

Collapsible, Minimalistic, and Solar Powered 3D Printer

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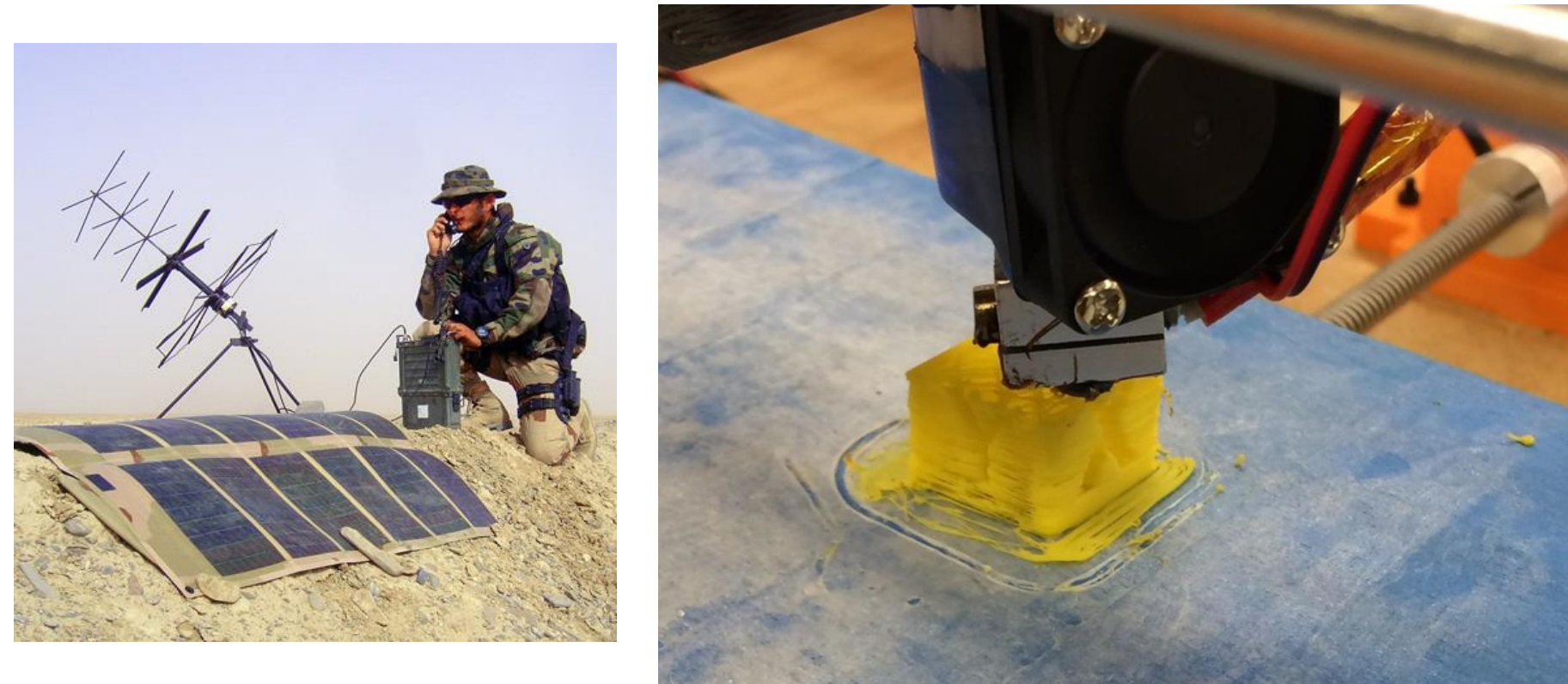
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Background

- 3D Printing: The leading method for rapid prototyping and manufacturing
- Used in fields ranging from hospitals to outer space
- Need for a portable design



Project Objective

Develop novel 3D Printer with collapsible, minimalistic, and solar powered features

