

SLING



Dnevi SLING

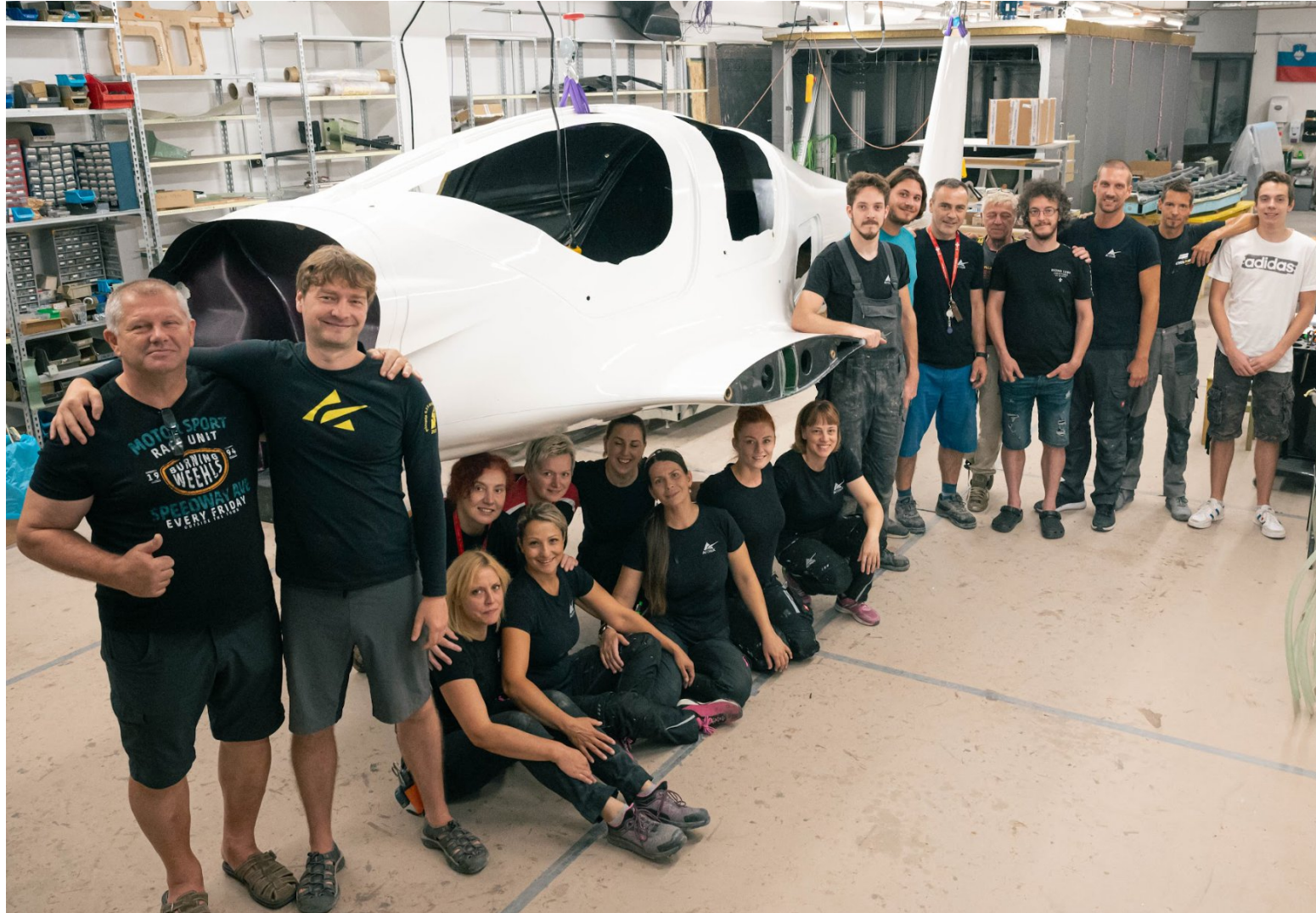
HPC ZA INOVATIVNE KONFIGURACIJE V LETALSTVU

