



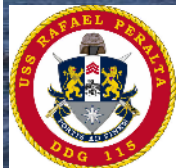
# DDG 51 Program



***Sea, Air, Space Exposition  
Washington, DC – 04 April 2017***



**Presented by:  
CAPT Casey Moton, USN  
DDG 51 Program Manager  
PMS 400D**





# Agenda



- **DDG 51 Shipbuilding Profile**
- **DDG 113-123 Production Status**
- **Flight III Update**
- **Summary**



# Highlights

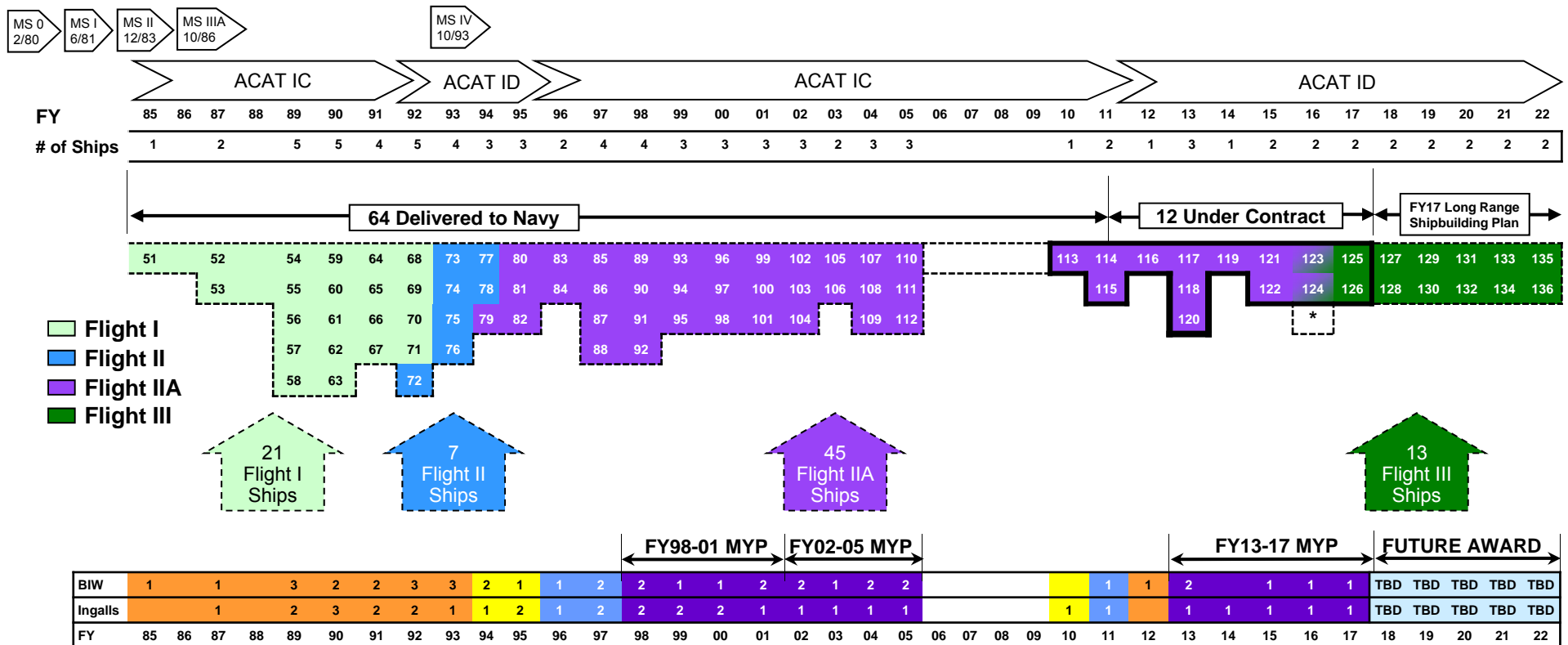


- **DDG 113 (first HII restart ship) delivered December 2016 after successful Trials**
- **DDG 115 (first BIW restart ship) delivered February 2017 after successful Trials**
- **Eight additional ships under construction at HII and BIW with four more under contract in the FY13-17 MYP**
  - DDG 123 Start Fab achieved 25 Jan 2017
  - DDG 114 Main Engine Light Off completed 7 Feb 2017
  - DDG 121 Lay Keel completed 21 Feb 2017
  - DDG 116 Christening completed 1 Apr 2017
- **Both shipyards in execution and preparing for introduction of Flight III ships**