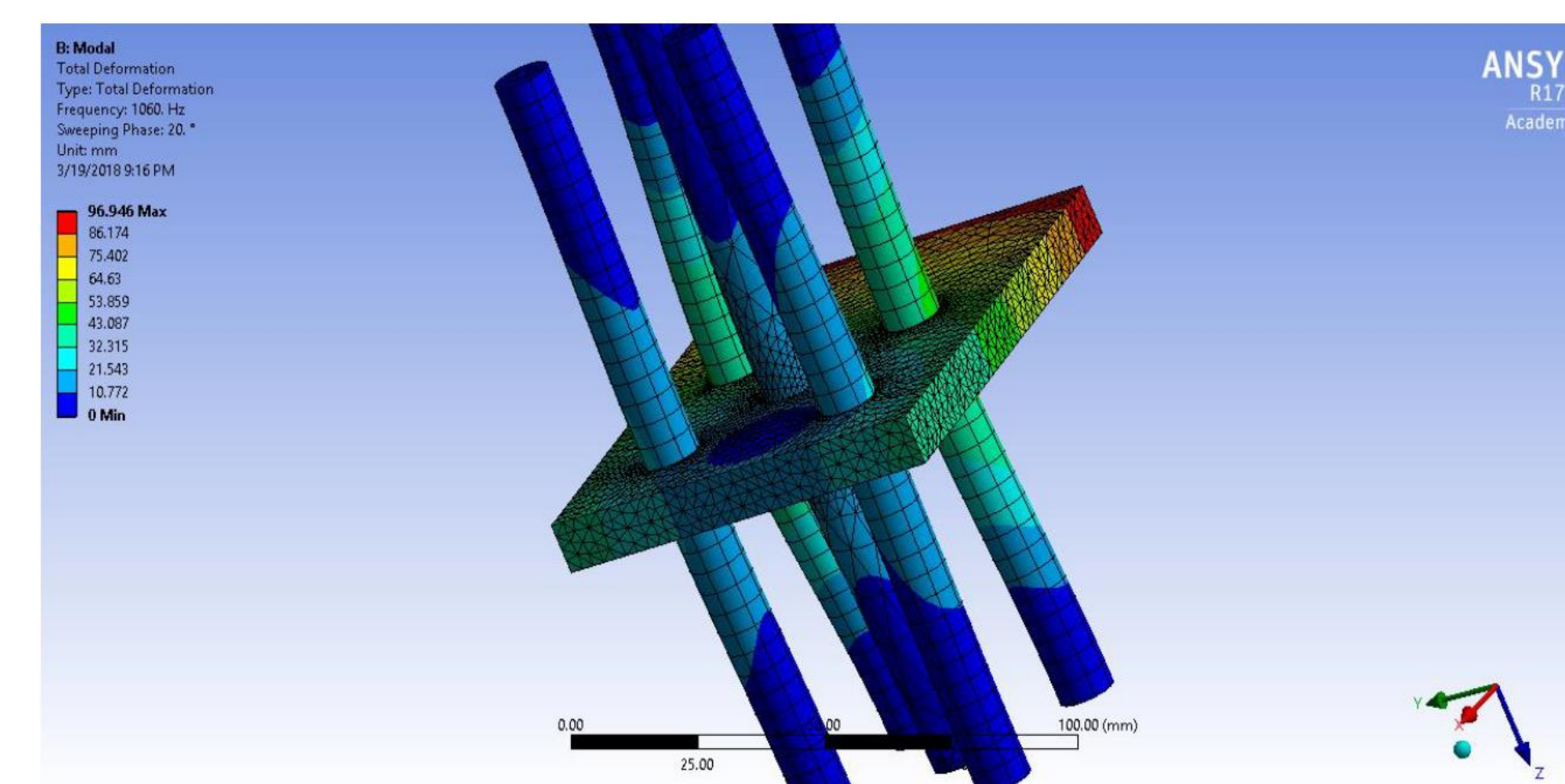
Design Constraints

- Portable (folding, collapsible, minimal parts)
- Max. 4.50 kg in weight
- Min. 8cm x 8cm workspace
- Power Source: Batteries and Solar Power

