

2-Day In-Person Hands-On Training Curriculum

JIRA Cloud for Mechatronics Program Delivery

Duration: 16 Hours (2 Days × 8 Hours)

Format: Instructor-led | Hands-on | Scenario-based

Primary Tool: JIRA Cloud (Boards, Advanced Roadmaps, Dashboards)

DAY 1 - FOUNDATIONS & PROJECT EXECUTION (8 HOURS)

Session 1 (09:00 - 10:30)

Delivery Models for Mechatronics Programs

Objectives

- Understand Predictive, Agile, and Hybrid delivery models
- Identify why pure Agile fails for hardware-centric programs
- Learn how hybrid models are implemented in real organizations

Key Concepts

- Predictive (Waterfall): stage-gates, long lead times, frozen designs
- Agile: incremental value, fast feedback, change tolerance
- Hybrid for Mechatronics:
 - Stage-gated hardware + iterative software
 - System engineering upfront + rolling wave planning
- Mapping delivery models to:
 - Systems
 - Mechanics
 - E/E hardware
 - Embedded software
 - Testing & validation

Best Practice

- Use **hybrid governance**, not hybrid confusion: stage-gates at system level, Agile at execution level.

Common Pitfall

- Treating mechanical design like user stories without accounting for lead times.

Trainer Talking Points

- Real industry failures with “Scrum-only” hardware programs
- How OEMs and Tier-1 suppliers structure hybrid governance

Participant Activity

- Group discussion: map participants’ current projects to delivery models

Session 2 (10:45 - 12:15)

JIRA Cloud Overview & Architecture

Objectives

- Understand JIRA Cloud components and capabilities
- Map JIRA concepts to engineering reality

Key Concepts

- JIRA Cloud architecture
- Project types:
 - Agile (Scrum, Kanban)
 - Business
 - Service Management
- Boards, backlogs, workflows, issues
- JIRA terminology vs engineering language

Live Demo

- Navigate JIRA Cloud UI
- Explore projects, boards, issues, filters

Best Practice

- Treat JIRA as a **system of execution**, not a reporting tool.

Common Pitfall

- One JIRA project for everything > unmanageable workflows.

Session 3 (13:15 - 14:45)

JIRA Project Types for Mechatronic Systems

Objectives

- Design JIRA project structures for multi-disciplinary programs
- Understand cross-project coordination patterns

Key Concepts

- System engineering project
- Mechanical design tracking
- Embedded & software development
- E/E hardware tracking
- Testing & product validation
- Coordination models:
 - One program > multiple execution projects
 - Shared epics across projects

Hands-On

- Create multiple JIRA projects:
 - System Engineering
 - Software Development
 - Mechanical Design
- Define responsibility boundaries

Best Practice

- Separate **governance projects** from **execution projects**.

Common Pitfall

- Mixing validation & development workflows in one project.

Session 4 (15:00 - 16:30)

Setting Up a JIRA Project (Deep Dive)

Objectives

- Configure JIRA projects correctly from day one
- Avoid rework caused by poor initial setup

Key Concepts

- Issue hierarchy:
 - Initiative > Epic > Feature > Story/Task > Subtask
- Workflow design:
 - Status vs states vs gates
- Discipline-specific workflows
- Roles & permissions

Guided Hands-On

- Create issue types
- Configure workflows:
 - Mechanical
 - Software
 - Testing
- Map roles:
 - Engineer
 - Product Manager
 - Scrum Master
 - Leadership

Best Practice

- Fewer workflows with discipline-specific statuses.

Common Pitfall

- Over-customizing workflows before usage stabilizes.

Session 5 (16:30 - 17:30)

Day 1 Capstone Exercise

Hands-On

- Create a **multi-disciplinary mechatronics project**
- Configure:
 - Issue hierarchy
 - Workflows
 - Permissions
- Validate setup via sample issues

Expected Outputs

- Fully configured JIRA project
- Working board per discipline

Best Practice

- Validate setup with real scenarios before scaling.

DAY 2 - PLANNING, SCALING, REPORTING & PORTFOLIO (8 HOURS)

Session 6 (09:00 - 10:30)

Multi-Team Agile Execution for Mechatronics

Objectives

- Plan across multiple teams and disciplines
- Synchronize hardware and software work

Key Concepts

- Increment planning
- Hardware lead times vs sprint cadence
- System integration milestones
- Release alignment

Hands-On

- Split work across multiple teams
- Define increments and releases

Best Practice

- Use **integration milestones** as alignment anchors.

Common Pitfall

- Sprint commitments without hardware dependency checks.

Session 7 (10:45 - 12:15)

Planning & Dependency Management

Objectives

- Plan capacity realistically
- Visualize dependencies early

Key Concepts

- Capacity planning techniques
- Sprint planning in JIRA
- Dependency visualization
- Risk & blocker management

Hands-On

- Plan sprints using capacity data
- Create and link dependencies
- Track blockers

Best Practice

- Explicit dependency ownership.

Common Pitfall

- Hidden dependencies discovered during integration.

Session 8 (13:15 - 14:45)

Work Item Management & Estimation

Objectives

- Define work items consistently
- Estimate across disciplines

Key Concepts

- Work item definitions at each level
- Estimation methods:
 - Story points
 - Hours
 - Hybrid estimation
- Documentation best practices

Hands-On

- Create and estimate issues
- Define acceptance criteria
- Track progress

Best Practice

- Hybrid estimation for hardware-software programs.

Common Pitfall

- Over-precision in early estimates.

Session 9 (15:00 - 16:00)

Reporting & Dashboards

Objectives

- Provide role-specific visibility
- Avoid vanity metrics

Key Concepts

- Team dashboards
- Product Manager views
- Project Manager / Scrum Master views
- Leadership dashboards
- Meaningful metrics

Hands-On

- Build dashboards for:
 - Team
 - PM
 - Leadership

Best Practice

- Different dashboards for different decisions.

Common Pitfall

- One dashboard for all stakeholders.

Session 10 (16:00 - 16:45)

Portfolio Management Using JIRA

Objectives

- Enable portfolio-level governance

- Track strategic initiatives

Key Concepts

- Portfolio vs program vs project
- Advanced Roadmaps
- Cross-project dependency tracking
- Decision support

Hands-On

- Configure Advanced Roadmaps
- Link initiatives to execution

Best Practice

- Portfolio views for alignment, not micromanagement.

Session 11 (16:45 - 17:30)

Final Capstone: End-to-End Mechatronics Simulation

Hands-On

Participants:

- Plan a product roadmap
- Execute sprints
- Manage dependencies
- Track risks
- Report to leadership

Expected Outputs

- Working portfolio roadmap
- Execution dashboards
- Dependency visualizations

Best Practice

- Treat JIRA as a living system.

Common Pitfall

- Tool compliance without behavioral change.

TRAINING CLOSE-OUT

- Key takeaways
- Anti-patterns to avoid
- Scaling guidance
- Q&A