Publishable material

Project website:
http://www.hypstair.eu/

Project logotype:

Figure 1: HYPSTAIR powertrain during testing

Figure 2: HYPSTAIR partners at final project meeting (Ajdovščina, 20.7.2016)

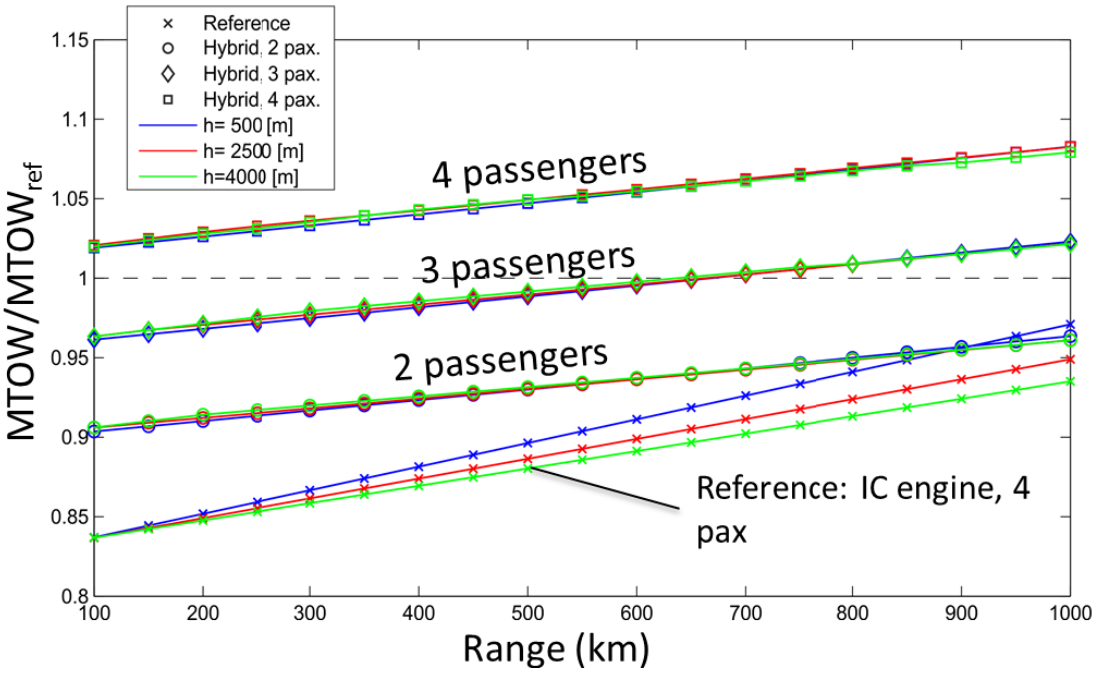

Figure 3: Flexibility chart of hybrid and conventional general aviation aircraft by University of Pisa

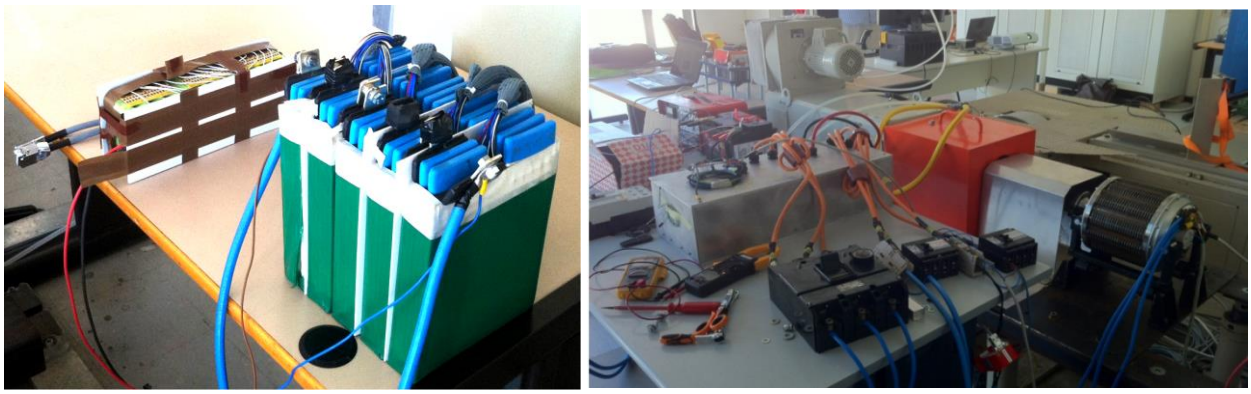

Figure 4:Li-Po Batteries and hybrid power train testing platform at University of Pisa (DESTEC)

