

# IFIRE

## Icing Forecast In Real Environment

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## Kurzdarstellung der Konsortialpartner



**AIRlabs Austria GmbH** is an Austria-wide BMK innovation laboratory for the development and operation of test infrastructures for unmanned aerial systems.



**PEGASUS Research & Development GmbH** specializes in icing and de-icing in various mobility sectors with a focus on aviation applications and investigate the accumulation of ice on various objects and its effects on subsequent operation.



**FH JOANNEUM GmbH – Institute Aviation** is involved in innovative aircraft concepts, materials and construction methods. Areas of strength are certification aspects of unmanned aircraft simulation-based investigations into aircraft icing and avionics systems.



**Technical University Graz - Institute of High Frequency Technology** is primary research focuses on the hardware and software aspects of radar systems, as well as weather informatics to develop decision-support systems for the aviation industry.

## Ziel des Projekts

- Missing testing capabilities for UAVs under natural icing conditions

### **„Development of a Comprehensive Roadmap for UAV Flight Testing Under Natural Icing Conditions“**

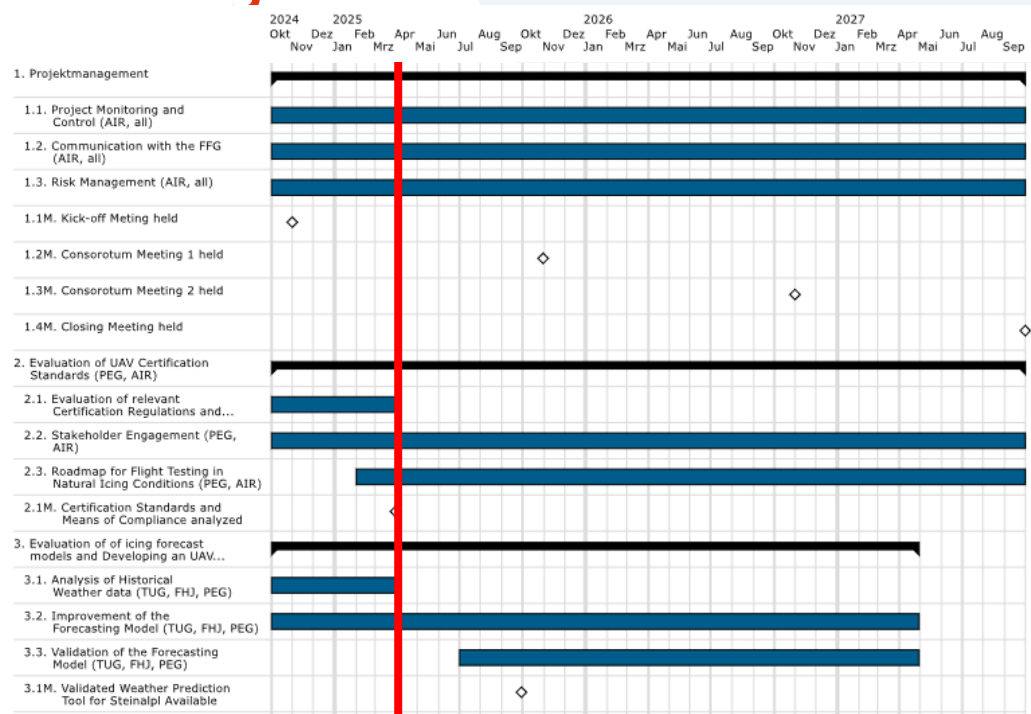
- Establishing a novel flight-testing area for natural icing tests
- Developing a robust icing weather forecast model
- Adaption and instrumentation of a flying testbed
- Perform flight tests and verify the forecast model

# Arbeitsplan/Zeitplan/Umsetzung

## WP 1 Project Management

## WP 2 Certification Standards & Roadmap

## WP 3 Forecasting model

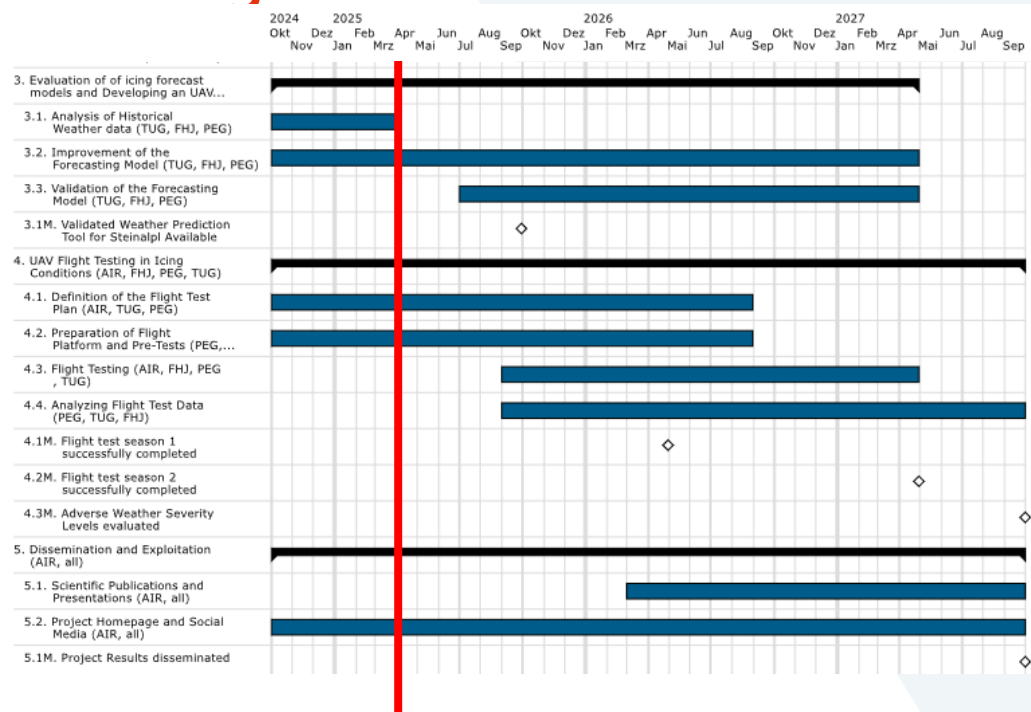


# Arbeitsplan/Zeitplan/Umsetzung

## WP 3 Forecasting model

## WP 4 Flight Testing in Icing

## WP 5 Dissemination



## Angestrebte Verwertung

- **Dissemination:** Major outcomes are shared through different channels, ensuring all partners and the drone community benefit.
- **Service Expansion:** AIRlabs and PEGSUS leverage IFIRE results to add flight testing under adverse (icing) conditions, enhancing their service portfolios and increasing facility utilization.
- **Academic Integration:** FH JOANNEUM embeds IFIRE results into its curriculum and research, supporting theses and dissertations while actively publishing findings at renowned aviation conferences.
- **Advanced Technological Tools:** TU Graz develops a WIIS-based web portal, Austrian icing map, and real-time decision support system for ice prediction, improving forecasting accuracy and aiding operational planning.

## Kontakte



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