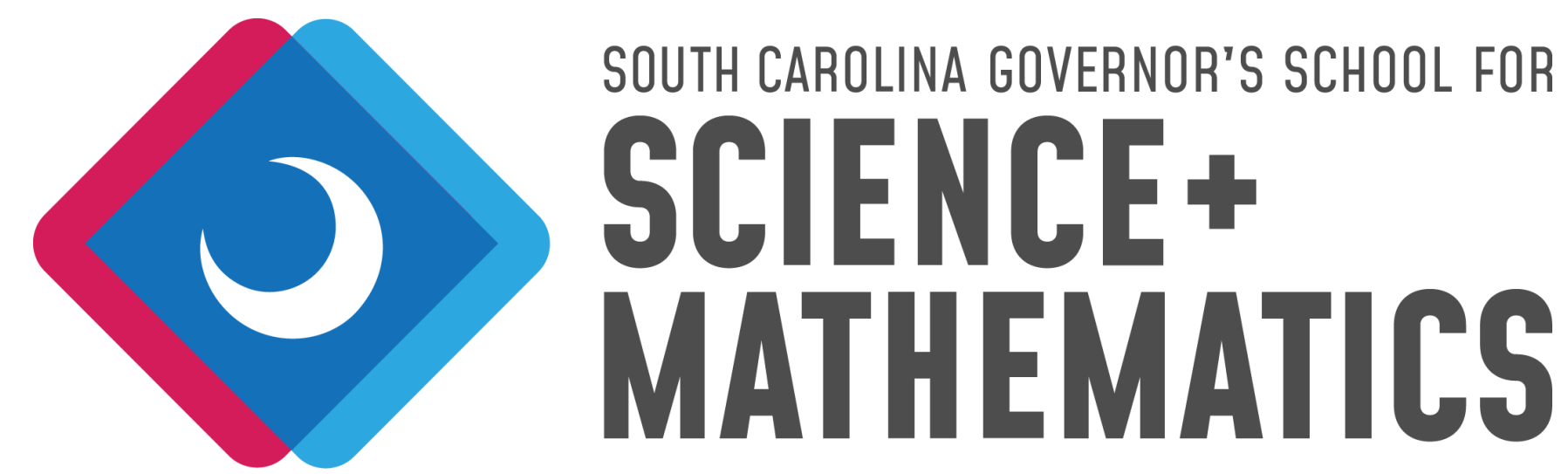


# Electrification In Aviation: Creating An All-Electric Variant Of A Cessna 206



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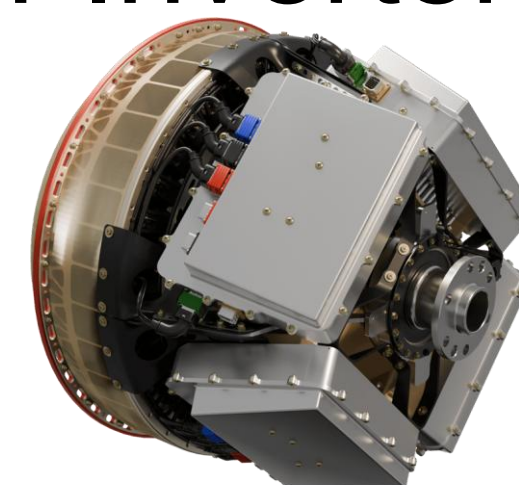