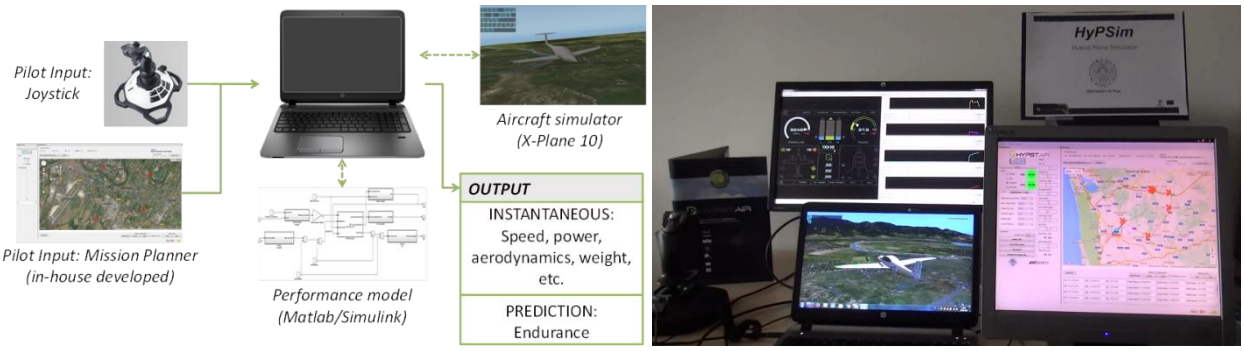

Figure 5: Conceptual scheme (left) and final setup (right) of the Hybrid Plane Simulator «HyPSim» by University of Pisa

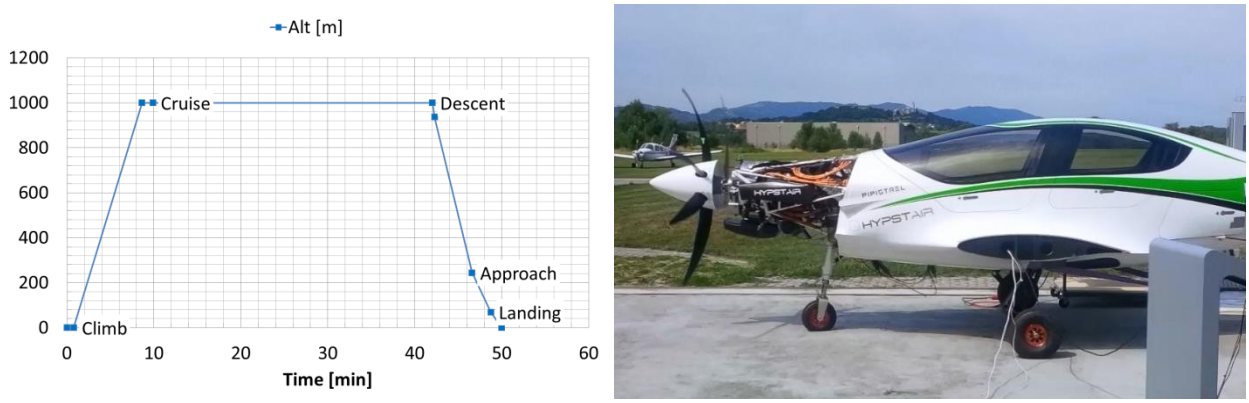

Figure 6: Altitude profile of the mission (left) used in the tests on the hybrid power train prototype (right) by University of Pisa

