

**DEVELOP:** SAFETY ARTIFACTS**REDUCE RISK THROUGH DEVELOPMENT CYCLES****THE CHALLENGE**

A prime integrator is supplying the core avionics systems for a new, short-haul urban air taxi that will use electric-powered vertical takeoff and landing (eVTOL) capabilities to leverage rooftops and small urban parks to service its customers.

The air taxi company will be the first to deliver this service, and time-to-market is a key business benchmark. It is relying on the prime integrator to deliver the avionics systems on time.

However, it can take five to nine years for a new aircraft to earn airworthiness certification. In addition, international standards for eVTOL aircraft are evolving even as the company is developing the product.

**THE SOLUTION**

To reduce the risk of safety certifications delays, the prime integrator chose a proven Arm® platform for the core avionics system and Wind River® Helix™ Virtualization Platform Cert Edition, including VxWorks® Cert Edition as the guest operating system.

Wind River Studio provides DO-178C process support so that the company can scan and review its applications code as it is being developed, using the Studio Gallery partners of their choice.

**Studio also allows Helix Platform certification evidence tests to run automatically against the final hardware configuration, as required by the safety authority.** It enables testing against a digital twin using Wind River Simics® as the hardware design is finalized, supporting parallel development of hardware and software systems while reducing risk.

Finally, Wind River Professional Services can assist in both the overall system design and in the development of safety evidence for the board support package and middleware. Gallery partners can provide additional software-certified middleware that is pre-integrated into the VxWorks guest OS.

**THE RESULTS**

The company can reduce risk and meet the DO-178C and safety authority guidelines for this emerging use case. By adopting Studio, the customer can also automate many of the necessary safety processes and test requirements to be ready for the safety audits.

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