

Airbus Engineering unlimited
performance inspired

Centre of Competence Systems

11th European Mechatronics Meeting

Strategic View on Products & Operations

Presented by

Jean-Pierre Métivier / Vice-President Strategy and Integration of Aircraft Systems

Aviation is a major driver of the world economy

2,681,000,000

passengers carried in 2010

\$5.3 trillion

*worth of cargo shipped by
air in 2010*

Globally
contributes

56.6^{million}

Job supported
World-wide

\$2.2^{trillion}

Aviation's global
economic **impact**

19th

If aviation was a
country ranked
by **GDP**

In the next 20 years

- Air traffic will double
- Over 28,000 new aircraft
- With a market value of \$4 trillion

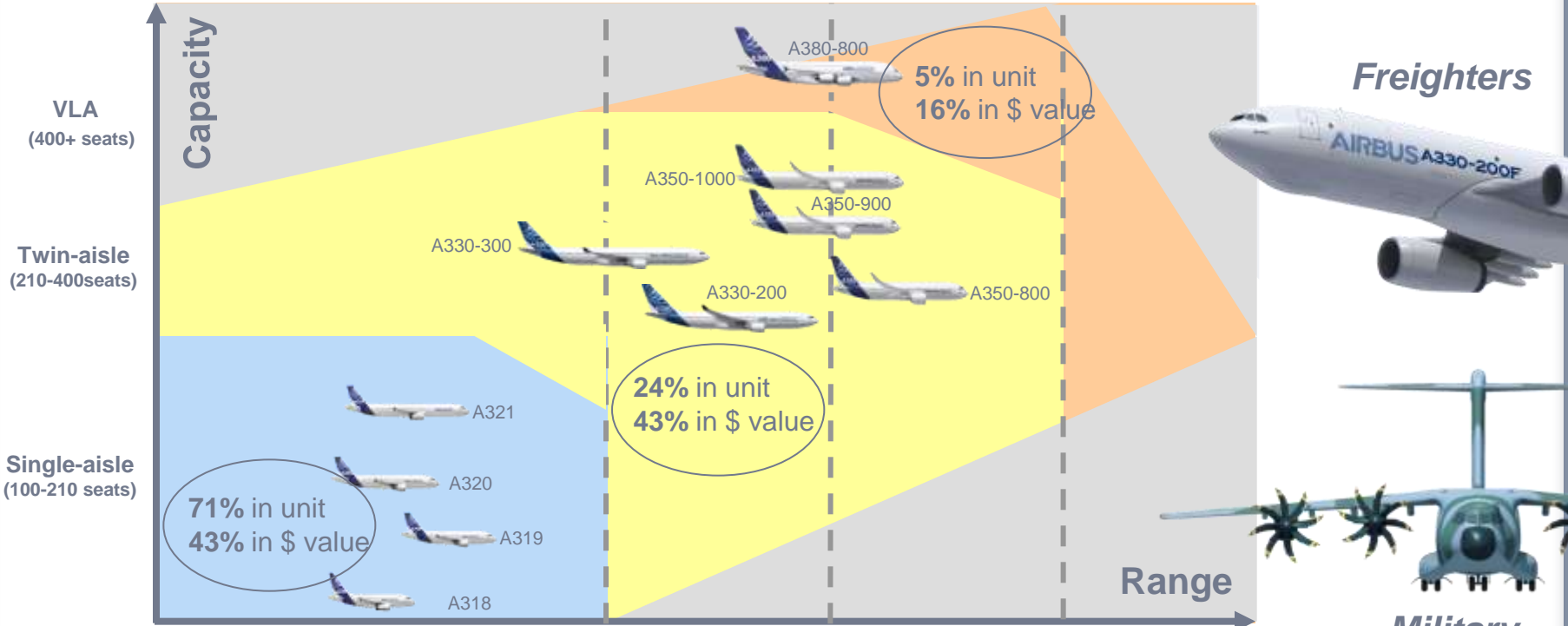


Air transport growth is highest in expanding regions



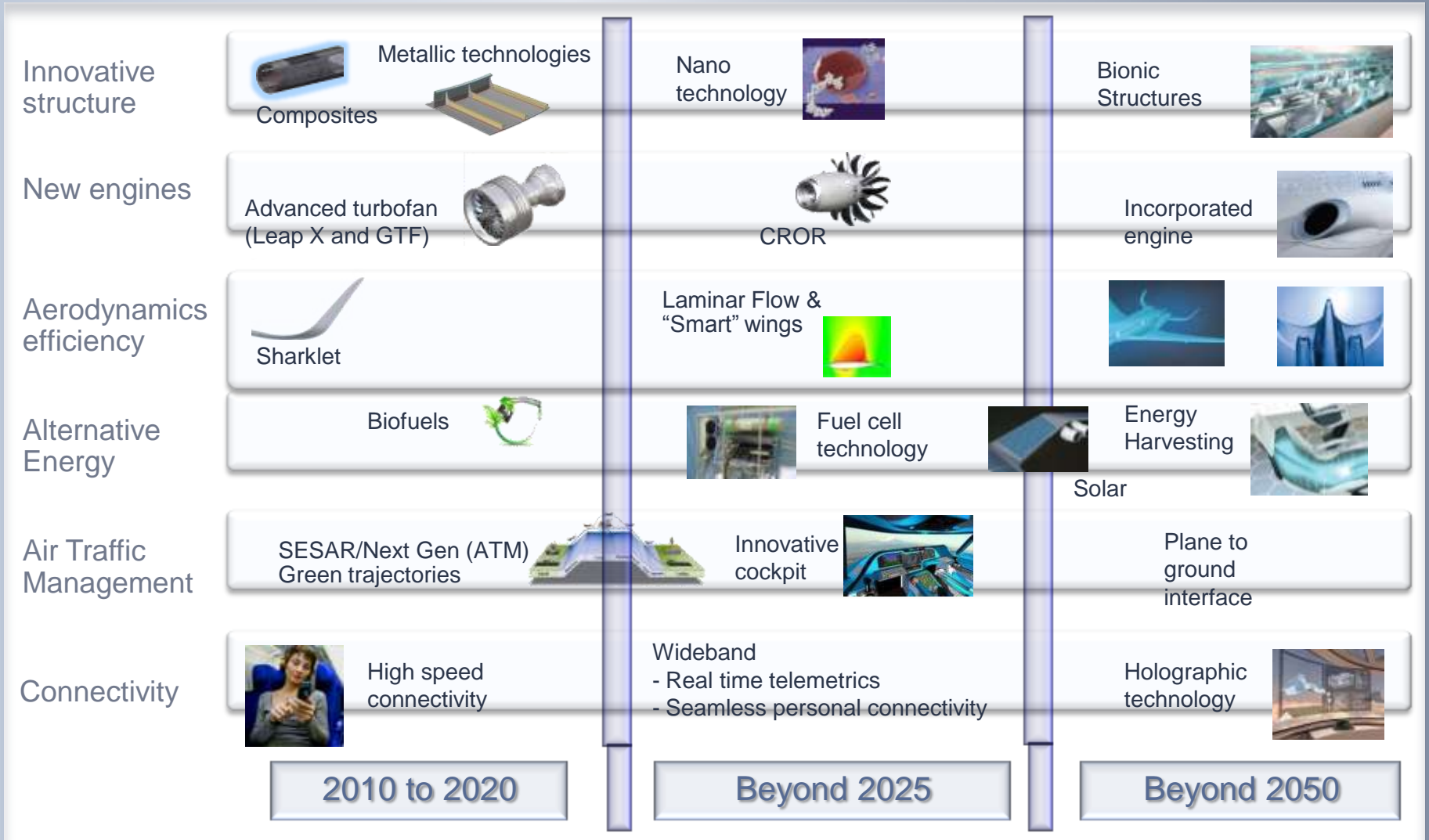
Billions of people will increasingly want to travel by air