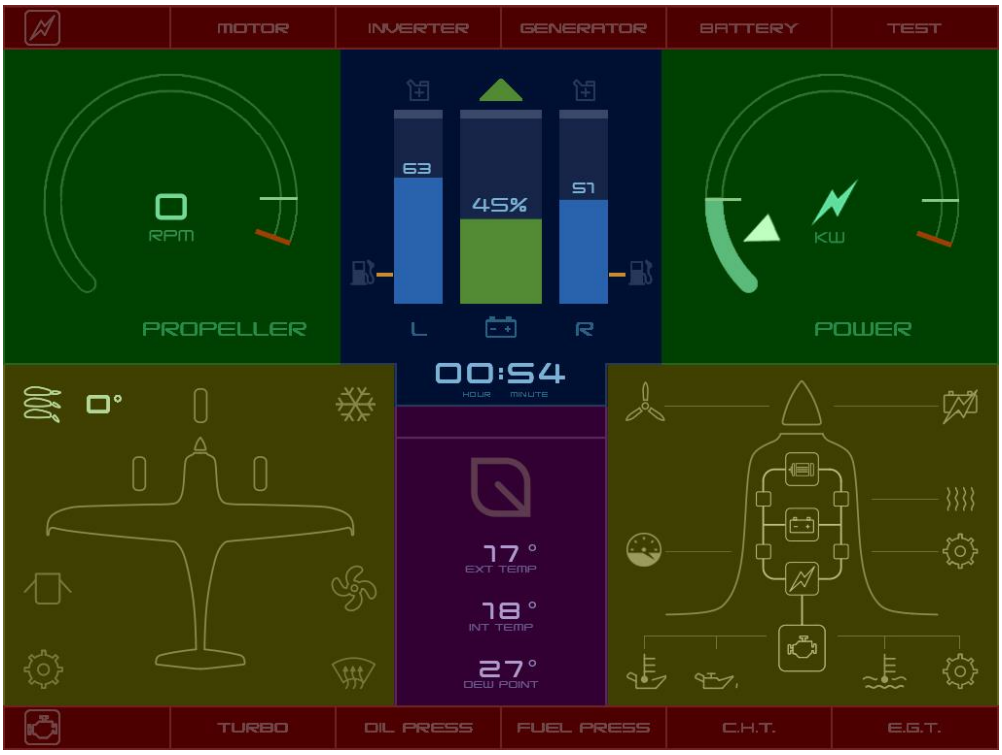

Figure 7: HYPSTAIR's HMI by MBVision

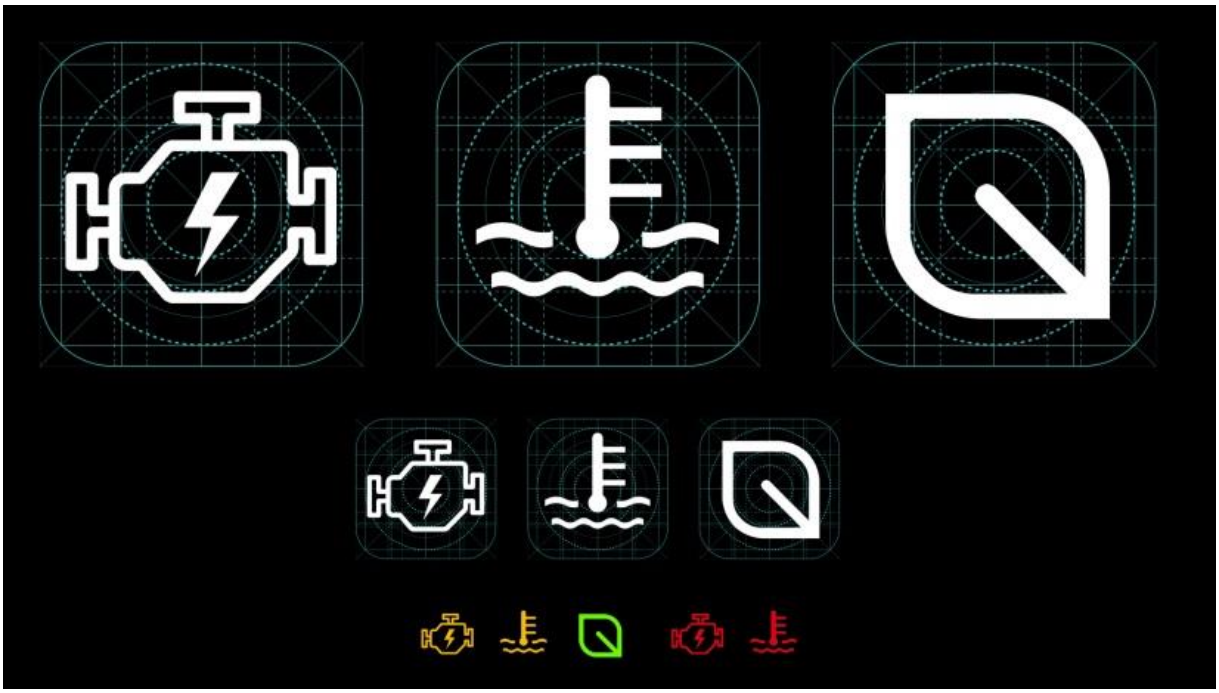

Figure 8: HMI icons by MBVision

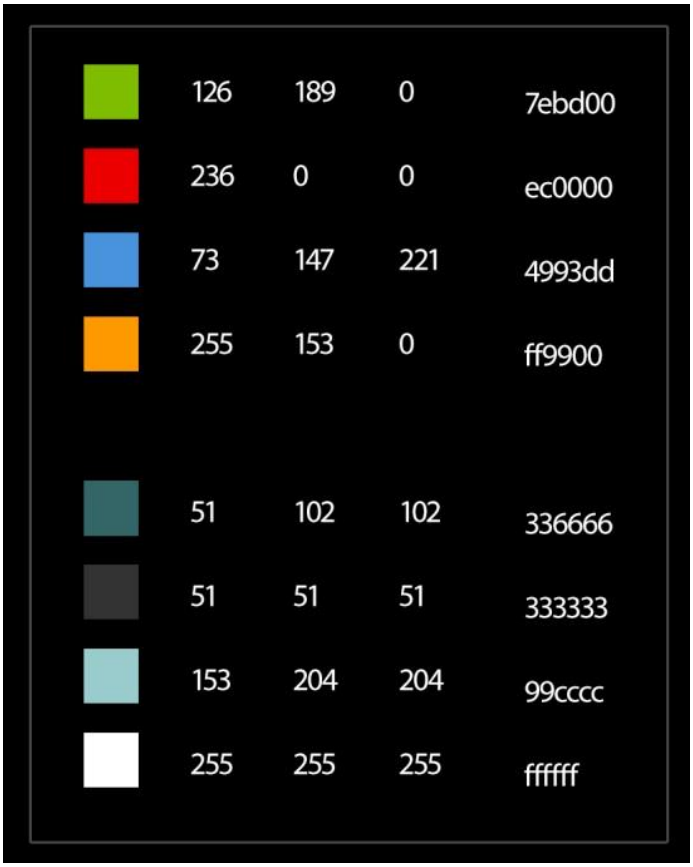

Figure 9: HMI background by MBVision

Figure 10: HYPSTAIR experimental prototype of the haptic power lever by University of Maribor

