



VIRGINIA Class Submarine Program Perspective



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Why The VIRGINIA Class?



Mission:

Develop and deploy a more affordable, nuclear-powered attack submarine with multi-mission capability and enhanced capabilities for performance in littoral areas. VIRGINIA Class submarines support five of the six Navy core maritime capabilities:



Forward Presence



Power Projection



Sea Control



Deterrence



Maritime Security

Maritime Strategy at a Glance:

“A Cooperative Strategy for 21st Century Seapower” recognizes the economic links of the global system and how any disruption due to regional crises – man-made or natural – can adversely impact the U.S. economy and quality of life. This strategy charts a course for the Navy, Coast Guard, and Marine Corps to work collectively with each other and international partners to prevent these crises from occurring or reacting quickly should one occur to avoid negative impacts to the U.S.

Mission Areas:

- Anti-Submarine Warfare (ASW)
- Anti-Surface Ship Warfare (SUW)
- Strike Warfare (STK)
- Covert Mine Warfare (MIW)
- Intelligence Surveillance and Reconnaissance (ISR), Intelligence and Warning (I&W) and Electronic Warfare (EW)
- Naval Special Warfare (NSW)
- Battlegroup Operations (BGO)



Shipbuilder Teaming

Co-Production at Three Facilities



General Dynamics – Electric Boat (GDEB) (Prime Contractor) shares work with Huntington Ingalls Industries – Newport News Shipbuilding (HII-NNS)

- Each contractor repetitively builds designated sections and modules
- Contractors alternate final assembly, outfitting, and delivery



GDEB, Quonset Point, RI
Manufacturing



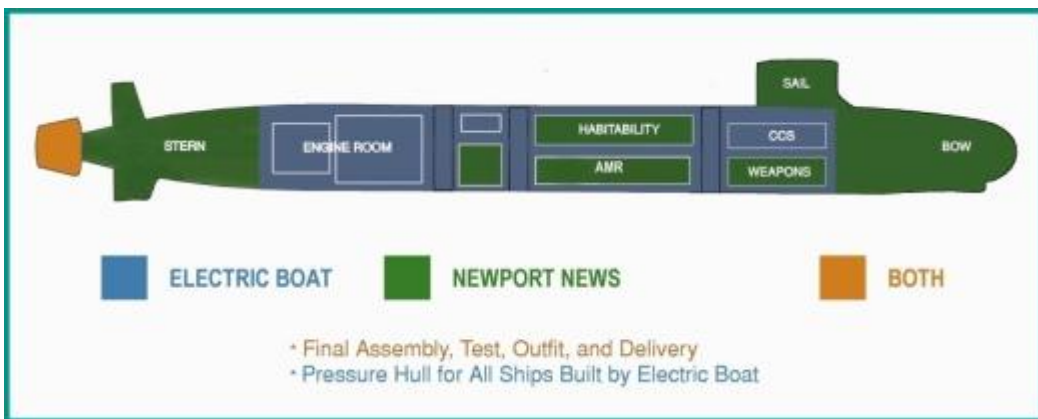
Ship for Assembly



GDEB, Groton, CT
Assembly, Test and Delivery



HII-NNS, VA
Assembly, Test and Delivery





The VIRGINIA Class

The Right Submarine for Today with Flexibility for the Future



Blocks I (FY98–08)

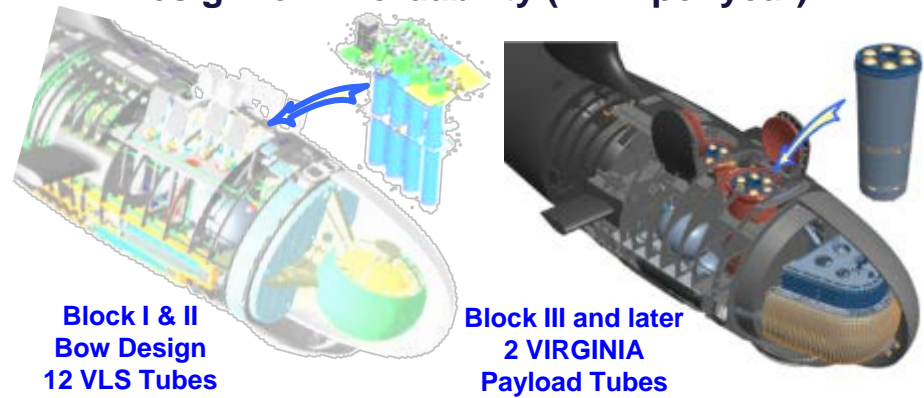
Quantum leap in platform capability



10 Ships Delivered

Block III (FY09–13)