Key market segments



Short (<3,000nm)	Medium (<5,000nm)	Long (<7,500nm)	Ultra Long (7,500nm +)
Single-aisle	Twin-aisle	VLA	
Market		Market	
Total Demand: 19,418 (71%)		Total Demand: 1,332 (5%)	
Total Demand: 6,497 (24%)			

Future trends – New technologies

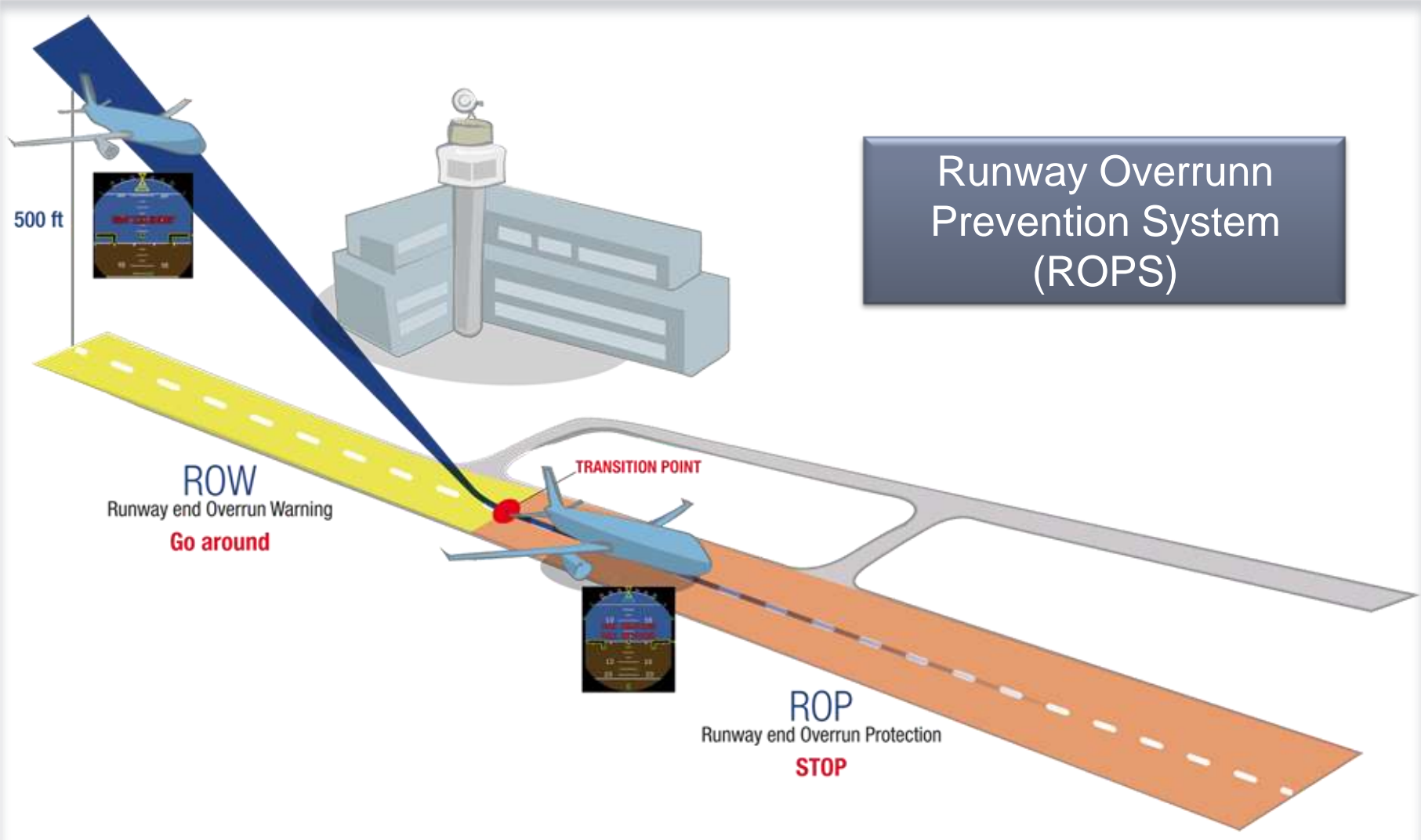


