



# Methodology for a Fire Risk Assessment and an Increase of Passenger Survivability in New Generation of Aircrafts: The AircraftFire (AcF) Project



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## Fire Safety in Aircrafts

For 20 years, the fire threat in aeronautics has been reduced, but more efforts are still necessary, particularly for new generation of Aircraft (A350 or B787 families) to :

- ✓ reduce the incident/accident rate
- ✓ increase the passenger and crew survivability

## But, the fire threat can increase due to:

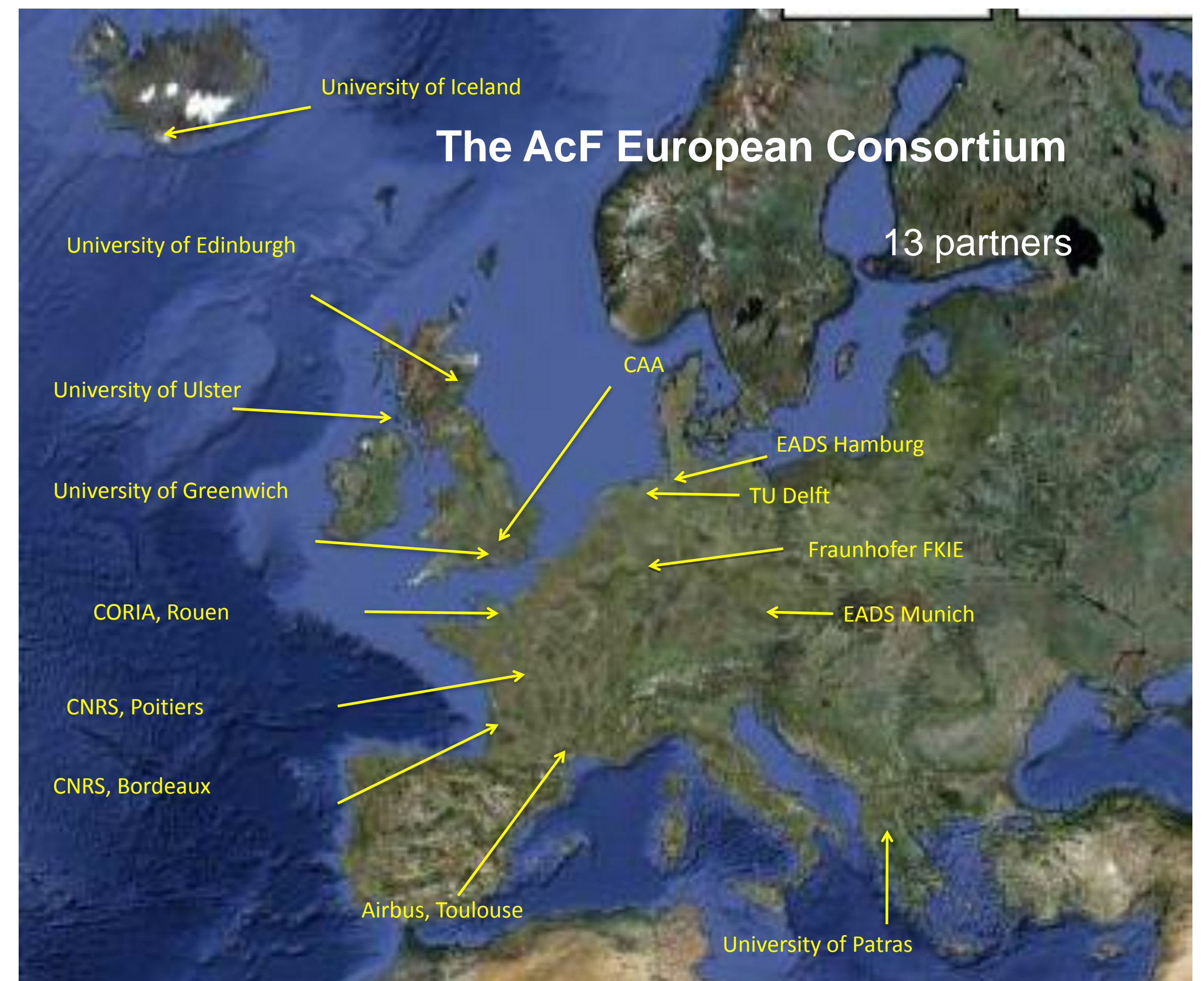
- The weight reduction of new generation aircraft is obtained by substituting aluminium by flammable composites for hull, wing and structure
- The massive use of polymer and composites increases significantly the thermal power of new generation aircraft
- Power supply requirements for electronic and avionics equipment increase the fire ignition risks