## Motivation/Introduction

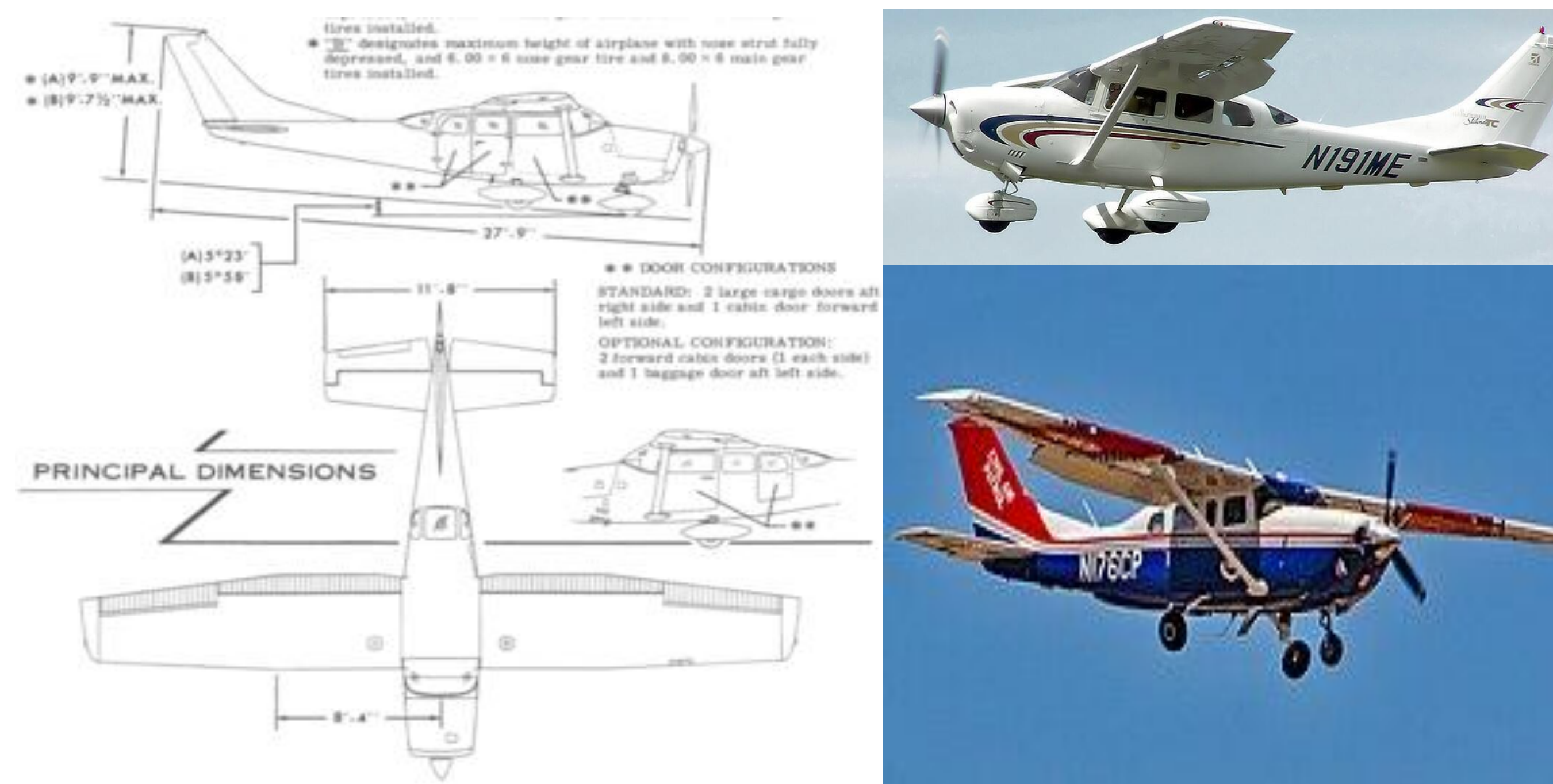
- ❖ Electrification in aviation has shown promising potential for its low energy requirements and sustainability.
- ❖ However, electrification has been reserved only for light short-haul aircraft due the energy limits of a battery compared to liquid fuels.
- ❖ In this research project, we are trying to make a 3D autonomous model of a Cessna 206 aircraft that runs solely on electrical power.
- ❖ The visualization will help keep dimensions in check and show that we don't theorize something that cannot fit on the aircraft.

