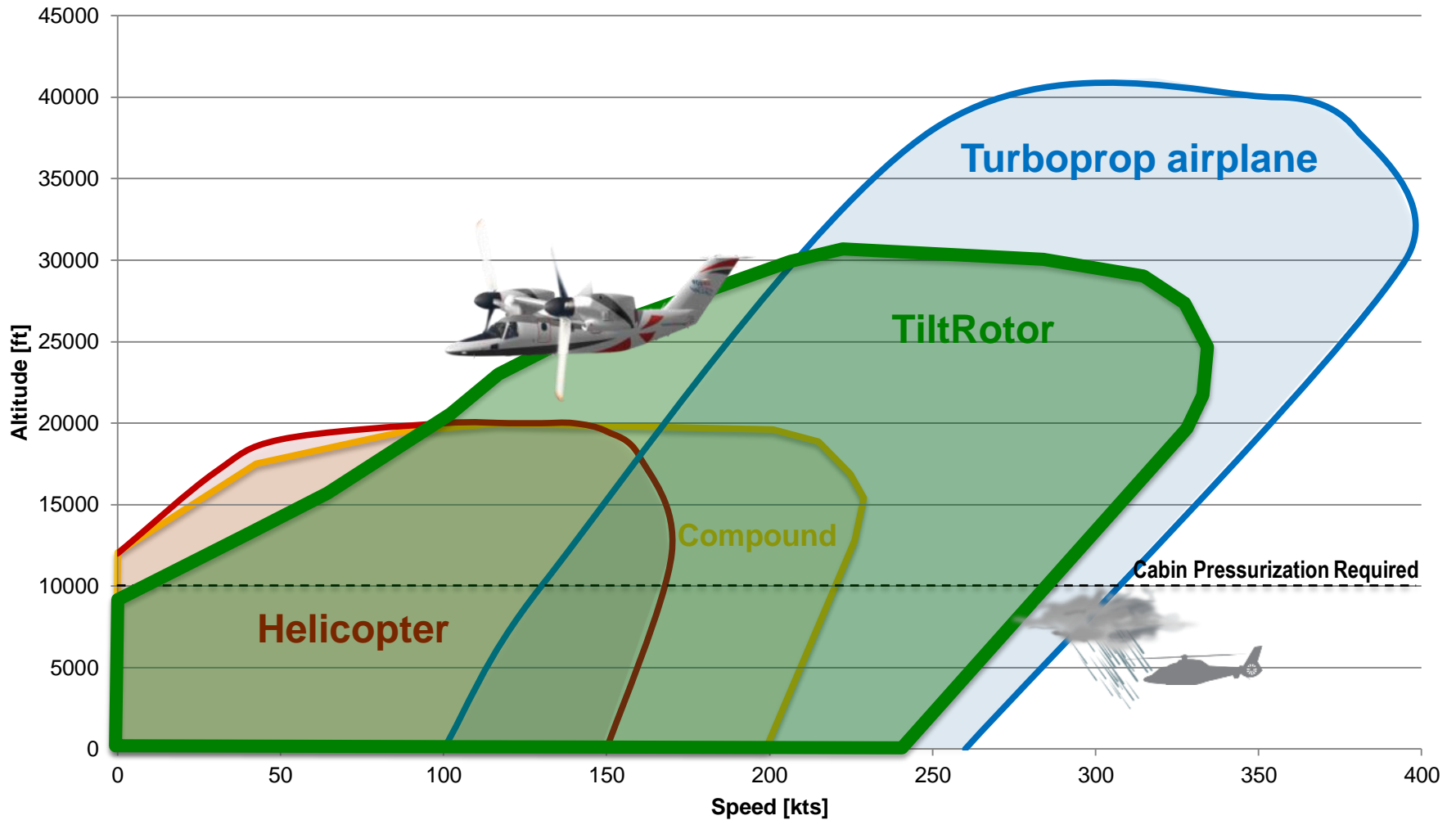
AW609

TILTROTOR

On Track with Certification Activities!

