BATTERY & CONTROL SYSTEMS FOR ELECTRIC AVIATION

This competency addresses the development and optimisation of battery-powered propulsion and energy control systems for electric and hybrid aviation. It supports partners with control algorithms, battery efficiency optimisation, and embedded system integration across aircraft and hybrid vehicle platforms. The activity contributes to mobility decarbonisation and applied RDI through joint development with national and international industry partners.

ACHIEVEMENTS

- Contribution to the design and development of the Magnus eFusion electric training aircraft with Magnus Aircraft Zrt..
- Development of aviation-grade battery management and control systems.
- Research on hybrid propulsion architectures and electrical safety validation.
- Integration of real-time control algorithms to improve performance and endurance.

INFRASTRUCTURE

- Battery testing and control system laboratories.
- Propulsion and energy-flow simulation tools.
- Embedded systems development environments.
- Integration platforms for hybrid and fully electric powertrains.

REFERENCES

- Joint development of the Magnus eFusion electric aircraft with Magnus Aircraft Zrt..
- Electromobility and battery-system RDI activities with Robert Bosch GmbH.

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