## Materials

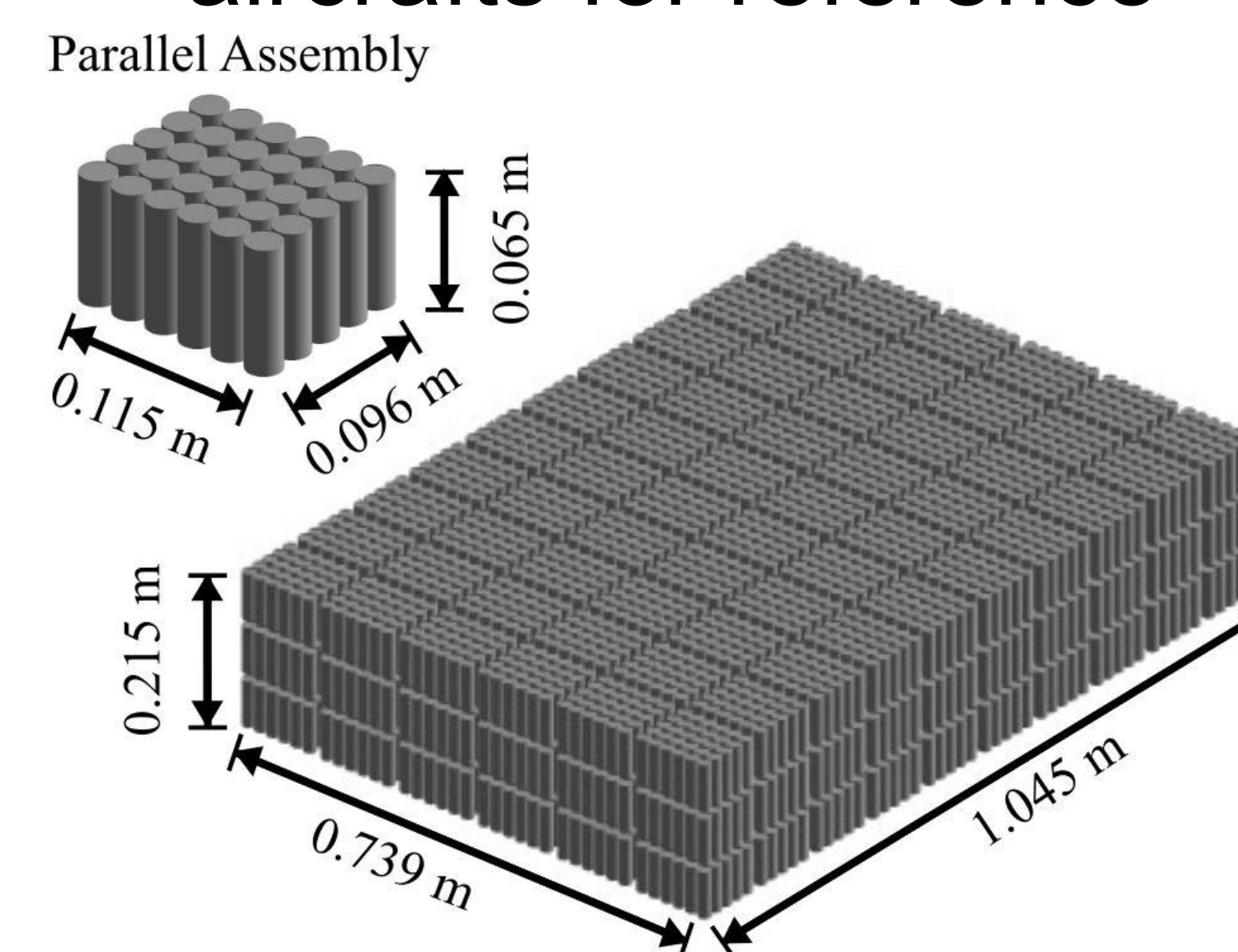
- ❖ Inventor
  - ❖ CAD software
- ❖ Electric Engine: H500B 4 Stators + 4 Inverters
  - ❖ 640 kW (Kilowatts) max power
  - ❖ 300 kW max takeoff power
- ❖ 4 sub packs of lithium-ion nickel manganese cobalt (NMC) batteries
  - ❖ 360 ah (amp-hours)
  - ❖ 647 V (Volts)



