

Aeronautics Research & Testing Infrastructures

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ACARE WG 5 Chairman

EREA Chairman

Knowledge for Tomorrow



Association of
European Research Establishments in Aeronautics



Motivation

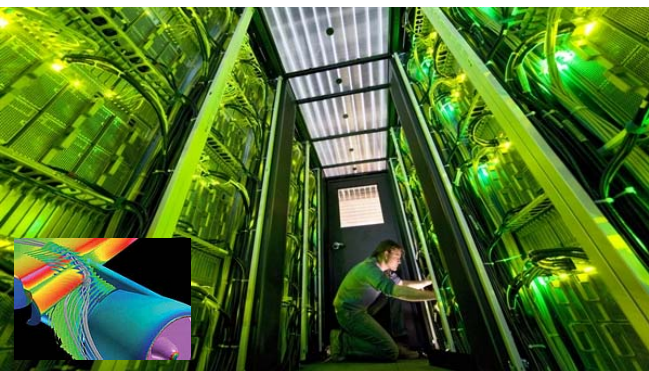
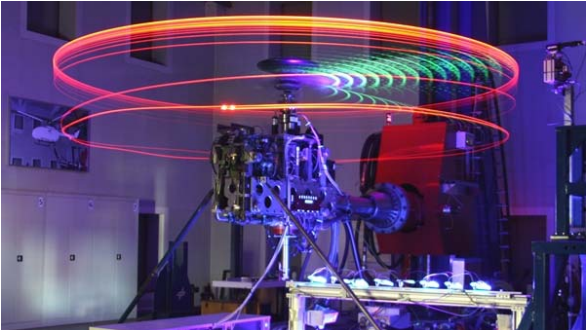
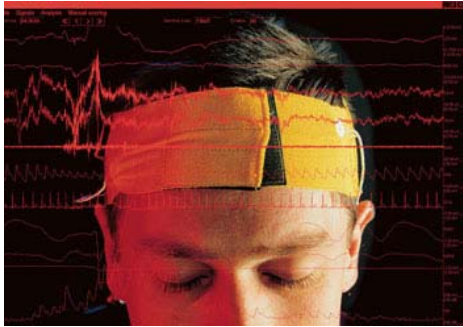
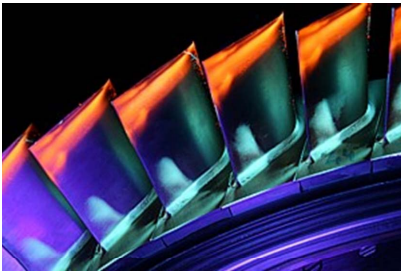


Flightpath 2050:

- *“Strategic European aerospace test, simulation and development facilities are identified, maintained and continuously developed”*
- *“The ground and airborne validation and certification processes are integrated where appropriate”*



Aeronautics Research Infrastructures



What Makes an Infrastructure *Strategic*?

The Goal-oriented Approach

AirTN: Financial figures

EC: „Level playing field“

IEG:

- **Size**
- **Uniqueness**
- Precision
- Sophistication
- User's expectations/
experience
- Timeframe according to
Horizon 2020++

