



REGENT

CUSTOMER STORY

**Electric Transportation Startup, REGENT,
Speeds Time to Market by Choosing
Jama Connect® to Simplify and Prove
Compliance for Complex Safety-Critical
Product Development with Strict
Regulatory Oversight**

- Founded in 2020 by MIT-trained, ex-Boeing engineers
- Building their flagship product, the seaglider, a wing-in-ground-effect craft
- Sub-scale prototype built and a goal of having paying passengers on their 12-passenger seaglider Viceroy by 2025
- Headquarters in the Boston area

With a mission to drastically reduce the cost and headache of regional transportation between coastal cities, REGENT is building a revolutionary new category of electric vehicle called a seaglider that will service routes up to 180 miles with existing battery technology, and routes up to 500 miles with next-gen batteries. The vehicles will be as safe as aircraft and have better wave and wind tolerance than existing seaplanes and WIGs.

By coupling the high speed of an airplane and the lower operating cost of a boat, REGENT is revolutionizing regional coastal travel.

Founded in late 2020, REGENT has already built a sub-scale prototype of the seaglider and will have a full-scale prototype by 2023.

Backed by many big-name investors, including Mark Cuban Companies, Hawaiian Airlines, and Founders Fund, REGENT aims to safely transport commercial passengers by 2025.

CUSTOMER STORY OVERVIEW

As the developer of a coastal transportation vehicle, REGENT must adhere to rigorous safety standards for both aviation and maritime travel, and they take that process very seriously. And in order to create the safest, highest quality vehicle, they know that they must implement a world-class development process. With that in mind, REGENT implemented Jama Connect®.

OBJECTIVES

- Demonstrating compliance with stringent aviation and maritime safety standards
- Meeting aggressive development timelines in order to safely transport commercial passengers by 2025
- Building an inclusive, efficient review process

EVALUATION

- Cloud-based solution
- Easy-to-use platform with a modern, intuitive interface
- Ability to scale multiple projects
- Industry experience and aviation market presence

OUTCOMES

- Ability to complete an entire design review in three weeks
- Reuse library of compliance with more than 25 sets of external regulations and standards
- Collecting artifacts for compliance is a simple, automated process

As a new company, REGENT knew that they needed to get things right the first time around. With little wiggle room for error, the team set out to find a requirements solution that could help the team turn their ideas into reality.

The main objectives that REGENT needed their requirements management platform to support were:

- Demonstrating compliance with stringent aviation and maritime safety standards
- Meeting aggressive development timelines in order to safely transport commercial passengers by 2025
- Building an inclusive, efficient review process

“As a developer of seaglidors which are essentially flying boats, REGENT connects the aviation and maritime domains. In the future we will also need to comply with international maritime regulations as well. Because of this, we knew we needed to take a rigorous approach to safety and vehicle development. It was important for us to find a solution that could track requirements and be used to generate the artifacts necessary to certify a flying boat,” said Ted Lester, Vice President, Certification at REGENT.

“We wanted to lay the groundwork for the kind of safety-critical development that’s used in the aviation industry. Ultimately, we knew that if you’re developing a new aerospace vehicle from scratch, a good requirements management tool is key.”

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VICE PRESIDENT, CERTIFICATION
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As part of their evaluation process, they began searching for a solution that met the following criteria:

- Cloud-based solution
- Easy-to-use platform with a modern, intuitive interface
- Ability to scale multiple projects
- Industry experience and aviation market presence

REGENT evaluated a number of solutions, including IBM® DOORS® and Intland codebeamer, but Jama Connect was the only platform that met all of their needs.

“As a startup, we were working with a very small, agile team. We knew that we couldn’t stand up a hosted solution, so it was important to us that we find a solution that could be Software as a Service (SaaS). And with Jama Connect, we were able to stand the platform up very quickly with very little IT work” said Ted Lester, VP, Certification.

“It was also very important to us that our team could easily use the platform. We knew we needed a solution that allowed us to easily trace requirements from design all the way through verification and validation,” said Lester. “Between the more than 25 sets of external regulations and standards we need to follow, our requirements, and our sub-system requirements, we knew we were going to have an extensive number. The ability to scale and do traceability easily was key to our selection process, and nobody did that better than Jama Connect.”

