

Drones in arctic environments

Work package 8

Reykjavik 2017-01-25



Umbilical Design

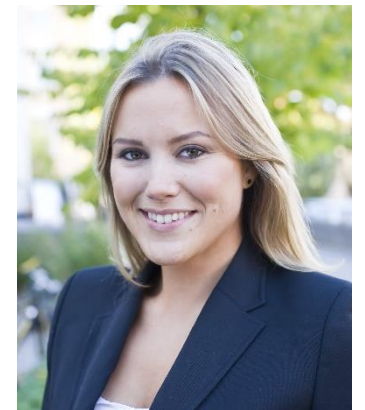
- **National Space Broker, Sweden, for the European Space Agency, ESA**
- 1 of 15 Space Technology Brokers in Europe, contracted by the European Space Agency
- Collaboration with ESA and NASA
- Technology Transfer from space down to earth and for extreme environments
- Strong focus on sustainable development
- Founded in 2001

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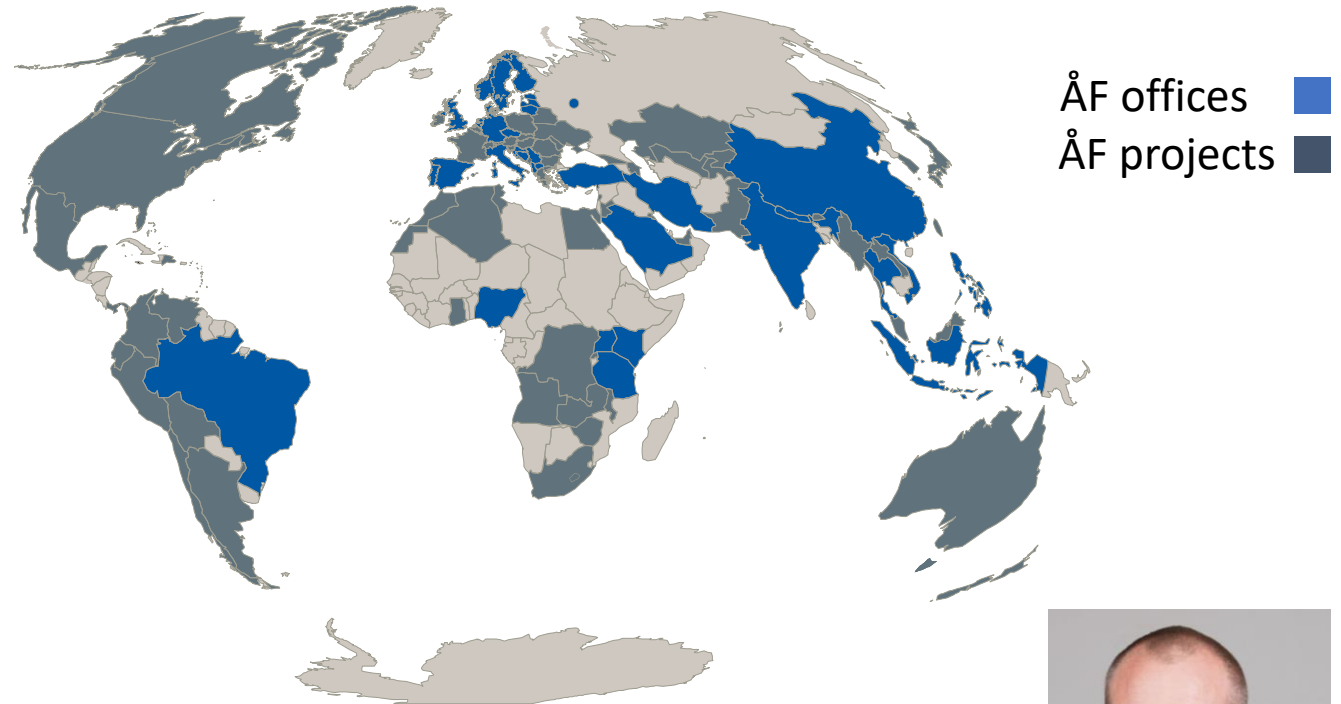
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- **Largest engineering and consulting company in Sweden**
- 8600 employees. 27 000 within partner network
- Assignments in over 100 countries, offices in 30 countries
- Energy, Infrastructure, Industry, IT, Technology and Product development
- Founded in 1895



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Objectives - Work package 8

Developing technology for drones for scaling up from research stations

- Increasing awareness of drone technology (UD)
- Drone technologies to be used in arctic terrestrial settings (ÅF)
- Producing best practices and standards for use of drones at INTERACT research stations (ÅF)
- Transfer new technology from industry to research projects