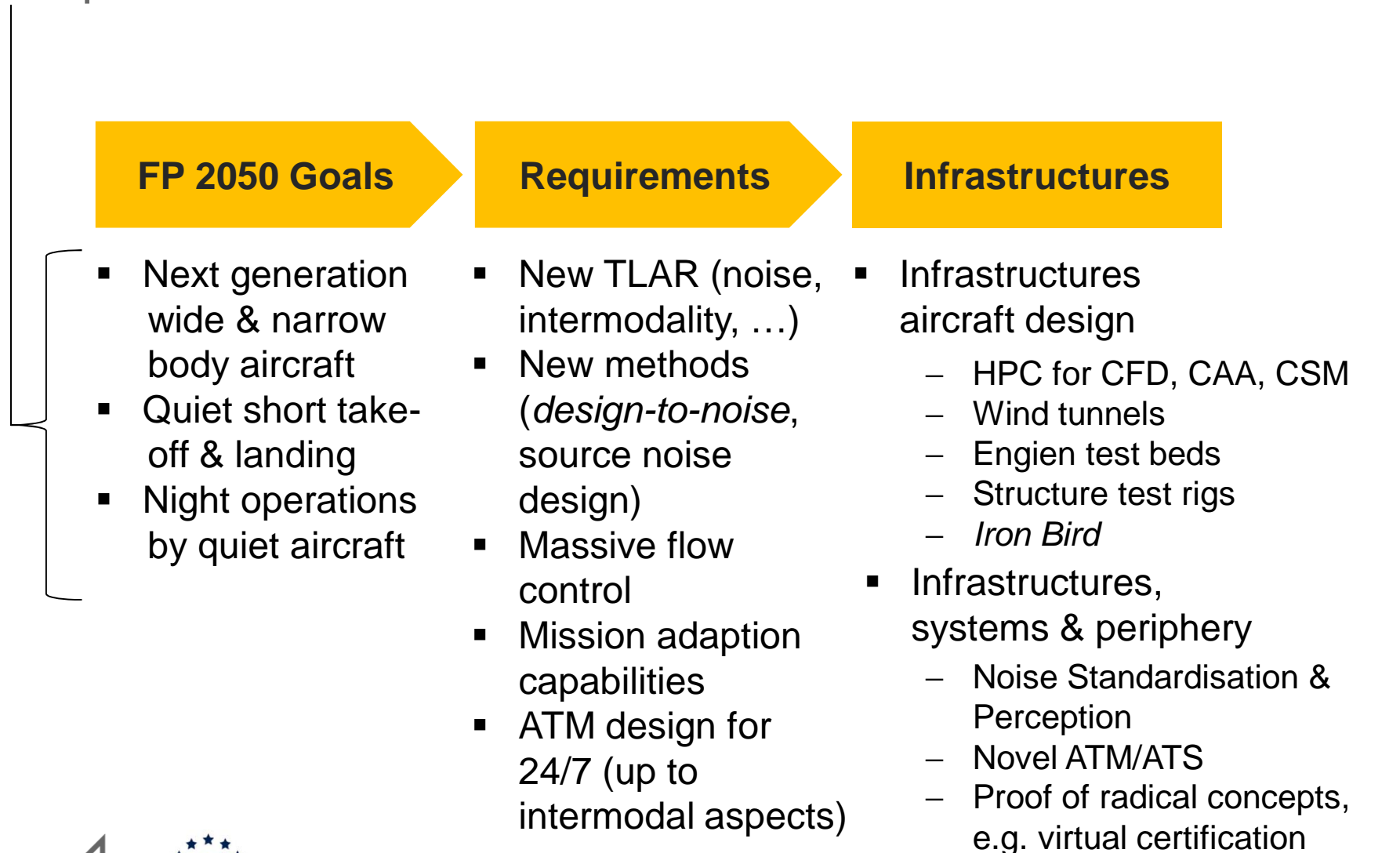
**Alignment with ACARE
Flightpath 2050 goals**

- Responsibility towards
society
- Finding solutions beyond
aircraft
- European competitiveness
- **Facilities + abilities =
capabilities**
- Rating
- Availability
- Capability gaps

