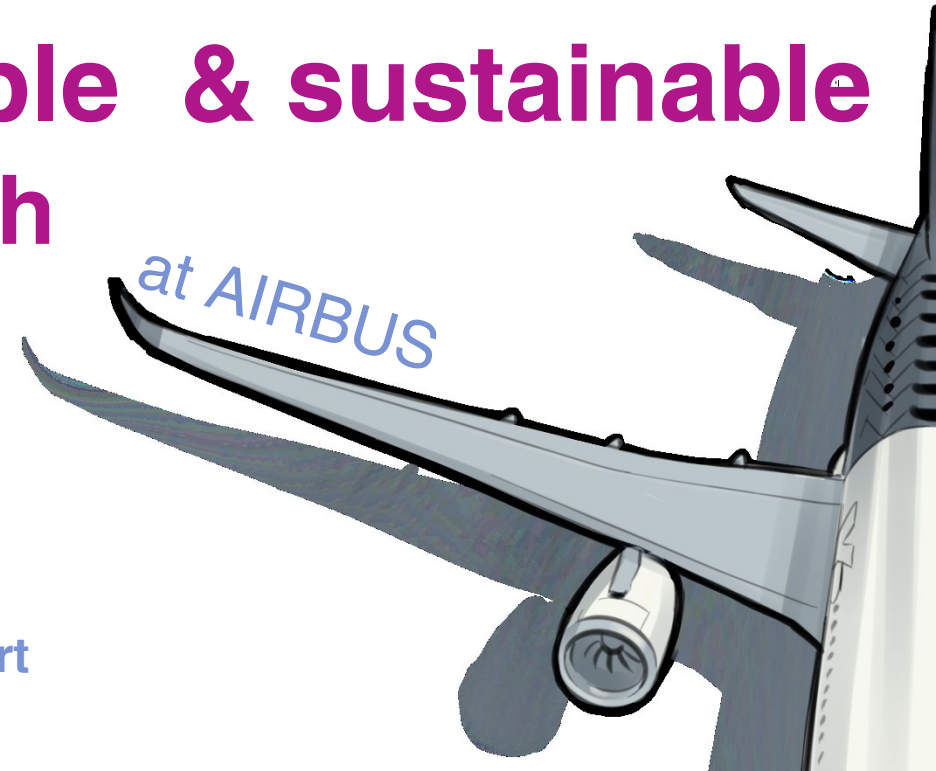




The key drivers for a valuable & sustainable HOF approach

at AIRBUS

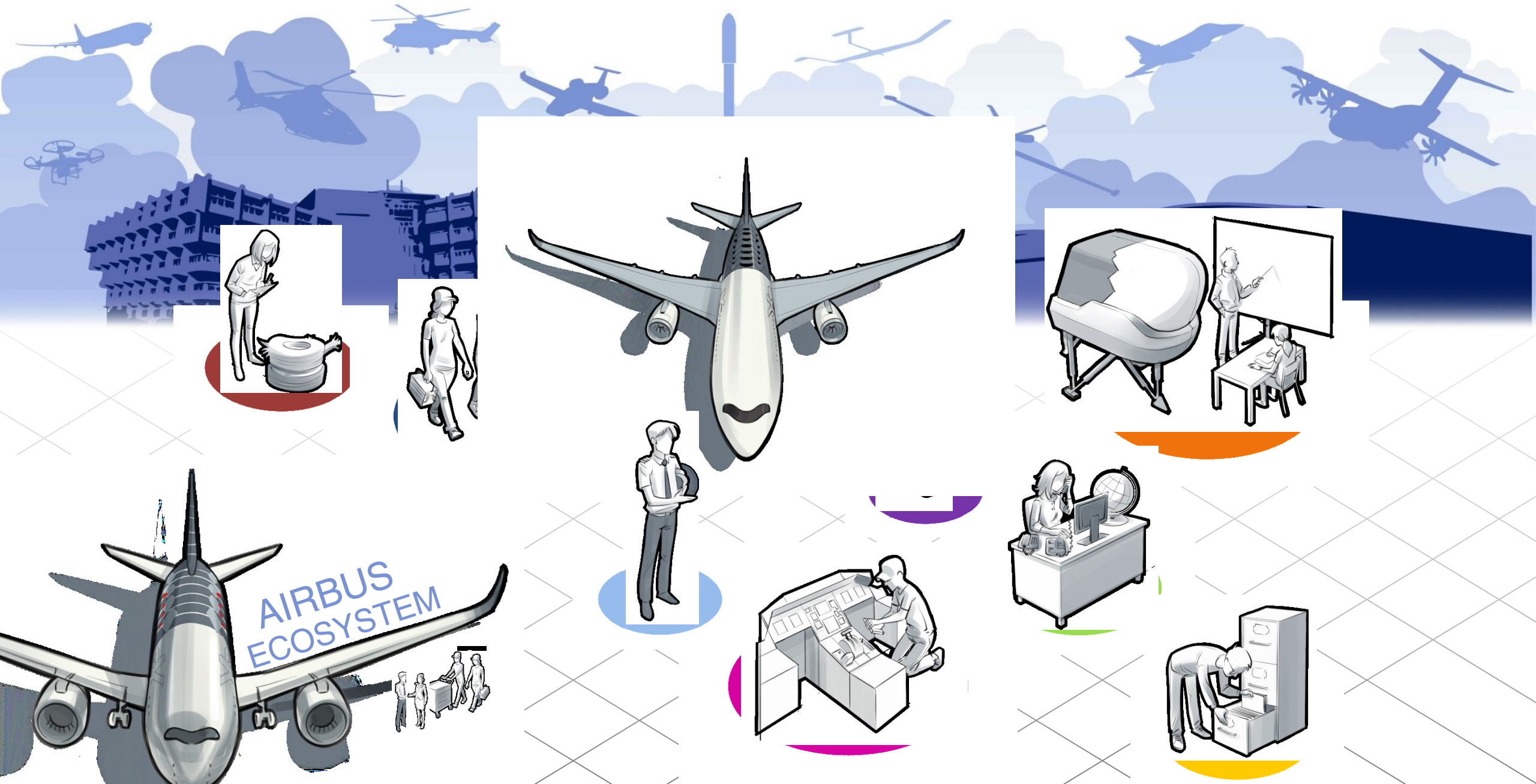
Dr FI Reuzeau
Human Factors Executive Expert
Jan 2018



Agenda