Task

Workshop

- **Utilize the research you are conducting**, and explore how drone technology can be beneficial for your research.
- The workshop will take place **together with station managers and industry at a Station Manager Forum (SMF)** and a side meeting of the TA community workshop.
- These meetings will **increase awareness of drone technology while inviting representatives from the industry and the technology community** which will identify particular needs.
- Preliminary during Q3

Tasks

Drones technologies to be used in arctic terrestrial settings

- Scientists and station manager interviews
- Sensors and drone technologies, now and in the future
- Seminar with stakeholders, trials – drones and sensors, technology development

Produce a best practice scheme for use of drones with sensors at INTERACT research stations

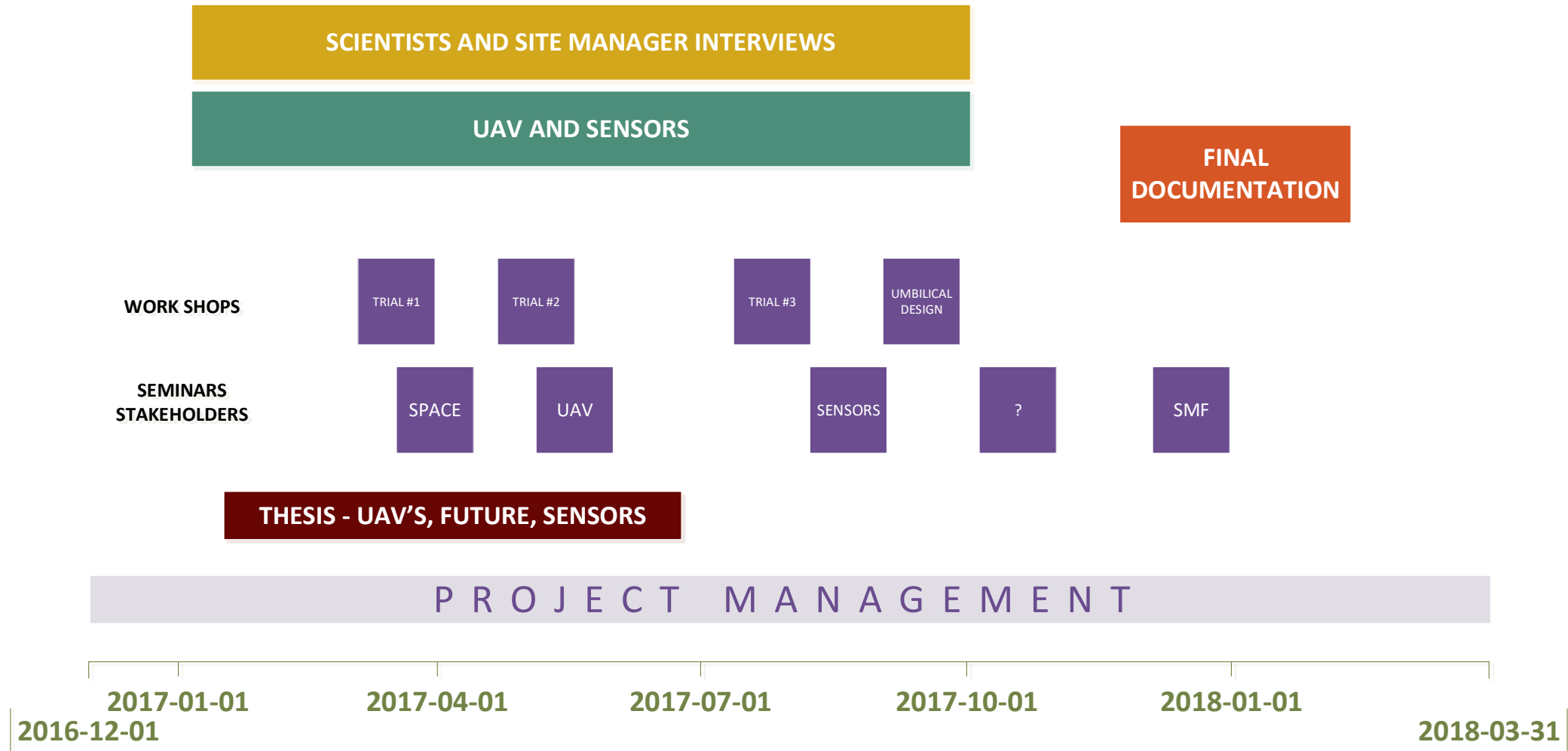
- Identify sensors for UAV's specifically for Arctic research currently underrepresented
- General regulation and legislation with an application on the Arctic environment and their respective countries
- Report and presentation for station managers



