Transmutex Wastes No Time Choosing Jama Connect® for Developing Nuclear Waste Recycling Systems

ABOUT TRANSMUTEX

Transmutex is a startup reinventing nuclear energy by turning nuclear waste into clean energy, fresh fuel, and other products with industrial applications. The company is currently in a conceptual design phase for a nuclear reactor coupled with an accelerator that generates energy and a reprocessing plant that receives spent fuel assemblies to separate usable from unusable material. The resulting waste has a potential 5 to 200 times reduction in volume and 300,000 years to 300 years of radioactive lifetime reduction which reduces transportation, storage, and liability costs that exceed $90 billion in the U.S alone – these are expected to escalate to $186 billion if nuclear capacity triples as announced at the COP28 declaration.

CUSTOMER STORY OVERVIEW

Working in the highly regulated nuclear reactor and waste processing industry in collaboration with CERN, leading laboratories, industrials, and other startups, Transmutex requires rigorous requirements management and traceability processes to ensure safety, compliance, and project success.

Initially using Word and Excel documents to track requirements, the team knew that this was no way to trace up to 100,000 requirements for several complex systems and entire facilities to ensure requirements quality, documentation consistency, and change management reliability.

Transmutex chose Jama Connect over IBM® DOORS Next®, Cameo, and Capella for its combination of ease-of-use, requirements quality verification, customization, integration, and flexibility that provided the best fit to fuel the company's development projects and growth.

WITH JAMA CONNECT, USERS EXPERIENCE:

- Intuitive, easy-to-use solution allowing people unfamiliar with requirements to participate in authoring and reviewing requirements

- Requirements management customized to fit with current startup processes and team with flexibility to adapt to growth

- Dashboards tuned specifically for each team including one providing quick status check of the health and quality of requirements

- Quality verification of requirements authored and analyzed using Jama Connect Advisor™ allowing less experienced people to write requirements with confidence

- Complete history of discussions and analyses of requirements and risk accessible to everyone

"Jama Connect's ease of use is a big plus for us because we have a lot of people inexperienced with requirements who can now author and review requirements without training or other meetings."

- ALEXANDRE CARVALHO, SYSTEMS ENGINEER, TRANSMUTEX

"We have a dashboard which we call 'the good, the bad, and the ugly' with indicators that we creating using Jama Connect's powerful filters that allows us to quickly check the health and quality status of requirements to ensure that they are all precise, traced, and confirmed."

"Using Jama Connect Advisor to verify the quality of the requirements gives confidence to people who are not used to writing requirements."

"The ability to customize Jama Connect to our processes and teams means that we don't need to compromise on half-done analysis or requirements or complicate the process further."

ALEXANDRE CARVALHO, SYSTEMS ENGINEER, TRANSMUTEX

CHALLENGES

- Tracing up to 100,000 requirements for complex systems and entire facilities cannot be done using Word and Excel documents

- Involving people who are unfamiliar with requirements to be involved in authoring, commenting on, and reviewing requirements

- Identifying well written vs. poorly written requirements in a systematic way to avoid inconsistent documentation quality

Transmutex recognized that using Word and Excel documents would not enable its teams to manage large volumes of requirements with the quality and consistency needed to achieve design goals and regulatory compliance.

EVALUATION

- Ease of use and flexibility to ensure participation of diverse user base

- Comprehensive requirements traceability from high-level systems to subsystems with documentation needed for regulatory compliance

- Integration with architectural models in existing MBSE tools

After evaluating IBM DOORS, Capella, Cameo, and Jama Connect, Transmutex selected Jama Connect based on its ease of use in authoring, collaborating, reviewing, and tracing requirements of complex systems and subsystems. The company first learned about Jama Connect through G2 which has reported Jama Connect as the top ranked solution by customers for years. Unlike competitors with steep learning curves, Jama Connect offered an intuitive interface that allowed the team with varying technical skills to become productive quickly, which was crucial for a startup operating under tight timelines. Using Cameo Datahub, the team integrated the requirements in Jama Connect with their MBSE architectural models in Cameo.

OUTCOMES

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