# DDG 51 Class Shipbuilding Profile



ACQUISITION STRATEGIES	
Competition For Work	27
Negotiated Allocation	7
Competition for Profit (PRO)	8
Multi-Year (PRO)	34
TBD	10
Total	86

	DELIVERED	UNDER CONTRACT	TOTAL
BIW	35	6	41
Ingalls	29	6	35

14 Feb 2017

\* Congress authorized and appropriated incremental funding for an additional DDG 51 class ship in FY16 which the Navy plans to procure in the Flight III configuration pending negotiations and receipt of FY17 appropriations. Hull numbers will also be determined based on negotiations and FY17 appropriations





# Huntington Ingalls Ships - DDG 113, 114, 117, 119, 121, 123 Status



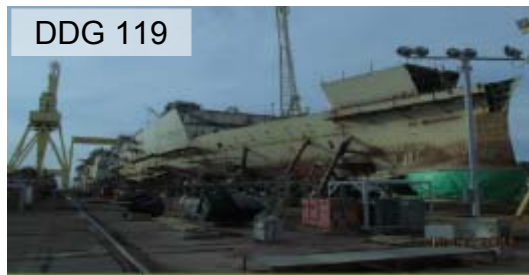
- **DDG 113 (Delivered)**
  - Trial ALPHA completed 29 Aug 16
  - Trial BRAVO completed 26 Oct 16
  - Trial CHARLIE completed 04 Nov 16
  - Delivery completed 07 Dec 16



- **DDG 114 (90% complete)**
  - ALO completed 06 Jun 16
  - MELO completed 7 Feb 17
  - ALPHA/BRAVO trials planned 5 June 17



- **DDG 117 (66% complete)**
  - Launch completed 11 Nov 16
  - Christening planned 8 Apr 17
  - ALO planned 03 Jul 2017



- **DDG 119 (41% complete)**
  - Start Fab completed 06 July 15
  - Lay Keel completed 23 May 16
  - Launch planned 02 Sep 17



- **DDG 121 (24% complete)**
  - Start Fab achieved 27 Apr 16
  - Lay Keel completed 21 Feb 17



- **DDG 123 (4% complete)**
  - Start Fab achieved 25 Jan 17
  - Lay Keel planned 30 Oct 17



# Bath Iron Works Ships - DDG 115, 116, 118, 120 Status



- **DDG 115 (Delivered)**

- Trial ALPHA completed 18 Oct 16
- Trial BRAVO completed 14-17 Nov 16
- Trial CHARLIE scheduled 12-16 Dec 16
- Delivered and Crew Move Aboard 03 Feb 17

DDG 115



- **DDG 116 (79% complete)**

- Lay Keel completed 06 Nov 15
- ALO scheduled 09 Apr 17
- Launch scheduled 23 Apr 17

