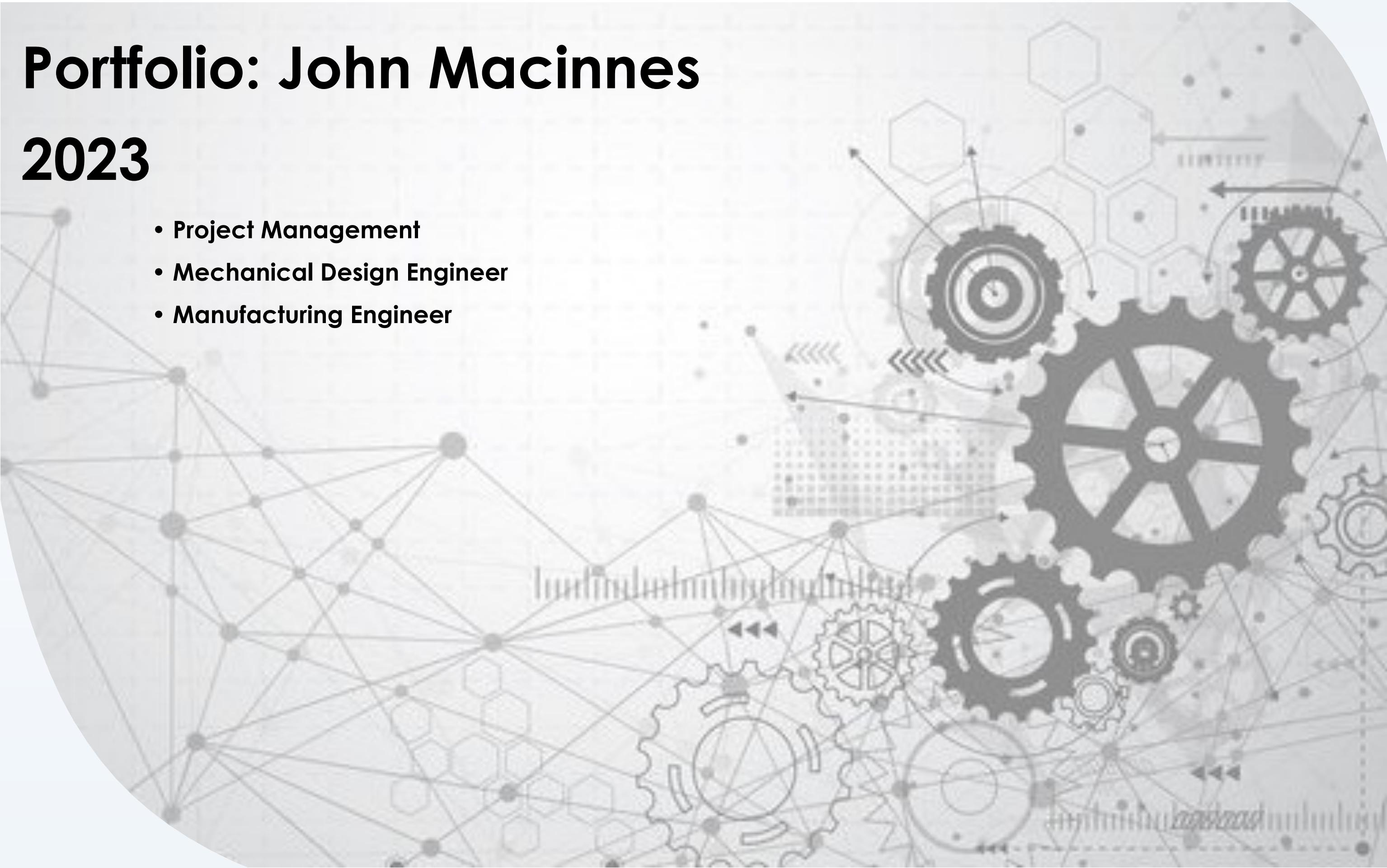


# Portfolio: John Macinnes

## 2023

- Project Management
- Mechanical Design Engineer
