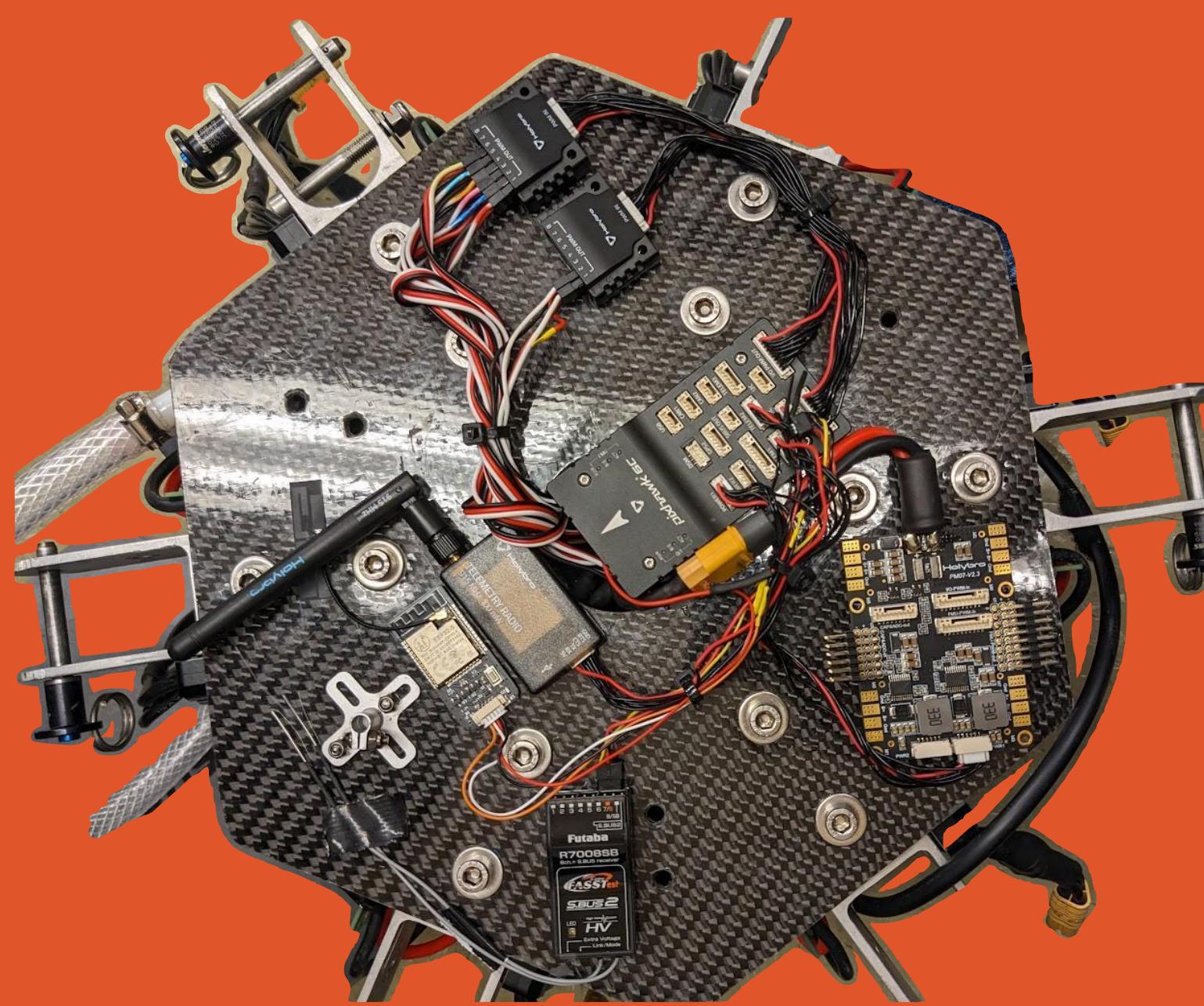


Where the Team Started:

- Broken antenna
- Wires overheating
- Motors overworked
- Cracking landing gear brackets

Problems Discovered:

- Difficult flight controls
- Unusable tank attachments
- Inefficient tank geometry