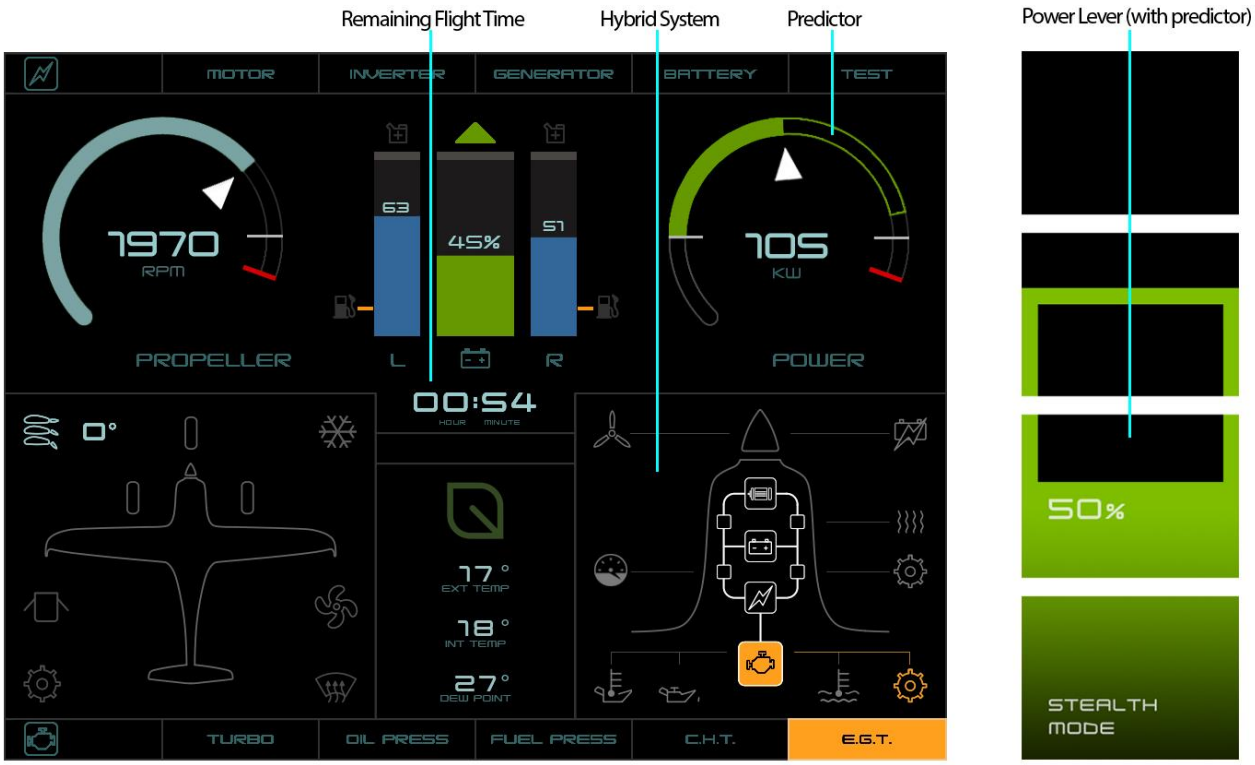

Figure 11: HMI design and power lever by MBVision

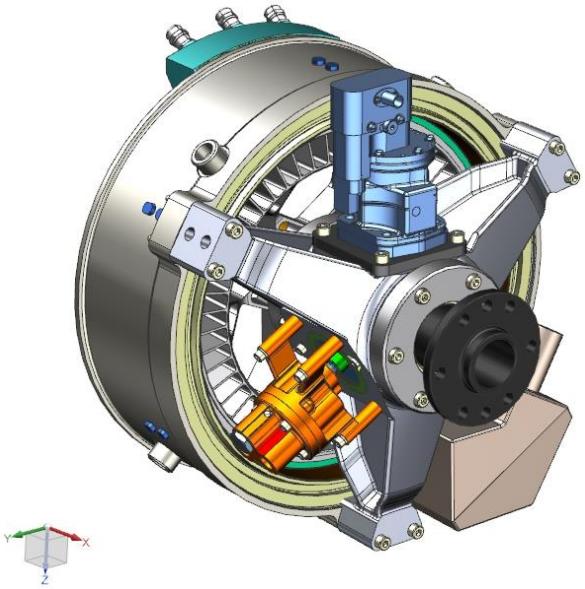

Figure 12: CAD-image of the HYPSTAIR electric motor by Siemens

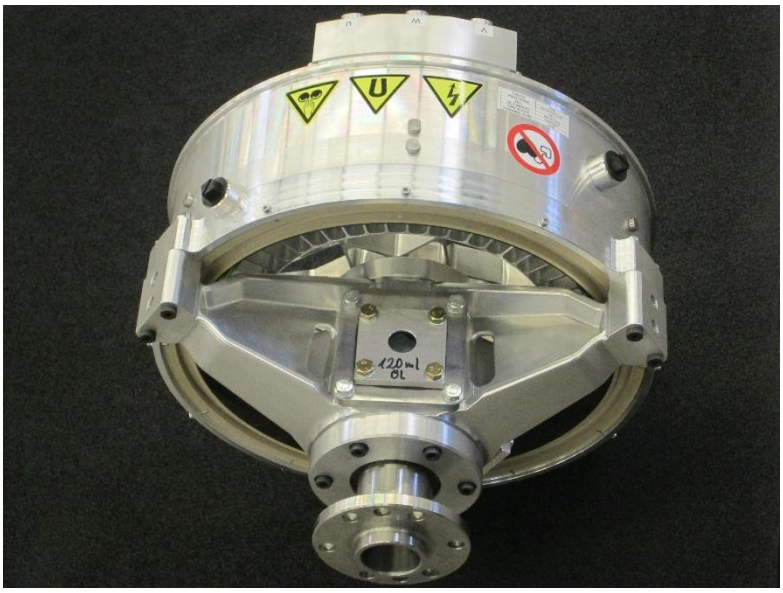

Figure 13: E-Motor including the integrated bearing unit by Siemens

