

# Managing the Software Life-Cycle for Large Format Display System



A leading avionics manufacturing firm was awarded a contract to create a new large format display system (LFDS) for a commercial aircraft cockpit. The systems manufacturer faced a tight deadline in developing the LFDS, tied to the critical path of commercial aircraft production.

The manufacturer needed to partner with outside firms to help manage the project and deliver the LFDS on time. Esterline Control System - AVISTA's prior experience with the company's Engine Indication and Crew Alerting Systems (EICAS), and reputation in avionics electronics control systems led the avionics manufacturing firm to select them to manage key elements of the [software development life-cycle](#).

LFDS development was complicated by the need to invent new technology to support feature requirements, as well as by the need to create new tools to support various verification requirements. During the extensive project, the team performed the requirements capture, architected, designed, and coded major portions of the software, and integrated the software components developed by the AVISTA team, and other vendors, for [system verification testing](#). They also tested the functionality both at AVISTA team headquarters and onsite at the client's offices.

With its strong project management, close communications and efficient use of resources, AVISTA services delivered the project on time and within budget, helping the LFDS achieve DO-178B Level A certification.

## Fast Facts

**Company:** Industrial equipment manufacturer

**Industry:** [Aerospace](#)

**Geography:** United States

**Project:** New large format display system (LFDS) for a cockpit

**Certification:** DO-178B, Level A

**Challenge:** Needed to create new display system on a tight deadline

**Solution:** Outsource significant parts of the project to a team with extensive software development experience

**Results:** With careful management of the project and resources, the team delivered on time and within budget—achieving Level A certification



# Esterline Control Systems - AVISTA Success Factors

The team was selected as a key vendor to handle significant portions of the software development life-cycle, and brought the following strengths to the project:

- **Contributed during all phases of the life-cycle.** Among other tasks, the team created the project plan, developed multiple software components, performed [integration and verification testing](#) on the product, assisted with product implementation in the field, and provided follow-up legacy support.
- **Quick response to crisis issues.** Project leaders describe the program as a “wild ride” with a fair number of issues and problems that arose to challenge the team. In each case, the AVISTA engineers and managers responded quickly to assess project impact and mitigate the issue through team redeployment, schedule adjustment, or design workaround. The team’s [strategic contributions](#) in program management ensured that critical deadlines were achieved and budget guidelines were met.

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**“AVISTA’s knowledge, experienced staff and avionics expertise helped us complete a complex, difficult project on time and within budget.”**

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- **Commitment to safety-critical quality.** Unlike many other types of hardware and software, avionics components must meet extremely stringent standards for quality, reliability, and fault tolerance. The staff has considerable experience in avionics development under the DO-178B standard and led the verification process to achieve Level A certification of the LFDS software.
- **Project completion on time and within budget.** Careful management of the project and resource details delivered the results both on-time and within budget. In fact, the team completed more work than originally planned in the initial statement of work.

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