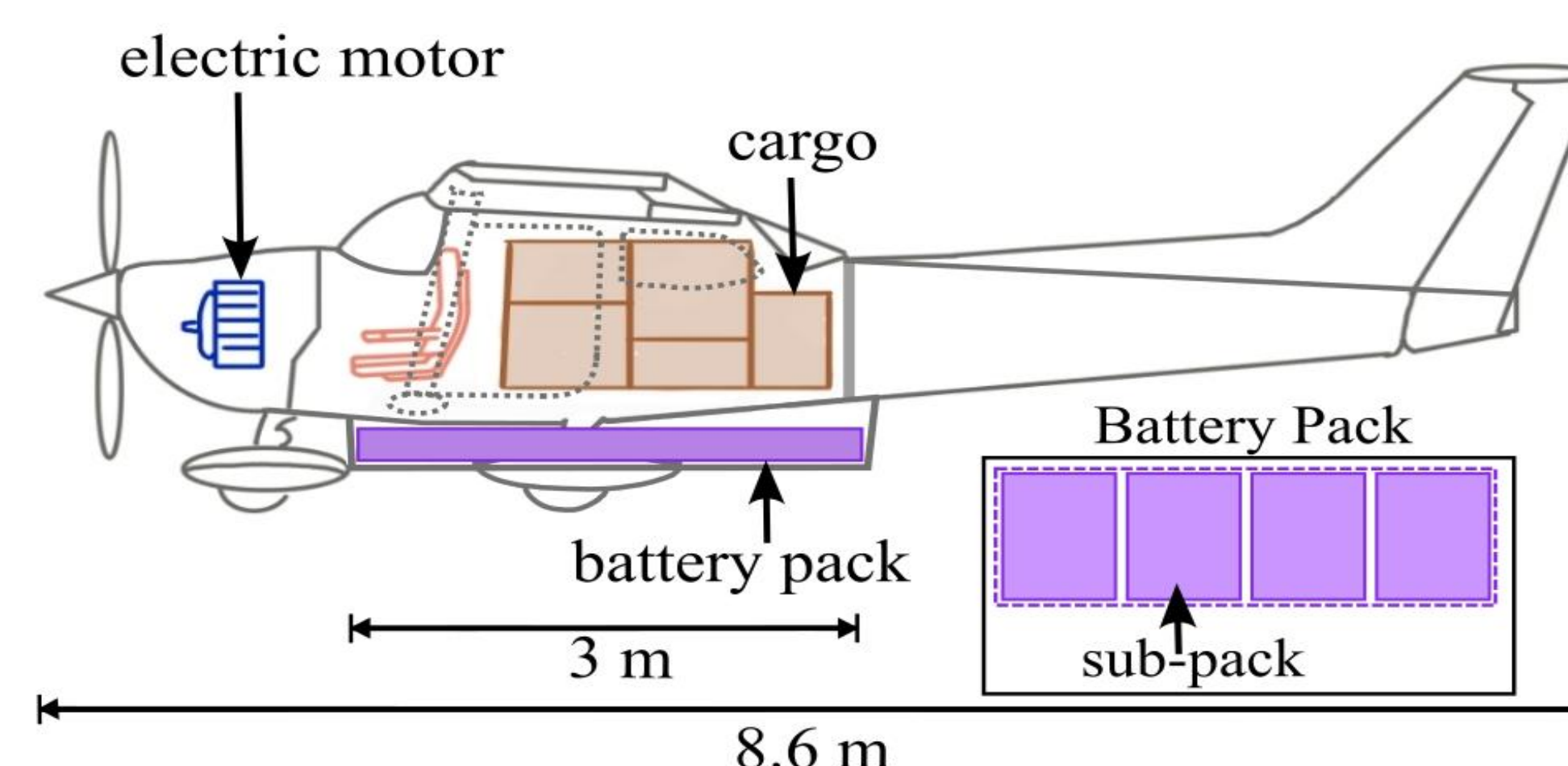
## Drafting



Cessna 206 blueprint and real-life Cessna aircrafts for reference

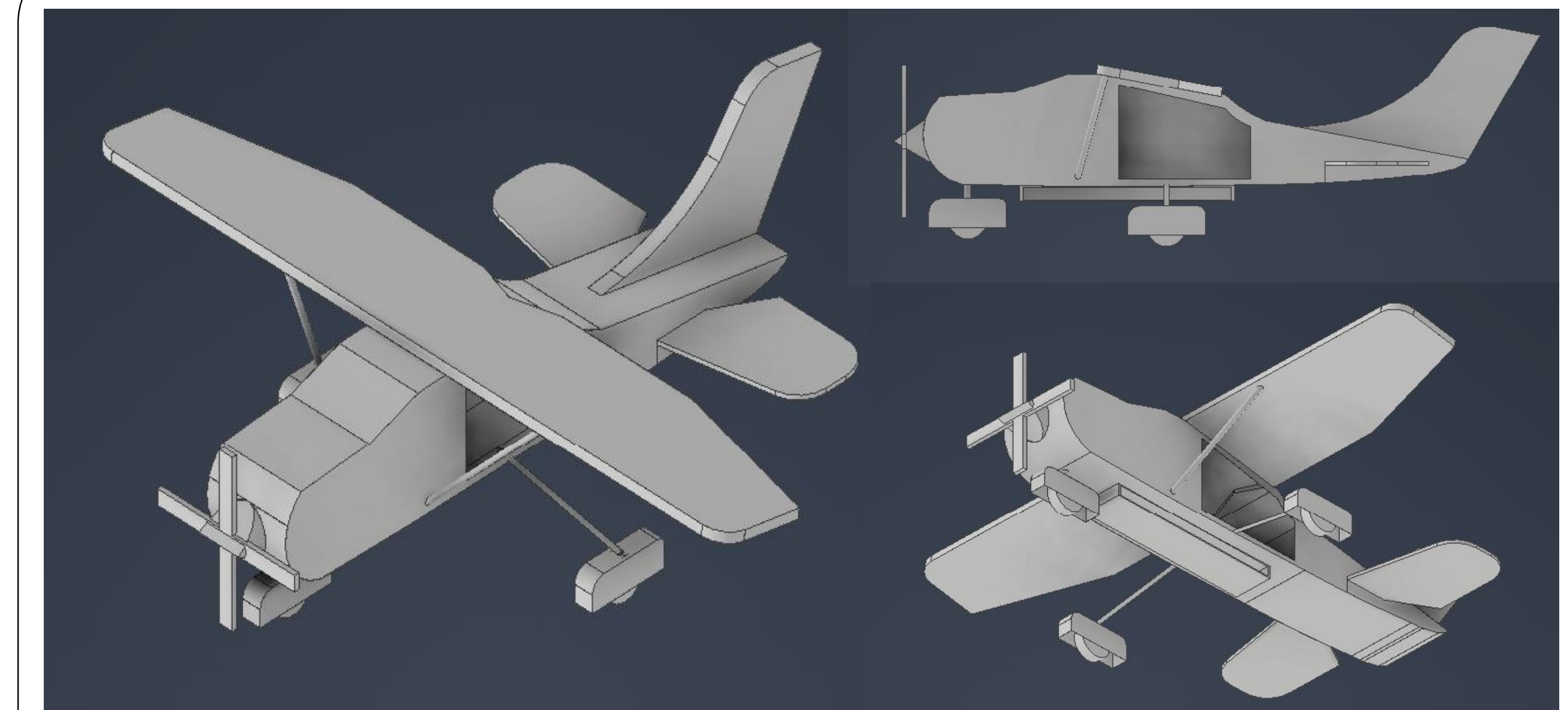


Dimensions of the batteries/battery packs

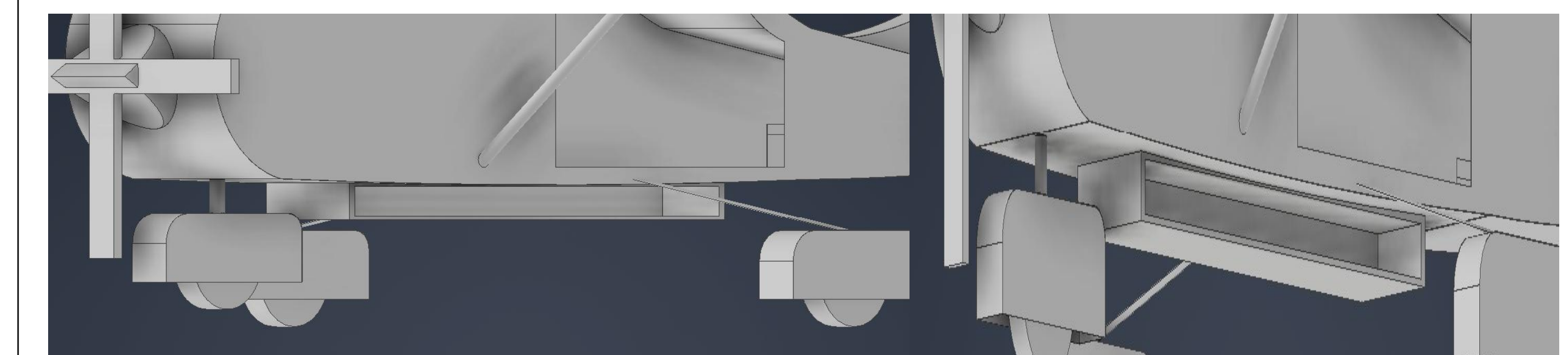


Dimensions of the battery pack holder on the aircraft and location of electric motor

## The Model



Final version of Cessna 206 model views



Battery box close-up



Polished version made with AI

## What's next

- ❖ The next steps will be fitting the electric motor in the model, getting it to look more accurate to a Cessna 206, and making sure it fits the flight ready criteria so it will be ready to commercialize.



QR code to the Github of this research project

## References

- Arpingstone, Public domain, via Wikimedia Commons
- Cessna Aircraft Company, Public domain, via Wikimedia Commons
- Tomás Del Coro from Las Vegas, Nevada, USA, CC BY-SA 2.0  
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