Mechatronics – A Definition

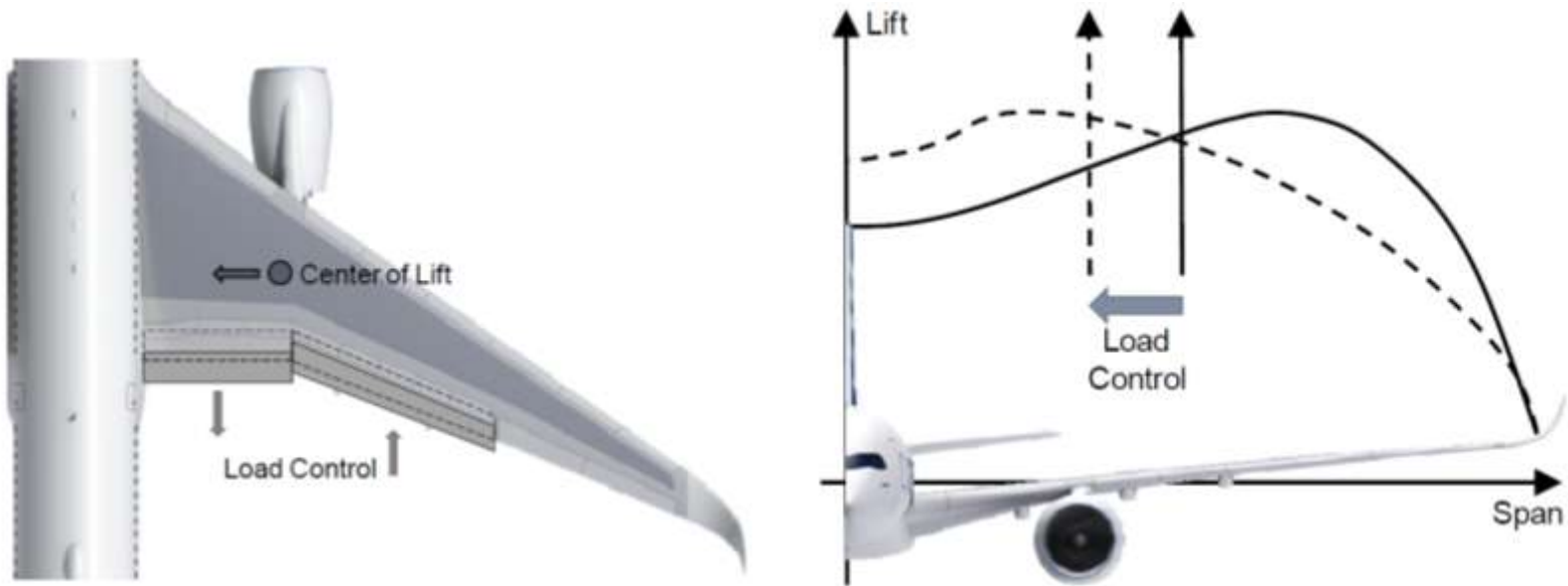
« approach aiming at the synergistic integration of mechanics, electronics, control theory, and computer science within product design and manufacturing, in order to improve and/or optimize its functionality »



