Naval Additive Manufacturing

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OVERALL CLASSIFICATION: UNCLASSIFIED
AM: A Warfighting Capability TODAY

Radio Clip

Equipment Nob

Tailored, Attritable UxS

H1 Helmet Clip

Snow Shoe Clips

Re-start Training Pipeline


**Foundational AM LOEs – Overcoming Enterprise Challenges**

1. **Accelerate standards development**
   - Define and prototype DON usage of materials database
   - Enable rapid approval process for certain AM components

2. **Prototype End-to-End Digital Manufacturing Ecosystem**
   - Publish procedures to network select printers
   - Field and populate initial 3D Print Exchange Server

3. **Expeditionary and afloat deployment**
   - Deploy capability afloat, undersea, expeditionary
   - Define and pilot afloat network solutions
   - Metal capabilities forward deployed

4. **Define workforce development requirements**
   - Warfighter, Artisan, DAU/acquisition

5. **Develop AM Contracting and Acquisition Guide**

6. **AM Challenge**

*Define metrics that convey AM benefits to fleet and a means to capture them*
2019 AM Goals

- 1000 Unique end use components available to fleet
- 5000 AM files available on 3D file exchange server
- 10 sites with networked AM equipment
- AM Contracting Guide signed out through DASN (RDT&E)
- Permanent AM installations on 7 ship classes
- MARCORSYSCOM responses to MARFOR AM requests within 24 hours
DON Additive Manufacturing / 3D Printing Vision

Enhanced Capabilities
Additive manufacturing will be integrated into weapon system designs in order to field capabilities that outperform those that use conventionally manufacturing techniques only.

Agile Supply Chain
Our supply chain will be transformed from a physical to digital inventory. The Navy and Marine Corps will leverage a global, distributed digital manufacturing infrastructure that is able to scale and surge to produce the right part, at the right time, in the right place.

Mission-Tailored, On-Demand Warfighting Systems
Sailors, Marines and civilians will be trained to rapidly build and adapt systems tailored to specific missions in order to meet emerging warfighting requirements.

Energetics
Customized munitions and explosives will be printed afloat and ashore, greatly enhancing our Naval supremacy in the areas of speed and flexibility.

Expeditionary Sustainment
Forward-deployed personnel will be able to better maintain and enhance their warfighting systems. Whether it’s a Forward Operating Base ashore or a repair shop afloat, AM will bring more capability closer to our deployed operational forces.

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