Testing & Analysis

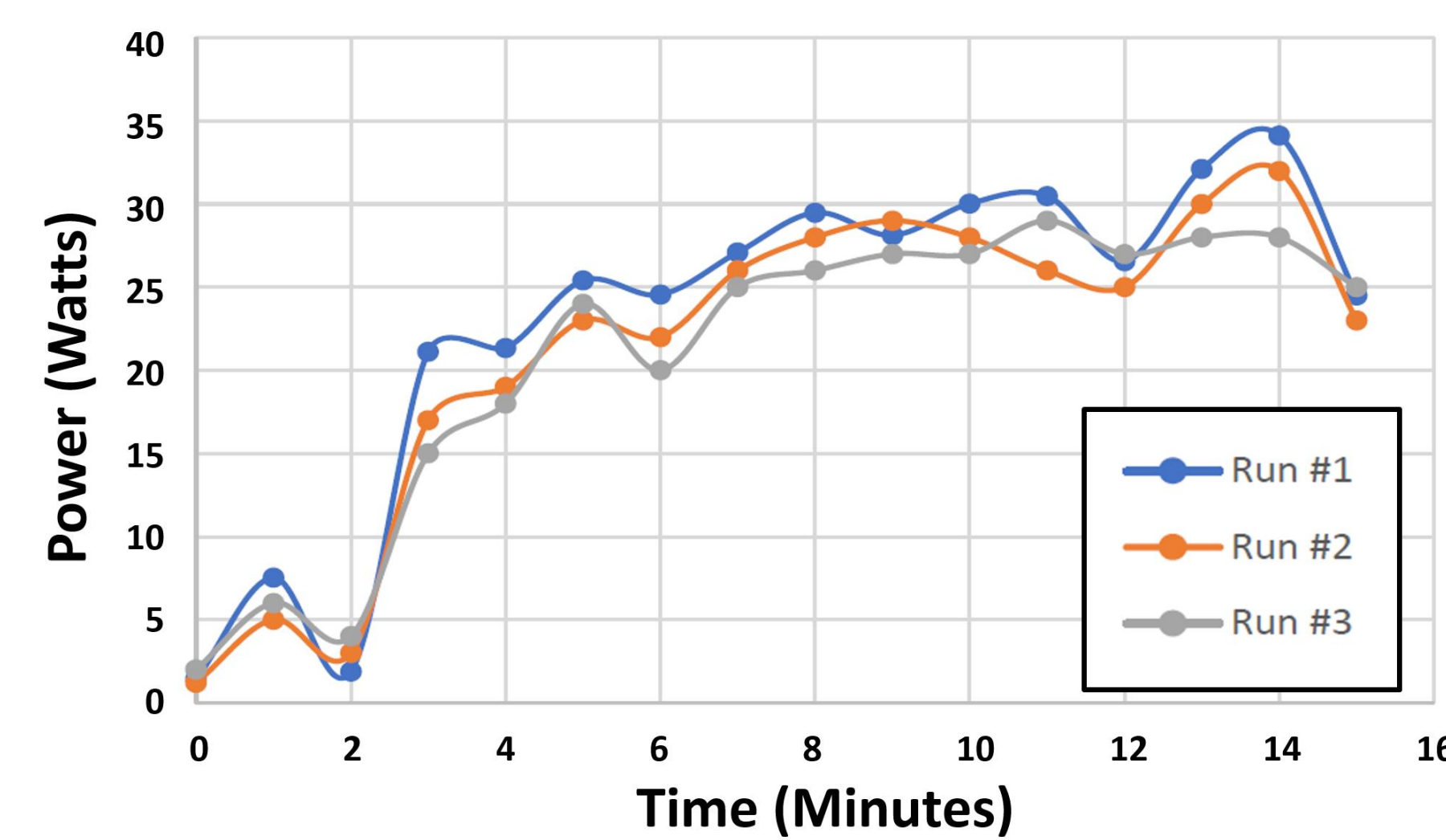
FEA Analysis

(Structural Integrity & Vibration)