Mechatronics ... for enhanced safety



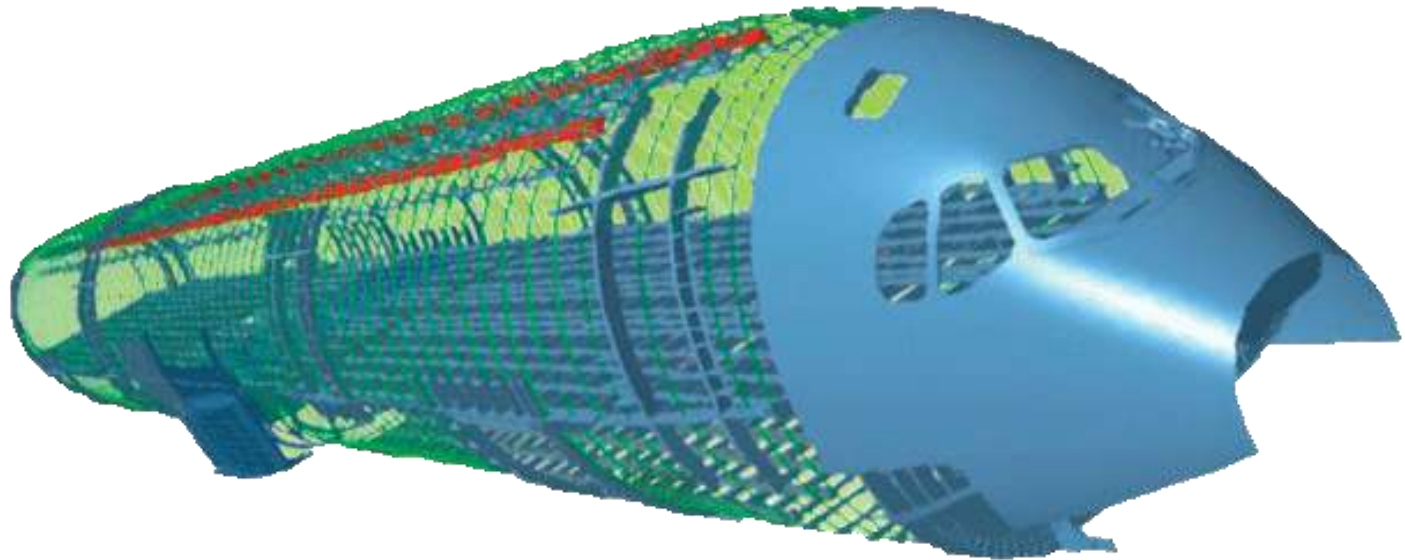
Mechatronics ... for enhanced performance



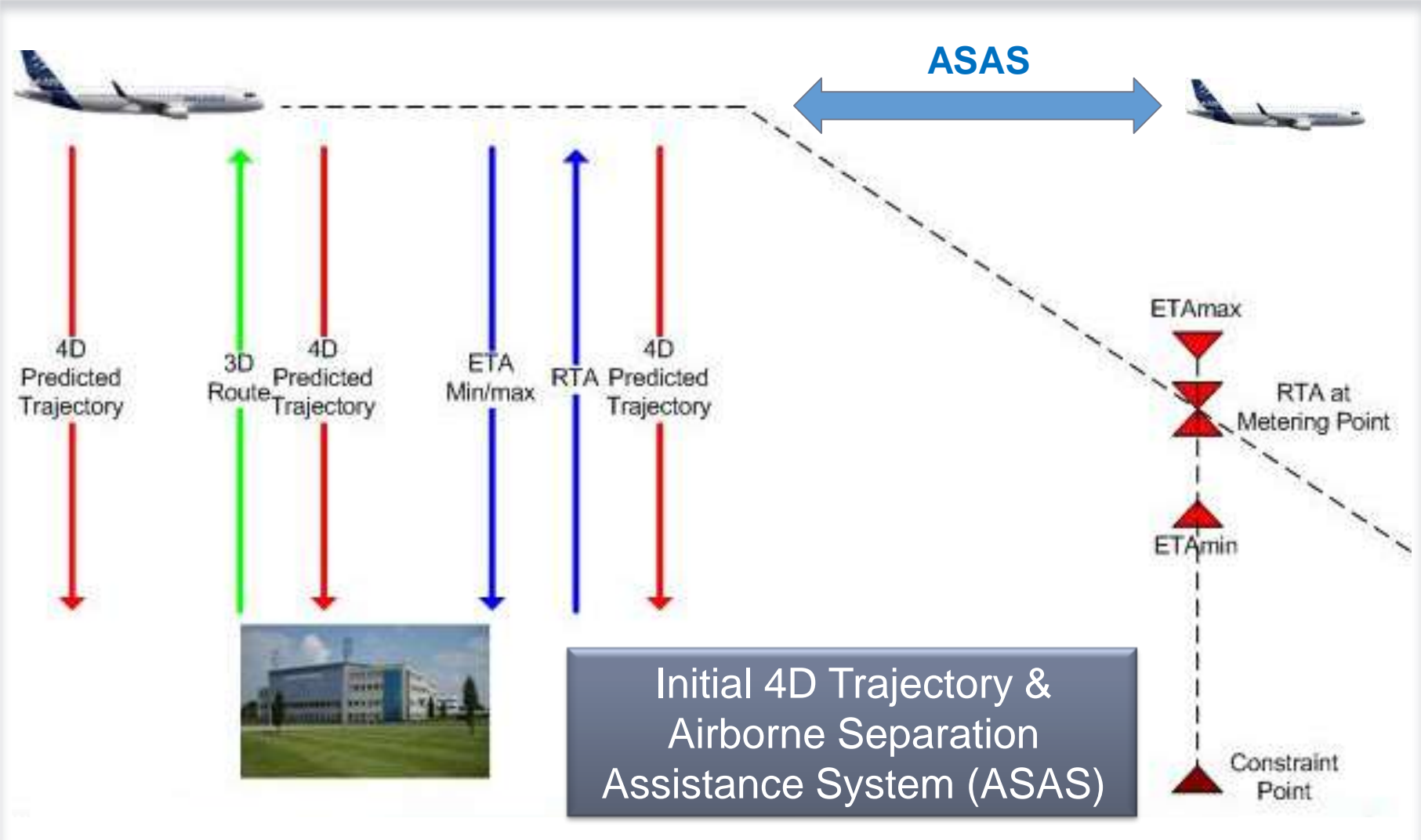
A350 Aerodynamic Performance and Load Optimisation thanks to Differential Flap Setting (DFS) and Variable Camber (VC)