- Manufacturing Engineer



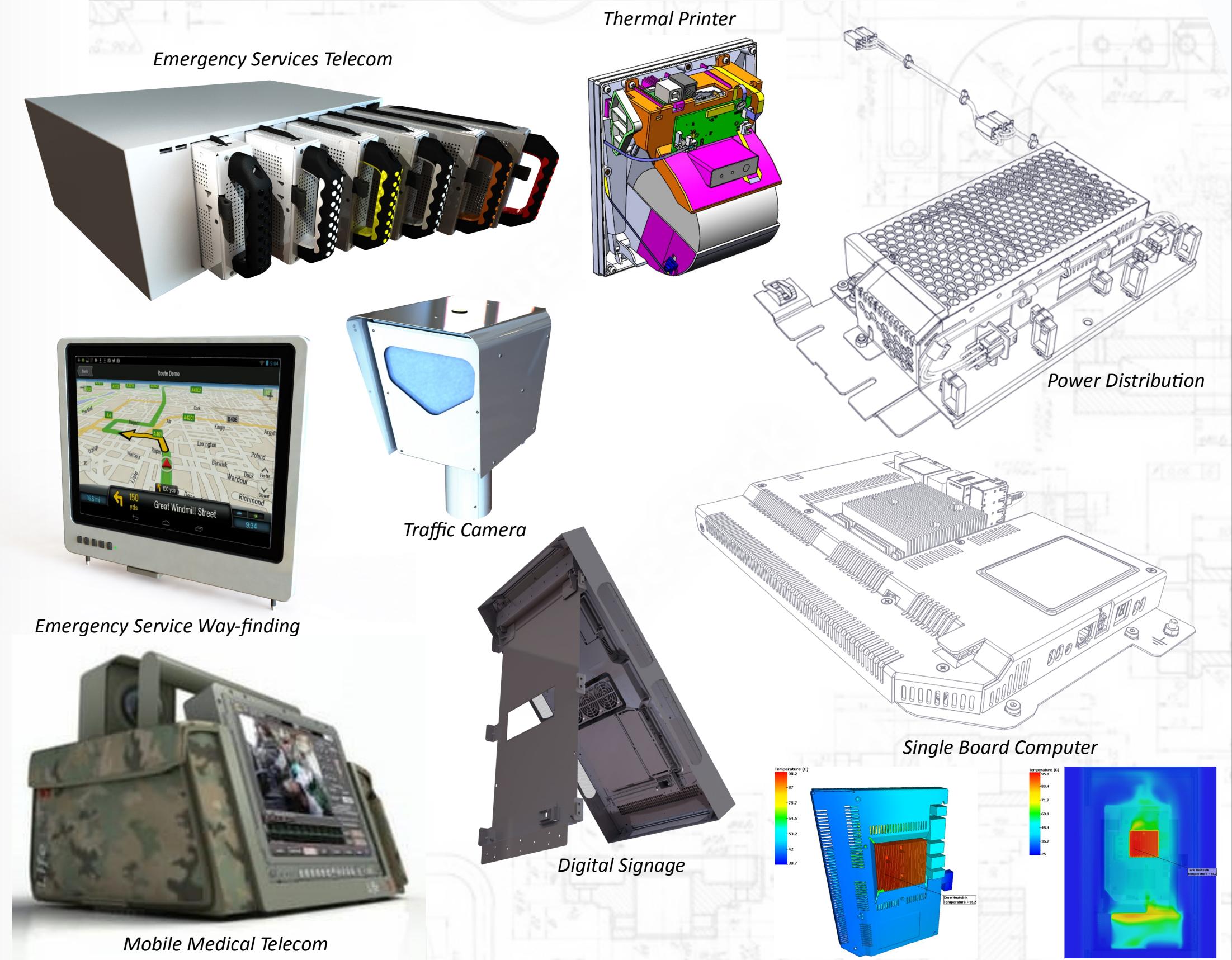
# Design Capabilities (Overview)

