

# Collaborative Systems Engineering:

## The Jama Vision

In business, times change because needs change. Changes driven by the rise in software-driven products, the business imperatives of on-time delivery, and extended supply-chain systems are disrupting traditional manufacturing and engineering processes. Your teams are pressured to accelerate product delivery and manage growing complexity in distributed organization and supply chains, within products, and across a network of interrelated and interdependent systems.

Despite continued advances in embedded computing components, commercial software, and automated software development tools, engineering organizations have not been able to add resources or gain additional efficiencies fast enough to keep pace with the rising complexity in their projects. Results from VDC's 2014 Software and System Development Survey show that 42% of embedded systems are behind schedule. The survey results demonstrate that issues around inadequate specifications, technical challenges and complexity are major impediments to on-time project completion.

Systems Engineering provides distinct benefits when approaching development of complex systems. INCOSE postulates that a systems engineering process will:

- “Provide a structured process for integrating and linking requirements, schedule, decision milestones, and verification – it works best when the project team is committed to the systems engineering process
- Enable the project team to work to a single, integrated set of requirements and processes
- Enable integration of the system at the requirements and design stages (before sunk costs) rather than waiting until hardware and software is available
- Reduce unplanned and costly reengineering necessary to resolve omissions and integration difficulties.”

Jama's collaborative software replaces 20th century document centric requirements tools with a data-driven approach to requirements and test management that engineers and non-engineers alike readily start using from day 1. No other solution exists in the market today that can connect—in real-time—the individual contributions of thousands of architects, engineers, customers, managers, etc. across all disciplines and boundaries collaborating on complex systems development and sustainment while providing traceability, visibility and collaboration to the entire effort in a single system, thereby creating efficiency and effectiveness where chaos once ruled.

**Jama Manages Complexity** – Complexity is the biggest challenge to successful product delivery. Distributed teams, complicated product lines, siloed groups, and market dynamics all contribute to a system's complexity which is now demanding new ways of defining, building, and testing products. Jama makes it easy for all users to visualize and manage complex sets of requirements data.

**Jama Maintains a Digital Thread** – Jama's real-time traceability allows you to identify the gaps and dependencies between people and data, throughout the development lifecycle. Live traceability aligns asynchronous development teams for agile systems engineering. Modern purposeful collaboration mechanisms built into Jama allows systems engineers to work smarter, keeping conversations in the context of the work itself. Everyone is aligned around the greater product goal.

**Jama Increases Speed** – Companies can get to market faster when both people and data are aligned and in sync on product development and deliverables. Jama's ease of use and virtualized review and approval technology shortens the time from ideas to value.

## Modernize Requirements Management With Jama

Jama provides next-generation product development software that transform product development and delivery into a transparent, controlled and highly adoptable systems engineering process. With industry-leading competence across ALM disciplines in an enterprise-class platform that is rapidly adaptable to the unique needs of each organization, Jama is an analyst-recognized leader in the requirements management market, delivering unmatched value in each of the following areas:

- Requirements Engineering
- Verification and Validation Management
- Purposeful Systems Collaboration
- Process and Workflow Management

With Jama, internal and external stakeholders (systems engineers, customers, product managers, QA, development, testing, suppliers and more) are brought together in a collaborative, interconnected, environment. Jama ensures the application of systems engineering best practices, provides real-time visibility, balances business-driven priorities with the complexities of product development and ensures accountability while streamlining audit and compliance efforts to deliver the right products, faster.

### Solution Overview

Jama is a single application for your systems engineering data, which supports a broad range of systems engineering capabilities for Agile, Waterfall and hybrid development approaches:

- High performance cloud or on premise solution
- Requirements Engineering (RE)
- Requirements Change Management
- Test Management (TM)
- Systems Engineering Verification, and Validation (V&V)
- Risk Management
- Program/Project Management (PM)
- Variant Management for Product Lines
- Integrations to MBSE and Agile development tools

“The worlds of software development, systems engineering and product design are changing drastically, and the convergence of them has created an unprecedented opportunity for innovation. ”

—Eric Winquist, CSO and Co-Founder of Jama Software

Jama is engineered using state of the art microservices and cloud deployment architectures; enabling high performance speed and scalability. While Jama is available as a SaaS solution running on AWS, customers can also run their own Jama server on premise with the same advantages of monthly updates and cloud application architecture performance.

### Your peers and fellow innovators work in Jama.

More than 700 companies, including eight of the top 10 contractors to the U.S. government, use Jama to define, build and test products and projects. By leveraging Jama’s technology architecture, customers routinely experience the following high-level benefits and results and having requirements and tests in Jama:

#### Benefits:

- End-to-end traceability
- Internal and External Collaboration
- Real-time status and visibility
- Process Standardization
- Automated compliance

#### Results:

- Mitigated Schedule Risk – Reduced Cycle Time
- Higher Design Quality from Collaboration
- Reduced TCO from using the Jama SaaS cloud

