

Problem:

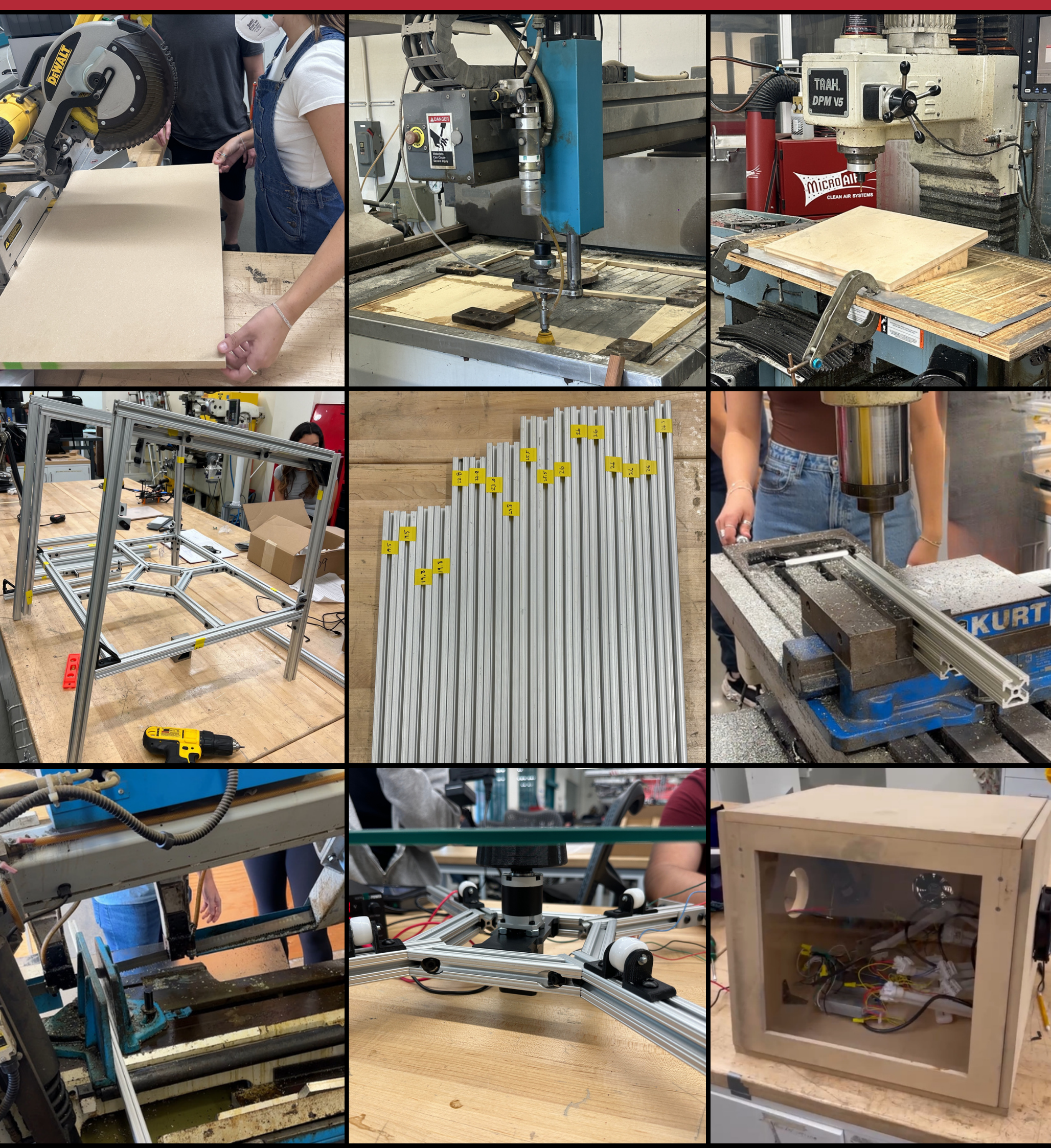
Masimo's current off-the-shelf UV curing chamber exhibits these issues:

- High temperatures cause part warping
- Uncured blind spots
- Incapacity for larger parts
- Inconvenient overhead cavity access
- Manual operation that risks resin transfer