Another factor that played into REGENT’s decision was Jama Software®’s deep knowledge of the aviation industry, extensive resources, and industry templates that help teams build the infrastructure for regulatory compliance with aviation standards.

“Although IBM DOORS and IBM Telelogic probably have the largest market penetration in aviation, we had many people on our team who had worked in the tool in the past and did not have good experiences. With Jama Software, we had templates available for DO178 and ARP4754 available to help us get up to speed faster.” said Lester.



Intuitive, easy-to-navigate platform

Throughout After onboarding Jama Connect and leveraging the Profession Services team to get up and running quickly, the team has realized the following outcomes:

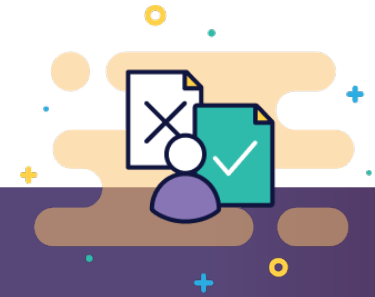
- Ability to complete an entire design review in three weeks
- Reuse library of compliance with more than 25 sets of external regulations and standards
- Documenting verification and collecting artifacts for compliance is a simple, automated process

With the ability to include as many reviewers as they wanted, the REGENT team was able to quickly and seamlessly gather feedback and gain company-wide alignment on design requirements. What is often a very slow, painful process, takes the REGENT team just three weeks.

“We completed an entire design review in three weeks. Without Jama Connect, it would have taken us two months,” said Jackie Banning, Systems Engineer at REGENT.

“The fact that people could do their entire review offline, on their own time, allowed for a more thorough and easy review process,” said Lester. “We could iterate making changes based on people’s comments and feedback, have those changes re-reviewed, and then close out the entire review in three weeks. If we had done this using Word and Excel, or purely in meetings, this would have taken significantly longer. This was a major early win for us.”

As the team grows and the company moves from its flagship product to additional vehicles; reuse is going to be a key timesaver for the team. And with Jama Connect, the team is able to easily reuse requirements across multiple projects.



“With Jama Connect, we were able to include our entire company as part of a design review of our craft-level requirements. Every person was invited to review as a stakeholder or an observer, and they were able to provide comments. This was really beneficial for us because we were able to make sure the whole company was aligned on the highest level of requirements for our vehicle.”

TED LESTER
VICE PRESIDENT, CERTIFICATION
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“As we start to look for other vehicle derivatives, and larger vehicles, having multiple projects available is very useful. The ability to reuse requirements across these projects is very valuable for us,” said Lester. “Right now, we’re using 25 different regulations and standards. The ability to reuse that library of standards is going to be incredibly valuable for us going forward. It’s definitely going to speed up future design iterations.”

“It took us about a week to import all those standards, so not having to do that every single time is going to save us a lot of time. It’s just a matter of how many times we’ll reuse it,” added Banning.

Spanning both maritime and aviation standards means that the REGENT team needs to be very strategic and thorough when it comes to documentation of artifacts. And with Jama Connect, much of this work is automated.

“When it comes to documenting all the verification steps, Jama Connect is key. We can easily show that we’ve met the verifications to show compliance with each of the standards and automatically generate those artifacts. We can then use the traceability analysis to make sure that we’re complying with all the processes we need to and collect the artifacts to show to the U.S. Coast Guard or Bureau Veritas as part of our certification package,” said Lester.

“Since we are in this grey area of air and sea, if we don’t exactly meet one standard or another, we’ll have these failure analyses to justify that what we’re doing is safe. Having this all in one space is very helpful,” said Banning.

As REGENT grows and expands to include multiple vehicles, Jama Connect will continue to play a key role in every aspect of development – from design down to verification and validation.

“Jama Connect is very much an ingrained part of the systems engineering V, and it’s consistent with the ARP4754 development process, where we’re starting with those craft-level requirements, breaking those down into the system-level requirements, tracing those to these external standards, and then flowing these down to item-level requirements. Eventually we will have all of the requirements decomposed and traced ultimately to the implementation, whether it’s software or hardware,” said Lester.



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JACKIE BANNING
SYSTEM ENGINEER
REGENT



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, please visit us at jamasoftware.com.