



European experience in international cooperation armament programs

How it can contribute to Europe –Japan cooperation in defence technology?

The helicopter industry example



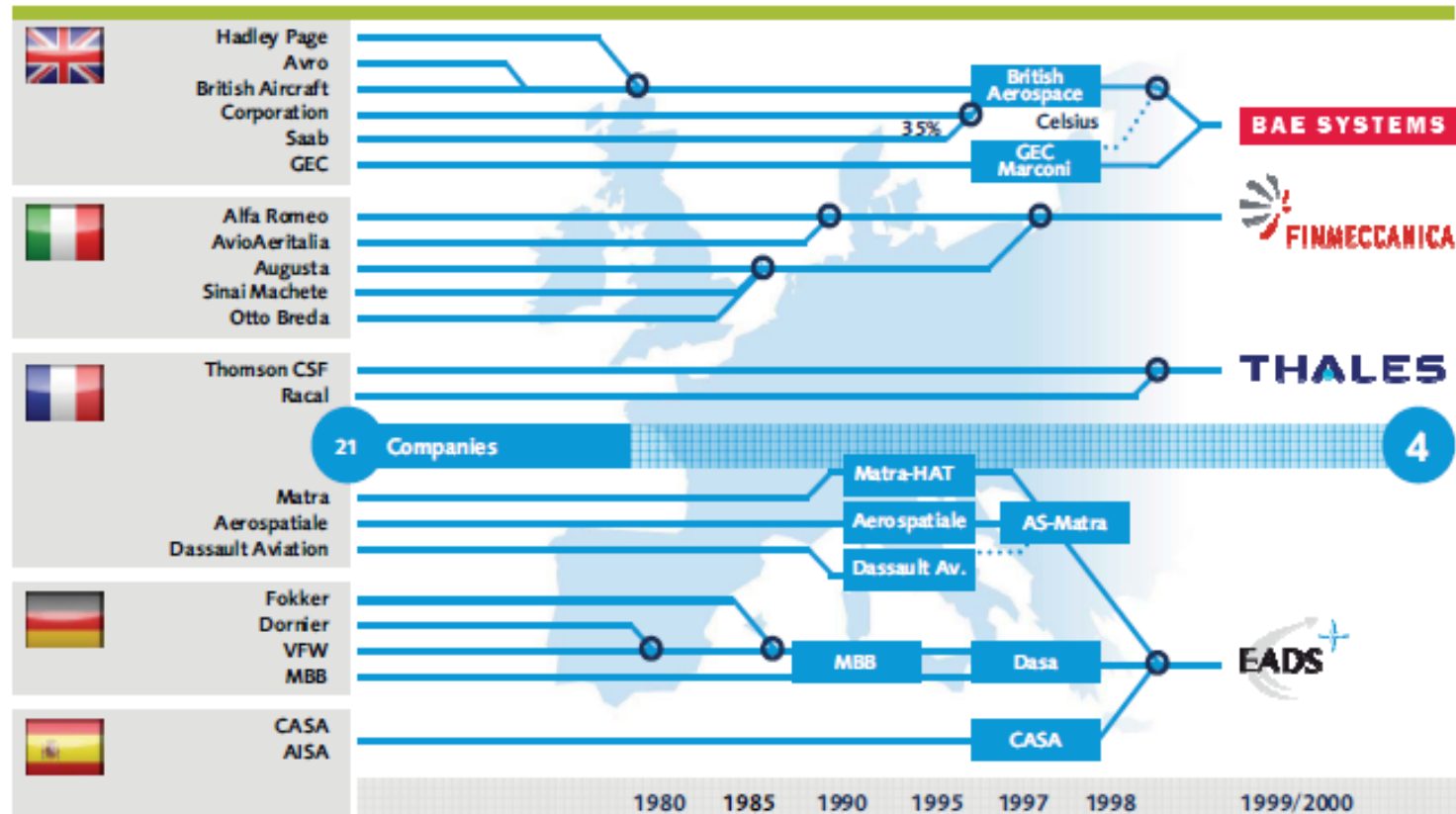
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Defense Seminar JA 2012





CONSOLIDATION IN EUROPE



EADS at a glance



Two examples: the A400M and the A330 MRTT



Weapon system acquisition by program management & purchase agencies



1992: establishment of Eurocopter



NATO Multi role medium helicopter

- Tactical transport
- Navy roles (SAR; ASW)