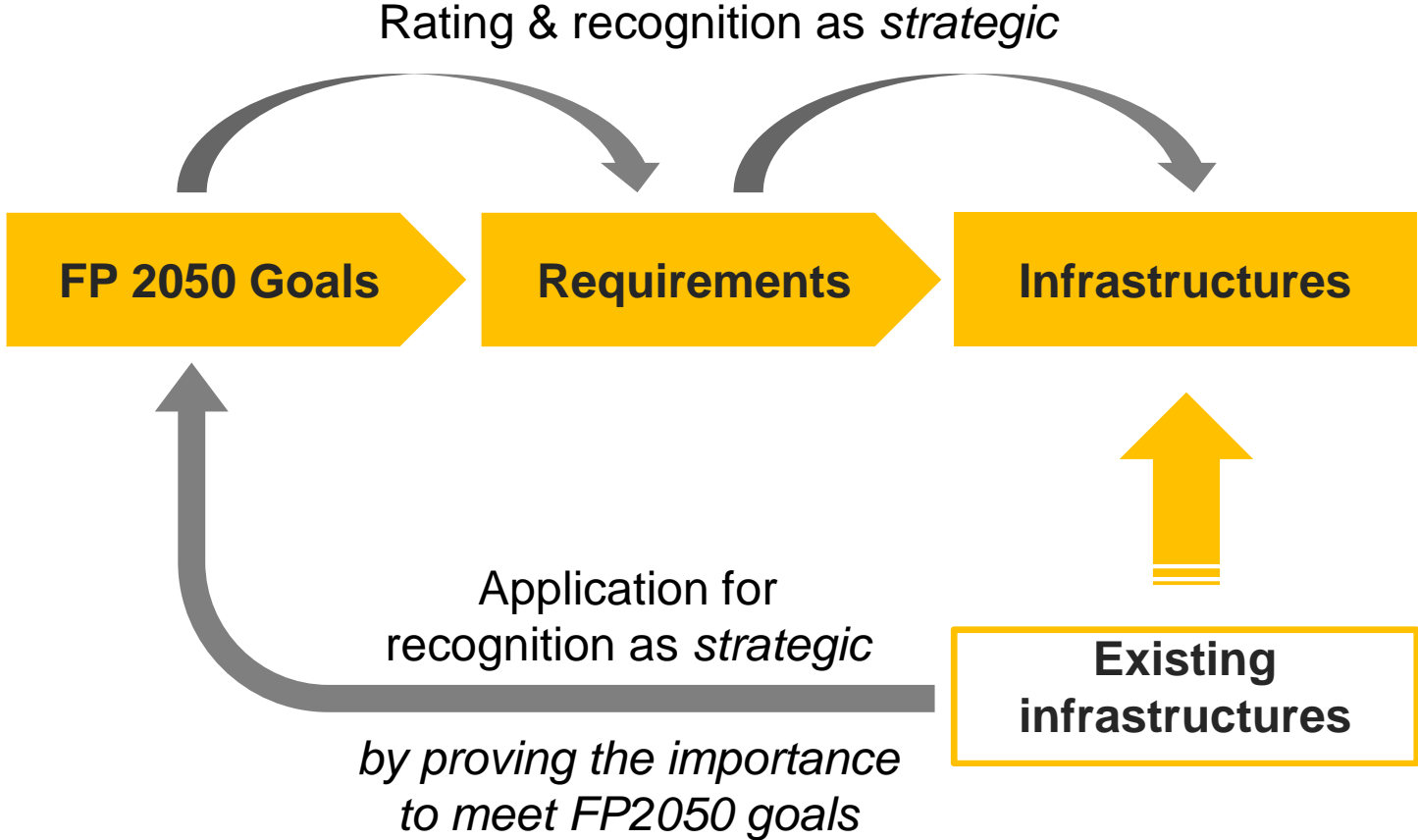


Derivation of *Strategic* Infrastructures from FP 2050

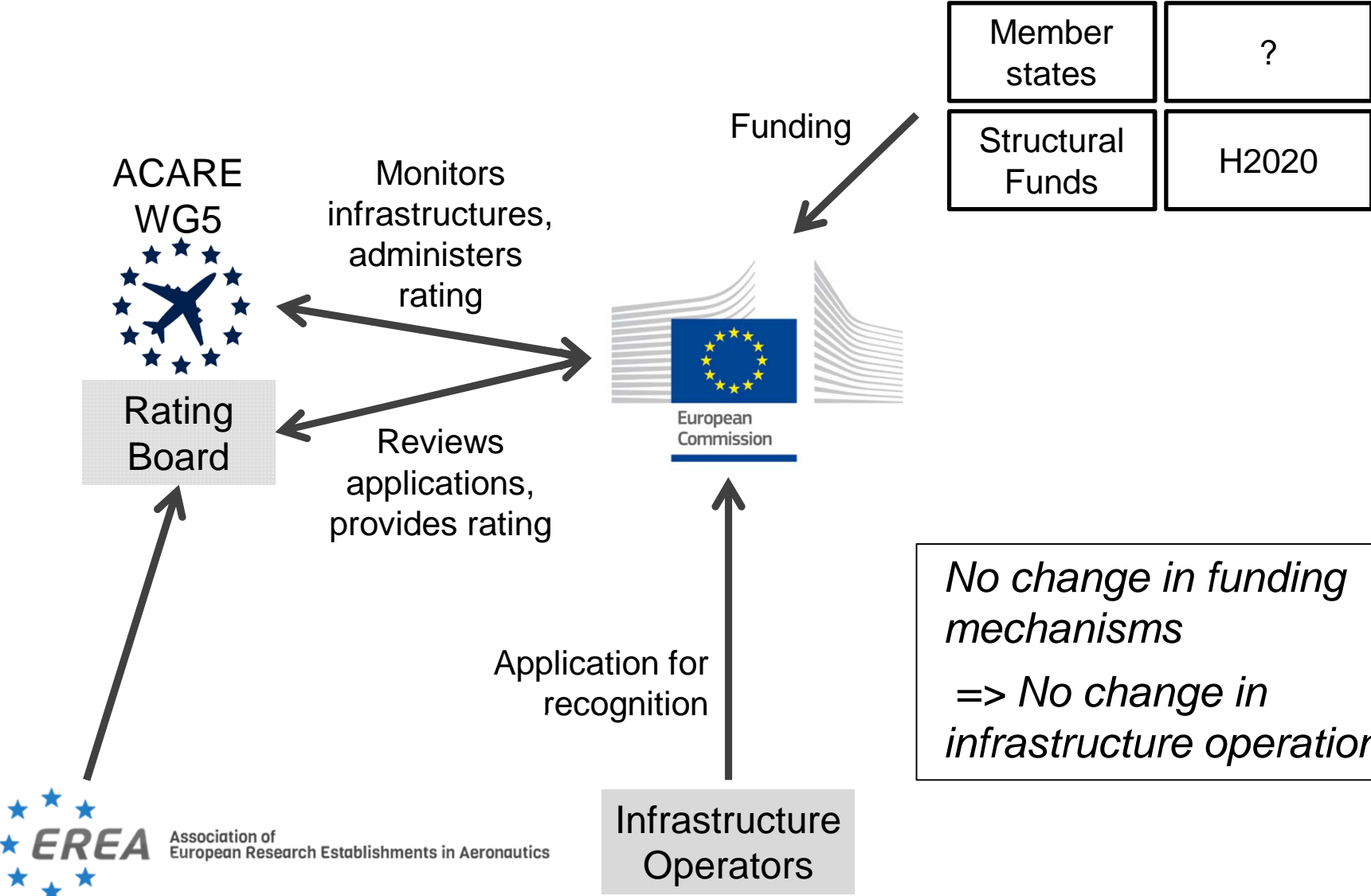
Example: The 24/7 Aircraft



Recognition of Existing Infrastructures



Stakeholders



Member states	?
Structural Funds	H2020

*No change in funding mechanisms
=> No change in infrastructure operations*

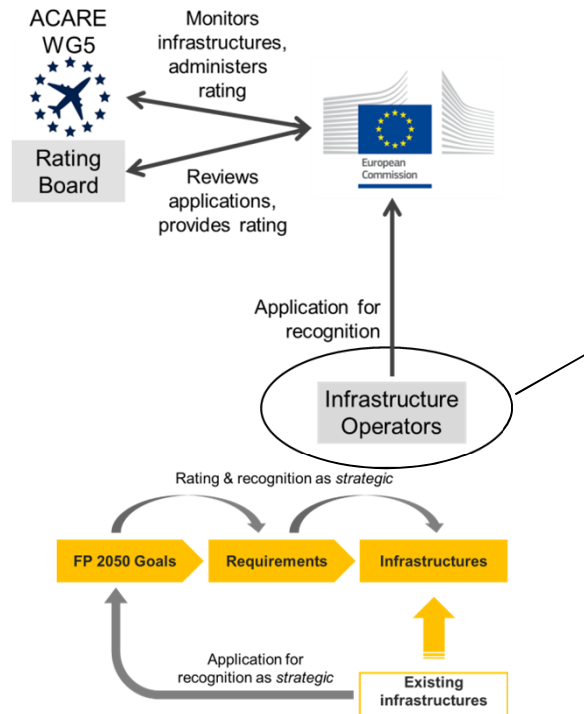


Example: The DLR Research Helicopter FHS



DLR Project: Co-Operation with Liebherr on EC 135 with two active sidesticks, funded by the German Agency for Military Procurement (BWB / BAAINBw) in 2009

FP 2050: “Special mission flights can be completed in the majority of weather, atmospheric conditions and operational environments” => **FHS with EFCS needed!**



w/o EU activity, e.g. specific funding:

Decision on FHS solely depending on DLR budget.

FHS vital for FP2050 goals, but may be not available if DLR cannot afford it.



Summary

- Infrastructure is „strategic“, if vital for achieving FP2050 goals. Pure existence or installation cost not a value in itself.
- Need to identify aviation research infrastructure in total, not only wind tunnels.



- Group needed to identify strategic aviation infrastructure according to FP2050. Recommendation: EREA (operators) plus ACARE WG 5 (incl. EC) in charge
- In parallel: infrastructure operators should prove their contribution to achieve FP2050 goals.
- *No change in funding mechanisms => no change in infrastructure operations*





Flightpath 2050 Europe's Vision for Aviation

Report of the High Level Group
on Aviation Research