5. december 2024

THE PRESENTER

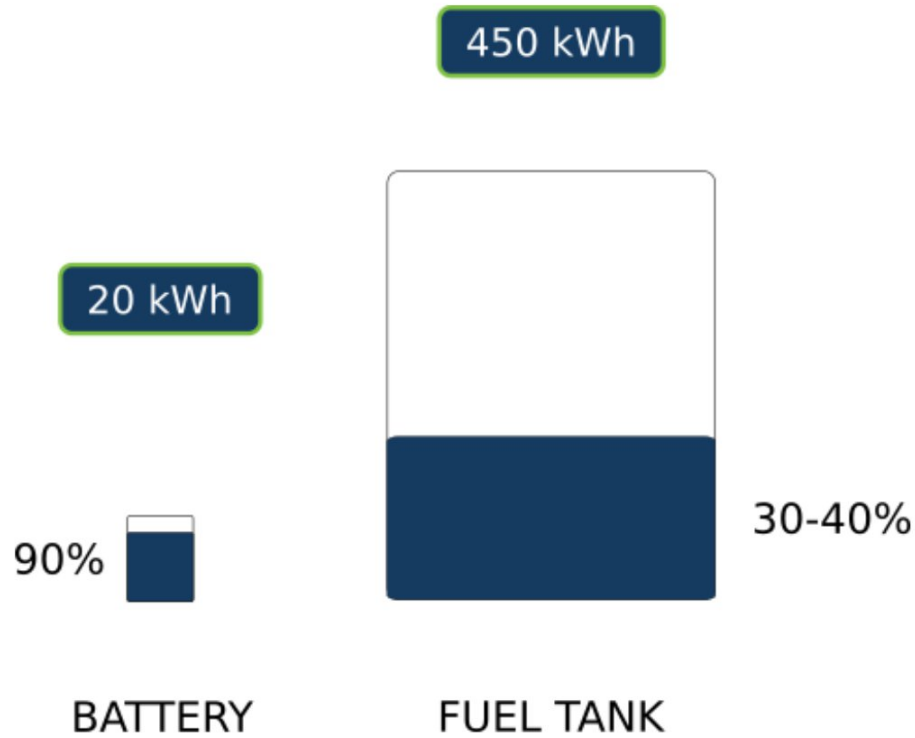


AFormX - THE TEAM



AIRFRAMING
