# **Hybrid Electric**

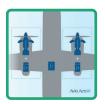
Combining Innovative Airframe, Novel Systems & HE power train



**HE-ART** 

2.150-2.850 MW Multi Hybrid Electric propulsion system for regional AiRcrafT

ROLLS-ROYCE (\*)



#### **AMBER**

~ 2MW Multi Power train InnovAtive for hyBrid-Electric Regional Application GE AVIO (\*)



#### TheMa4HERA

Thermal Management Solutions for Hybrid Electric Regional Aircraft

**HONEYWELL** (\*)



#### HECATE

Electrical Distribution Solutions for Hybrid-Electric Regional Aircraft

COLLINS (\*)



#### **HERWINGT**

Hybrid Electric Regional Wing Integration Novel Green Technologies

AIRBUS (\*)



# Ultra Efficient / Short Medium Range

Combined powerplant & Airframe efficiency



**HEAVEN** 

Ultrafan - Hydrogen & hybrid gas turbine design

ROLLS-ROYCE (\*)



#### **SWITCH**

Sustainable Water-Enhanced-Turbofan (WET) Comprising Hybrid-electrics

MTU AERO ENGINES (\*)



#### **OFELIA**

Open fan engine demonstrator incl. gas turbine design hybridisation for Environmental Low Impact of Aviation SAFRAN (\*)



**UP Wing** 

**Ultra Performance Wing** 

AIRBUS (\*)



#### **FASTER-H2**

Fuselage, Rear Fuselage and Empennage Technologies for H2 Integration

AIRBUS (\*)



# Hydrogen Powered Aircraft

Novel concepts with H2 direct burn & fuel cell based propulsion



**CAVENDISH** 

Hydrogen and dual fuel combustion technologies

**ROLL ROYCE (\*)** 



#### **HYDEA**

Hydrogen engine integration in flying platform

AVIO AERO (\*)



#### **NEWBORN**

NExt generation high poWer fuel cells for airBORNe applications

HONEYWELL (\*)



#### **H2ELIOS**

HydrogEn Lightweight & Innovative tank for zerO-emisSion aircraft

ACITURRI (\*)



#### **FLHYing Tank**

Liquid hydrogen load bearing tank for commuter

PIPÏSTREL (\*)



#### **HyPoTraDe**

Hydrogen Fuel Cell Electric Power Train Demonstration

PIPISTREL (\*)

# **Transversal projects**



## CONCERTO

Construction Of Novel CERTification methOds and means of compliance for disruptive technologies

DASSAULT (\*)



### **HERA**

Hybrid-Electric Regional Aircraft Architecture and technology integration LEONARDO (\*)



## **SMR ACAP**

SMR Aircraft architecture and technology integration Project AIRBUS (\*)



## **ECARE**

European Clean Aviation Regional Ecosystem/synergies with regions