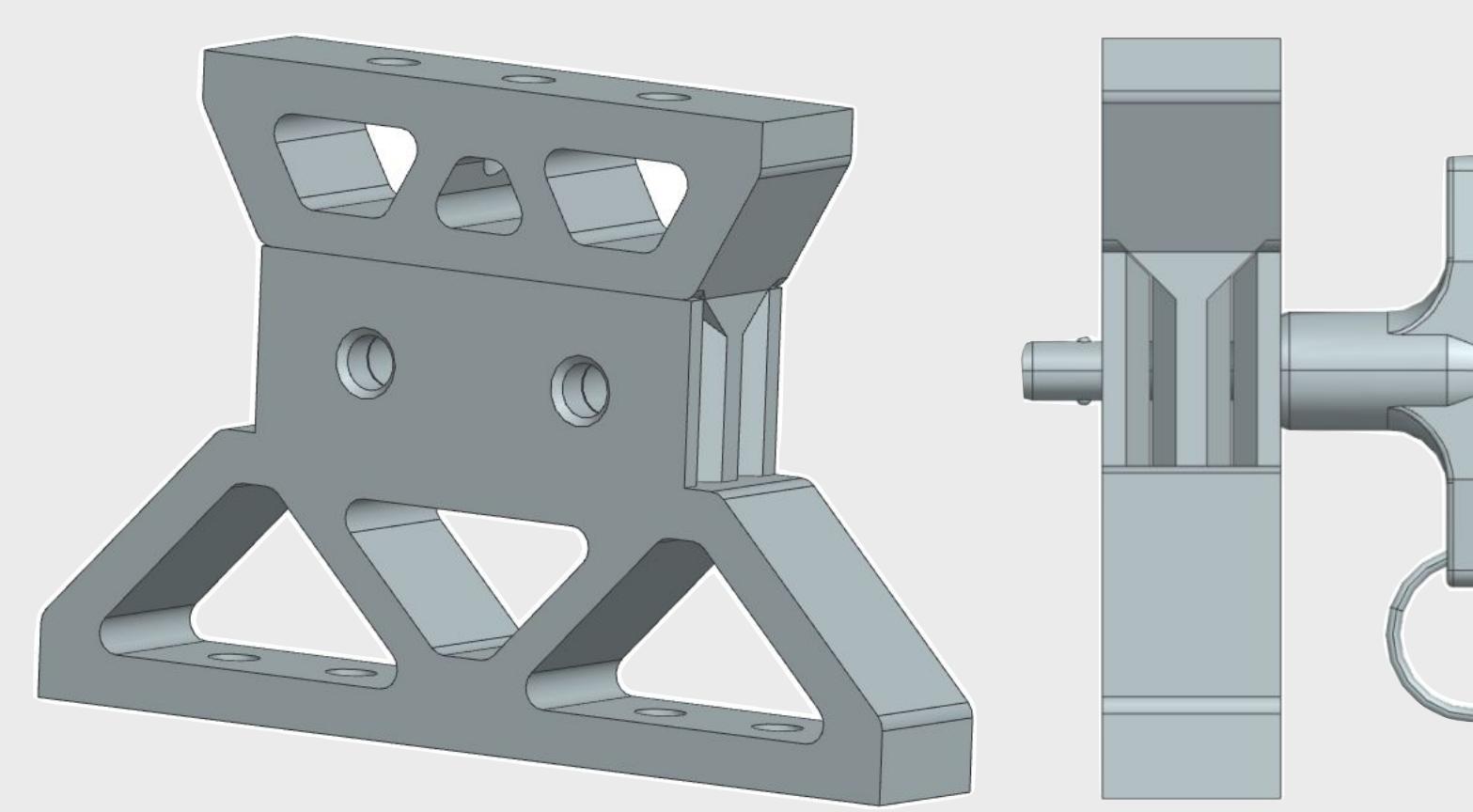
# AGRICULTURAL DRONE

Physical Upgrades:ECE SUBTEAM:

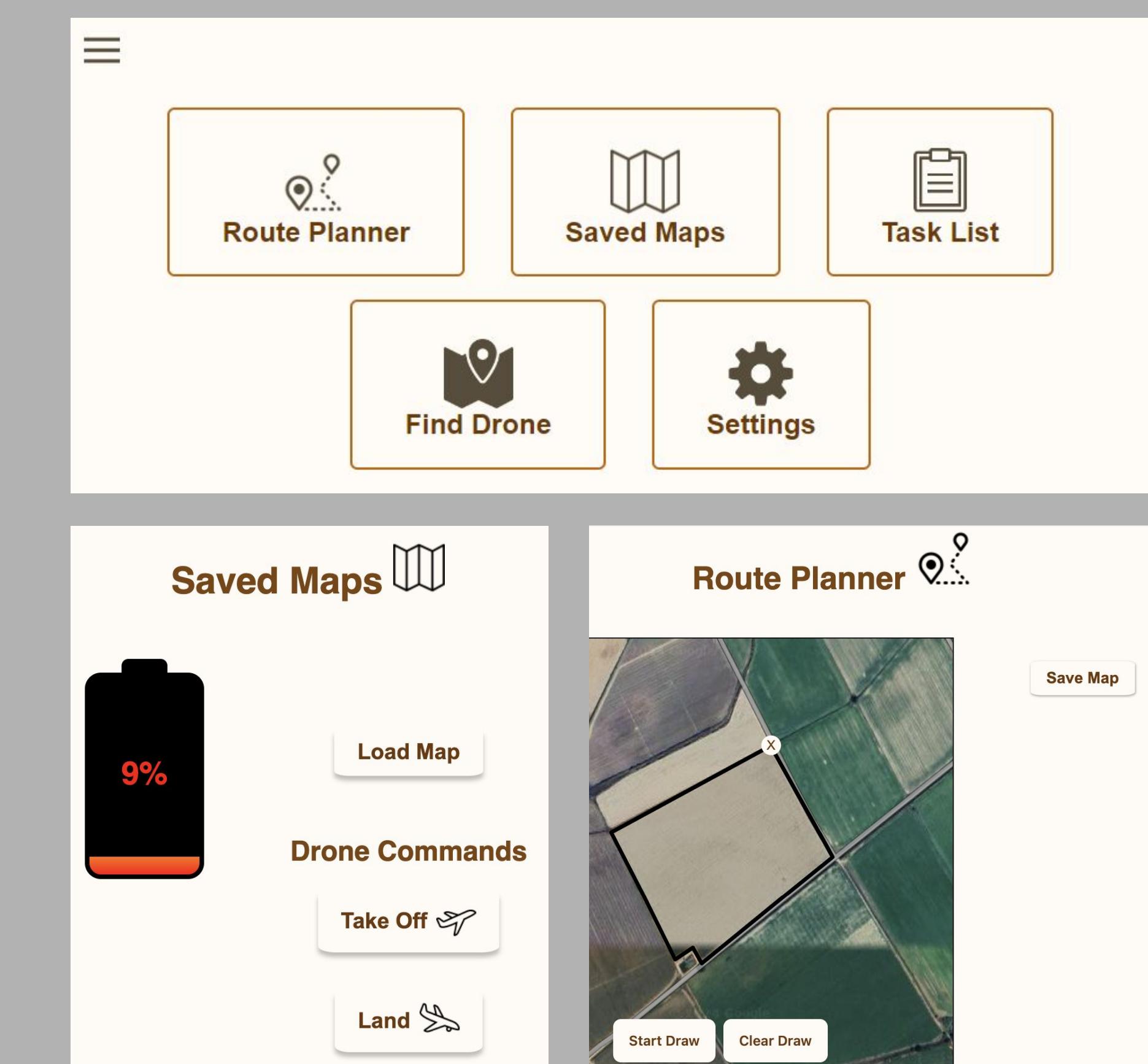
- Custom battery for increased voltage and capacity (Li-Po -> Li-Ion)
- Battery voltage increase from 22.2V to 44.4V for higher efficiency
- Power Distribution board implementation
- ARK optical-flow sensor for positional accuracy

MECHANICAL SUBTEAM:

- Upgraded tank to conical
- Designed robust attachment mechanism
- Retrofitted old piping
- Tank stabilizers
- Landing gear bracket redesign
- Waterproofing investigation

NEW APPLICATION:

- Non-technical-user friendly, customer-specific application available in multiple languages
- Application creates a route through a field given drawn boundaries
- Routes can be saved for quick future use
- Alarm for finding lost drone in tall crops

FUTURE PLANS:

- Variable mass flow rate of pump
- CAD clean up
- Reinforcement steel beams
- Collision prevention
- Open-source release

OUR SPONSOR:

- Raitong Organics is a Thai company revolutionizing the agricultural industry by adding autonomous drone technology to increase crop spraying efficiency.
- Hazardous manual labor can be automated increasing safety and quality of life.