- Project Management
- System Design
- Mechanical Design
- Cable Harness Design
- Power Distribution Design
- Tooling / Fixture Design
- Drawings
- BOM / PLM Management
- Assembly Instructions
- Install Guides
- Test Procedures
- System Diagram / Schematics
- Package Design
- Reliability Testing / Troubleshooting
- Budget / Schedule Management
- Procurement / Operations
- KPI / DFMEA
- Estimating / Cost Analysis



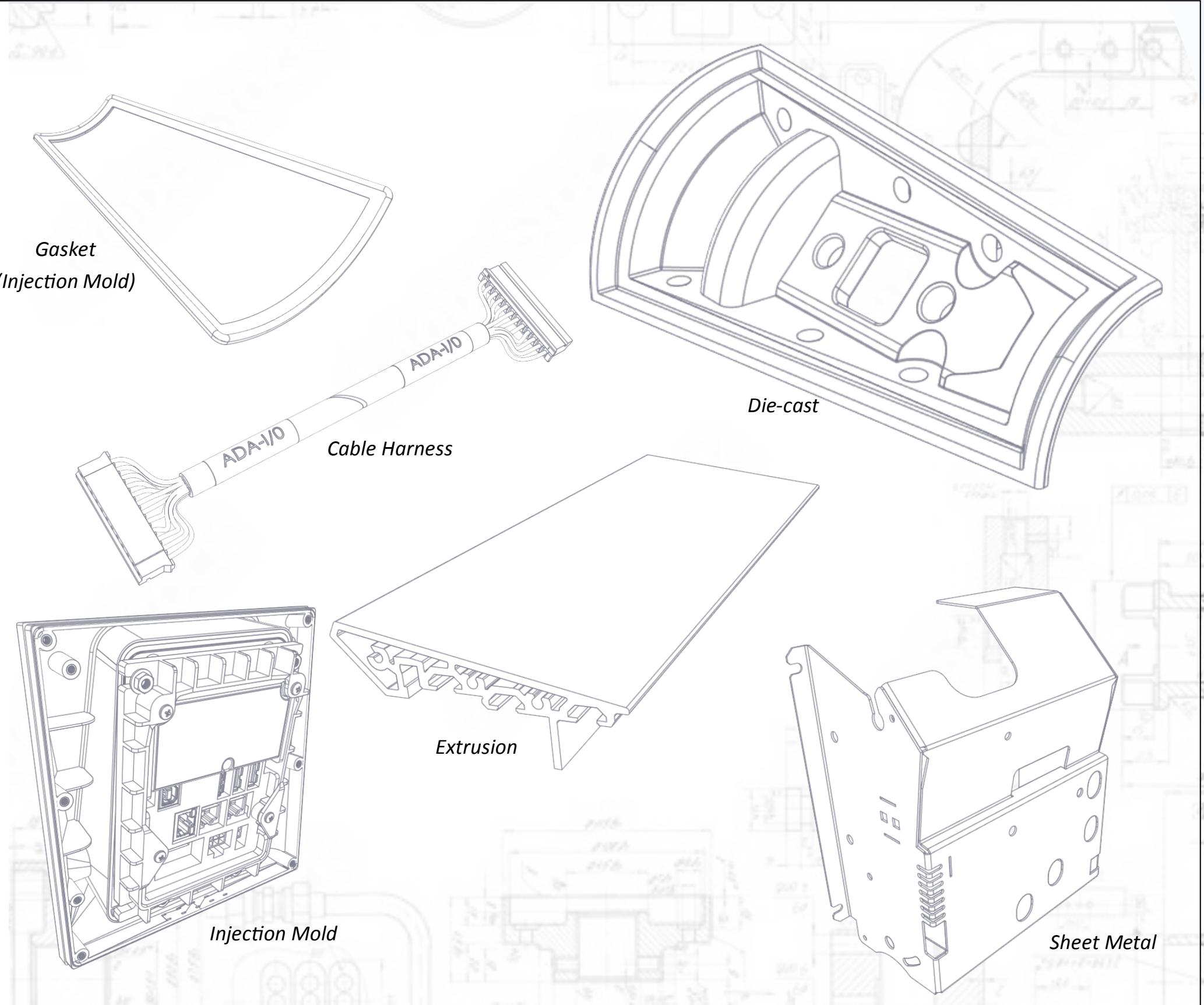
# Product Design (Industries Served)

