



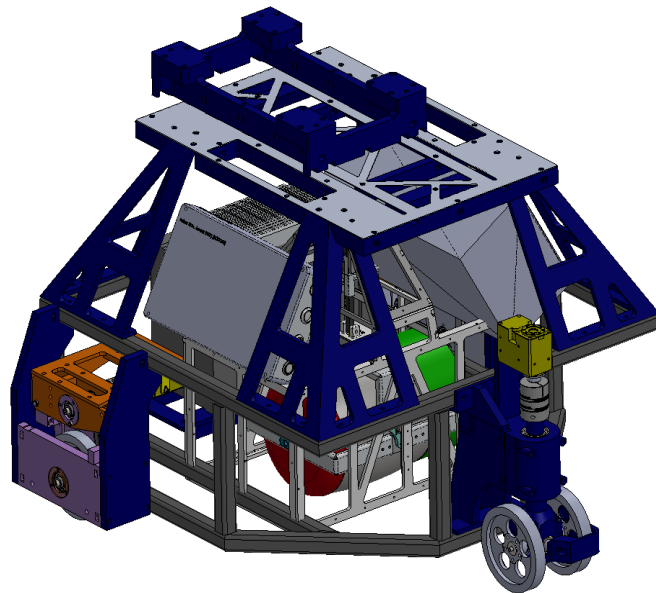
autonomous
intelligent
systems

Nobleo AIRTuB2

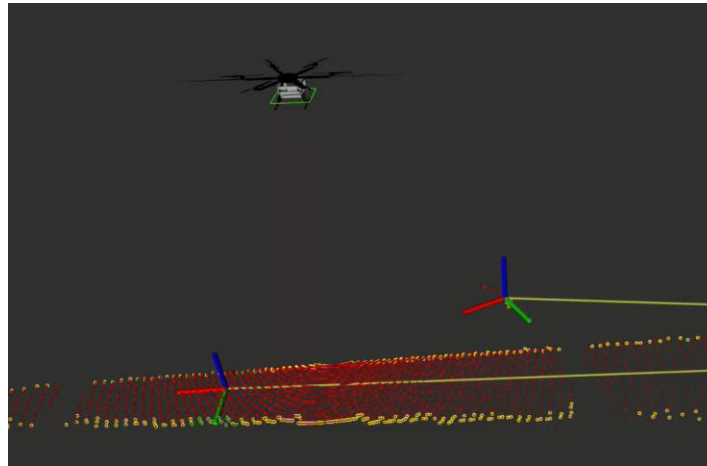
Fieldlab Zephyros AIRTuB jaarevent 28/11/2025

Nobleo's components

Crawler hardware design



Aerial navigation;
landing on the blade



Blade navigation



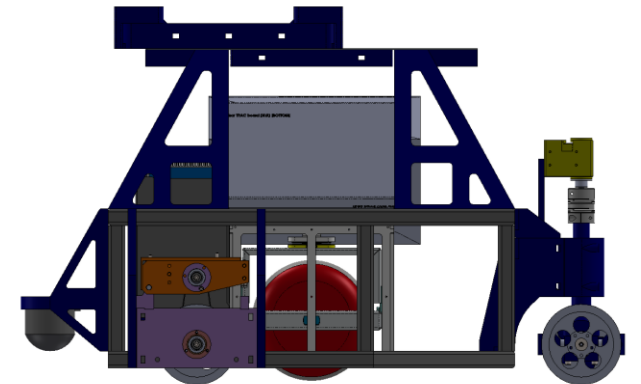
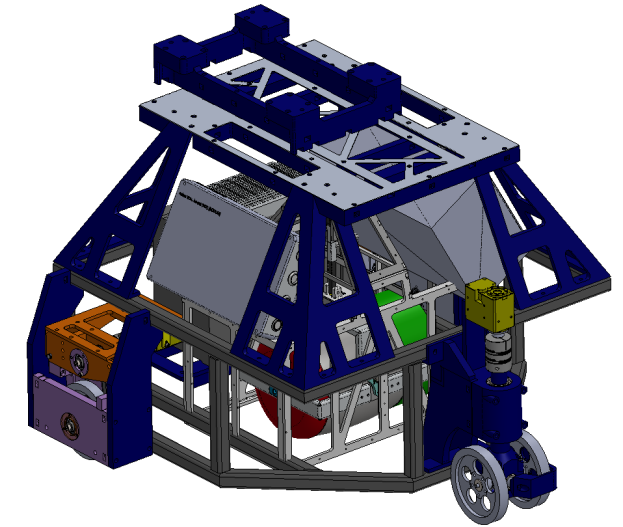
Crawler hardware design

Includes:

1. Power train
2. Interfaces with drone, lift, ultrasonic sensors and nest
3. Battery and BMS
4. Blade detection LiDAR

Main challenges:

1. Minimizing mass
2. Traction on an inclined, double-curved blade surface



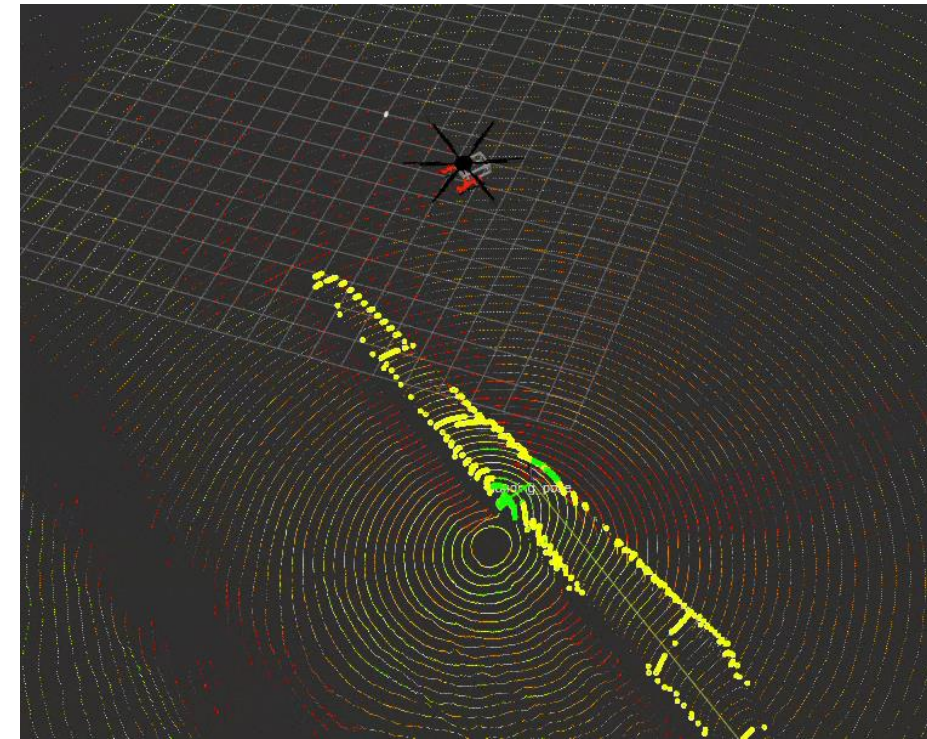
Aerial navigation; landing on the blade

Includes:

1. Blade detection using LiDAR
2. Localization; fusing GNSS, IMU and blade detection
3. Controlling the drone

Main challenges:

1. Robust blade detection
2. Landing on a moving target



Blade navigation

Includes:

1. Path planning
2. Localization; fusing GNSS and odometry
3. Navigation

Main challenges:

1. Accurate localization w.r.t. the blade
2. Path tracking

LET'S
OUTSMART
TOMORROW