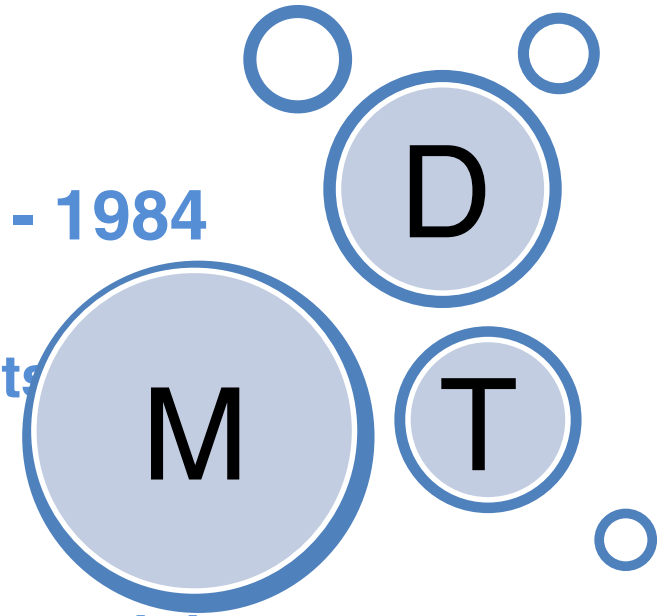
- **The History of HF at Airbus in a nutshell**
- **The 4 pillars of current success**
- **The pain points**
- **Common key success factors & discussion**

AIRBUS



The HF history in Airbus : the endemic questions .