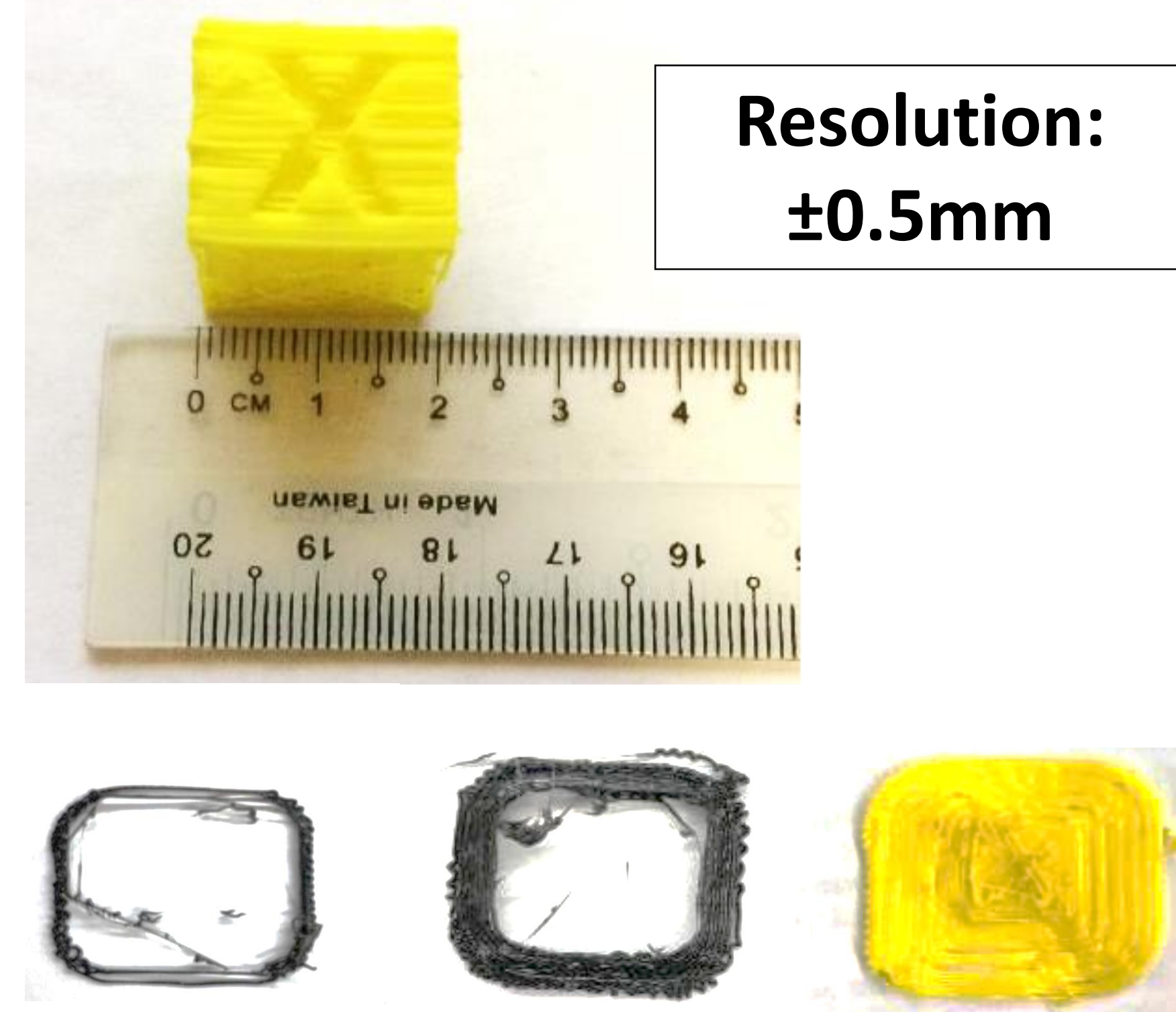
Energy Testing & Analysis

(Power Consumption For Print)

