

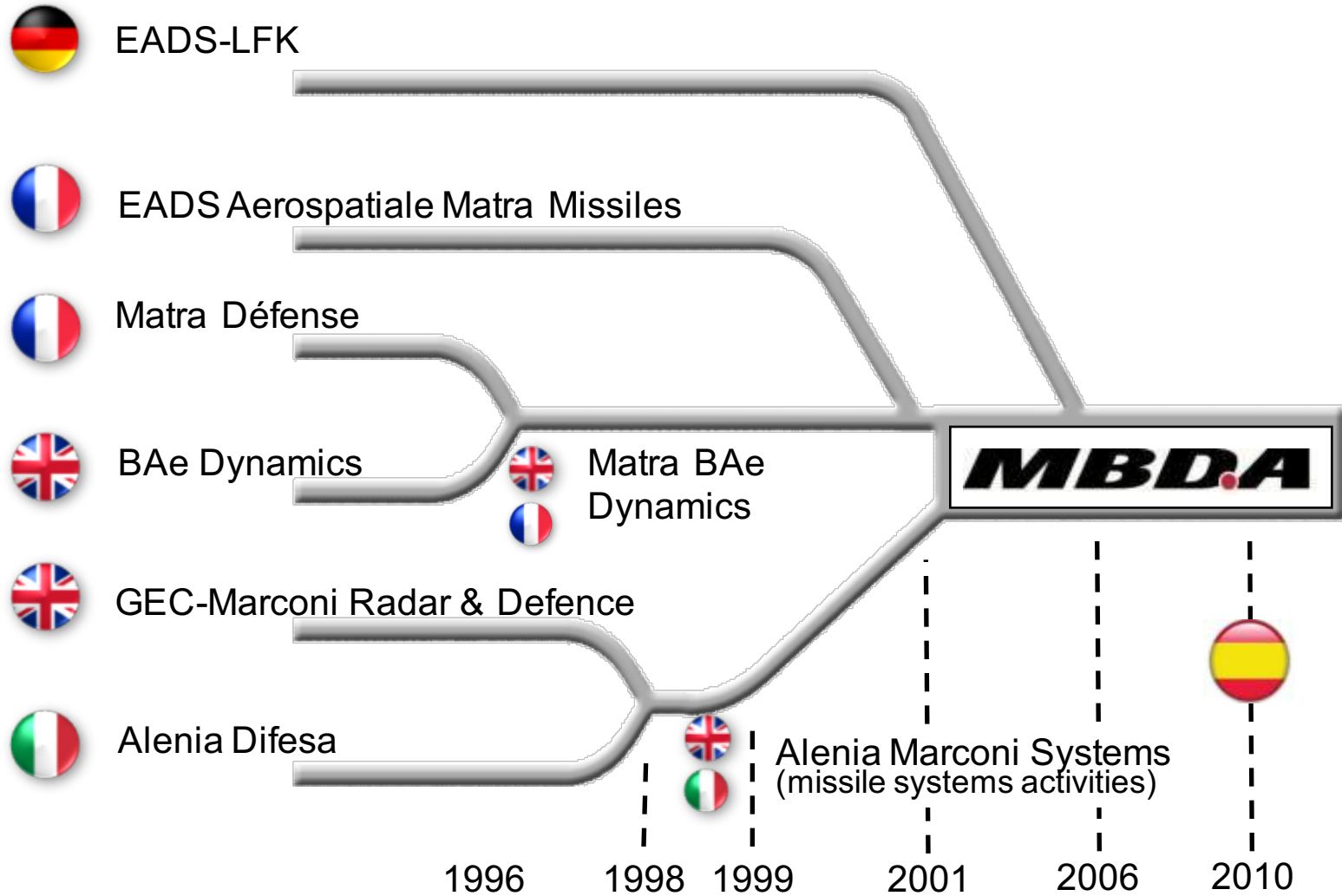
## **MBDA and our use of MBSE**

INCOSE UK MBSE WG Meeting  
19<sup>th</sup> May 2016

Ian Clark  
Systems Capability

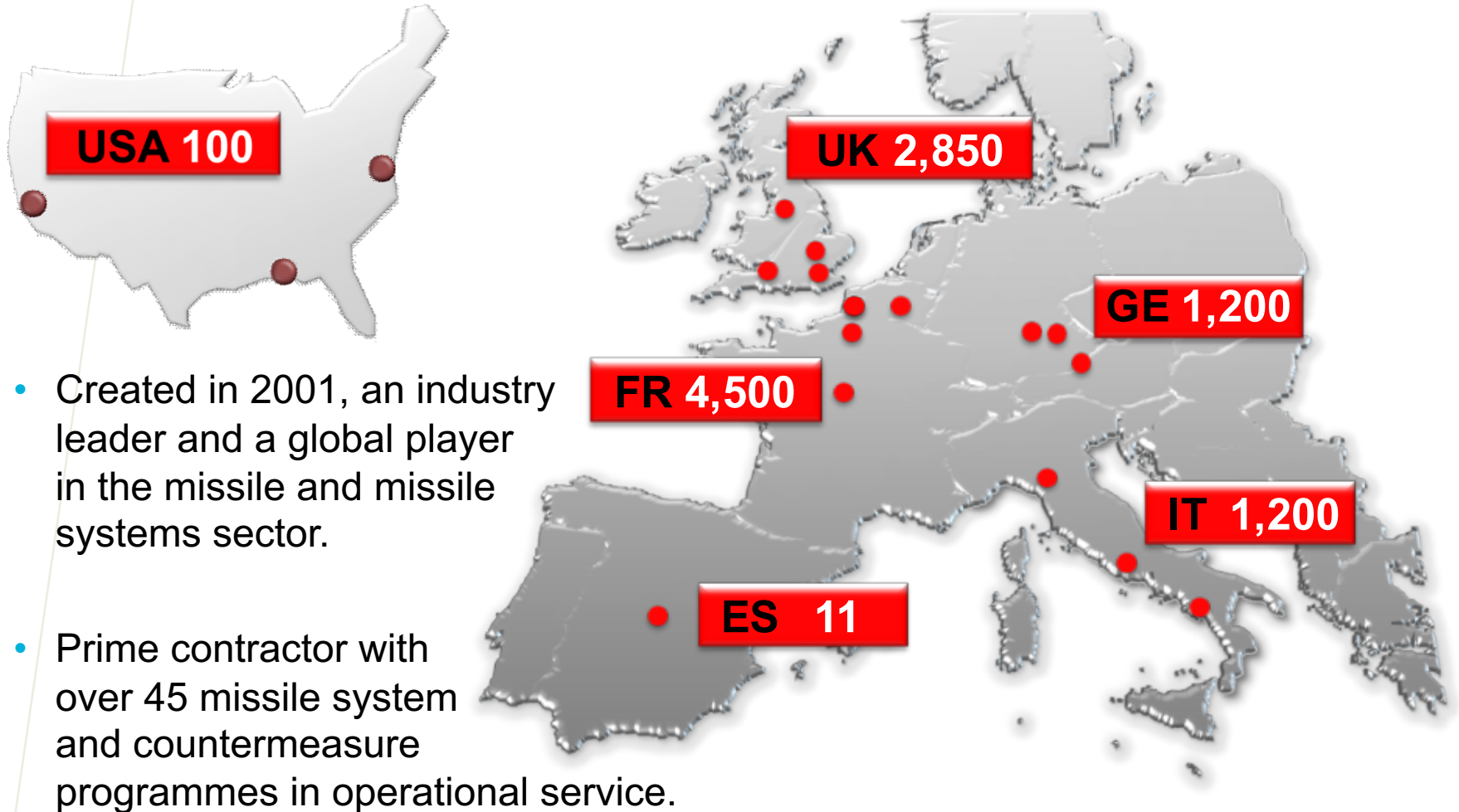
**MBDA**  
MISSILE SYSTEMS

# MBDA European Industry Collaboration



## MBDA Centres of Excellence

**10,000** people worldwide, **60%** in Technical/Engineering functions



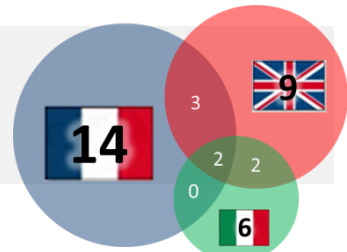


## Why did MBDA Need to Change?

- The evolving types of products that MBDA develop

Traditional Products		New Products
<b>Technology driven</b>	<b>vs.</b>	<b>Complexity driven</b>
System built for a specific purpose	vs.	Flexible and agile roles
Sub-systems specifically built for each product	vs.	Sub-systems modularity and re-use driven
Little interaction between parts or with the outside world	vs.	High level of information sharing with external entities
User interaction limited to simple prescribed tasks	vs.	Multiple user participation
Similar design effort required for hardware and software	vs.	Design effort predominately in software with increasing complexity