- **The HF in Manufacturing/Manufacturing engineering - 1984**
 - Health and safety
 - Work analysis : New machines, Tools, buildings in the plants
- **The HF in Airbus Training - 1988**
 - Better understanding of learning behaviour to customize the training courses to pilot competence “patterns”.
 - Dedicated CRM courses or NOT
- **The HF in Product Design - 1993**
 - Safety matters
 - Rationalise the assumptions about “pilots’ expected behaviour”



The current scope of HF : objectives

- **The HF in Manufacturing**

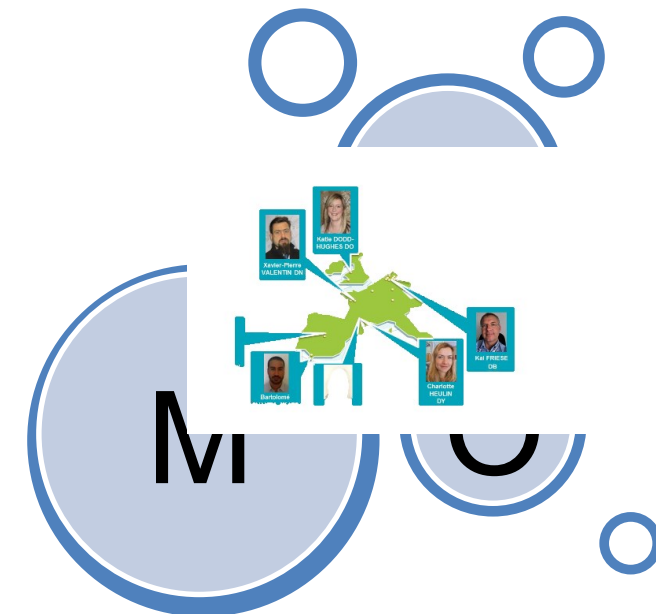
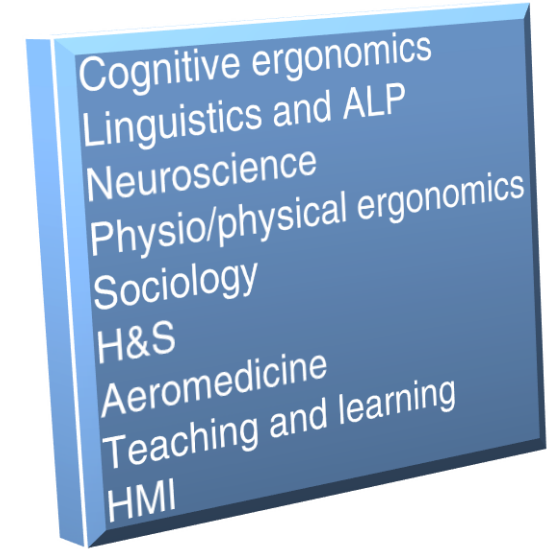
- Preventive & Corrective ergonomics in order to improve working conditions
- EMMA Screening (Ergonomics Risk Assessment Tool)
- Best practice sharing across Airbus, Airbus Group and external

- **The HF in Design and certification**

- Safe & Efficient
- Easy to use, to learn, & to support
- Pleasant to use
- Easy to design & to manufacture