SIMULATIONS

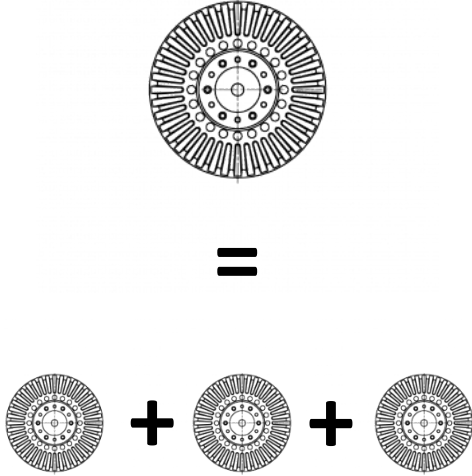
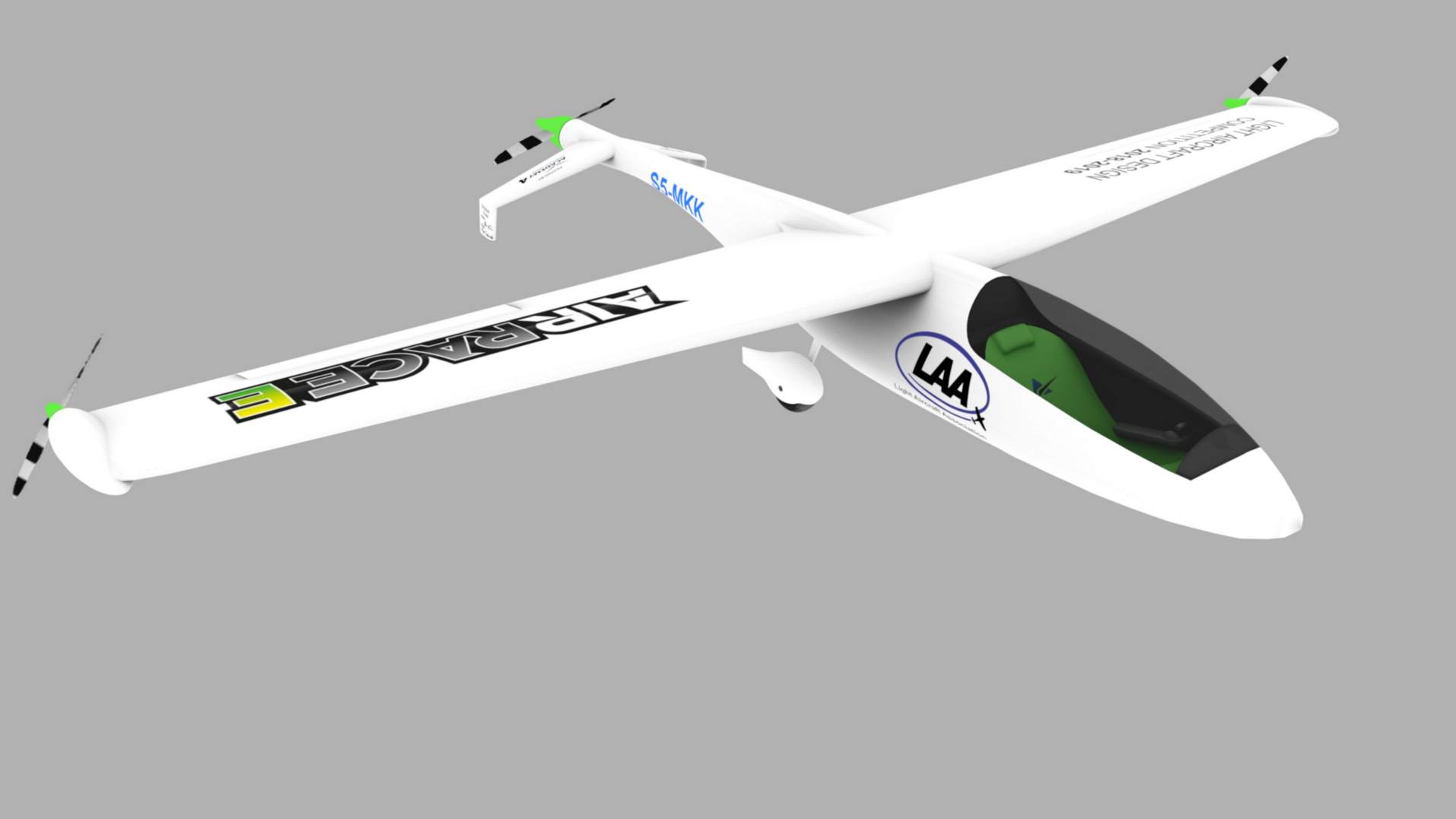
THE CHALLENGE



