

ADVANCED AIR MOBILITY

## Commercial Aircraft EVTOL

Project  
Management



Mechanical  
Engineering



Systems  
Engineering



## NEXT-GENERATION EVTOL DEVELOPMENT

### APPROACH

- Build embedded engineering team with mechanical and systems engineering support
- Support airframe design and stress analysis, mechanical systems design, propulsion and controls systems design, requirements management, tooling design, and manufacturing build support of NCRs and floor guidance
- Provide requirements management for multiple system configurations
- Support mass governance activities
- Support design reviews of PDR, CDR, and MRR

### RESULTS

- Designed majority of fuselage, empennage, and boom components, assemblies, and installations
- Performed static and dynamic testing of boom and boom-to-wing interface
- Validated and verified requirements for propulsion and control systems
- Developed CAD part framework of composite components to support aggressive timelines
- Developed company-wide Fibersim guidelines for design and manufacture of composite parts
- Performed dynamic nonlinear analysis of landing gear and boom-to-wing interface
- Designed tooling for composite part layup and airframe bonded assembly
- Created design and installation engineering of avionics mounting components
- Managed system requirements development
- Supported identification of safety-of-flight requirements and system mass governance activities

### KEY TOOLS & TECHNOLOGIES

- Siemens NX
- Teamcenter
- GitLab
- Fibersim
- Femap/Nastran
- LS-DYNA
- Polarion
- Jira

**ALTEN TECHNOLOGY**