## Main Objectives

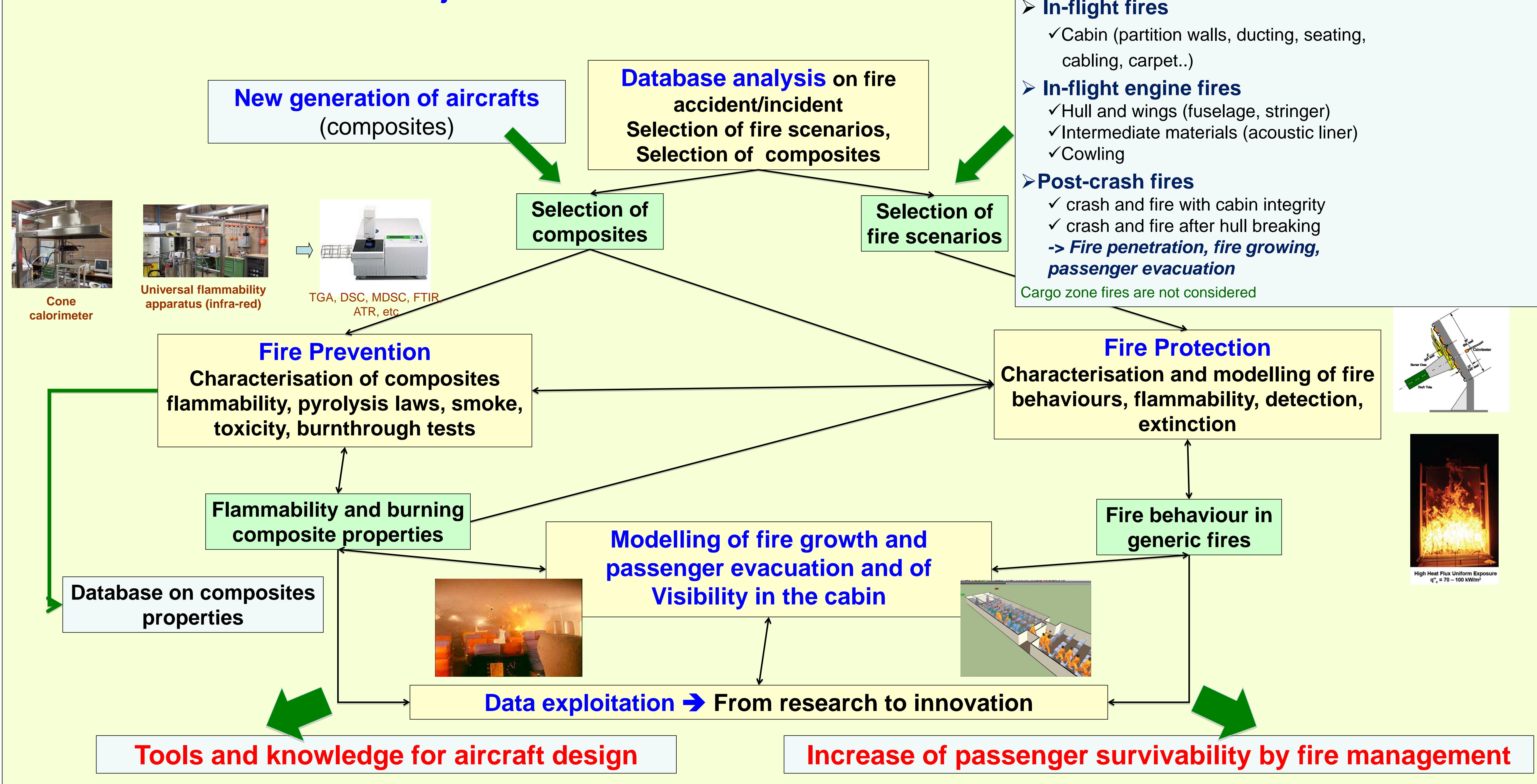
- To identify the **new fire threats** in new generation of aircrafts
- To assess the resulting fire risks
- To improve prevention, protection and procedure efficiency
- To increase the passenger and crew survivability

## Needs of Research

- To characterise the **physical/chemical/thermal properties** of composites and polymers aboard aircrafts
  - ✓ For hull, wing and structure
  - ✓ Cabin (carpets, seats,...)
- To evaluate the **evolution of the fire scenarios**, the fire growth and the passenger evacuation procedures
- To model the **fire growth and evacuation procedures**
- To give **recommendations for the development of efficient industrial technologies** through technological breaking or technological catch-up in order to improve fire prevention and protection including prompt detection and extinction



## The Structure of the Scientific Project AircraftFire



**Associated European FP7 project: AircraftFire - EU Grant Agreement n° 265612**  
**"Fire risks assessment and increase of passenger survivability in new generation of Aircrafts"**  
 Project duration: January 1<sup>st</sup> 2011 - December 31<sup>st</sup> 2013 Project total budget: 4,200,557 € EU contribution: 3,220,690 € Total effort: 379 p.m.

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