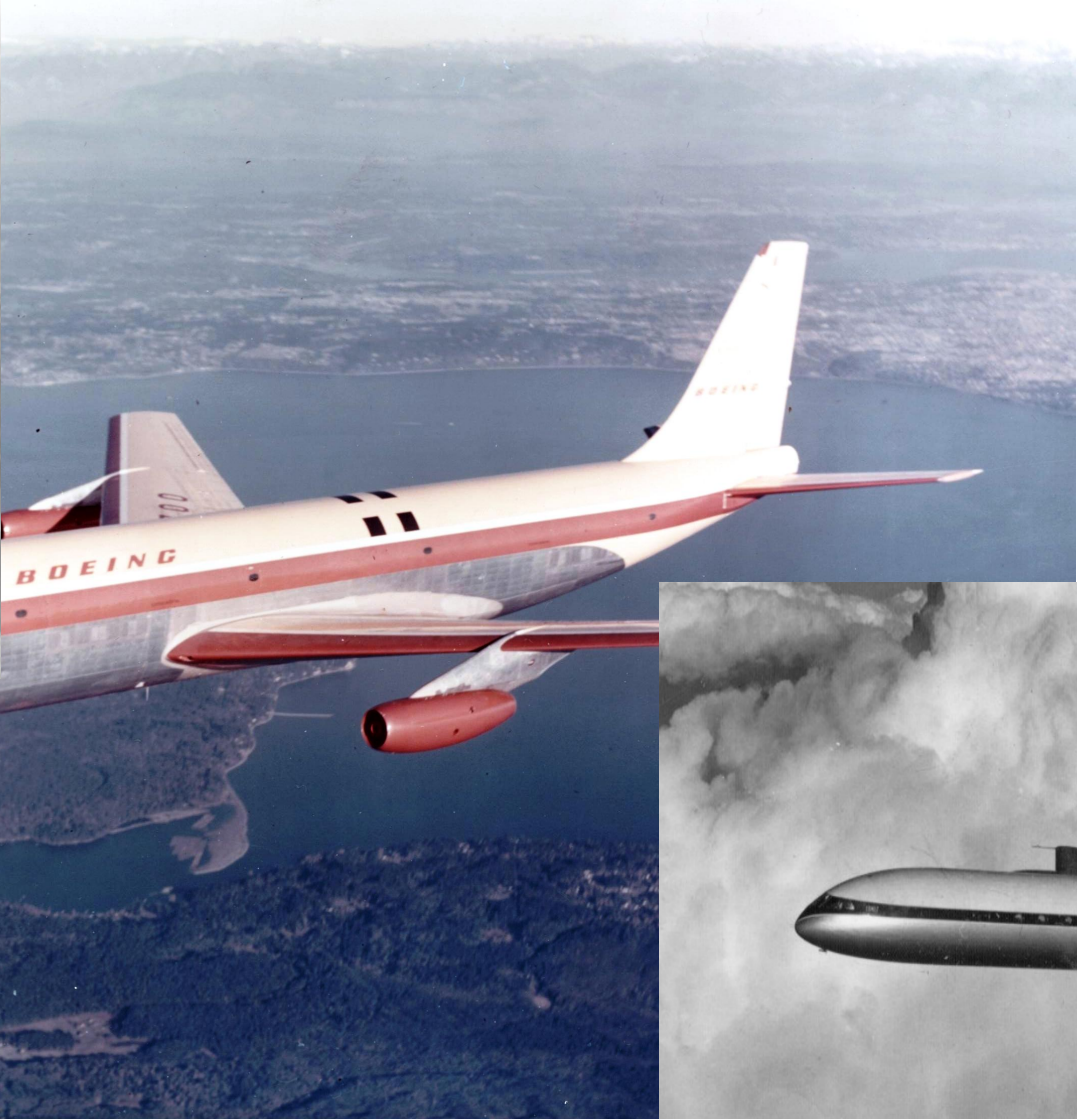
THE CHALLENGE



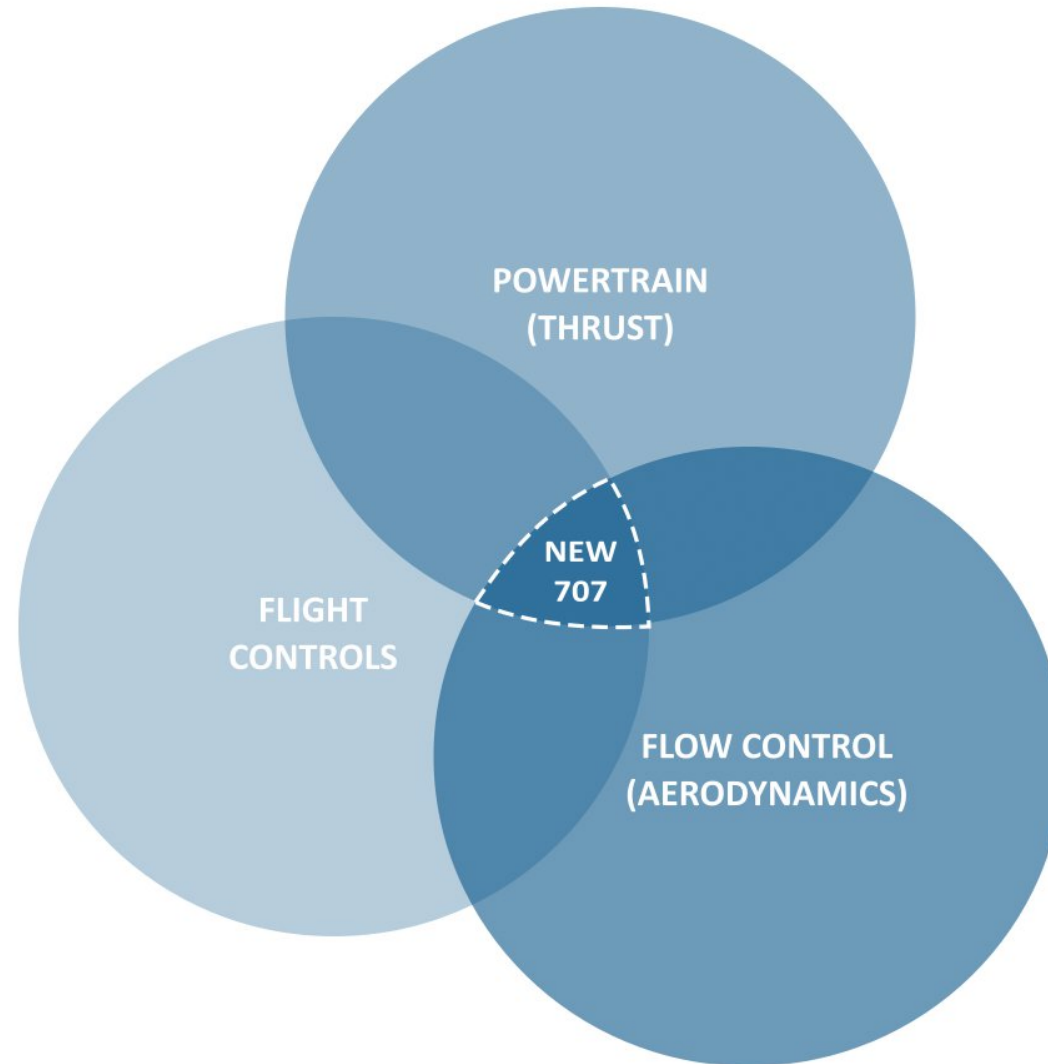
THE CHALLENGE



