Changing the Qualification Paradigm

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ACCELERATING TO THE NAVY & MARINE CORPS AFTER NEXT
“...the tempo of modern war has reached the point where this Nation will probably never again have an opportunity to arm itself successfully after the start of hostilities....” – Forrestal
The Naval Research Portfolio

Mission Capable, Persistent and Survivable Naval Platforms

Warfighter Performance

Information, Cyber and Spectrum Superiority

Future Naval Capabilities

Integrated Research Portfolios

Integrated Research Portfolios

Naval Research Enterprise (NRE) Research Council

Programs Of Record

Prototypes & Experiments

Enablers

Innovative Naval Prototypes

Demonstration and Validation

Advanced Technology Development

Applied Research

Basic Research

RISK

Less

More

Evolutionary

Revolutionary

More Less RISK

Innovative

Prototypes & Experiments

Information, Cyber and Spectrum Superiority

Ocean Battlespace and Expeditionary Access

Mission Capable, Persistent and Survivable Naval Platforms

Warfighter Performance

Aviation, Force Projection and Integrated Defense

Naval Research Enterprise (NRE) Research Council

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Additive Manufacturing. . .
Right Now

- Fabrication of components/ assemblies for obsolete or long lead time items
- Enables supply chain agility
- May provide intermediate solution

V-22 Nacelle Link and Fitting
With AM, material microstructure, processing and properties occur simultaneously with respect to geometry.
Where do we go next?

• How do we target the right V&V to gain confidence?
• How do we expand the use of computational tools to inform the right experiments?
Create and develop additive manufacturing materials and processes for Naval applications.

Enhanced capabilities through broader design space in AM fabrication, including tailored design and materials performance.

Enable broad implementation of AM.