



Incrementally Assuring the Viability of Critical Software Systems

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The *DevStar* Concept



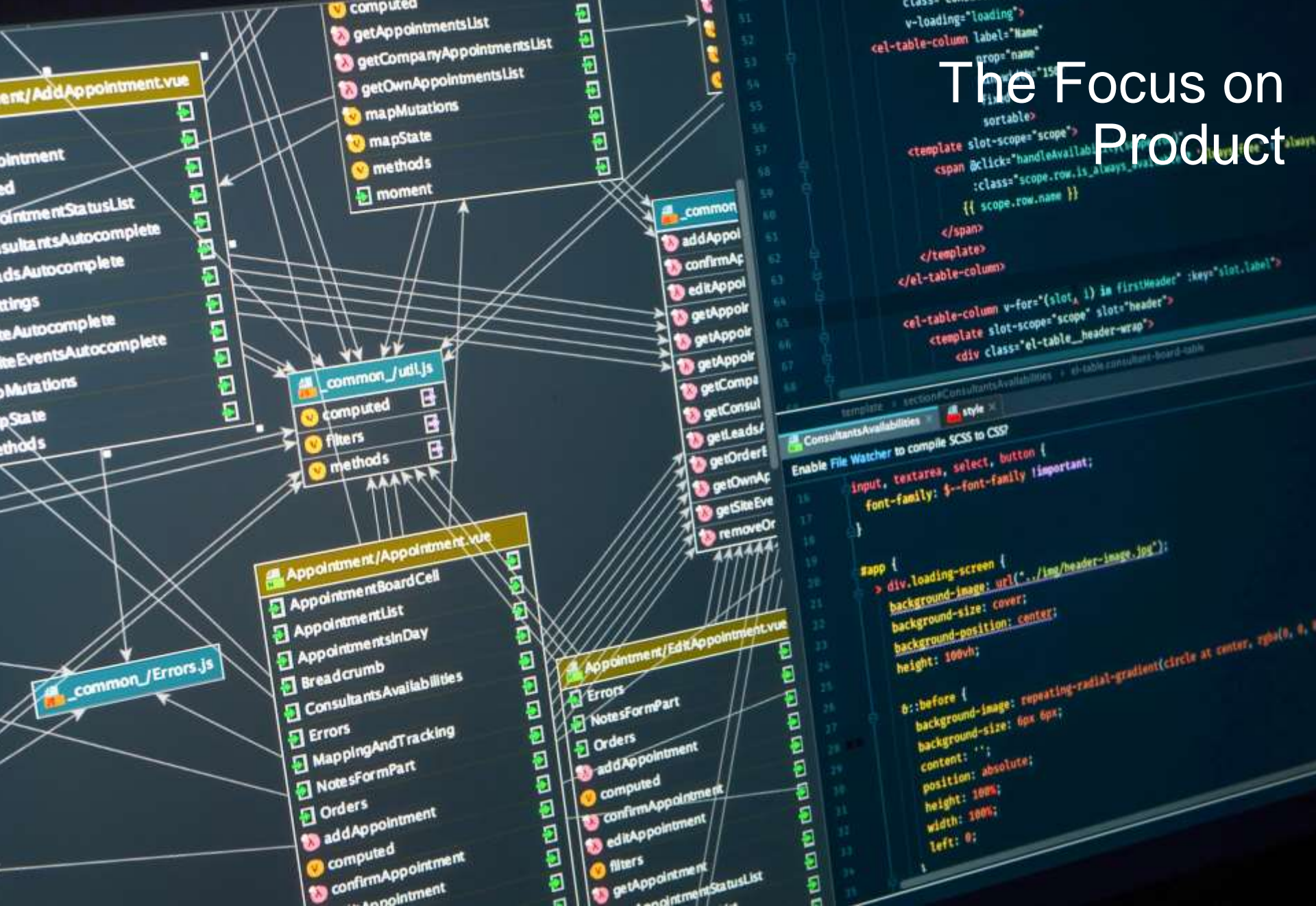
Dr. Michael Tanner • SAF/AQ

<https://software.af.mil/dsop/dsop-devstar/>

The Focus on Process/Workflow



The Focus on Product

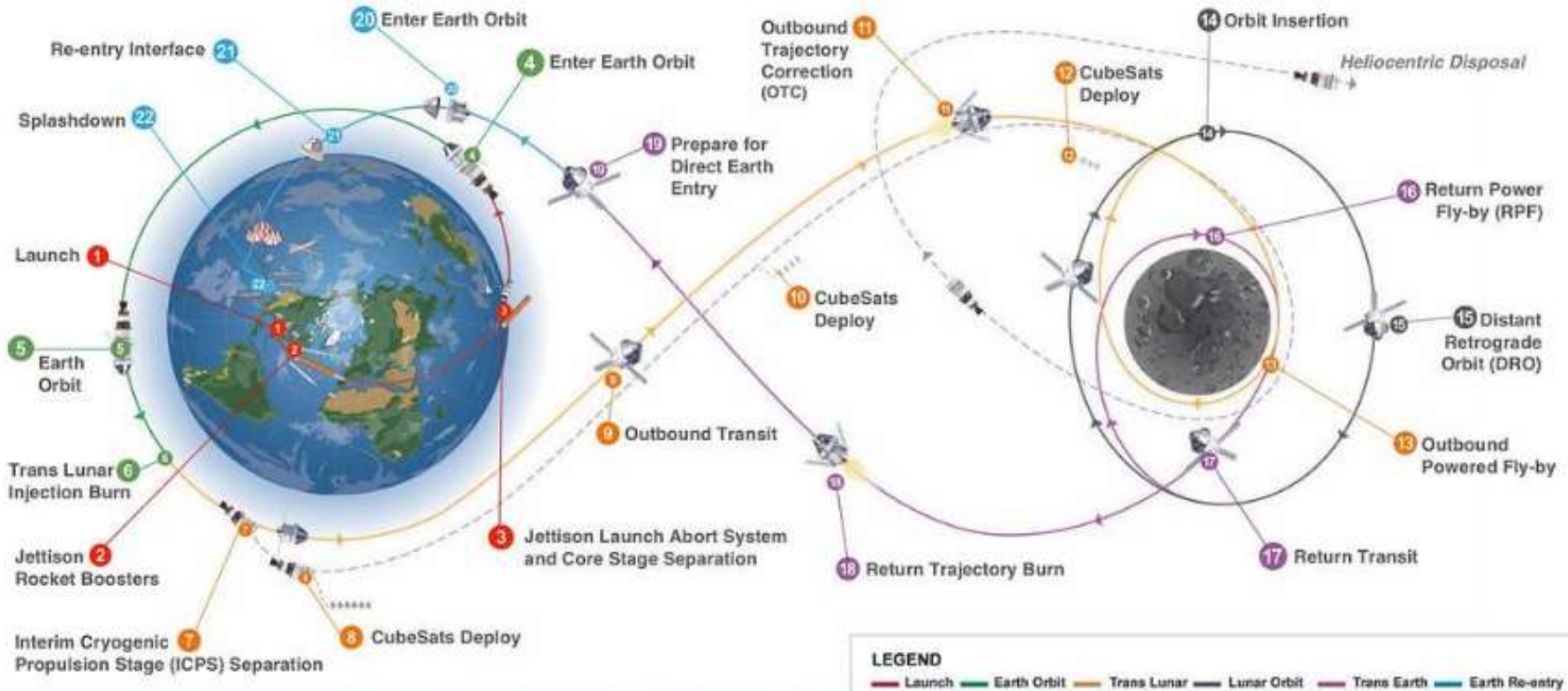


The Focus on Mission

EXPLORATION MISSION-1



The first uncrewed, integrated flight test of NASA's Deep Space Exploration Systems. The Orion spacecraft and Space Launch System rocket will launch from a modernized Kennedy spaceport.



Total distance traveled: 1.3 million miles – Mission duration: 25.5 days – Re-entry speed: 24,500 mph (Mach 32) – 13 CubeSats deployed

Excerpted from: Justin Smith, John Bradbury & Will Hayes
2018 Trilateral Safety and Mission Assurance Conference

Lessons on Iterative Realization of Value



Abstractions of the product may not all be deliverable components

Iterations of process design may be paired with product increments

Not all iterative processes need to execute on the same cadence

Product demonstrations don't have to all be a 'run for score'

Mission and Product Vision drive process optimization – not the other way around