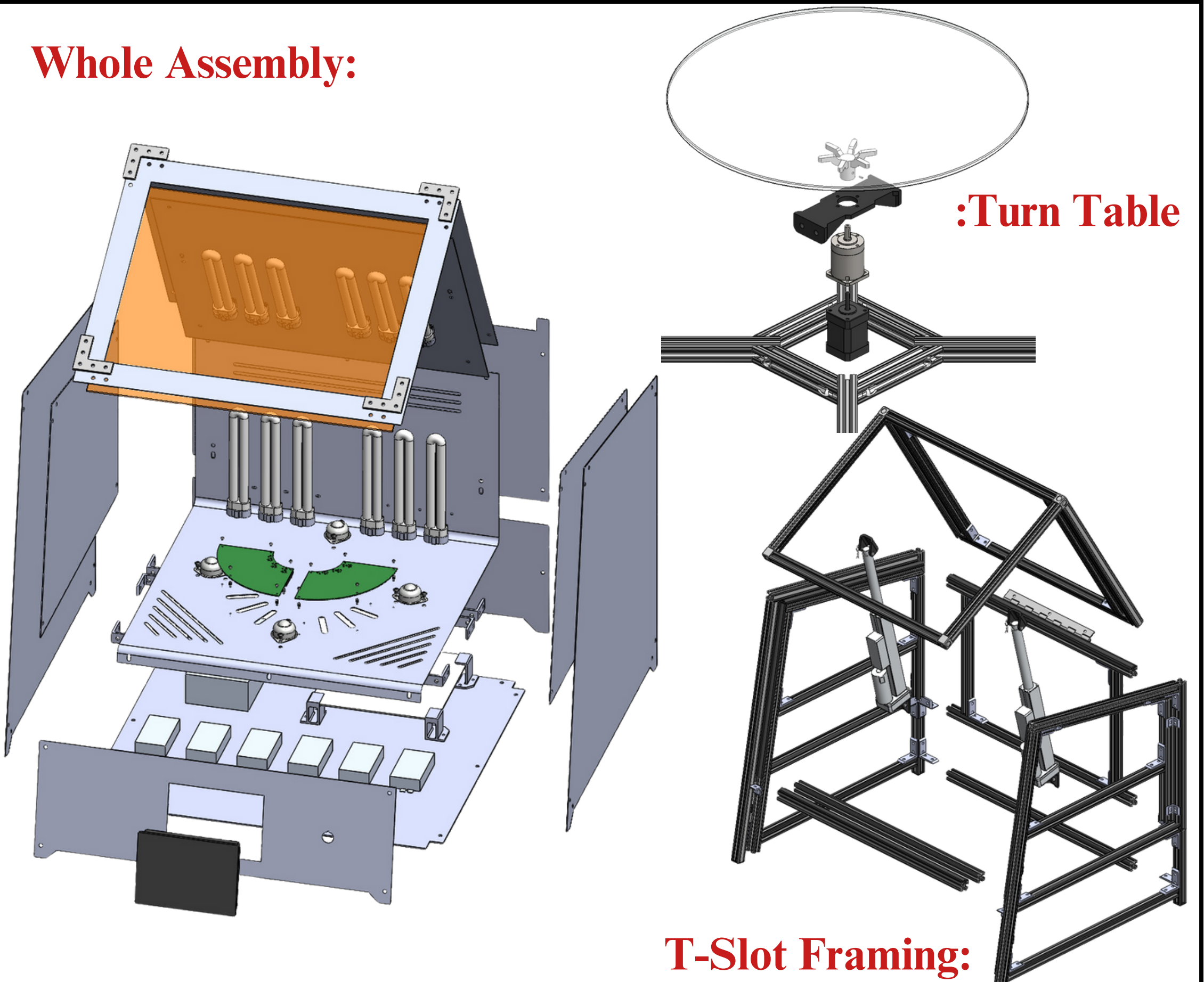
Objective:

To design, document, and fabricate a temperature-controlled UV curing chamber that emits UV light to all sides of an object for a controlled amount of time.