- **The HF in Airbus Customer Services (Operations)**

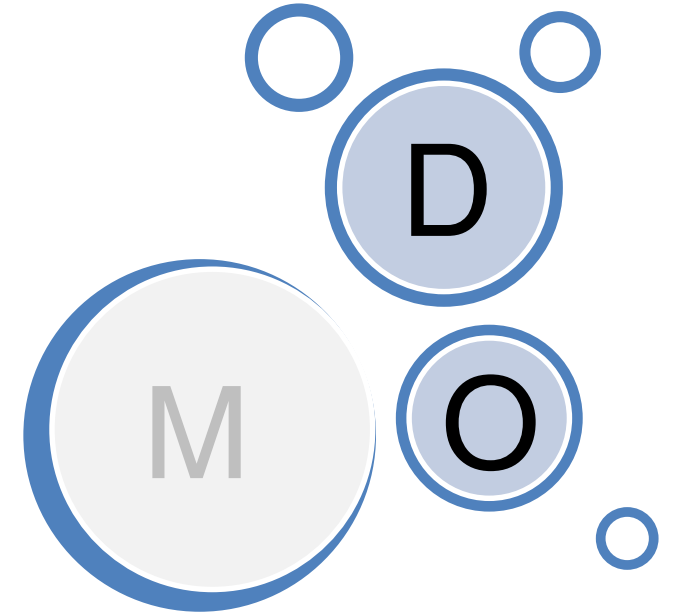
- Learning methods
- In service-event analysis



The 4 pillars of current success in FOH.

1_ obligations & external incentives

- **The certification rules**
 - Design certification: dedicated HF rules.
 - Operational certification
- **Strong recommendations**
 - HF processes (Sae 5056 : title)
 - HF requirements on dedicated technical solutions (HUD, Tactile..)
- **The national laws**



The 4 pillars of current success in FOH.

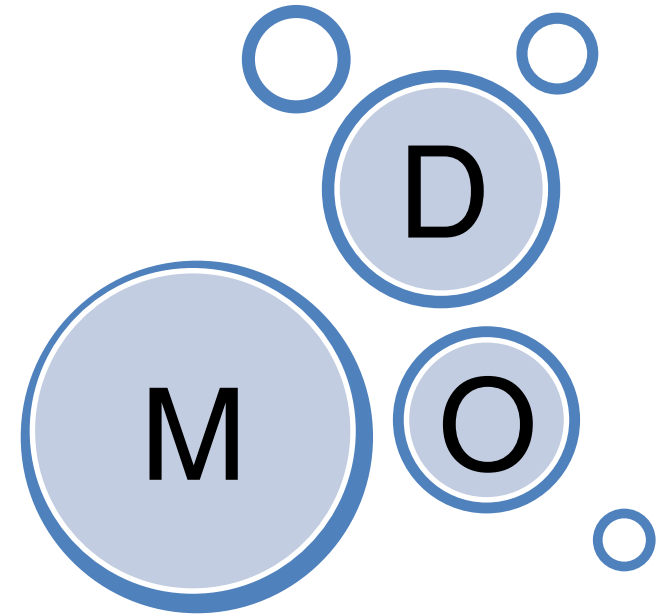
2_ HF processes embedded in the other Key Airbus processes.

- **The HF in design and certification processes**

- Iterative , systemic, systematic, early phase....
- End-users involvement, naturalistic scenarii
- Integrated and multidisplinary study
- Clear deliverables and responsibilities expected from HF team

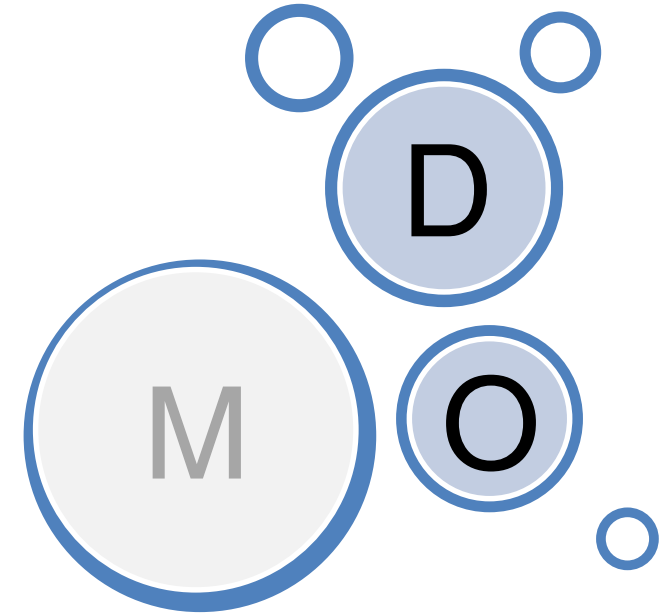
- **Embedded in Airbus major processes, Including HF in Product safety Process**