Mechatronics ... for advanced functions

A350 Electrical Structure Network (ESN)

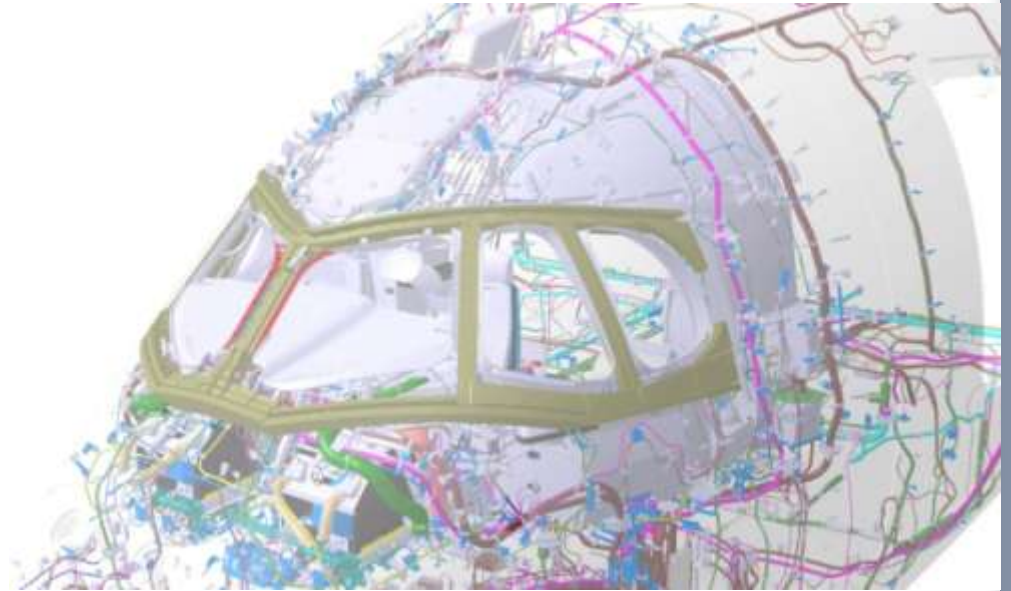


Mechatronics ... for better integration



Conclusions

Today's challenge is in conducting truly **multi-disciplinary**, collaborative research, to ensure **aircraft level optimisation** which will deliver the **performance step change** required for tomorrow's aircraft.





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