Deliverables

- D8.1: SMF Drone Workshop Report (*Month 12*)
- D8.2: Report on Drone legislation (*Month 12*)
- D8.3: Report on drone in arctic environments requirement specification, drone types, drone projects and sensor technology (Month 18)
- D8.4: Report on recommendations for new sensor development (Month 18)
- D8.5: Guidelines for drone usage in arctic environment (Month 18)
- D8.6: TA Drone Workshop Report (Month 19)

Project timeline overview



Partners

- ESA Technology Transfer Network across **15 countries**
- Innovation Labs & Research Institutes
- Mediation between space and non-space industry
- Identification of applications to non-space market for all industries and environments

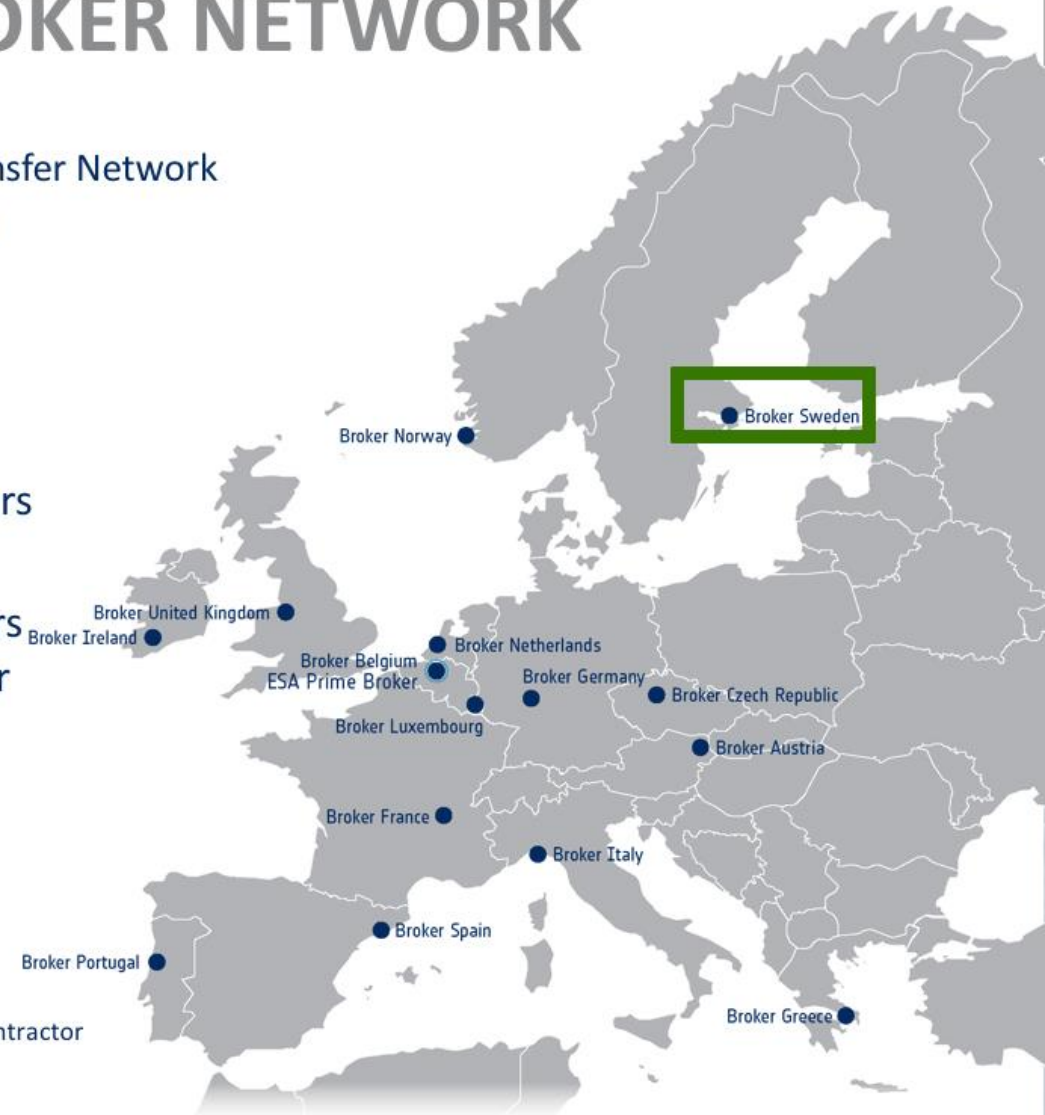
ESA BROKER NETWORK

ESA Technology Transfer Network
Across 15 Countries

320 Transfers
20 Transfers
per year

LEGEND

- ESA Broker
- ESA Broker Prime Contractor



How can we help you?

We are here for you - to help you facilitate your research

- Can drones support your research?
- What kind of technology would you like to see in the future?
- Are you already an experienced user of drones within the scope of your research?
- **Come see us and let us know!**



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