- **Addressing HF competences, resource model, interface with other processes**



The 4 pillars of current success in FOH. 3_ HF governance .

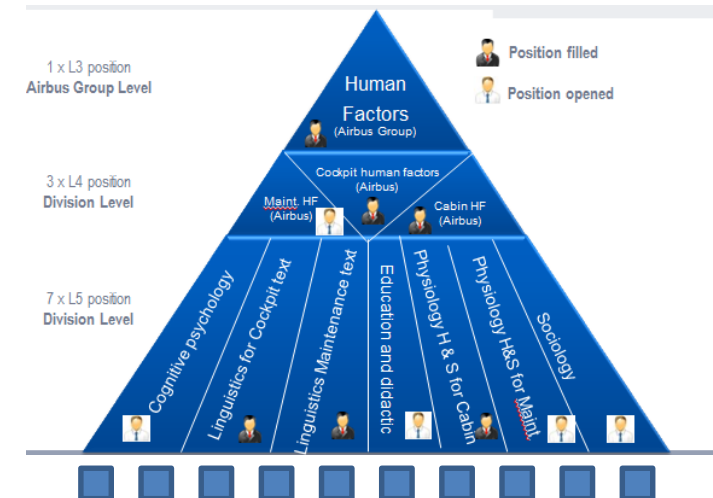
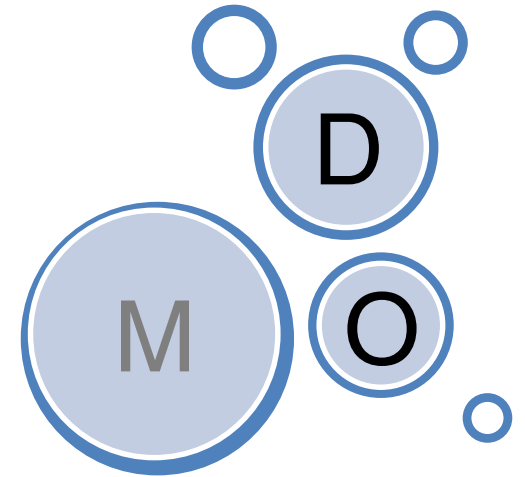
- **Engagement of the top management**
 - Decision board
 - Led by head of Engineering
- **Engagement of the HF expert community**
 - Decision committee
 - Lead by HF executive expert
 - ◆ Critical HF issues and Risk management .
 - ◆ Research strategy
 - ◆ How to enhance the HF impact on the business



The 4 pillars of current success in FOH.

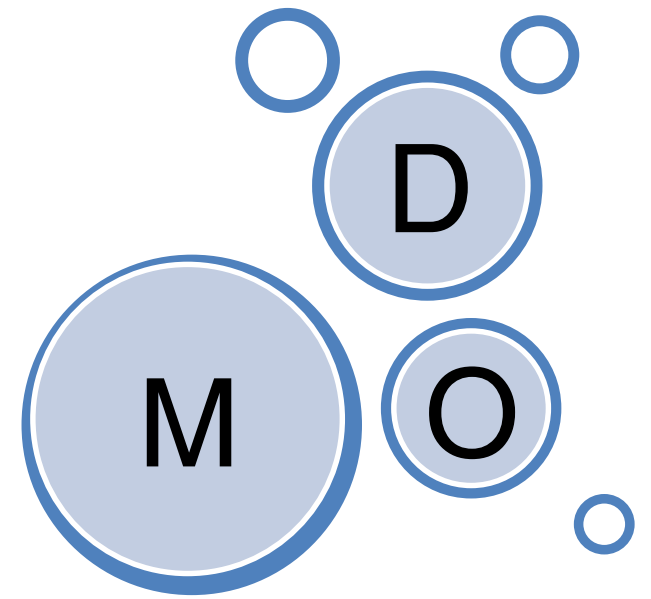
4_ HF competence management with Airbus.