- Consumer Products
- Aerospace
- Military
- Medical
- Transportation
- Gaming
- ATM / Kiosk
- Server Farm
- Vertical Grow Farming
- Solar
- Hospitality
- Electrical Enclosures
- Battery Containment
- Camera Enclosures
- Power Distribution
- Industrial Single Board Computers
- Facial Recognition



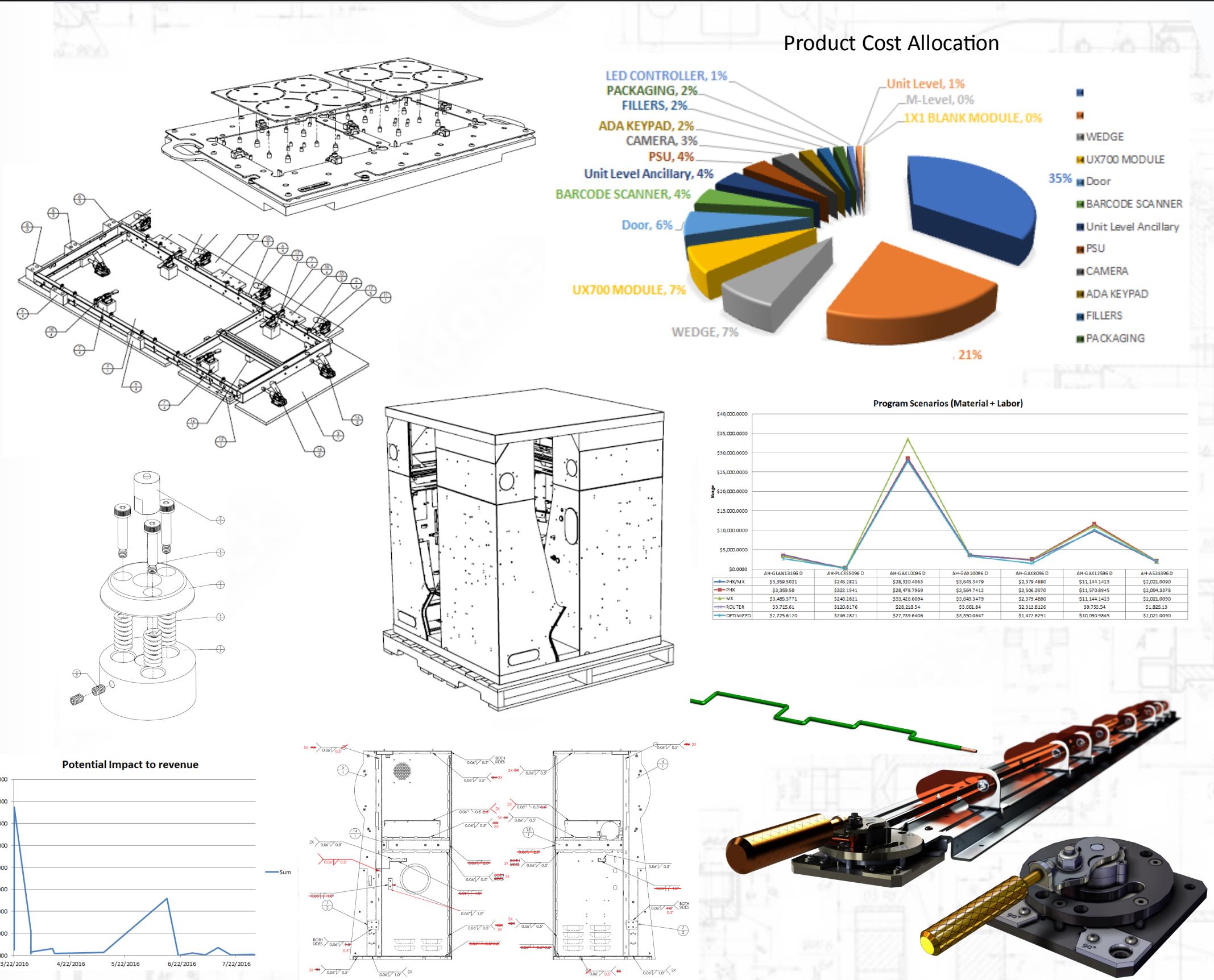
# Manufacturing Processes (Design Examples)

