

How to Transform an Enterprise

PLM Road Map 2022



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Northrop Grumman

Leading global security and technology company,
focused on global security and human discovery.



Space



Aircraft



Advanced Networking



Strategic Missiles



Survivability



Advanced Weapons



Missile Defense



Sensors and EW



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Digital Transformation

Enabling a digital ecosystem to rapidly deliver capability and achieve mission success




Programs & Products



Business & Operations



Technology Enablers



Culture & People



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Digital Transformation at Northrop Grumman




- Leading the way as a critical partner in our customers' digital transformation.
- Our success as a partner in digital transformation includes our expertise in:
 - Digital Engineering
 - DevSecOps
 - Artificial Intelligence/Machine Learning
 - Advanced Manufacturing
 - Open Architecture and Lean-Agile Methodologies
- Existing partnerships to deliver integrated digital capabilities across our portfolio of new and legacy programs.

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Interoperability enables digital transformation.

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To achieve our interoperability aspirations, we had to...



Break down siloes to
integrate disjointed
solutions



Build to scale
while enabling flexibility



Challenge
traditional ways

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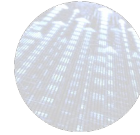
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To achieve our interoperability aspirations, we had to...

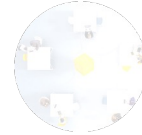


Break down siloes to integrate disjointed solutions

- Siloes are naturally-occurring in organization and in cross-industry teams
- We worked closely across programs to align on a core set of needs, applications and standards
- Turning pockets of excellence into enterprise best practices is key to scaling and realizing the full potential of a digital enterprise



Build to scale while enabling flexibility



Challenge traditional ways

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To achieve our interoperability aspirations, we had to...



Build to scale while enabling flexibility

- Finding the right level of commonality cannot be one size fits all, but economies of scale enable us to innovate more rapidly
- We advocate for common tools where possible and support the development of open data standards
- For example, Modular Open System Architecture (MOSA) can enable rapid technology insertion throughout the product lifecycle



Break down siloes to integrate disjointed solutions



Challenge traditional ways

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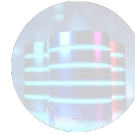
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To achieve our interoperability aspirations, we had to...

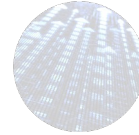


Challenge traditional ways

- Tools and technology are critical enablers of success, but digital transformation is about *people* and requires a culture shift
- We communicate through the change, making digital transformation relatable and accessible, as well as provide the right level of training and tools
- Iteration and innovation through digital transformation is a requirement for supporting our customers



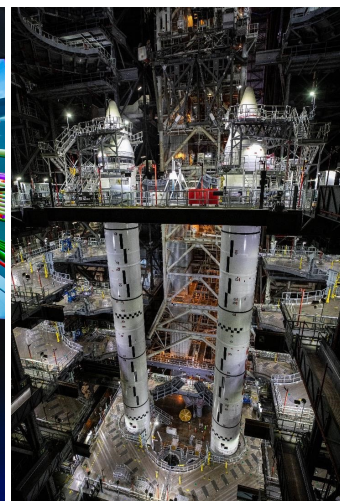
Break down siloes to integrate disjointed solutions



Build to scale while enabling flexibility

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Case Study: NASA's Space Launch System



Credit: NASA

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