



# EVOLUTION OF ENGINEERING™

Systems Engineering | Mission Assurance | Software Development

## COMPANY OVERVIEW

Avatar Technologies is a woman-owned systems engineering and management consulting firm headquartered in Greenbelt, MD. Founded in 2006, Avatar specializes in complex systems engineering, technology integration, mission assurance, program management and software development solutions for federal government and commercial clients in the space exploration, civil aviation, national defense and intelligence sectors. From human-rated spaceflight ground support infrastructure to narcoterrorism disruption tasks, our team excels in incrementally enhancing legacy systems and processes with cutting-edge technologies and cost-saving methodologies.

### SYSTEMS ENGINEERING

*Modernizing, designing, integrating, and testing complex systems for national defense & NASA human-rated missions*

- Concept of operations definition
- High-fidelity requirements development and allocation
- Functional analysis & trade studies
- Subsystem design and interfaces
- Full system integration & testing
- Validation and verification testing
- Design baseline and change control
- Operations and maintenance

### MISSION ASSURANCE

*Ensuring NASA and Air Force program operations meet all schedule, cost, quality and operational objectives*

- Planning, Programming, Budgeting & Execution (PPBE) analysis and reporting
- Earned value management execution
- Cost, risk and schedule integration with interdependency analysis
- Policy research and guidance
- Configuration management, workflow monitoring, auditing & issue resolution
- Quality management system design

### SOFTWARE DEVELOPMENT

*Developing technology evaluation and custom software solutions for NASA, Air Force & Missile Defense Agency programs*

- New technology evaluation and testing
- Custom algorithms, software, testbeds, and associated hardware design
- Database development, analysis, streamlining and management
- Software integration with legacy codes
- Software validation and verification
- Mission planning, real-time mission monitoring & post-mission data analysis

## RECENT TEAM ACCOMPLISHMENTS

- **Complex Systems Engineering:** Authored *Integrated Inter-connect Concept Drawing* defining C3 interfaces between KSC LCS, Range, other ground subsystems and vendor components to avoid costly future redesigns and impacts to launch schedule
- **Technology Integration:** Integrated Space Launch System (SLS) design, operational & interface requirements with KSC Pad 39B
- **Mission Assurance:** Drafted counter-narcotics program action plans to track & combat narcotics-funded terrorism in Europe
- **Program Management:** Integrated Orion ground processing flows & timelines and analyzed for impacts to master schedule
- **Strategic Program Planning:** Identified, analyzed & documented KSC ground systems technology development needs for program reviews and products, such as PPBE reports & Decision Package
- **Software Development:** Automated KSC change management process using SharePoint Designer, C#, JavaScript & AngularJS
- **Technology Evaluation:** Designed software testbed to evaluate new technologies for integration with missile defense systems

## THE AVATAR DIFFERENCE

- Certified woman-owned (**WOSB**) and small disadvantaged business (**SDB**), with **Navy SeaPort-e** and **FAA eFAST** Prime contracts
- **DoD Top Secret** facility clearance & **DoS ITAR Exporter Registration**
- **Rapid recruiting capability** with technical experts reviewing résumés and continually-refreshing database of candidates
- **Highly-educated** professional staff with all holding college degrees
- Operating under **DCAA-approved accounting system** with tight cost controls and real-time expenditure monitoring
- Strict adherence to & extensive knowledge of Federal Acquisition Regulation, as well as NASA, Defense & Air Force FAR Supplements
- Timely, error-free submission of all contract deliverables, required technical and financial reports, and monthly invoices

## NAICS CODES

**541330 [Primary]** | 541715 | 541690 | 541511 | 541512  
541513 | 541611 | 541614 | 541618 | 561210 | 561499