THE CHALLENGE



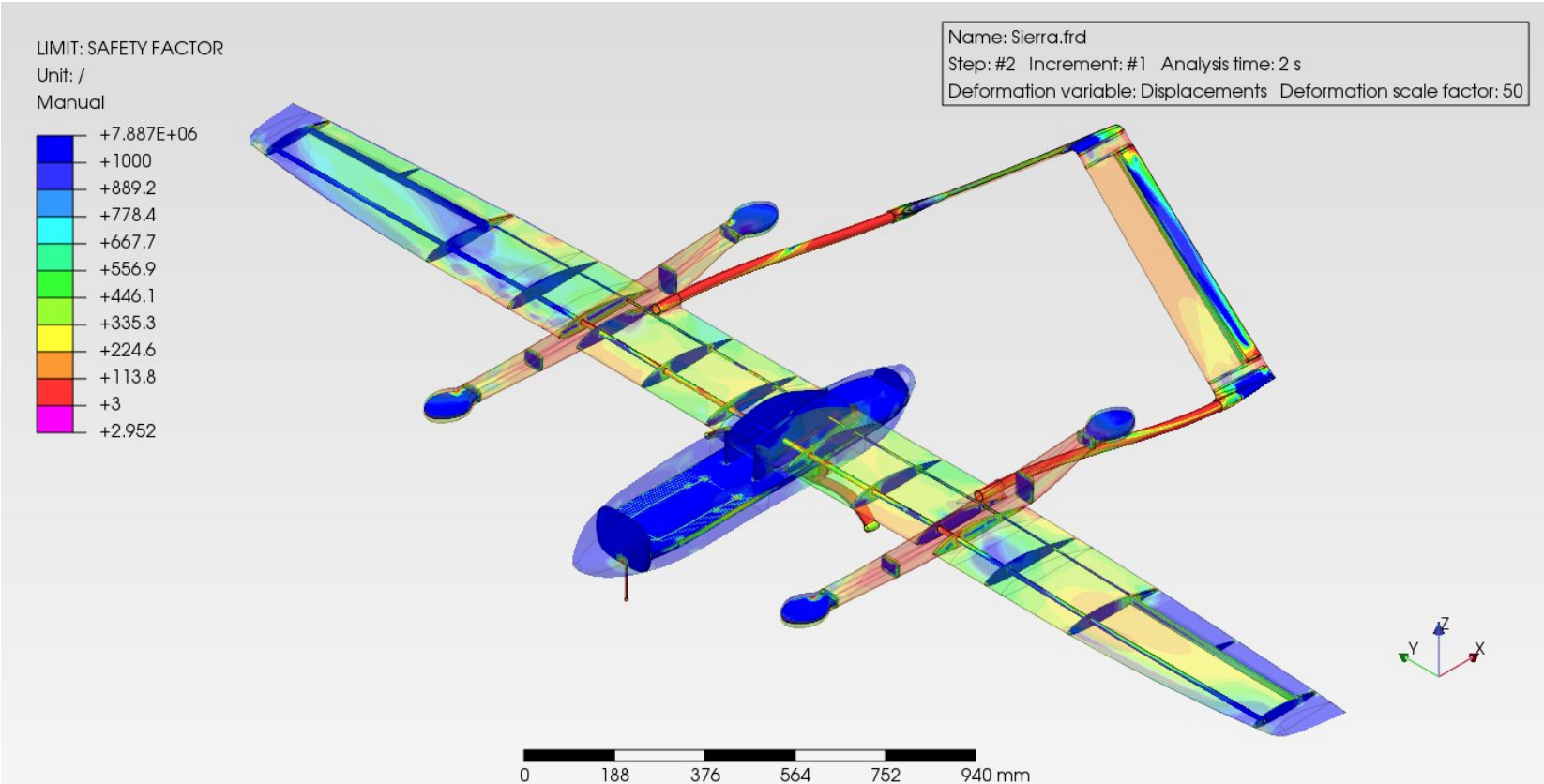
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