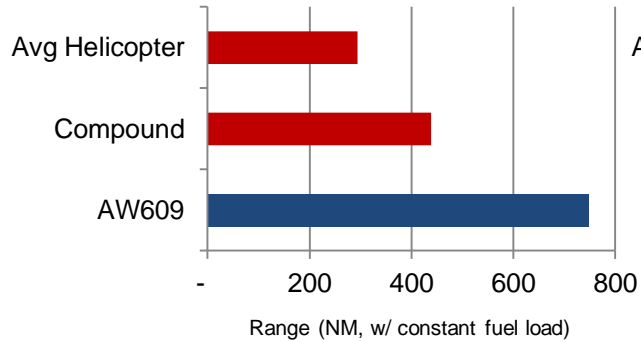


The New Frontier of the Vertical Flight

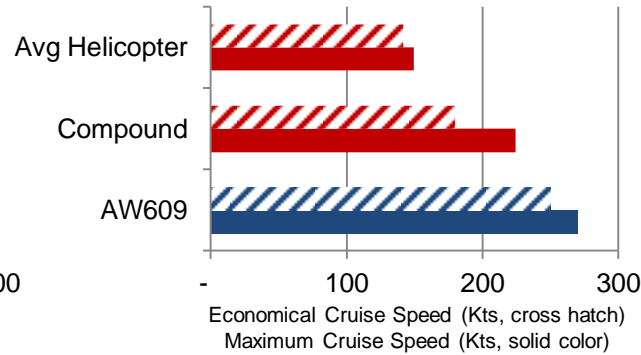


The AW609 Advantage

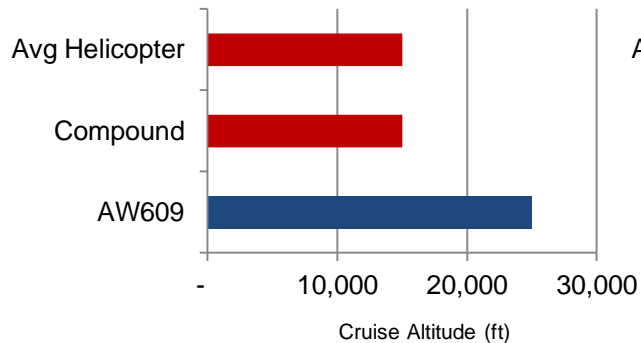
Further



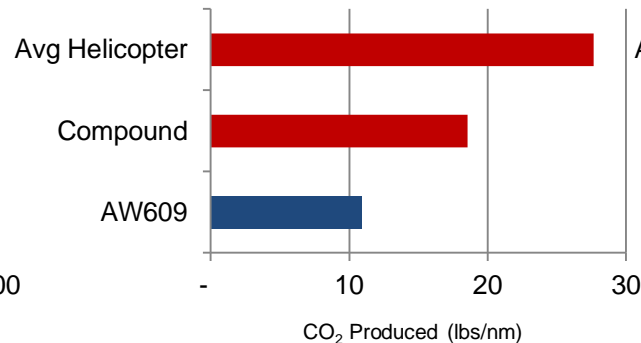
Faster



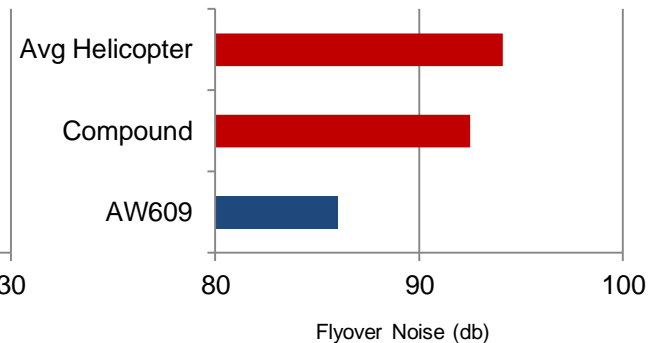
Higher



Cleaner



Quieter



Only the AW609 gives you VTOL, high speed, long range flight in the safety and comfort of altitudes above the weather, with a cleaner, quieter footprint than conventional or compound helicopters

Assumptions: Avg Helicopter is the average of 17,000-27,000 lb MTOW class conventional helicopters. Range is based upon a constant fuel load across all aircraft types.

CO₂ emissions: 3.16 lbs of CO₂ produced per lb of jet fuel burned (Aviation and the Global Atmosphere, Cambridge Univ. Press, UK 1999).

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Looking Forward: the NextGen Tilt Rotor



A ~20 pax aircraft that cruises at 330+ kts with a >700 nm Range
Payload/Fuel trade-off possible to extend the range even further



THANK **YOU** FOR YOUR ATTENTION



AgustaWestland Products