DDG 116



- **DDG 118 (24% complete)**

- Start Fab completed 02 Aug 15
- Lay Keel planned 11 Feb 18

DDG 118



- **DDG 120 (2% complete)**

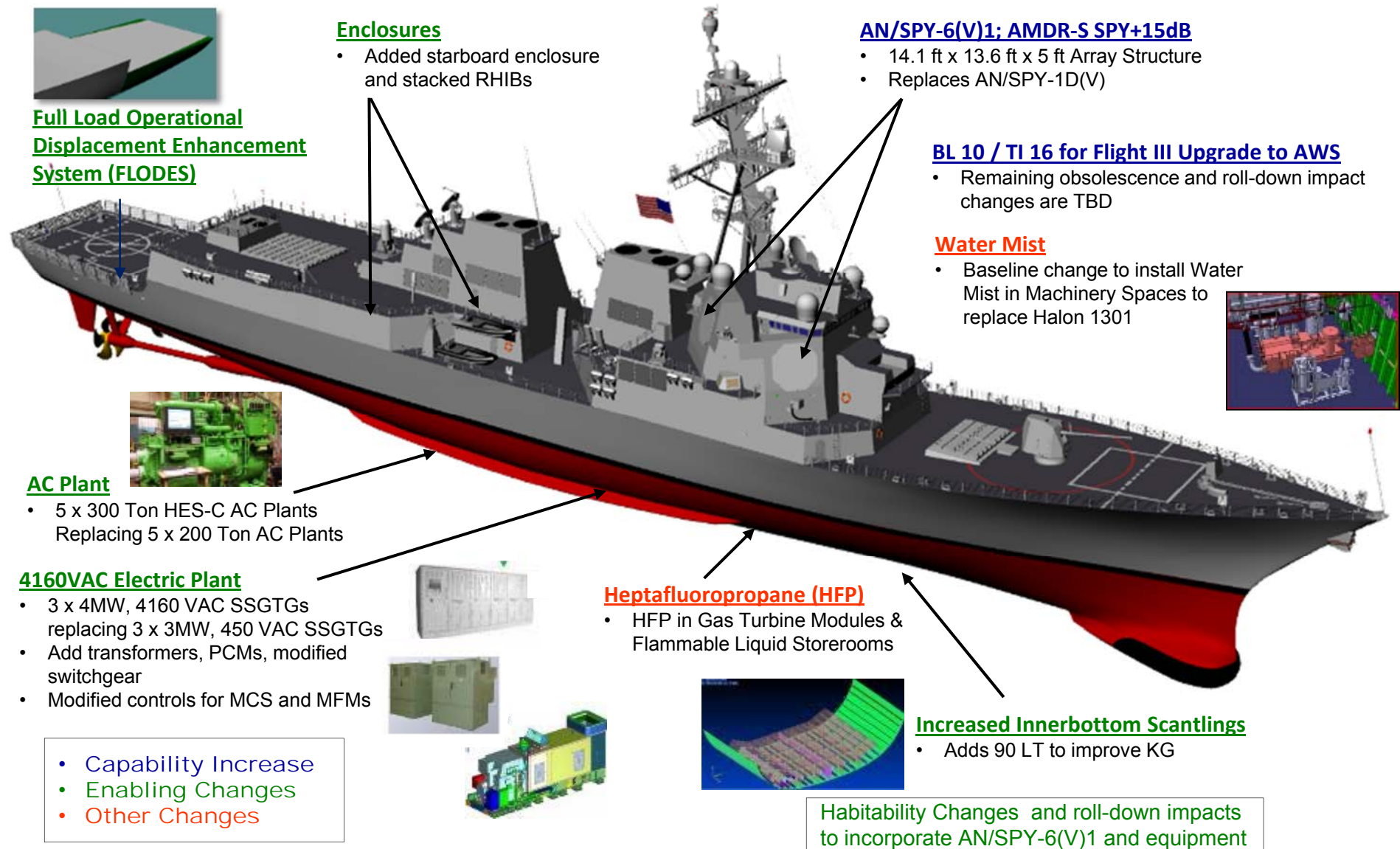
- Start Fab milestone achieved on 11 Sep 16
- Lay Keel planned 06 Jan 19

DDG 120





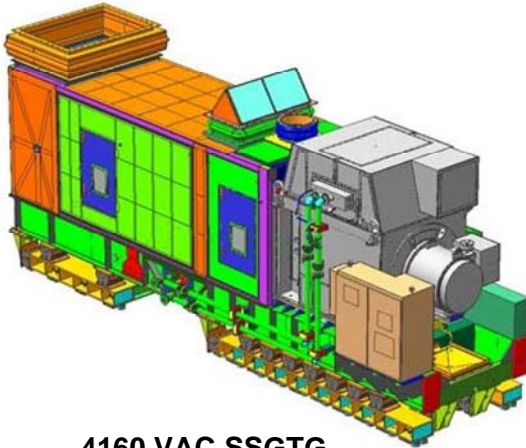
# Base FY16 and Follow Changes (Flight III)







# Flight III Distributive Systems Status



4160 VAC SSGTG

- Completed Preliminary Design Review (PDR) Sep 2015
- Critical Design Review (CDR) May 2016
- First delivery to Land Based Engineering Site (LBES) Dec 2017
- First Flight III order placed by shipyard December 2016
- Generator First Article Test (FAT) conducted 07 - 20 February 2017

- Completed PDR Feb 2015
- Completed CDR Sep 2015
- Test Readiness Review (TRR) Jan 2017
- FAT scheduled 10 Apr – 2 May 2017
- First Delivery to LBES Q3FY17



1000 VDC Power Conversion Module



300 Ton HES-C AC Plant

- Variable Speed Drive (VSD) CDR2 Completed Nov 2015
- VSD FAT completed Mar 2016
- Chiller FAT ongoing (vibration and shock testing)





