![Jama Software®]

SES™ Chooses Jama Connect®
to Manage Consortium Working
on EAGLE-1 Satellite System

- Founded in 1985
- Headquartered in Betzdorf, Luxembourg
- SES has a bold vision to deliver amazing experiences everywhere on earth by distributing the highest quality video content and providing seamless data connectivity services around the world. As a provider of global content connectivity solutions, SES owns and operates the world's only geosynchronous orbit and medium earth orbit (GEO-MEO) constellation of satellites with the unique combination of global coverage and high performance. By leveraging its intelligent, cloud-enabled network, SES delivers high-quality connectivity solutions anywhere on land, at sea or in the air, and is a trusted partner to the world's leading telecommunications companies, mobile network operators, governments, connectivity and cloud service providers, broadcasters, video platform operators and content owners. SES's video network carries over 6,400 channels, reaching 363 million households, delivering managed media services for both linear and non-linear content.

Customer Story Overview

In 2022, SES was awarded the EAGLE-1 project co-funded by the European Space Agency (ESA), European Commission, together with the space agencies of Germany, Luxembourg, Austria, Italy, the Netherlands, Switzerland, Belgium, and the Czech Republic. The scope of this significant European project is to design, develop, launch, and operate the EAGLE-1 satellite-based end-to-end system for secure Quantum Key Distribution (QKD) which will enable in-orbit validation and demonstration of next-generation cyber-security across Europe. As the prime contractor, SES is responsible for the overall project and for selecting and leading a consortium of 20 European companies to deliver on the project.

- Establishing a 'single source of truth' documentation
- Reducing manual effort and leveraging automation
- Reliably tracking and tracing requirements
- Adoption across the 20+ organization consortium

Eagle-1 had to comply with a number of European Cooperation for Space Standardization (ECSS) standards, tailored to the needs of the project, which deal with how to manage the project requirements and technical specifications. This included the ability to efficiently demonstrate traceability and compliance.

Before the development phase of the EAGLE-1 project took flight, the consortium lead SES defined the need for a modern requirements management and traceability tool that could be successfully deployed and adopted by disparate teams across the consortium's 20+ contractors and government agency customers involved with development requirements.

Image courtesy of SES

- Efficient documentation to prove customer requirements and space standards have been satisfied
- Traceability and autogenerated matrices and documents
- Ease of use including comments and interactions
- Reliable stable software that performs as expected
- Cost of the software including access for many stakeholders

The list of software tools to evaluate for EAGLE-1 resulted from SES talking to partners, subcontractors, and internal teams at SES about what tools they were using in addition to conducting online searches. After identifying a list of tools to consider, SES excluded tools designed for pure software development and focused on specialized requirements management tools.

Following extensive evaluation of the five requirements management offerings, Jama Connect was selected as the most suitable tool for EAGLE-1.

Multiple factors matter for the success of the project.

SES needed to ensure that the satellite system to be developed would meet customer requirements and space standards requiring documentation. Jama Connect provided an efficient solution with support for the compliance with the project applicable ECSS standards and all the functionalities SES needed including autogenerating traceability matrices and documents. "With Jama Connect, we were able on our own to adapt the tool to get the right output by creating our own sets, workflows, and export and import templates so that it worked in our environment," says Klaus Schwarzenbarth, Communications Systems Engineer, SES.

Ease of use was among the important requirements because SES was choosing a tool that would be used by SES, subcontractors, and government agencies. A web-browser based solution was critical for easy, yet secure access. "It would not have been easy to ask our partners to install 3rd party software. With Jama Connect, everybody