Combat helicopter for combined and joint ops

- Armed reconnaissance
- Antitank

Eurocopter: a Global Presence



Employees **5 1 8 0**

30 subsidiaries and participations
2 billion € in orders in 2011 - 60% of customers



recent successful cooperation achievements

USA UH-72A

Local production with UH-72A assembly line (based on the EC145)



KOREA KUH

Cooperation with KAI to develop and produce the Korean Utility Helicopter (KUH). First prototype flight in France in July 2009



JAPAN

EC 145 T2/ BK 117 D2



New up-graded version of EC 145/ BK 117 – co-developed with Kawasaki Heavy Industries

SPAIN TIGER, NH90

Creation of a new industrial site; development and production of Aero structures. Assembly lines Tiger and NH90.



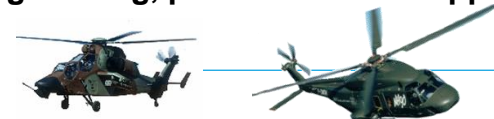
BRAZIL EC725

Local production with cooperation on engineering, support and assembly line of the EC725.



AUSTRALIA TIGER, NH 90

Australian Aerospace acting as major Defence contractor. Assembly Lines for the Tiger and NH90 with engineering, production and support.

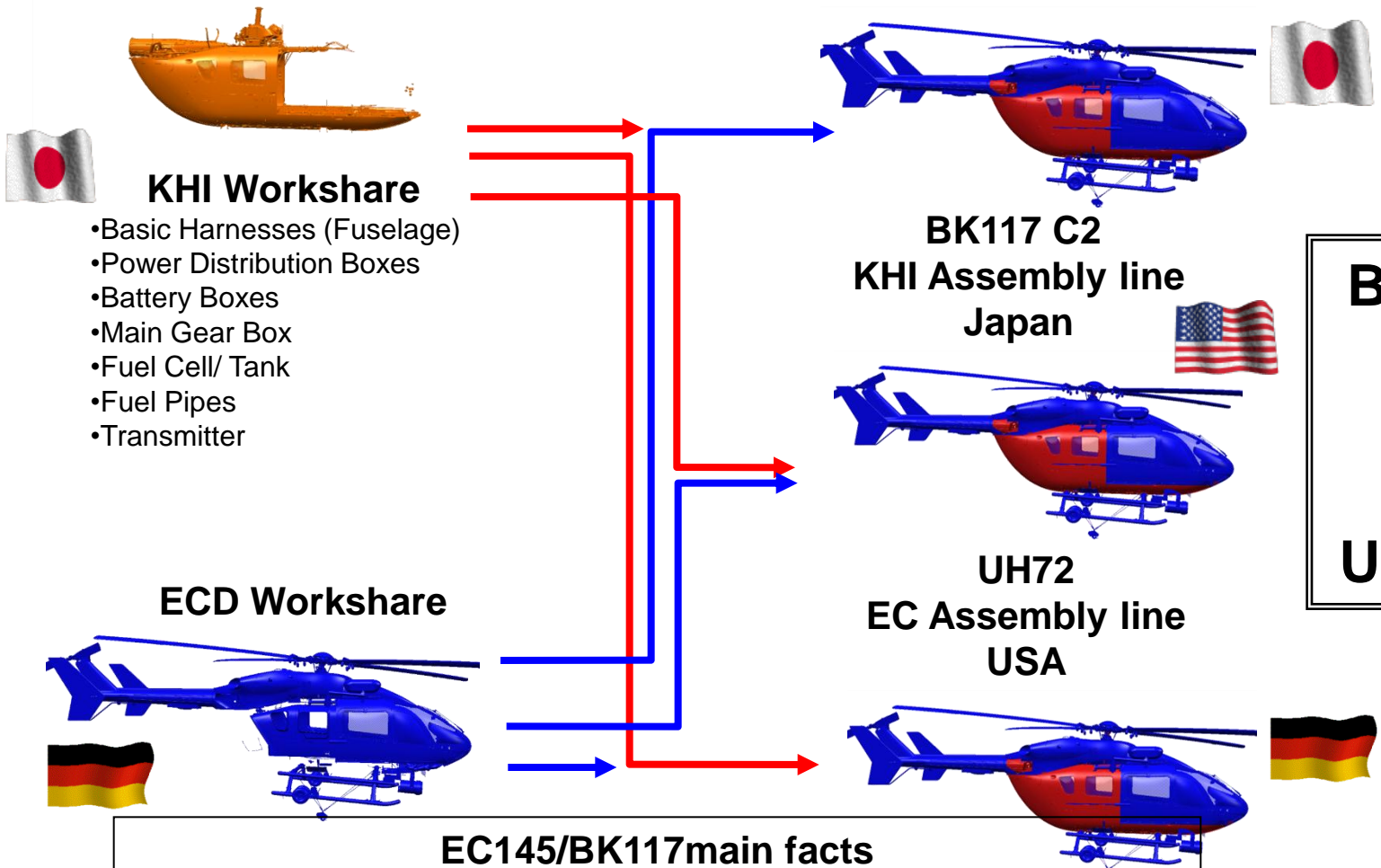


Eurocopter Japan : investment in the country and the people

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A 30 year partnership with Japanese industry : the EC145/BK 117

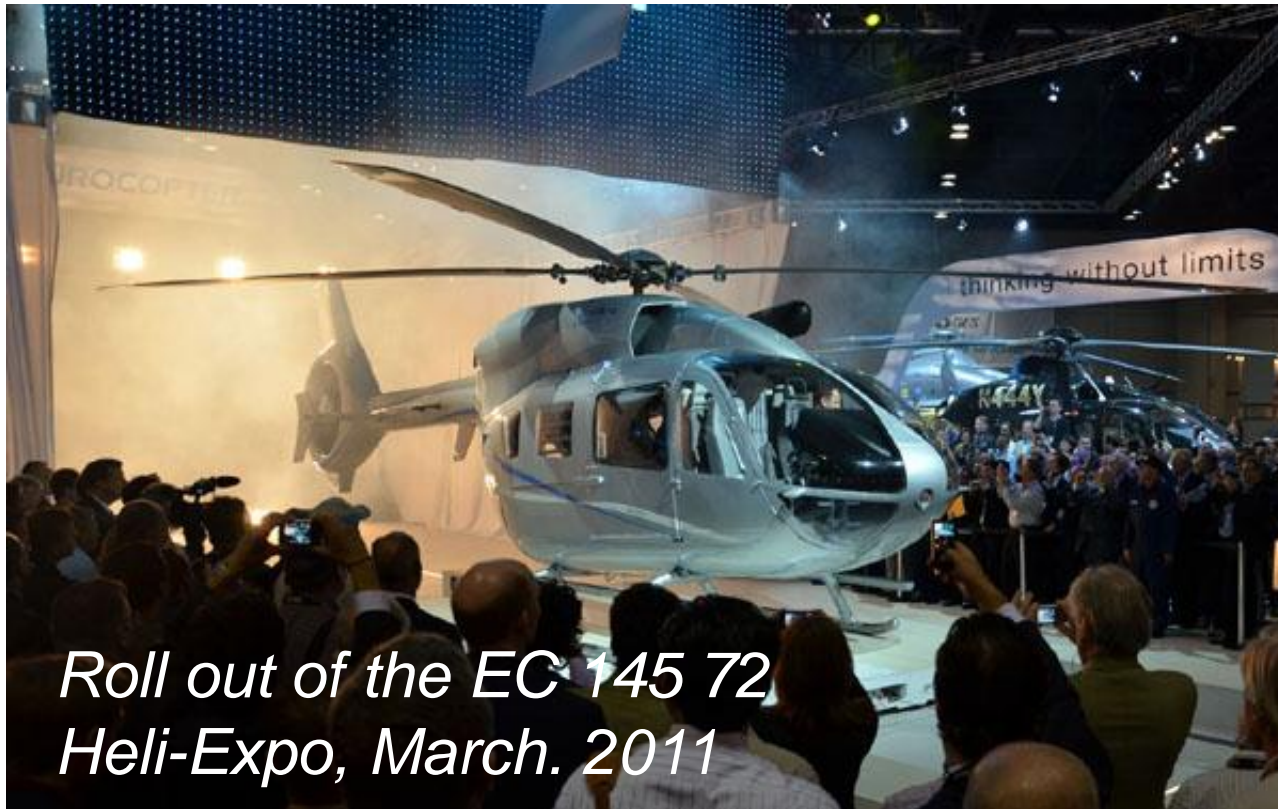


BK117 C2
=
EC145
=
UH72 LUH

EC145/BK117main facts

- 30 year co-development program between Germany and Japan
- More than 800 helicopters sold worldwide (200 EC145)
- Selected by US Army as their new generation Light Utility Helicopter
- 350 UH72 sold - 100 helicopters already delivered
- Growth potential & promising market opportunities