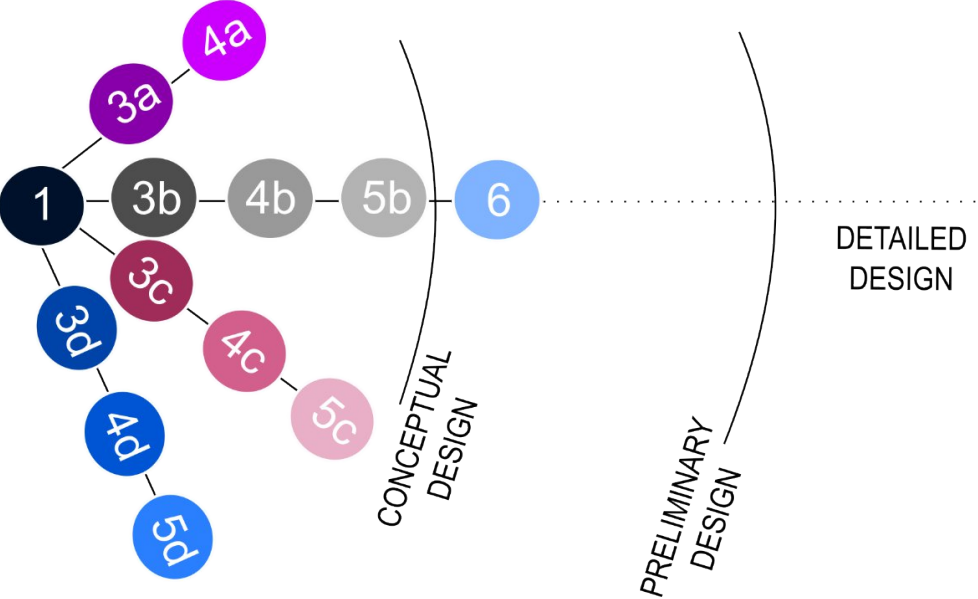
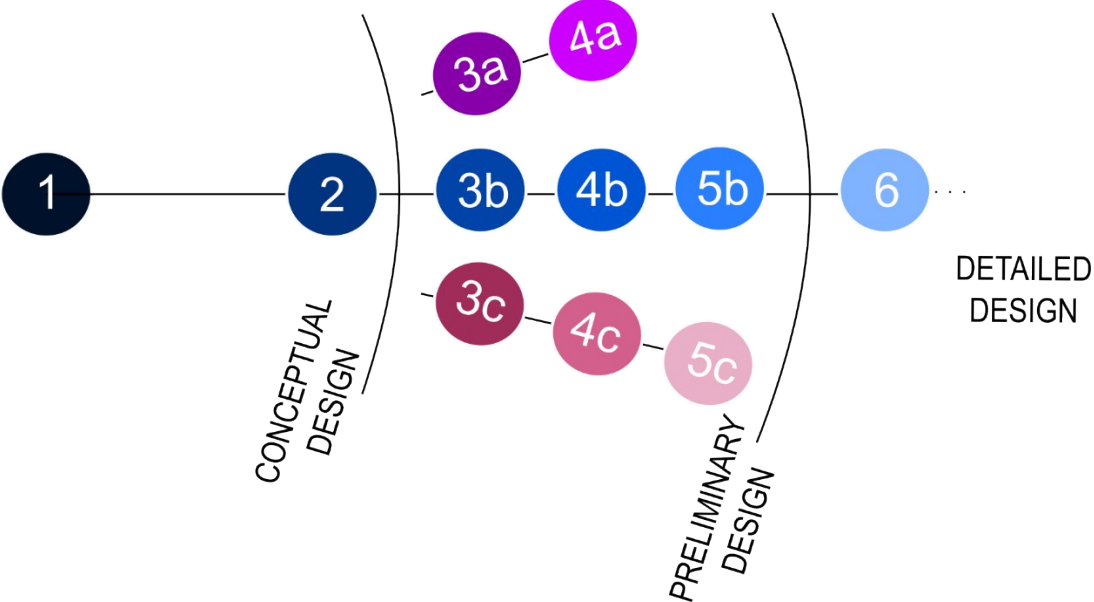
THE CHALLENGE