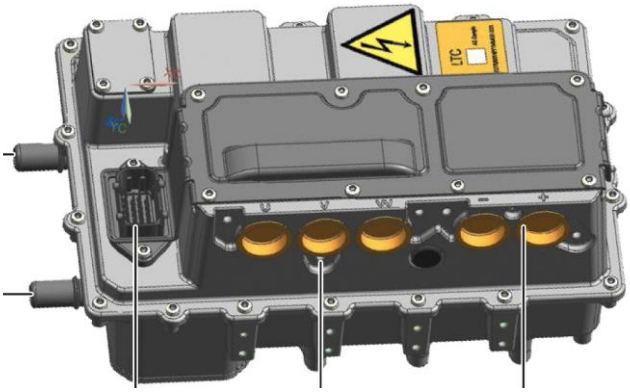

Figure 14: HYPSTAIR's eCar-Inverter developed by Siemens by Siemens

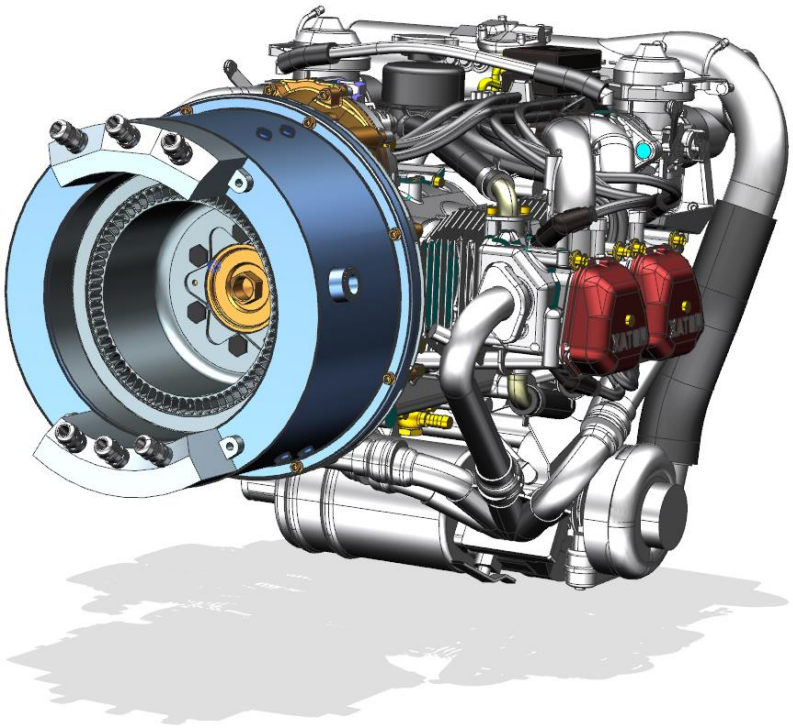

Figure 15: HYPSTAIR's e- Generator SG100 developed by Siemens
by Siemens

Figure 16: Side View of Generator Set
by Siemens

