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ADOPTING AGILE THROUGH TOOLING-DRIVEN PROCESSES

**Abstract**

As Agile software development grows in popularity across the software industry at-large, there is increasing interest – and pressure – to adopt these practices in traditionally waterfall-heavy industries. However, aspects of the Agile Manifesto may seem to be at odds with, or even directly contradictory to, the standards and policies expected to be followed by Safety-Critical Software. This tension begs the question: how can we facilitate Agile software development while still meeting the demands of a safety-critical industry?

Over the past three years, MDA has been grappling with this challenge as we have been building the software for the Canadarm3, the next-generation robotic arm destined for the Lunar Gateway space station. Along the way, we've created tools and processes to bridge the gap between Agile development and product assurance. In this presentation, we will outline our challenges and triumphs in making the switch to Agile, the lessons we've learned along the way, and where our next steps will take us.