Birth of a new helicopter



Recommendations for the successful cooperation between Europe and Japan in the armament field

Recommendation° 1: converging operational concepts among nations

World army aviations fleet rationalization

	Scout-LUH	ATK	TTH	Heavy
	LUH72 & OH58 then AAS	Apache	Black Hawk	Chinook
	Gazelle then AW159	Apache	Puma	EH101; Chinook
	Gazelle then future Twin	Tiger,	Puma / Cougar then NH90	FTH (TBC)
	Bo105 then EC635/645	Tiger,	UH-1 then NH90	CH53
	B206 & EC635	Tiger,	Cougar then NH 90	Chinook
	B206 & UH1 then LUH (TBC)	Tiger,	BH then NH 90	Chinook

Recommendation n° 2:

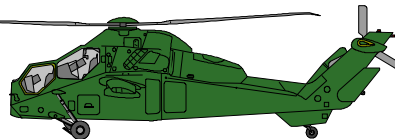
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shared operation requirements – standard specifications

Common basic helicopter

- 85% commonality
- Self-integrated

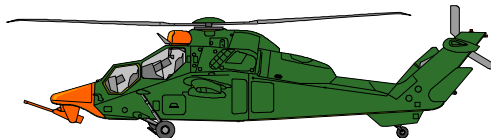
Basic H/C



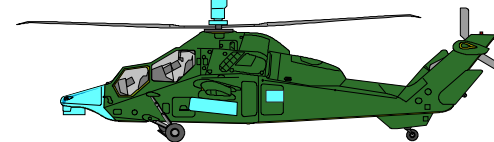
Common vehicle and basic avionics

Customized mission packages

HAP 



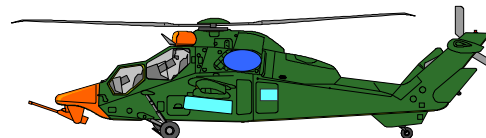
KHS 



Air to Air Combat/Combat Support

- ◆ Roof Mounted Sight
- ◆ Turreted gun

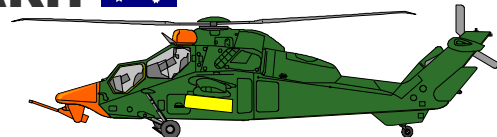
HAD 



Anti-Tank/Combat Support

- ◆ Mast Mounted Sight
- ◆ Anti Tank (HOT, TRIGAT)

ARH 



Armed Reconnaissance Helicopter

- ◆ Roof Mounted Sight
- ◆ Turreted gun
- ◆ Air-to-ground: Hellfire

Reconnaissance/Air to Air/Combat Support/Anti Tank

- ◆ Roof Mounted Sight
- ◆ Turreted gun
- ◆ Air-to-ground: Spike/Hellfire
- ◆ Laser designation
- ◆ Enhanced engine

Recommandation n° 3: Cooperation between industry players supported by Governments