Figure 17 The HYPSTAIR propulsion battery developed by Pipistrel

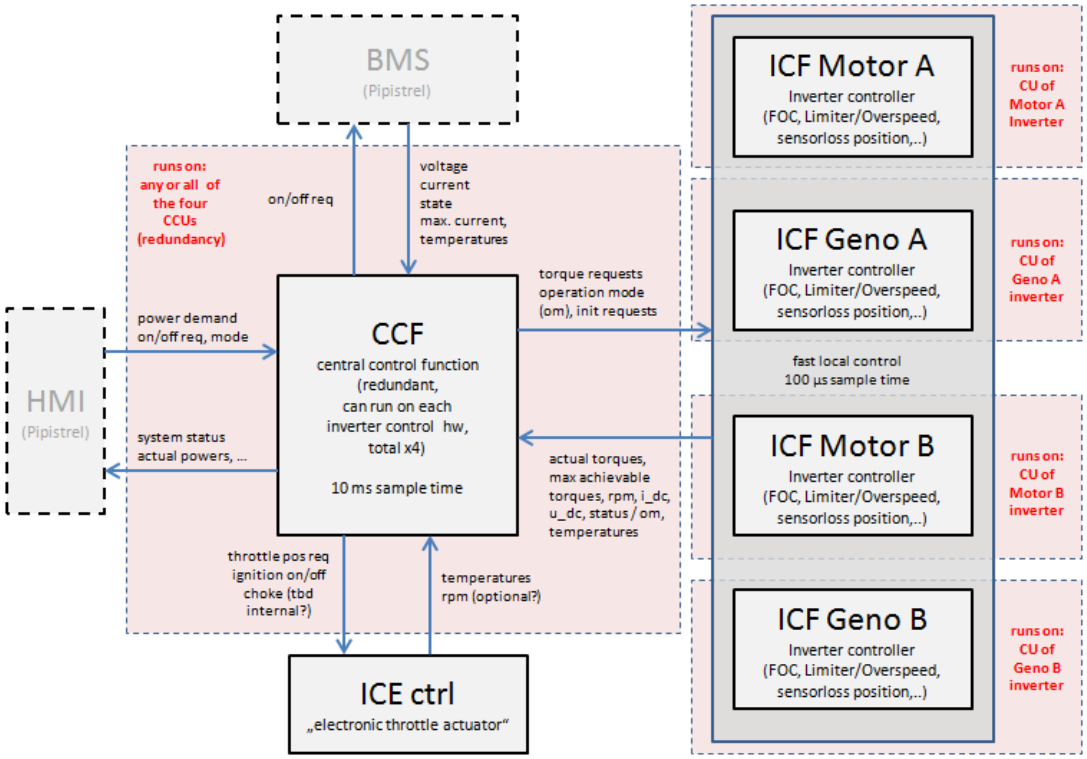

Figure 18: Functional control system architecture by Siemens

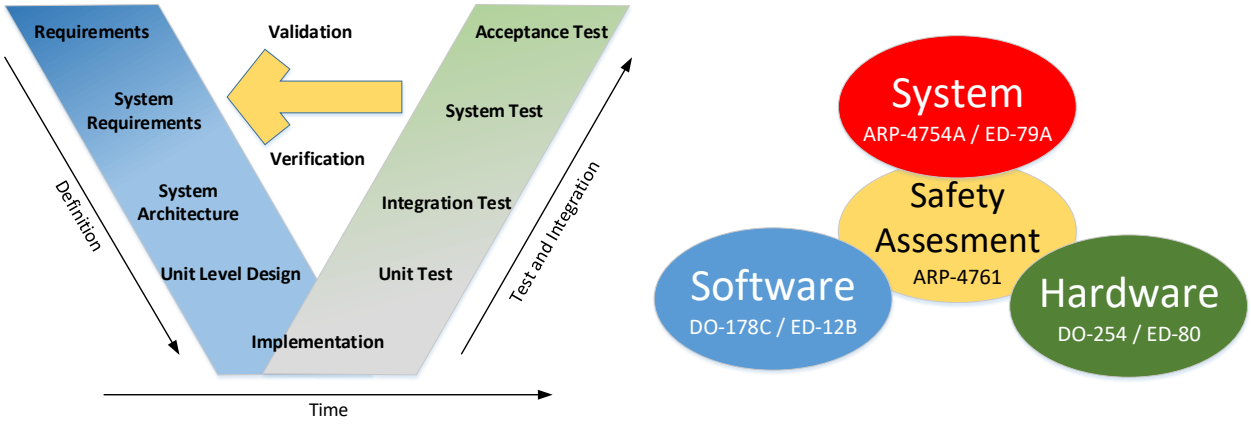

Figure 19: V-model (left) and functional safety document in aerospace (right) by University of Maribor

