# Graduation Project proposal

**Company:** Bright Cape  
**Supervisor(s) at company (name + e-mail addresses):**  
Ivo Schutz, i.schutz@brightcape.nl

**University**  
Supervisor(s) at university (name + e-mail addresses; TU/e will look for suitable supervisors if left blank):  
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## Project title (or topic):  
Drones for assisting avalanche Search and Rescue (SaR) operations

## Short project description:  
In this project the goal is to create a flexible autonomous drone platform for SaR (Search and Rescue) operations. This platform enables the assistance of UAVs (Unmanned Aerial Vehicles) during emergencies under harsh environmental conditions, such as avalanche search and rescue (SAR) missions. UAVs will be a faster, more flexible and less costly alternative compared to helicopters.  
This project is part of a European call from innovation accelerator EIT Digital. Bright Cape will develop and implement this concept together with other European industry and research partners.  
At Bright Cape we will develop the software module that identifies search target locations by real-time processing of UAV images to support during avalanche SaR operations.

## Technical assignment:  
To support SaR operations it is crucial to identify search target locations within seconds. Therefore, a smooth end-to-end integration of each component in the module is required to guarantee the success of the drone platform. You will be working on this end-to-end integration by ensuring the efficiency of image processing in real-time, and by guaranteeing the stability and scalability of the software module in the drone platform.  
You will operate within our multi-disciplinary team consisting of data scientists, UX researchers and our research partners in robotics.

## Business assignment*:  
Nowadays, the technological development of unmanned aerial vehicles (UAVs) is becoming more and more advanced. Even though a complete regulatory framework is not available yet in many countries, research prototypes and commercial applications are spreading. In order to guarantee a successful roll-out of this application it is important to identify the possible legal implications of this platform in the context of the support during avalanche SaR operations. Assisting our business lead, the student will write a short business report related to former mentioned topics.

*This part is only relevant for graduation projects carried out by students of the EIT ICT Labs (www.ictlabs.eu) variant of the Embedded Systems program. In addition to the MSc thesis about the technical aspects of their graduation project, these students need to write a short additional report discussing the business-related aspects of their graduation project. Please fill in this part if you wish your project proposal to be considered for this option.