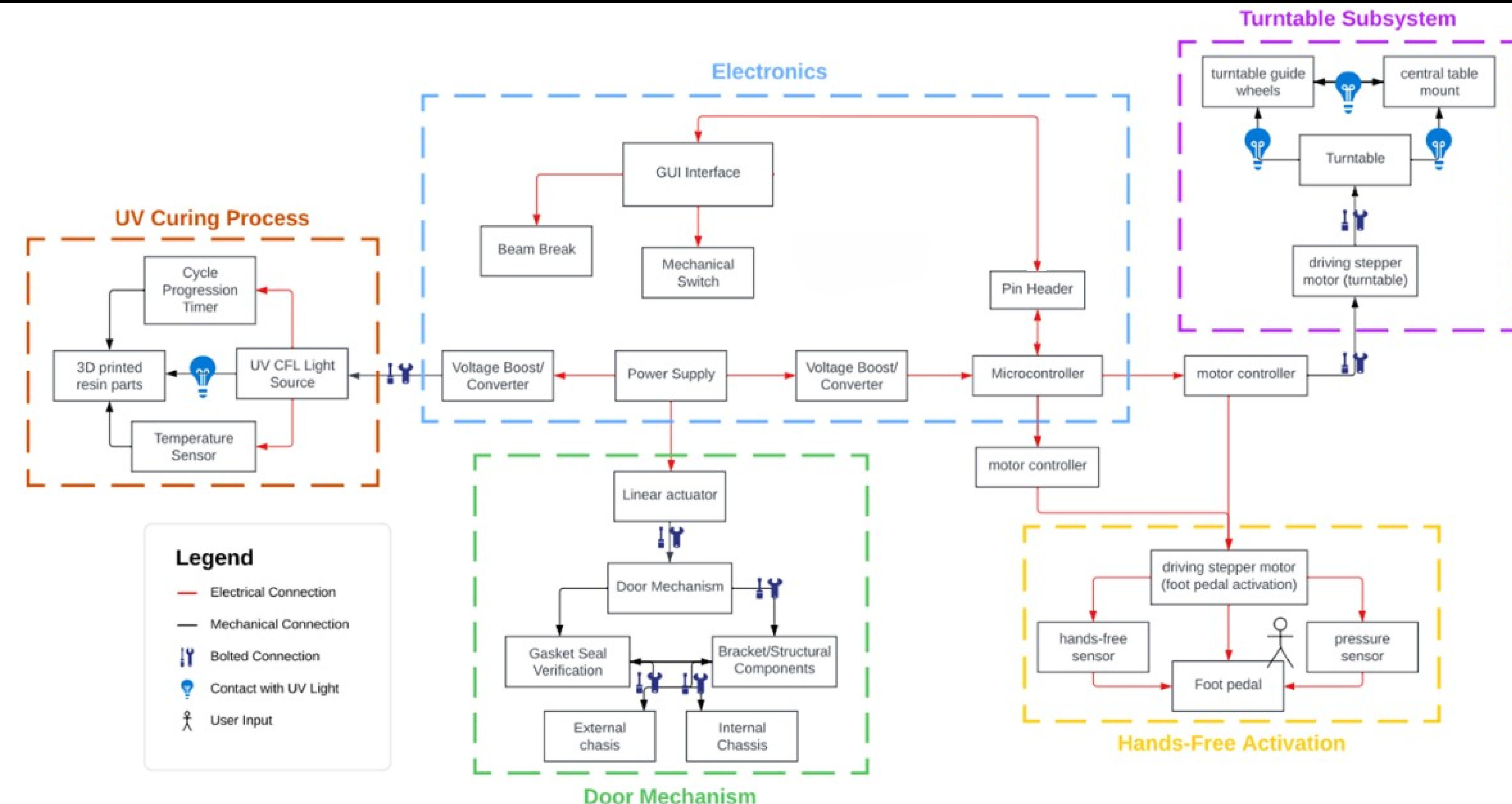
Manufacturing:



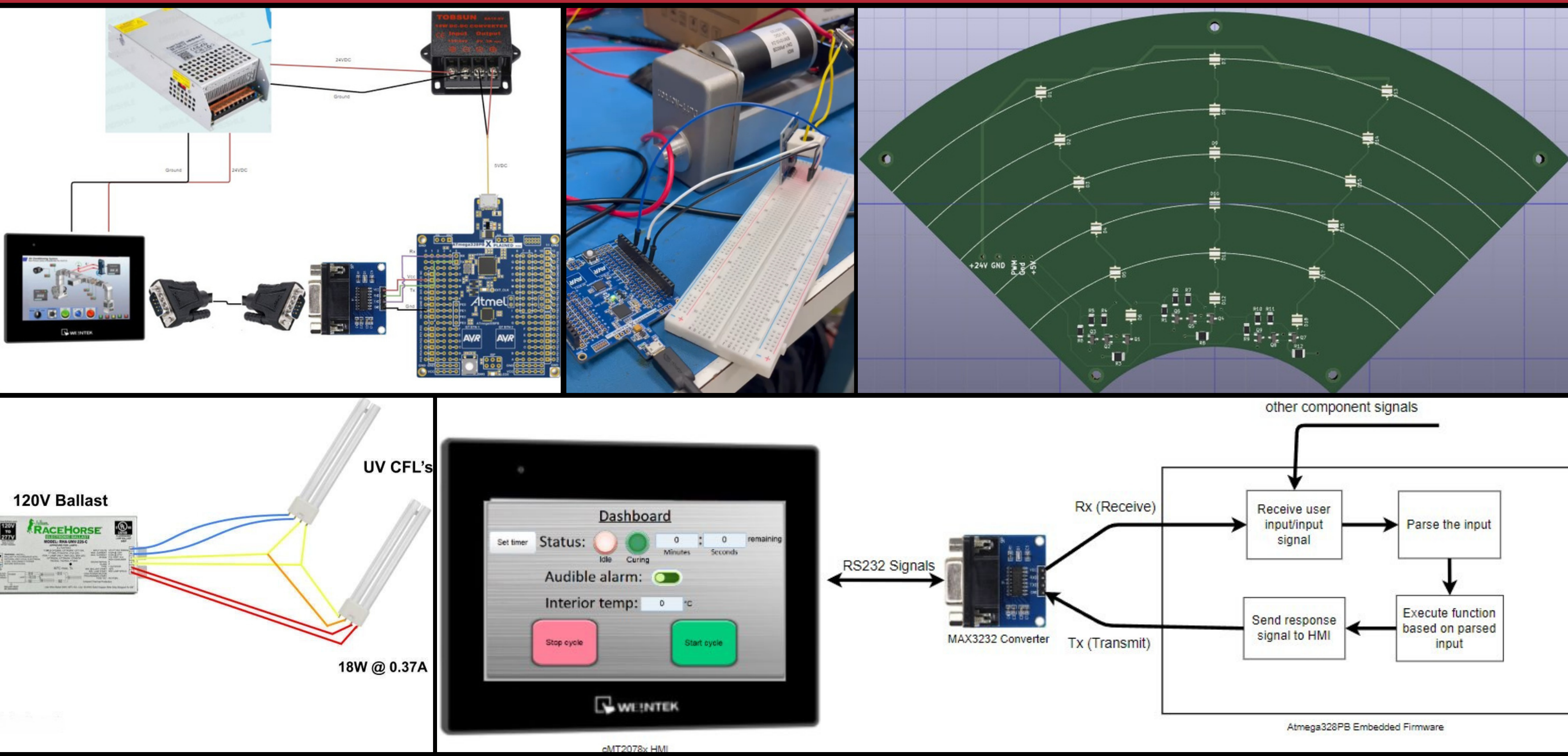
Computer-Aided Design:



System Level Diagram:



Electrical:



Testing:



Team Members:

Mechanical Engineering

Amber O'Brien | Ethan Taylor | Maxwell Lee | Ryan McKnight

Electrical / Computer Engineering

Benjamin Daluz | Esmeralda Marquez | Talal Alkhashti | Willie Arroyo Alva

Sponsor: Masimo

Masimo, a leader in global medical technology, innovates in monitoring technologies and hospital automation to enhance patient care across clinical and home settings. By integrating advanced medical devices with consumer health solutions, Masimo aims to improve patient outcomes and reduce healthcare costs. Their commitment extends beyond the hospital, embracing telehealth and home monitoring to transform healthcare delivery and experience.

Acknowledgements:

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