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COMMUNICATIONS SYSTEMS
ENGINEER AT SES

who has a web browser can log in and immediately use it without further ado, but still in line with the security needs of the project," says Schwarzenbarth.
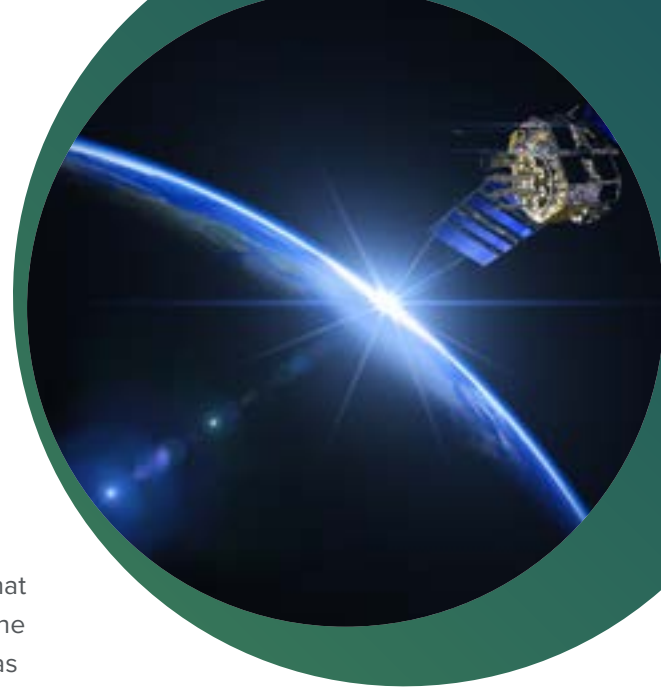
"We wanted to avoid requirements tools that are difficult to use and need somebody just to manage and keep it under control. From the beginning, Jama Connect made it clear how to create and link requirements and to figure things out easily without multiple tutorials or long trainings," says Schwarzenbarth.

The importance of choosing a mature, stable tool like Jama Connect that worked reliably without surprises became apparent. Confidence that the tool would be able to scale and perform well to meet project needs was another factor. "People evaluating the tools with one set with five requirements wondered what would happen if we had 100 sets with 10,000 requirements. It was reassuring to know that other customers use Jama Connect with hundreds of thousands of requirements," says Schwarzenbarth.

The project required easy access by European teams throughout the EU and no access by non- Europeans. Jama Connect's flexible deployment options made it possible for SES to securely self-host the software using a cloud provider with servers in Europe.

Cost efficiency was another important factor. "Giving access to as many reviewers as necessary to view and go over requirements was especially important. Jama Connect's free reviewer licenses make broad stakeholder access and contributions possible," says Schwarzenbarth.

Expert and responsive teams providing product help and process improvement from Jama Software stood out during the evaluation.

- Rapid deployment and adoption by SES and its consortium
- Single source of truth for all EAGLE-1 requirements and users
- Efficient collaboration across disparate organizations
- Direct access and official documents for customers

SES started using Jama Connect within a week after kickoff. They started with system-level requirements and gradually went down to lower levels. After several months of experience working with its requirements, SES invited EAGLE-1 subcontractors to start using the tool.

SES could implement the tool without extensive training sessions. "It was often sufficient to show our partners during a meeting how to create and link requirements and to answer questions that came up. Relevant process descriptions were integrated as a step-by-step list in an FAQ set directly in Jama Connect that users can access on demand," Schwarzenbarth.

Given the EAGLE-1 project's size and large volumes of requirements, SES has benefited significantly from Jama Connect providing a single source of truth and efficient collaboration across SES, its 20 subcontractors and multiple government agencies.

Image courtesy of SES

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Jama Software® is focused on maximizing innovation success in multidisciplinary engineering organizations. Numerous firsts for humanity in fields such as fuel cells, electrification, space, software-defined vehicles, surgical robotics, and more all rely on Jama Connect® requirements management software to minimize the risk of defects, rework, cost overruns, and recalls. Using Jama Connect, engineering organizations can now intelligently manage the development process by leveraging Live Traceability™ across best-of-breed tools to measurably improve outcomes. Our rapidly growing customer base spans the automotive, medical device, life sciences, semiconductor, aerospace & defense, industrial manufacturing, consumer electronics, financial services, and insurance industries. To learn more, visit us at jamasoftware.com.