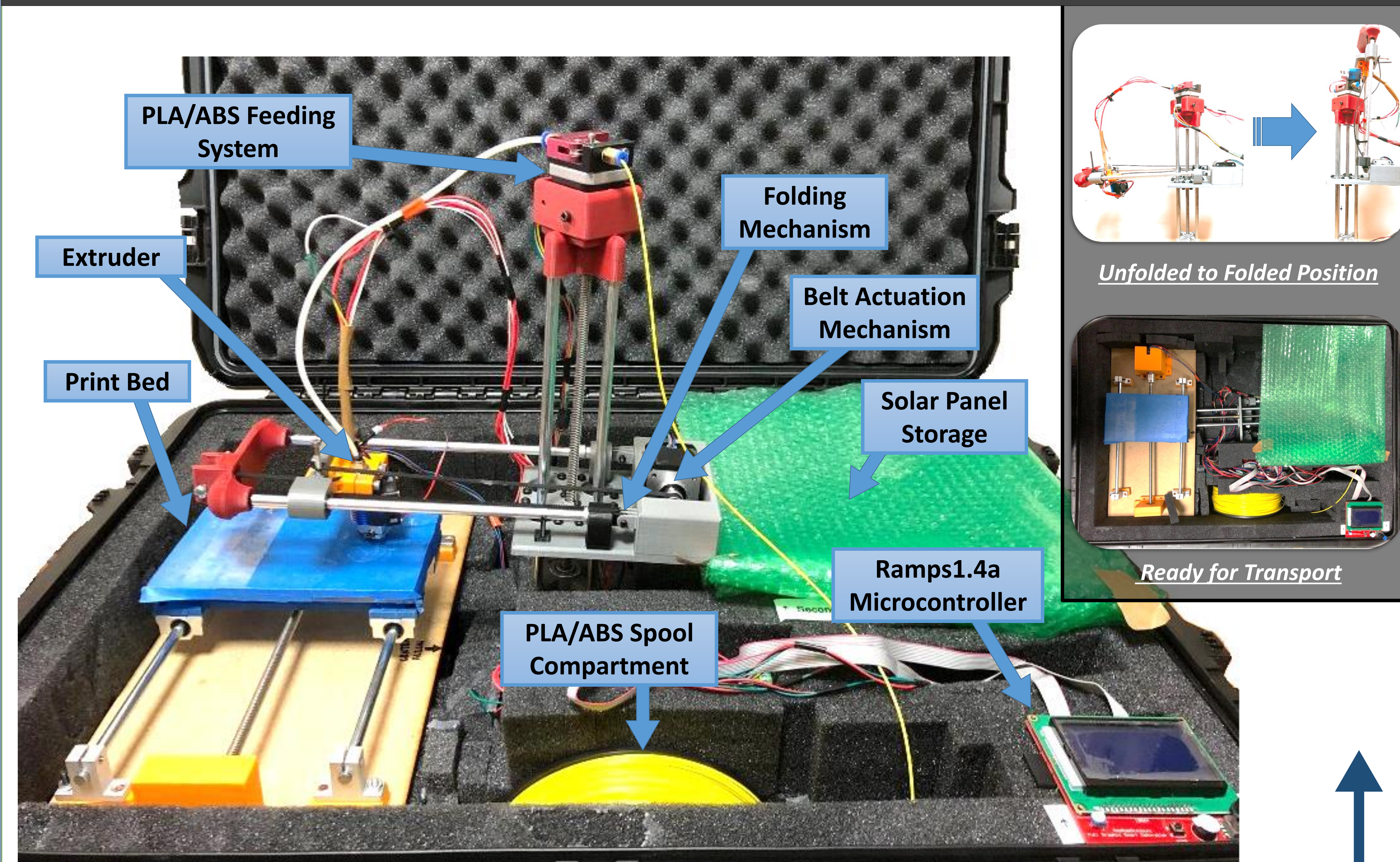


Print Testing

(Resolution and Accuracy)



Final Design



Design Iterations

