Master Thesis

Topic: Systematic Analysis of Domains and Influencing Factors and economic viability of Airborne Hail Defense Systems

Company: Steirische Hagelabwehr Genossenschaft

Start: Immediately (duration approx. 5-6 months)

Location: Flexible

Supervisors: DI Camilla Reis; Theophil Kroller, MSc; DI Dr.techn. Erwin Zinser

PROBLEM DEFINITION / GOAL:

For many decades, damage caused by hail has been prevented both internationally and in Styria with the help of the introduction of artificial condensation nuclei into the atmosphere. The influencing factors for an effective and efficient hail suppression are manifold and range from the chemical composition of a fuel to the measurement methods used to analyze the local weather. There has been some research carried out with partners (Geosphere Austria, Graz University of Technology, University of Graz, etc.) on a number of topics. This existing work and the network of experts from the region serve as a basis for this thesis. The goal of this thesis is to systematize and analyze the domains relevant to hail suppression, aggregate the existing data and identify the key influencing factors. Moreover, the economic viability is assessed, and theoretical aspects of potentially relevant business models are analyzed.

TASKS:

- Systematic analysis of the scientific domains and subdomains (international, regional) relevant to the topic of hail suppression as well as the logical interrelation of the domains (e.g. through an ontological graph)
- Identify the key influencing factors (e.g. through development of an influence matrix)
- Assessment of the economic viability and analysis of potentially relevant business models related to the topic
- Synthesis of the findings in the form of a written master thesis

Requirements: Courses General Management and Organisation, Business Model Management, and Technology Management desired but not mandatory

Field of Study: preferably Mechanical Engineering and Business Economics, Production Science and Management, or Software Engineering Management

Payment: 2000 € + performance-related overpayment

More information: camilla.reis@tugraz.at, theophil.kroller@tugraz.at

Curious? To apply for this master thesis, please send us your detailed application (CV & Transcript of Records) via e-mail. We are looking forward to your application!