Evolonic is a startup specialized in long range drones, which is currently in the pre-spin-off phase. Evolonic offers a service for automatic early detection of forest fires to minimize the risks they pose to people, responders, and the environment.

MANAGEMENT TEAM

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CURRENT STATUS

Evolonic is a research initiative located at Erlangen-Nuremberg University. Evolonic has generated know-how in the design and construction of high-end long-range battery electric drones. Evolonic built a sensor system for its drones and developed an AI for the detection of forest fires. Now Evolonic is planning a pilot project to test the business concept of a service for government agencies, for regular monitoring of wildfire risk areas and to generate funding for the upcoming spin-off.

CHALLENGE

Due to climate change, forest fires pose an increased threat to the environment, forestry, and humansettlements. Early detection of forest fires can reduce this risk. It can minimize the damaged forest area, reduce the cost of firefighting operations, and reduce the threat to human livelihoods.
The problem: Conventional early detection methods do not provide the necessary safety, efficiency, and data quality to detect and fight fires sufficiently early.

SOLUTION

Evolonic uses the experience gained in the last 5 years in designing and building long range battery electric drones to establish an aerial surveillance system for forest fires. The long-range drones are launched from an automatical rechargeable base station and can patrol a predefined area with a sensor system equipped for fire detection, autonomously detecting fires, and handing them over to the relevant emergency services and authorities.

MILESTONES

- ✅ Validation of customer benefit and need
- ✅ Construction of our drone prototype
- ✅ Construction of our sensor technology for forest fire detection
- ✅ Building of our software tools
- ✅ Building of our base station for autonomous charging of our drone
- Implementation of a pilot project
- Grants and funding for pilot projects and startup
- Funding and promotion for scaling

REVENUE MODEL

The largest source of revenue in Evolonic's business model is payments from the authorities (customers) who book the service offered to the emergency services (users).
In addition, revenues will be generated from image data. These will be used to analyze pest infestation of trees, surveys and on data exchanges for training artificially intelligent algorithms.

COMPETITIVE ADVANTAGE

Evolonic is focusing on a total system understanding and can therefore cover all areas necessary for service. Through the know-how in drone construction and the knowledge in software, computer vision and law, an automated service can be generated for the customer. Due to the strong focus on forest fires, a specific technical solution can be created for the requirement profile of this customer group, while other drone manufacturers and companies only deal with individual components. Therefore, the main competitive advantage is the process know-how combined with the custom-made technology.

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