- HF Competence plan
 - Education for a large number of Airbus employees and extended enterprise ?
 - A solid HF organisation with HF qualified specialists localised near the business
- The HF expertise network and organisation
 - Key positions : safety and customers impacts
 - Technical coordination
 - Adjustment : prestation...



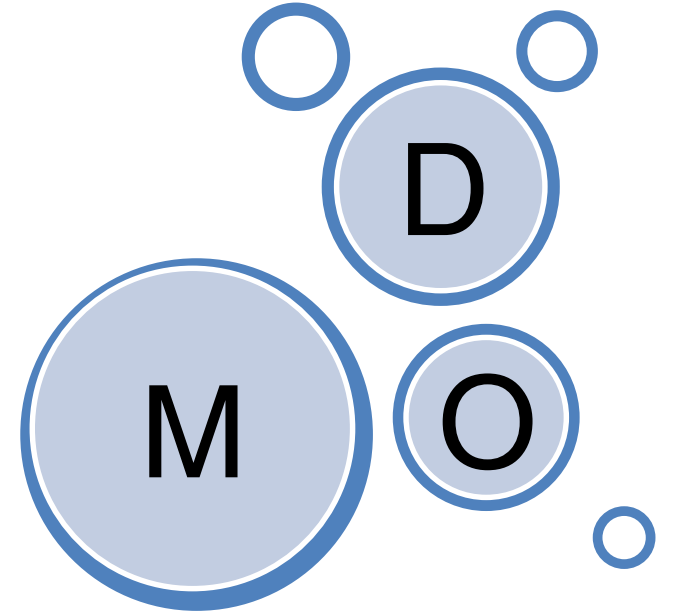
Pain points

- **The everyday Technical thinking**
 - Data/input for the design vs Human behaviour
 - Design-centered : “I expect that “the pilot will do that””
- **The unbalance between the weight of Engineers and HF communities: continuous age-old demonstration of HF added value**
 - Lobbying , communication ,
 - Risk management
- **Certification vs operational requirement ?**
- **Lack of HF value model .**