# MBSE Utilisation Across the Business



- Largest key projects (€ and heads)
  - UK/French Anti-Ship Guided Weapon System
  - UK/Italian Short Range Air Defence System
  - UK Air Platform Surface Attack
  - 29 National + 7 Multi-national projects across MBDA using MBSE

## International Reference Architectures

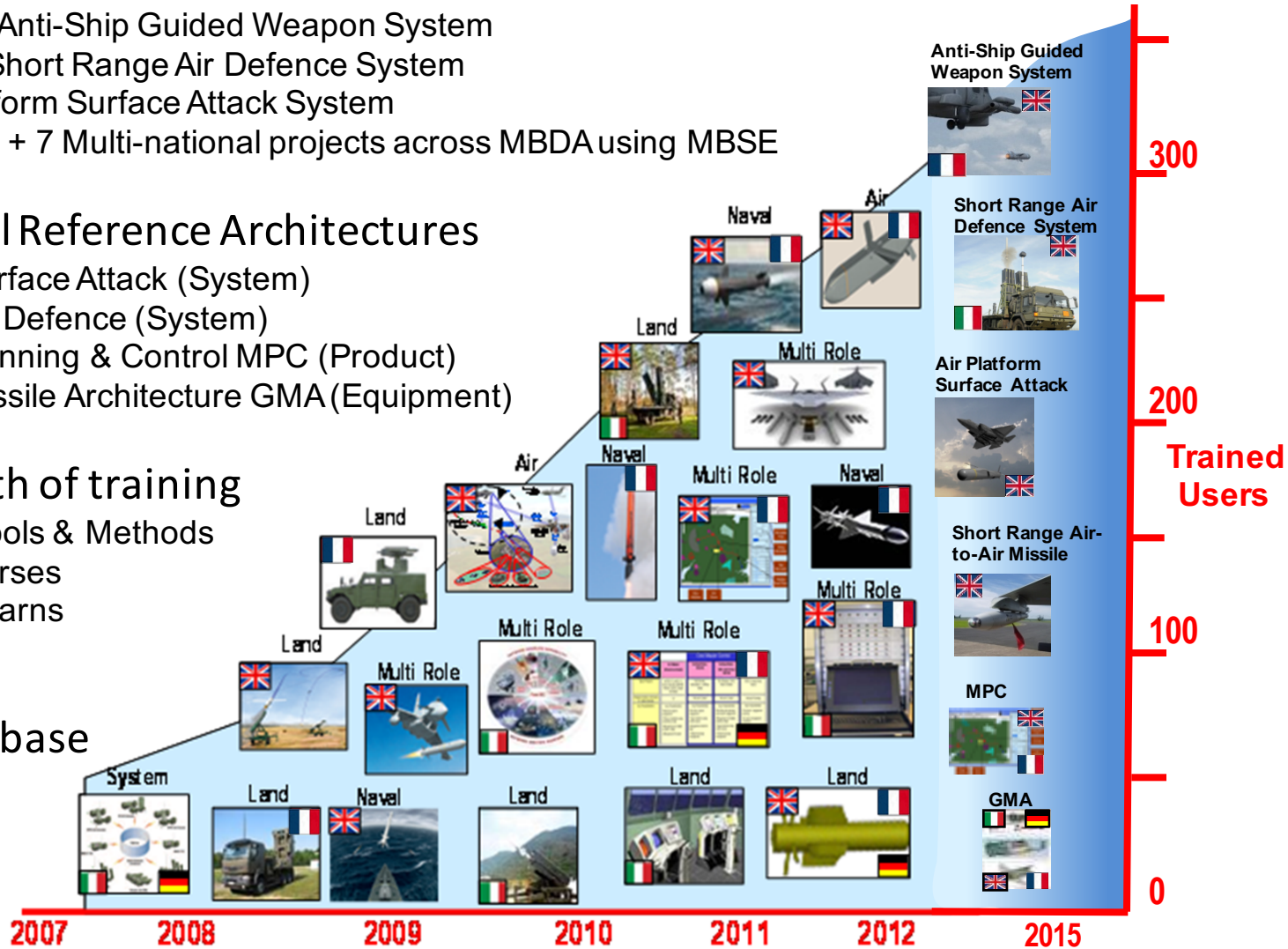
- Generic Surface Attack (System)
- Generic Air Defence (System)
- Mission Planning & Control MPC (Product)
- Generic Missile Architecture GMA (Equipment)

## Greater depth of training

- Process, Tools & Methods
- Formal courses
- Lunch & Learns
- On the job

## Greater role base

- Engineers
- Managers



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