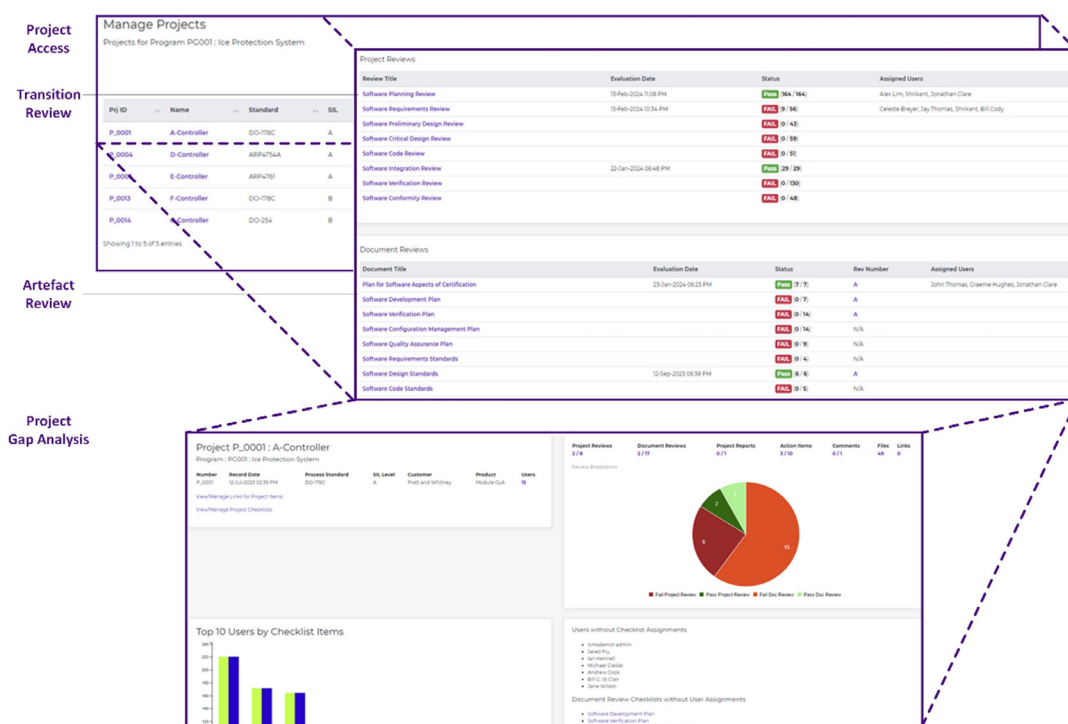


LDRA Compliance Management System (LCMS)

The LDRA Compliance Management System (LCMS) facilitates civil and military aviation certifications. It helps organizations prepare for certification in accordance with DO-178C & DO-254 by guiding them through the creation of a compliance data package.

This package collates the life cycle documents and artifacts required for Stage Of Involvement (SOI) audits and comparable reviews including compliance plans, standards, process checklists, and tools for Action Items (AIs) and Project Reports (PRs). LCMS capabilities are augmented by Level A Federal Aviation Administration (FAA) Designated Engineering Representative (DER) support as needed.

LCMS further supports the certification efforts of Systems and Safety engineers by providing detailed examples of ARP 4754A and ARP 4761 compliance data, including documents and associated checklists. These documents are linked to DO-178C and DO-254 examples and case study life cycle data, relating them to the “big picture” of aircraft certification and airworthiness objectives.



Project access

LCMS organizes ongoing review and audit activities under a Program/Project hierarchy. Each Program is a container that includes one or more Projects. A Program may be an aircraft, an aircraft system (e.g., ice protection system) or any component. Each compliance data package references a single project, collating the life cycle data produced by the planning, analysis, requirements, implementation and verification of a software or hardware item.

Subprojects are especially useful when multiple DO-178C and/or DO-254 items are identified in a Plan for Software/Hardware Aspects of Certification (PSAC and/or PHAC). The Project that contains the pertinent SOI #1 (Planning) artifacts can be referenced by one or more items.

Transition reviews

Transition reviews determine the correctness and completeness of DO-178C and/or DO-254 compliant processes. Using LCMS checklists customized to Development Assurance Levels (DALs), the reviews confirm the sequence and substance of development tasks. Any inconsistencies or errors in data and project progression may lead to the identification of Action Items (AIs), which are then monitored until resolved using the integrated AI tool within LCMS.

Artifact reviews

LCMS enables easy access and auditing of project documents and related artifacts. The audit framework is defined by an FAA Job Aide-comparable checklist that may be modified by the user. Non-compliance and quality issues are recorded and tracked by the LCMS Comment tool. LCMS includes detailed document exemplars, called Process Compliance Documents, that represent a comprehensive set of aircraft systems (ARP 4754A), safety (ARP 4761), airborne software (DO-178C) and programmable electronic hardware (DO-254) artifacts, greatly reducing the documentation burden.

Objectives compliance reporting

LCMS offers both quantitative and graphical reports on how well DO-178C and DO-254 objectives are met, based on user oversight of artifacts and processes. These reports are organized and detailed, giving a thorough overview of the project's status from a high-level perspective. Essentially, LCMS dynamically maintains a gap analysis, providing current evidence of compliance and readiness for certification.

Benefits

- Addresses the SOI project management pain points of schedule and cost overruns
- Organizes and automates SOI related activities
- Provides a collaborative framework linking the OEM, suppliers and regulators with the applicant's compliance data package
- Ensures FAA and EASA certification readiness
- Reduces documentation effort by hundreds of hours*
- Reduces process oversight costs by up to 50 percent*

*Cost/benefit analysis available on request.

Solution details

- Civil and military certification readiness solution, underpinned by Level A Federal Aviation Administration (FAA) Designated Engineering Representative (DER) support.
- Encompasses DO-178C and DO-254 artifacts, providing:
- **Project access** under a Program/Project hierarchy.
- **Transition reviews** supported by DAL specific checklists and Action Item tracking.
- **Artifact reviews** underpinned by a Job Aide comparable checklist, comment tool, and "Process Compliance Document" exemplars.
- **Objectives compliance reporting** is presented in quantitative and graphical terms, identifying vulnerabilities exposed by analyses and reviews while allowing appropriate measures to be taken.



www.ldra.com
LDRA
LDRA UK & Worldwide
Portside, Monks Ferry,
Wirral, CH41 5LH
Tel: +44 (0) 151 649 9300
e-mail: info@ldra.com

LDRA Technology Inc.
2540 King Arthur Blvd, Suite 228,
Lewisville, Texas 75056
United States
Tel: +1 (855) 855 5372
e-mail: info@ldra.com

LDRA Technology Pvt. Ltd.
Unit No B-3, 3rd Floor Tower B, Golden Enclave,
HAL Airport Road, Bengaluru 560017
India
Tel: +91 80 4080 8707
e-mail: india@ldra.com