PEO(A) Perspective on Additive Manufacturing

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Presented to:

NAVAIR Additive Manufacturing Industry Day

Presented by:

Glenn Perryman

DPEO(A)

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PEO(A) Programs

PROGRAM EXECUTIVE OFFICER AIR ASW, ASSAULT & SPECIAL MISSION PROGRAMS

PB-15 FYDP TOA $57.5B

PMA-207 $1.6B

Multi-Mission Helicopters

CAPT Jim Glass

PMA-261 $5.7B

Tactical Airlift, Adversary and Support Aircraft

Mr. Doug Dawson

PMA-264 $1.5B

Heavy Lift Helicopters

Col Hank Vanderborght

PMA-271 $1.3B

Air ASW Systems

CAPT Matt Tobler

PMA-274 $3.7B

Airborne Strategic Command, Control & Communications

CAPT Kyle Karstens

PMA-275 $11.2B

Presidential / Executive Lift Helicopters

Col Robert Pridgen

PMA-276 $6.5B

V-22 Osprey

Col Dan Robinson

PMA-290 $21.0B

Light / Attack Helicopters

Col Steve Girard

PMA-299 $5.0B

Maritime Patrol & Reconnaissance Aircraft

CAPT Scott Dillon

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PEO(A) Program Portfolio (as of 11 Jul 14)

A B C IOC FOC

	Material Solution Analysis	Technology Development	Engineering & Manufacturing Development	Production & Deployment	Operations & Support
ACAT I	MHXX		VXX CH-53K	P-8A MV-22 / CV-22 MH-60R MH-60S UH-1Y/AH-1Z KC-130J	CH/MH-53E VH-3D VH-60N AH-1W UH-1N EP-3E E-6B P-3C HH-60H SH-60B/F Air ASW Systems Sonobuoys & Sensors
ACAT II	ACAT ID: 3 PRE-MDAP: 1 ACAT IC: 5 ACAT II: 2 ACAT III: 2 ACAT IV: 5			C-40A E-6B Block I	
ACAT III				ADAR E-6B MR-TCDL	
ACAT IV				VH-60N CUP AH-1W HDTS MAC H-53 ERIP C-130T AOU	

Transition From Development to Production / O&S

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AM = Tuning the Value Stream

Man

- One artisan – multiple parts
- Fewer parts to assemble

Machine

- Re-allocable capacity
- Rapid response
- SDD / EMD tooling

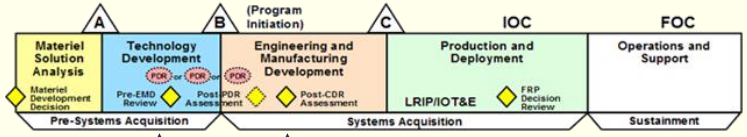
Method

- Free-form design, more innovative product design
- NDI (process in-flow and end item)
- New logistics chains (stockable data, printable part)

Materials

- Just in time inventory, reduced lead times
- New powder and wire alloys
- Low wastage rates (Buy:Fly)
- Increased volume / rate insensitivity

…across the Acquisition Lifecycle



Reduced lead time and cost to learn during development

Reduced lead time and cost for changes and ECPs

Increasing use of AM

Reduced lead time and cost to buy during production

Increasing use of AM

Reduced lead time and cost to support during sustainment

Increasing use of AM

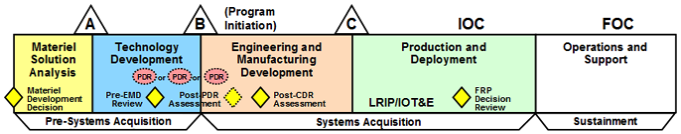
We are looking at everything: <u>We need help from Industry</u>

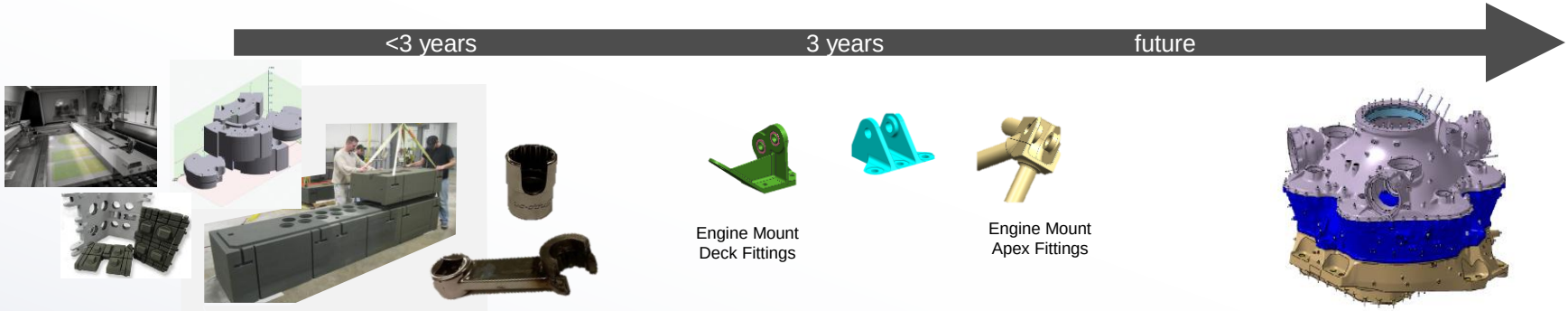
Tune the Value Stream

Use Additive Manufacturing to tune the value stream:

- **Methods**
- **Materials**
- **Tooling**
- **Products**

…across the Acquisition Lifecycle





3-D Printed Sand Molds & Cores
non-critical aircraft parts
Tooling and Specialized Small Tools

Smaller critical aircraft parts
Optimized designs

Full-up Printing of MGB Housings
Complex/Large Parts
New designs

Leverage Industry:

- Collaborate to improve technology
- Opportunities to expand supply base
- Critical parts demonstrations
- Process improvements