- Sheet Metal
- Welding
- Stamping
- CNC Machining
- Plating
- Silkscreen / Pad-print / Decal
- Powder-coating
- Die-cast
- Die-cut
- Extrusion
- Injection Mold
- Gasket
- Light-pipe
- Cable Harness
- System Integration
- 3d Printing (SLA/SLS)
- Quality Assurance
- ISO 9001:2015 / ISO 13485



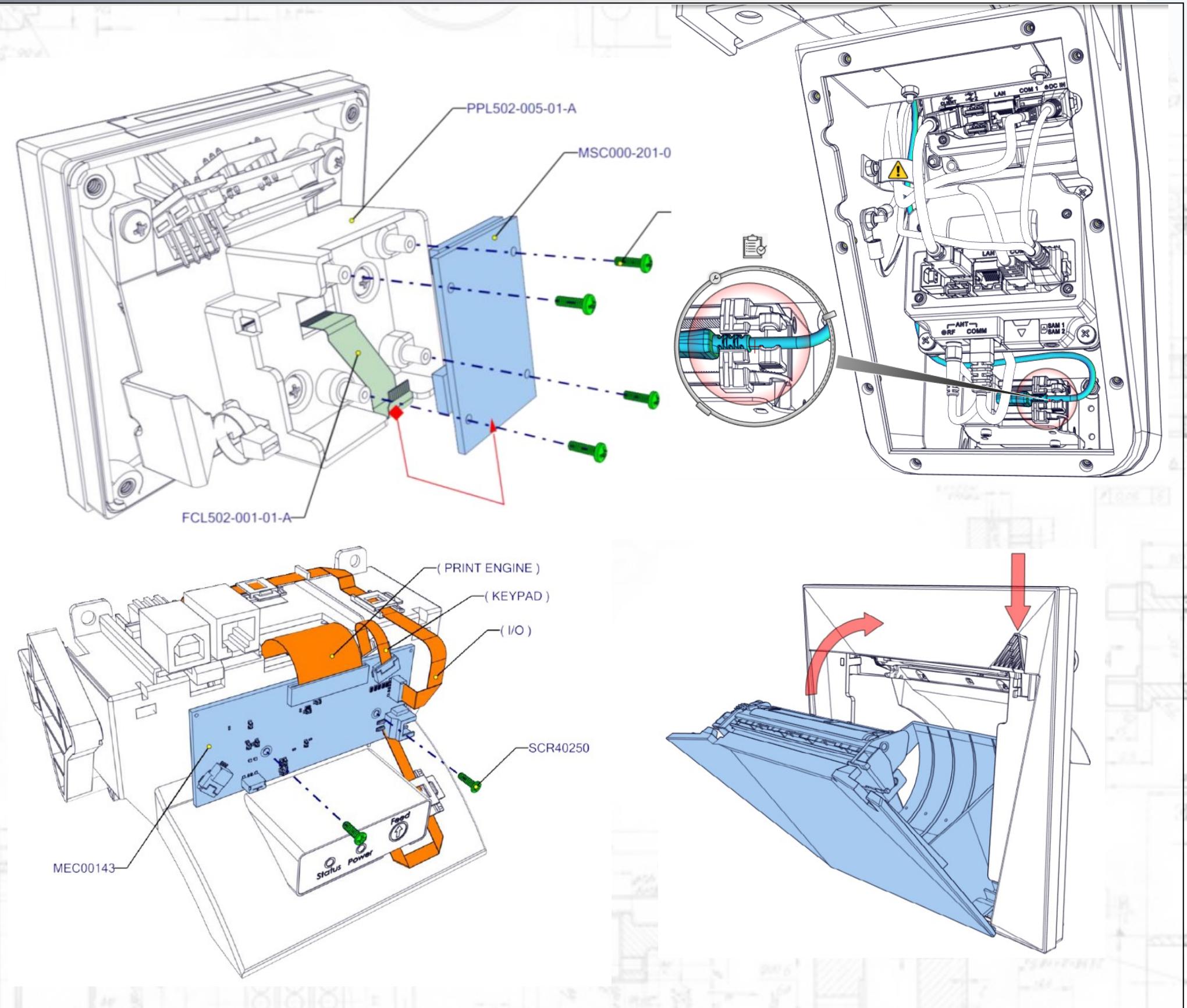
# Manufacturing (Analysis, Execution, Fixture & Tool Design)