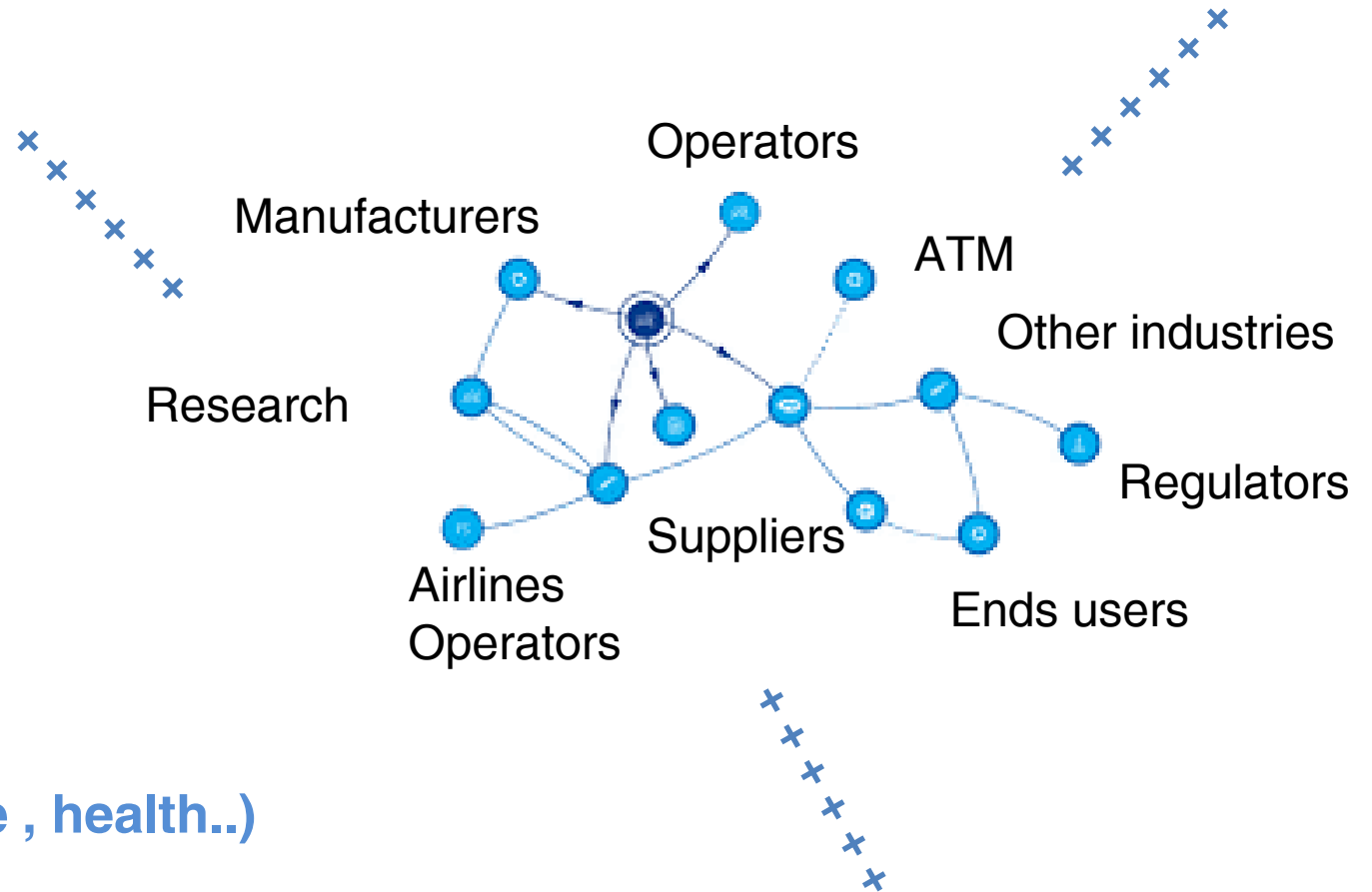
Common key success factors

- **A HF governance : to be IN.**
 - Power
 - Visibility
 - Legitimacy
 - Risk management
- **A HF process defined and declared as a major Company process.**
- **A HF Regulatory obligation on min Safety Standards (no prescribed solutions).**
- **A HF value model**
 - To speak the same language as the decision makers.