NAD : National Armament Director

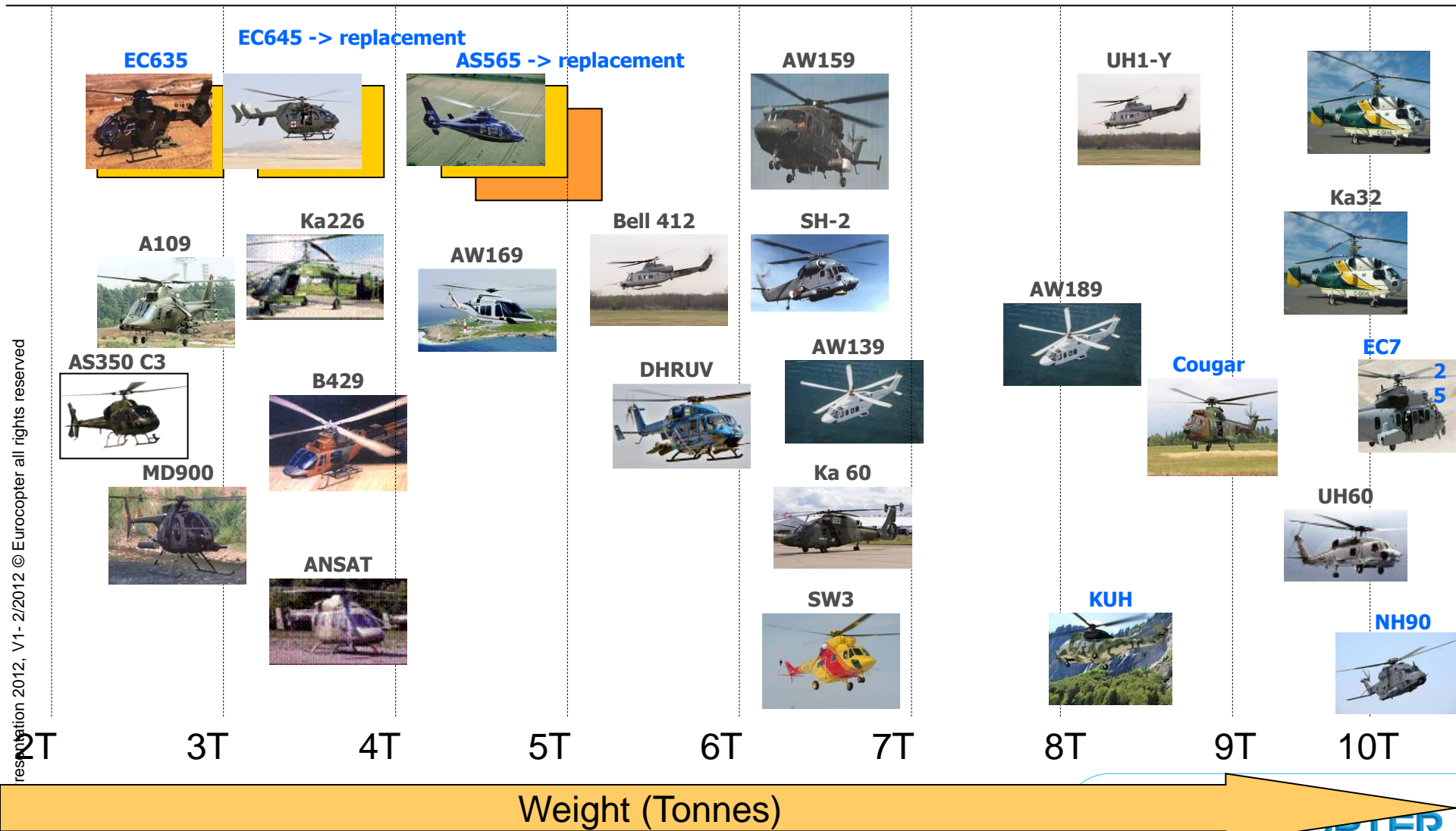
Recommendation n° 4: a large market base for cost optimization

NH90 EUROPEAN FLEETS STANDARDISATION



TODAY		▶▶▶▶▶▶▶▶	TOMORROW		
A/F ARMY NAVY	33 AS330/332 154 AS330/332 34 LYNX 18 SUPER FRELON		FRANCE	A/F ARMY NAVY	23 TTH 110 TTH 27 NFH
A/F ARMY NAVY	98 BELL UH1D 177 BELL UH1D 24 LYNX 20 SEA KING		GERMANY	A/F ARMY NAVY	66 TTH 115 TTH 38 NFH
A/F ARMY NAVY	36 AB212 128 AB205/212/214 77 AB212ASW		ITALY	A/F ARMY NAVY	40 TTH 100 TTH 56 NFH
NAVY	22 LYNX		THE NETHERLANDS	NAVY	20 NFH
---			PORTUGAL	ARMY	10 TTH
TOTAL (*) 605 NH90: 464 TTH + 141 NFH					

Recommendation n° 5: Carefull Trade-off COTS/New development



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EEB/G

conclusion

- Aerospace and Defense cooperation programs will contribute to the development of trade and investment relationship between Europe and Japan
- Industrial partnerships have to be supported by the Nations through convergence of operational requirements and secured financing.
- Benefiting from a long experience in cooperation and a proven commitment to Japan customers , EADS and Eurocopter are prepared to make proposals to launch successful cooperation projects with Japan.



THANK YOU!

The X3 technology demonstrator reached 232kt in May 2011