- DFM / DFMA / DFX
- Cost Reduction / Ease of Manufacture
- Continuous Improvement
- Lean Manufacturing / Six Sigma
- Tooling Design
- Fixture Design
- Line Layout (Integration / Capitol Eq.)
- Time Study / Tack-time Balance
- Test Procedure creation and adherence
- Assembly Instructions
- Cable Routing Optimization
- Troubleshooting, Root Cause Analysis
- CNC programming (Punch/Laser)
- Logistics
- Assembly Technology



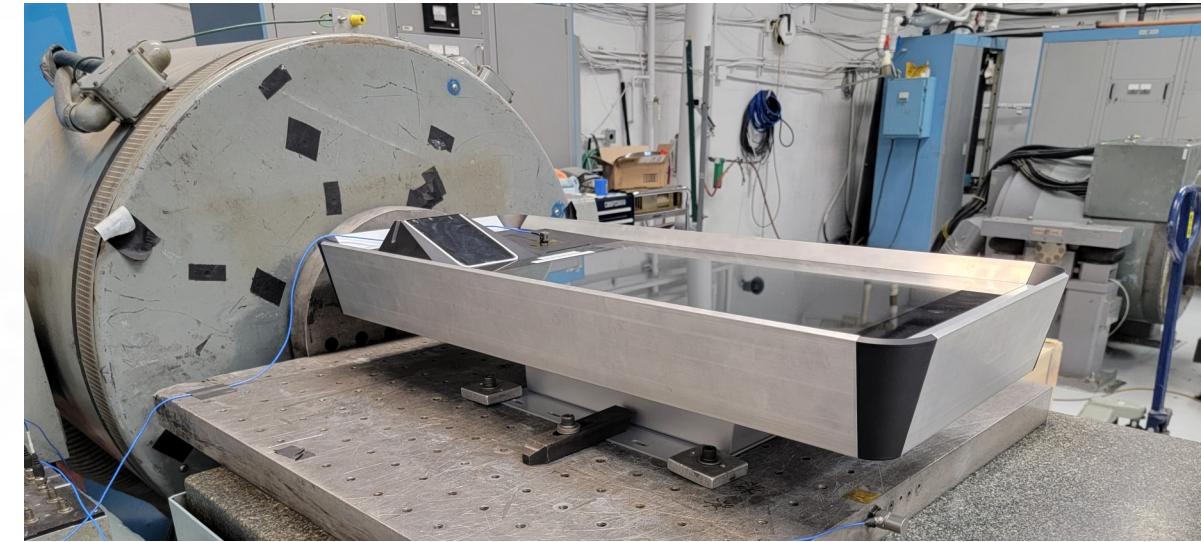
# Technical Writing (Creation, Maintenance, and Adherence)

- Engineering Procedures
- Engineering Work Instructions
- KPI Analysis and Reporting
- Task / Project Allocation and Scheduling
- Comprehensive Design Reviews
- Assembly Instructions
- Install Guides
- User Manuals
- Troubleshooting Guides
- Test Procedures
- Concept and Final Rendering
- Marketing Content
- Interactive website content
- Product Brochures