THE CHALLENGE



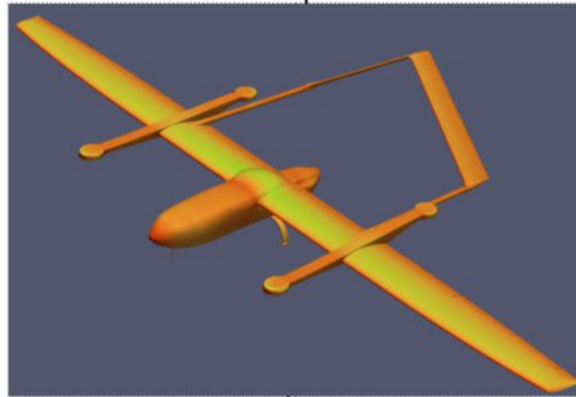
THE CORE IDEA



RESULTS

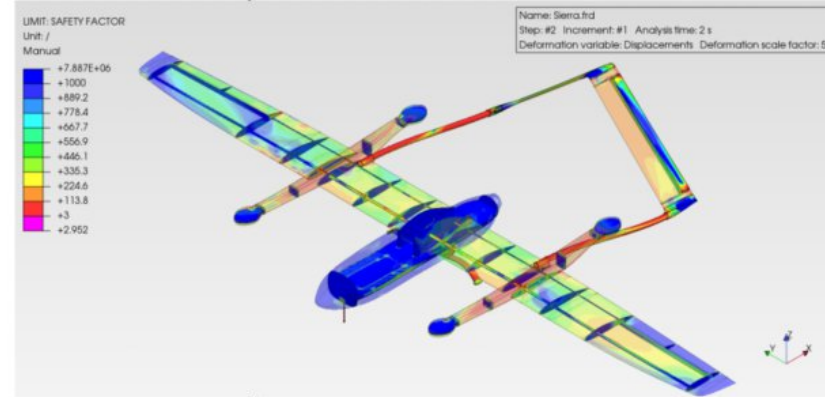
INPUT

THE OUTSIDE SHAPE IS DELIVERED BY THE AERO SECTION
PRODUCT DESIGN DEFINES A FEW KEY POINT IN FLIGHT ENVELOPE
PRODUCT DESIGN RESERVES VOLUMES IN THE AIRFRAME