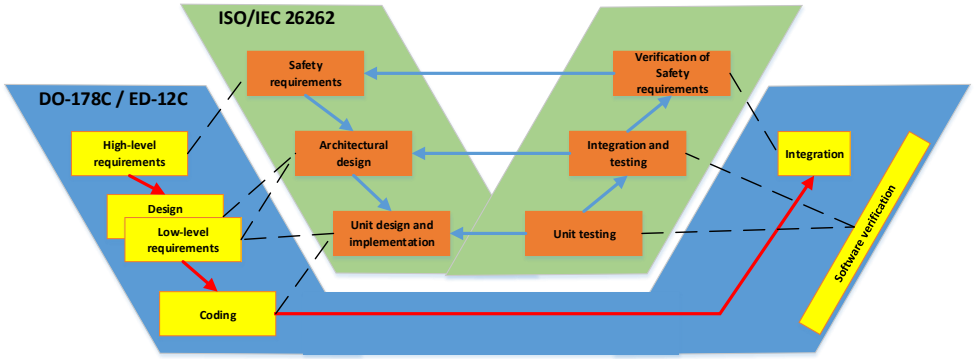

Figure 20: Software development phases in ISO 26262 and DO-178C, dashed lines map the phases by University of Maribor

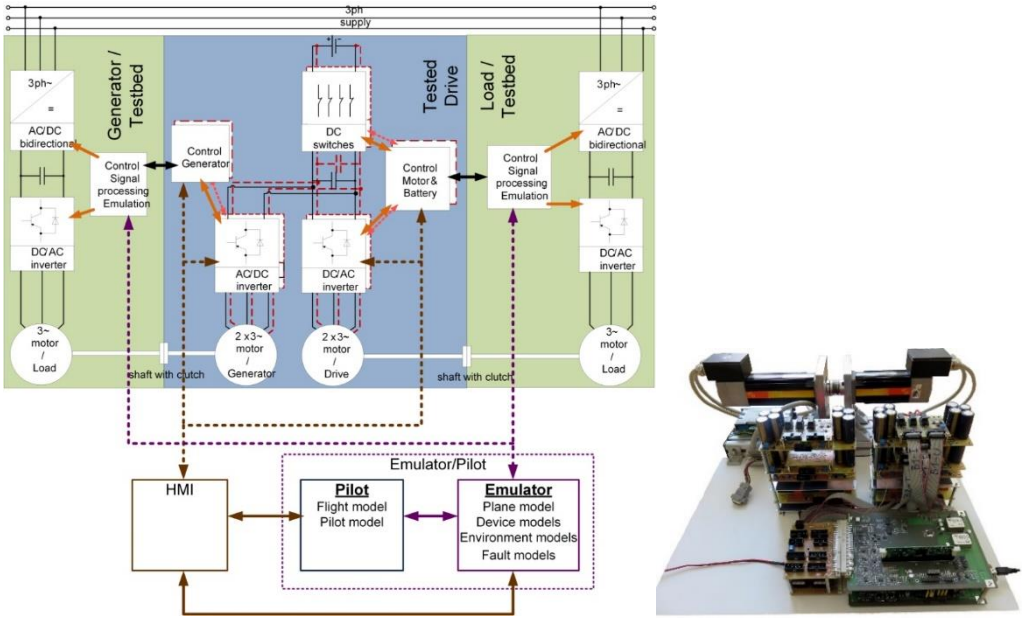

Figure 21: Testing hardware – for evaluation of algorithms by University of Maribor

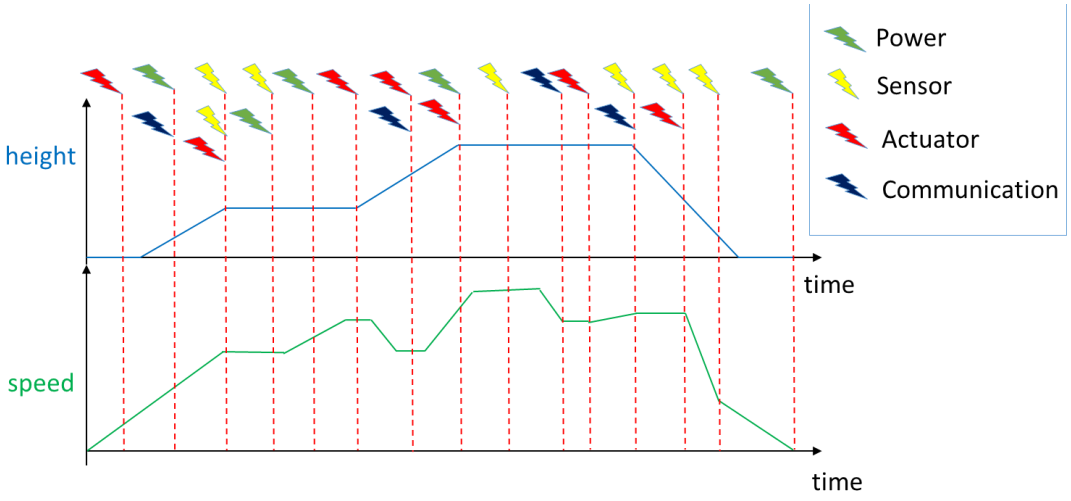

Figure 22: Testing profile – an example of profile with events from operation by University of Maribor