# Test Processes (Laboratory Testing)

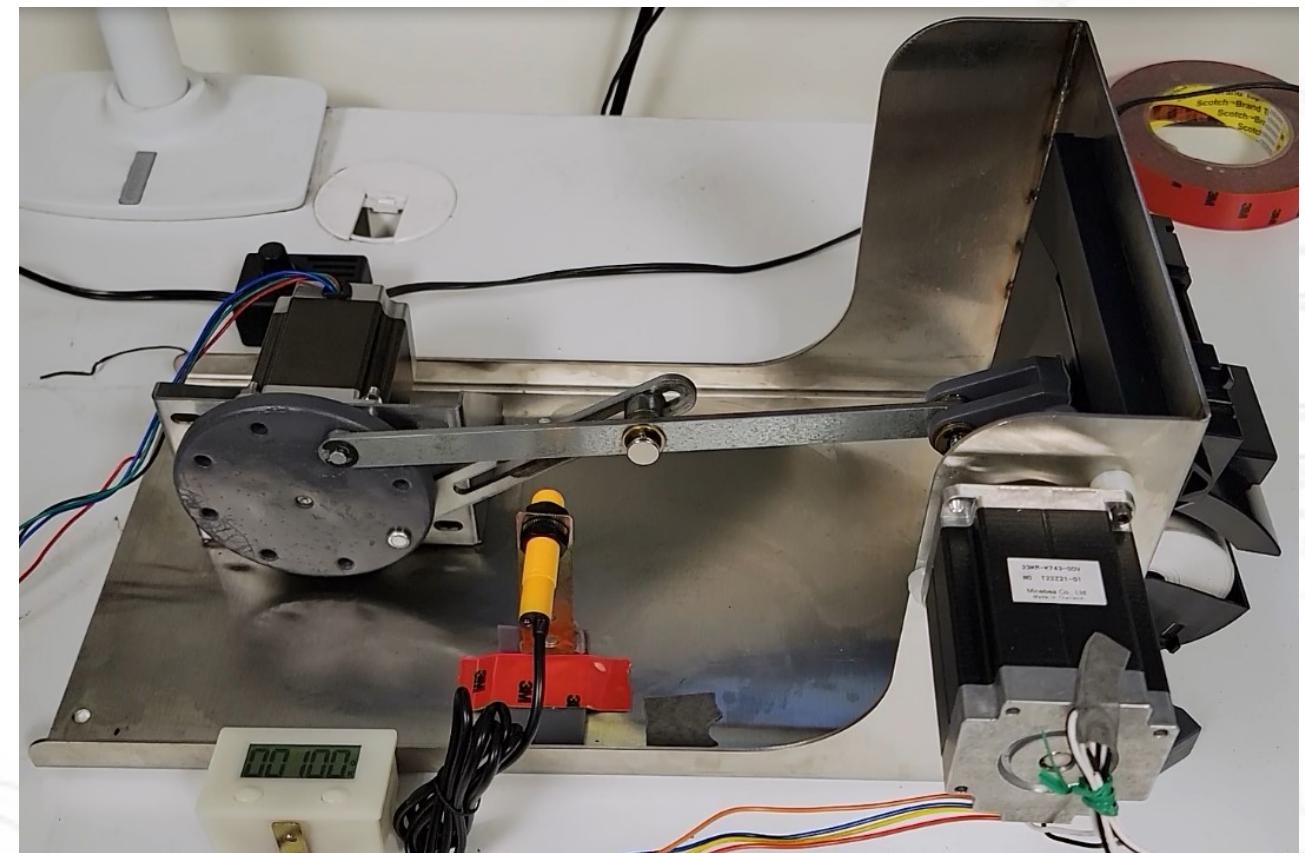
- Functional
- UL / ETL
- HiPot
- Thermal / Airflow Dynamics
- Solar Loading
- Vibration
- IK / Shock
- Ingress (IPxx / NEMA)
- Packaging
- Mechanical Cycle Test (Fatigue)
- Power Cycle
- EMI Emissions
- Drop
- Destructive
- Corrosion / Chemical Resistance
- Software Integration
- System Integration



Vibration (Transportation Profile)



Climatic (95% Humidity Profile)



Cycle (OEM Thermal Printer Door, Open/Close, 30k cycles)