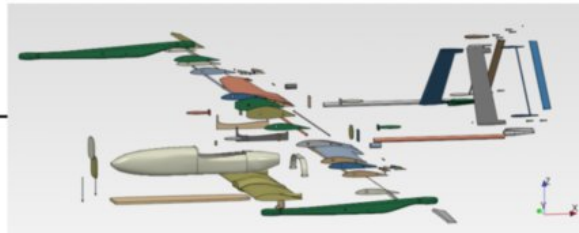


CFD (HPC) ANALYSIS OF THESE KEY POINTS
OpenFOAM®

ENSEMBLE OF REPRESENTATIVE LOAD CASES
CalculiX
POINT LOADS
AREA (PRESSURE) LOADS
INERTIAL LOADS



A FEW BASIC INTERNAL STRUCTURES ARE SKETCHED

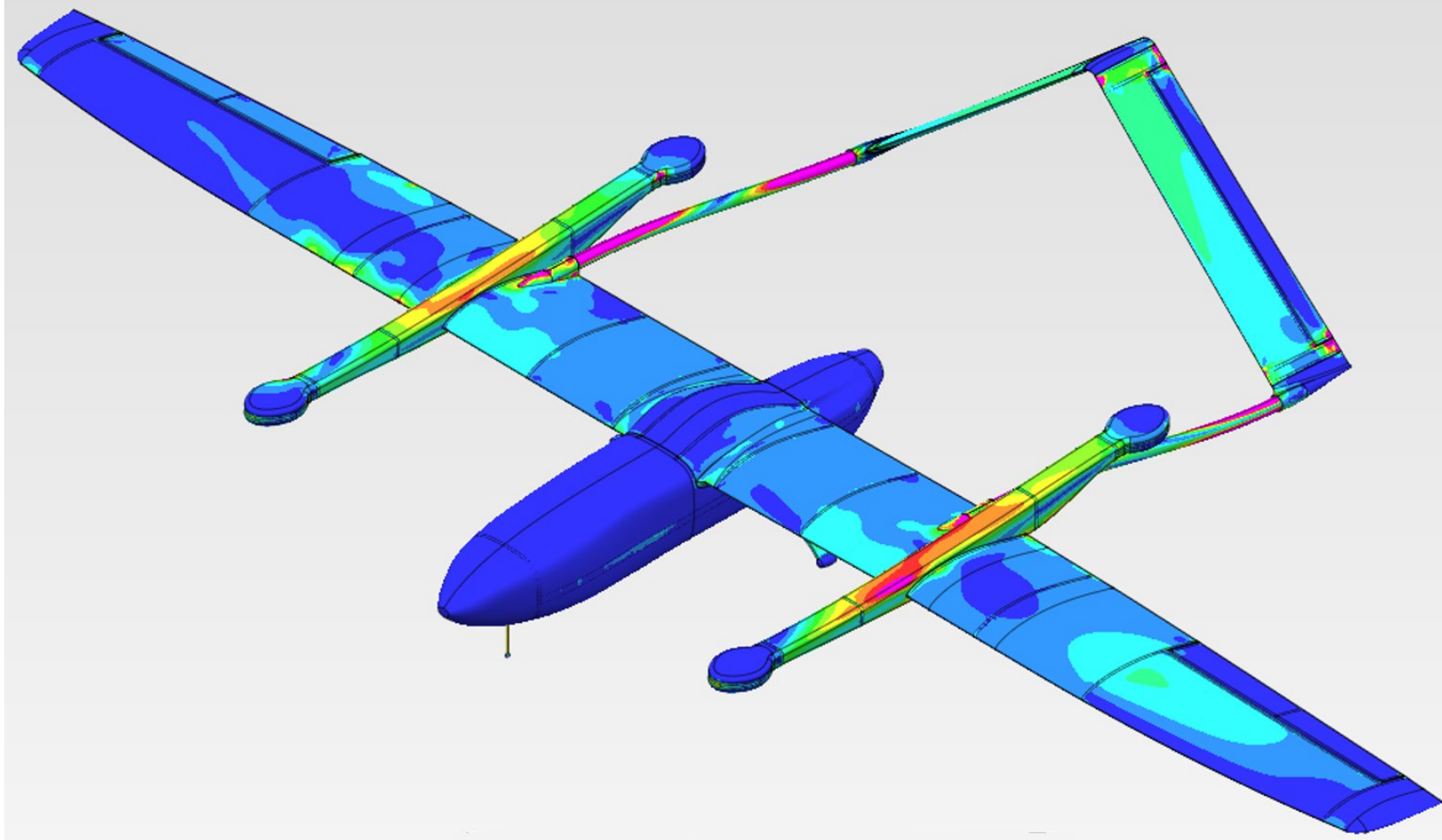


FEM (HPC) ANALYSIS OF ALL THE LOAD CASES AND REPRESENTATION ON A SINGLE IMAGE

OUTPUT

STRESSES AND DEFORMATIONS IS THERE ENOUGH STRUCTURE?
IF NOT - WHERE?
IF YES - WHERE IS IT TOO MUCH?

RESULTS



THE RISK



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Electric Air Taxis Are Already Coming in for a Hard Landing

German startup Lilium is the first listed eVTOL maker to be at risk of collapse, but may not be the last

By *Jon Sindreu* [Follow](#)

Oct. 30, 2024 6:30 am ET

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Lilium has said that its principal German subsidiaries will apply for self-administration proceedings. PHOTO: JUSTIN TALLIS/AGENCE FRANCE-PRESSE/GETTY IMAGES

Electric air taxis may not need a lot of runway to land, but they still need a lot of cash to take off.

STATUS AND WORK IN THE FUTURE

COMPLETED:

- WORKFLOW DEFINED
- WORKFLOW PROVED
- MAYOR OBSTACLES SOLVED

TO BE COMPLETED:

- SIMPLIFIED MATERIAL MODELS
- ACCELERATION OF MESHING
- VALIDATION OF RESULTS

READY FOR THE SECOND PROJECT.

INFO@AFORMX.SI

Thanks!



EuroHPC
Joint Undertaking

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