

SEI Spectral evidence of ice



The SEI project experiments spectral sensor fusion techniques of data acquired by UAVs during aircraft preflight inspection.

In fact, an important safety issue regards **the presence of ice on the aircraft's fuselage** and wings that can cause loss of lift and stalling during takeoff phase. Another important aspect to consider is the high amount of deicing liquid usually involved in the process incurring in high costs and considerable damage to the environment.

This is not a typical industrial scenario, but the project addresses important aspects related to the manufacturing sector:

- it has to accomplish specific tasks following a design process;
- it involves human operators (labour) collaborating with machines and tools;
- it includes the usage of semi-raw materials (glycol fluids) to accomplish a service;
- it sees serialization of the process that could be invoked at any needed time.

Moreover:

- it targets safety issues both for operators and machines regarding reliability of results at the end of the process;
- it is order-based, comparable to a discrete manufacturing process.

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FUNDED PROJECTS PROJECT SHEET



PROJECT DURATION

30 months
(from 21/03/2019 to 21/09/2021)

WEBSITE AND SOCIAL MEDIA

www.sei-project.eu

PARTNERS

- Kelyan Awm SRL (ora Kite S.r.l.) (coordinatore – IT)
- Politecnico di Torino – Centro Interdipartimentale PIC4Ser- DIATI (IT)
- IRIDA LABS (GR)
- UNIVERSITY OF PATRAS (GR)
- DREAL Directions Régionales de l'Environnement, de l'Aménagement et du Logement (FR)
- WPWEB SRL (IT)

FUNDING INSTRUMENT

Fondo Europeo di Sviluppo Regionale (FESR)

BUDGET

Total cost: **722.304 €** (165.104 € allocated to DIATI)

POLITO and DIATI's role:

For Politecnico di Torino, the project involves DET, DAUIN e DIATI departments.
Scientific manager for POLITO:
Prof. **Andrea Maria Lingua**