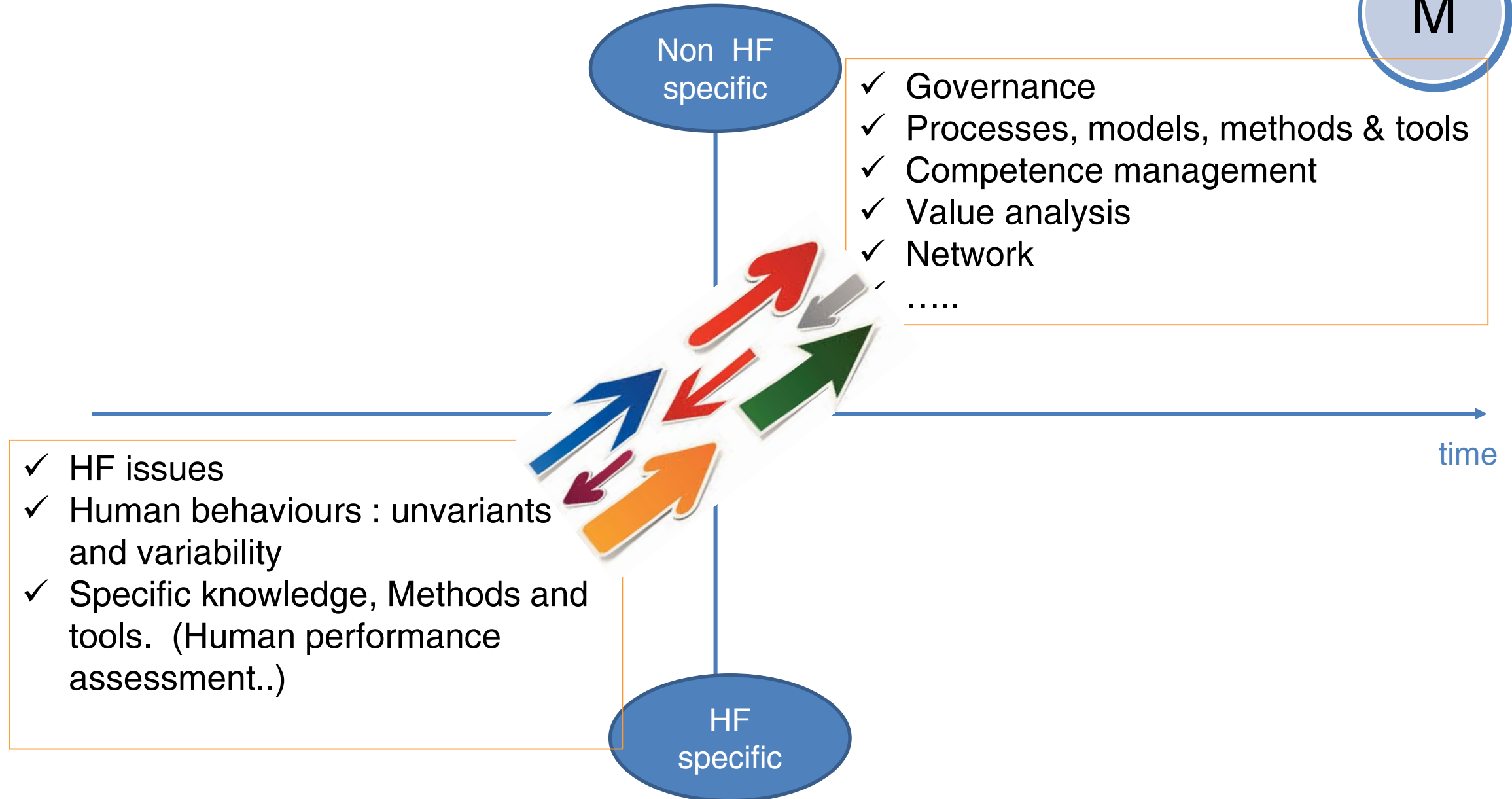
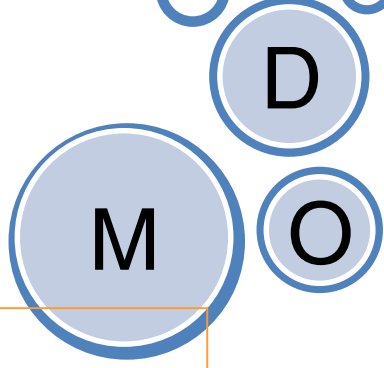


Recommended principle _ Be the (co)-leader of the big HF related change in society

- Neurosciences
- Human and robots
- Digital human
- More autonomous something
- AI , virtual assistant
- Human monitoring (performance , health..)
-



Discussion : Maturity of HOF approaches



AIRBUS



ANY QUESTIONS?