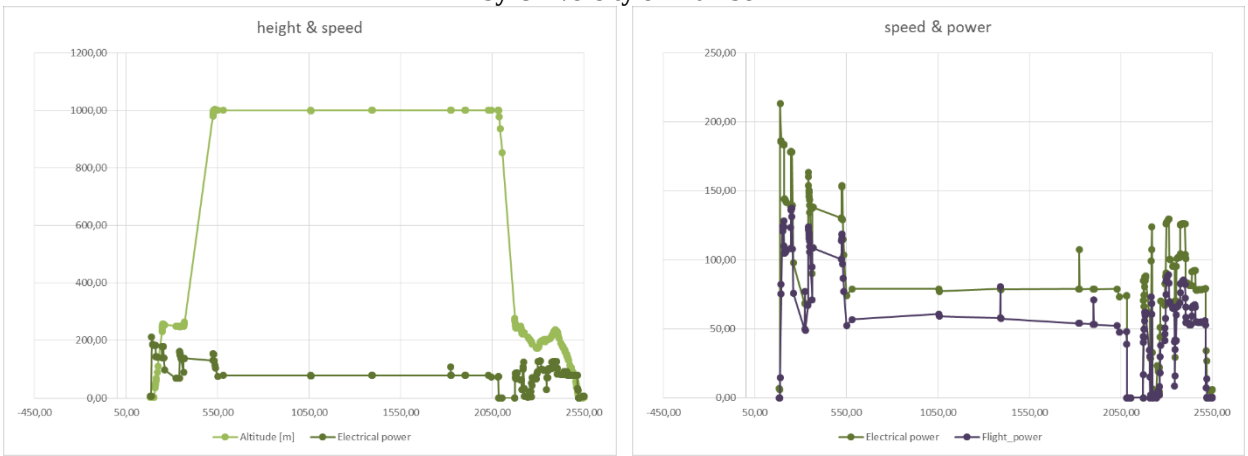

Figure 23: Testing profile – an example covering complete operational range of the drivetrain by University of Maribor

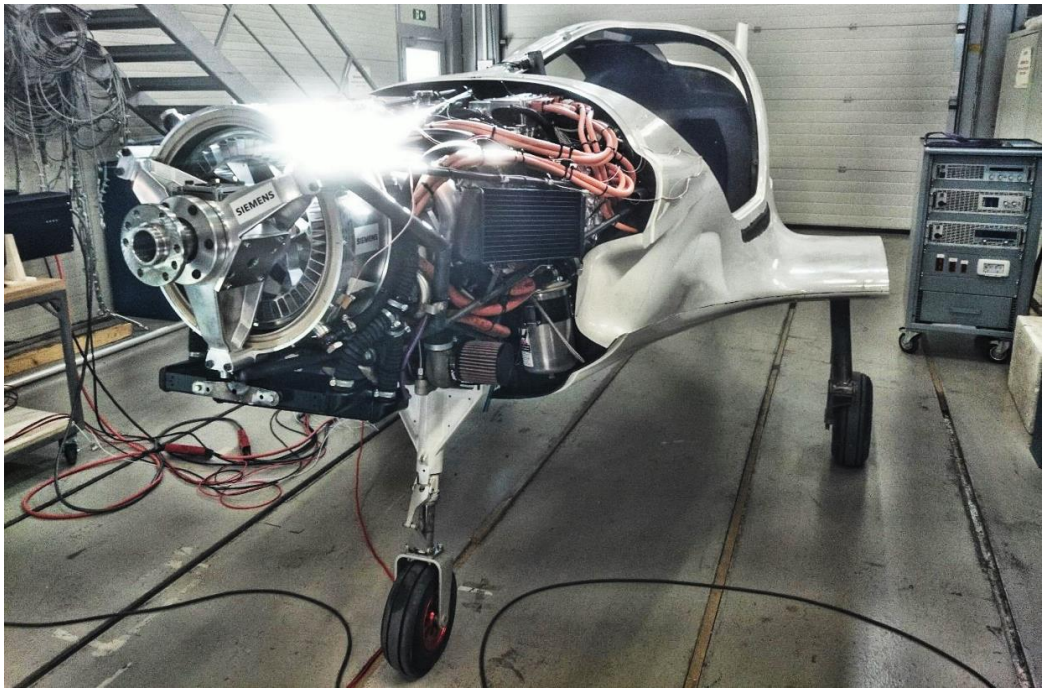

Figure 24 The powertrain components integrated and ready for testing

Figure 25 HYPSTAIR during testing with cowling installed