# EDM Array in Far Field Range

## PMRF Advanced Radar Detection Lab (Kauai, HI)



### Summary / Way Forward

- ✓ System CDR - Apr 2015
- ✓ NFR testing completed - May 2016
- ✓ EDM Array installed at PMRF - Jun 2016
- ✓ Tracking satellite and air targets - Oct 2016
- ✓ LLMs on order for 1<sup>st</sup> DDG 51 Flight III - 13 Dec 2016
- ❑ Testing at PMRF in progress
  - ✓ 1st BMD Track with SFTM-01- FEB 17
  - ✓ 1st AAW test with noise jamming- MAR 17
  - ✓ Completed SPY-6 BMD target test 15 MAR 17
- ❑ On track for SPY-6 Milestone-C OCT 17

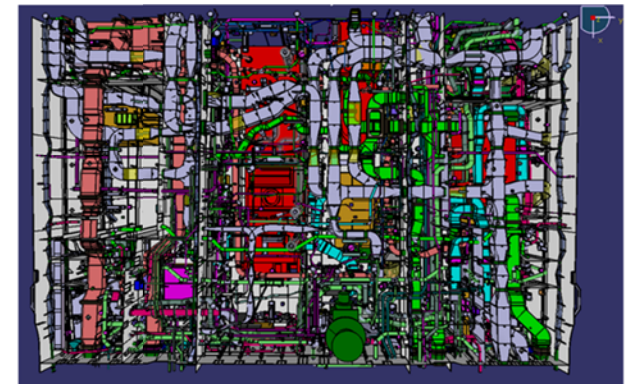
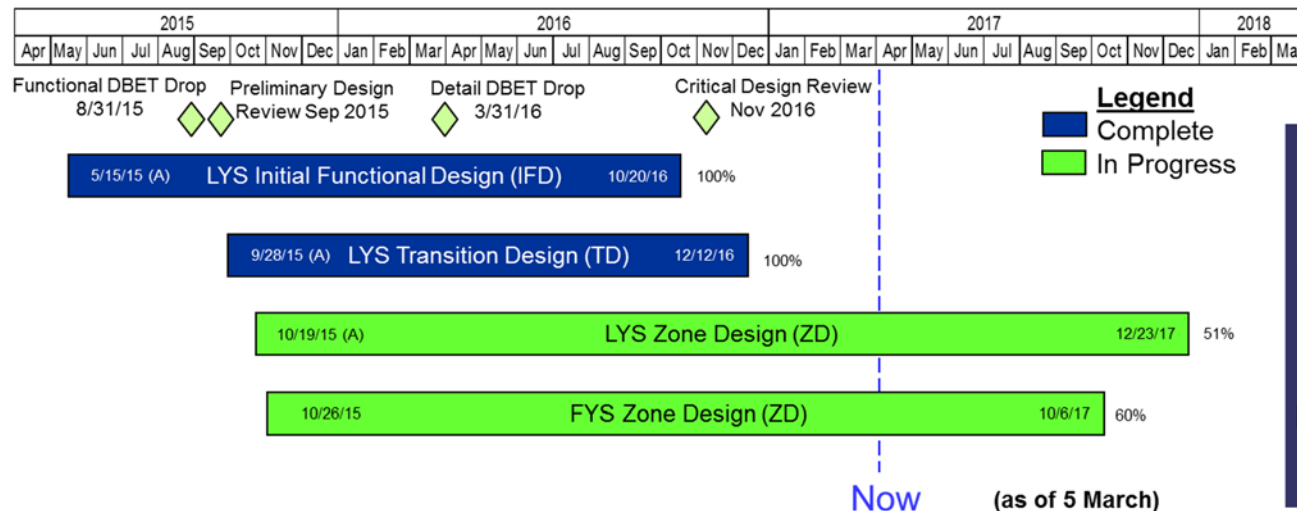
***First ballistic missile target tracked by a wideband digital beamforming radar***



# Flight III Design / Review Progression



- Flight III Preliminary Design Review (PDR) complete September 2015
- Critical Design Review (CDR) complete November 2016
- Initial Functional Design and Transition Design complete; Zone Design in progress; Will be complete before start of construction



**Flight III Design Progressing to Support Start of Construction with a Mature / Stable Design**



# Summary



- Initial DDG 51 Restart Ships at each shipyard have completed successful trials, and first ship at each yard delivered
- Shipyards reestablishing serial DDG 51 production, 12 more ships on contract through FY17
- Flight III Detail Design efforts on track for start of construction
- Flight III acquisition efforts in progress with shipbuilders



**Delivering capability to the fleet for current and future missions**