Design for Affordability (2 VA per year)



Block I & II
Bow Design
12 VLS Tubes

Block III and later
2 VIRGINIA
Payload Tubes

8 Ships – 5 Delivered, 3 Under Construction

Block IV (SSNs (FY14–18)

RTOC enables increased A_0 per hull



10 Ships – 9 Under Construction, 1 Under Contract

Block V and later (VPM)

Dramatically increase undersea influence effects



In Design Phase, FY19 Construction Start



VIRGINIA Class SBIR Experience

PEO SUB: >\$1.5B in Phase III contracts!

Cardinal Engineering / Weidinger Associates

Shock Analysis

WWW Technologies

Ship Cpntrl Architecture

CCSM

Planning Systems Inc

GCCS Development & COTS Applications

DSR

Advanced Information Systems
Software Migration Legacy Trainer
Photonics Mast Workstation

Rite Solutions

Mission/engagement planning s/w
Combat System of Future

Progeny

Audio Signals
Active Emissions
Information Assurance
AN/WLR-1 AI&R
Manning Reduction

Trident Systems

Mobile Computing for Submarine Applications

TCNi

OA Concepts

MIKEL

Combat System of the Future planning
Mobile Range

Chesapeake Science Corp.

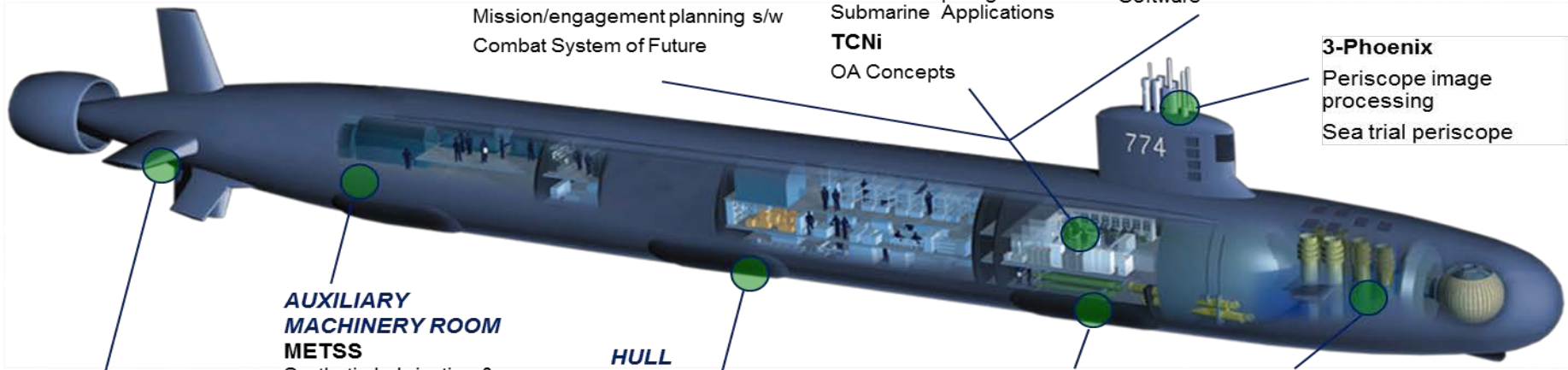
TSMS Telemetry

Jackpine Technologies

Common Submarine Radio Room Software

3-Phoenix

Periscope image processing
Sea trial periscope



AUXILIARY MACHINERY ROOM METSS

Synthetic Lubricating & Hydraulic Oil

STERN / PROPULSION

Towed Array Improvement
Fiber Tow cables
Fiber slip rings
Heading sensors
telemetry

Chesapeake Sciences Corp

IDT

Auto Testing

HULL

Compudrive

Electromechanical Actuators

Seeman Composites

Non-Autoclave Composite Systems and fairings

AAC

Acoustic sensors

WEAPON LAUNCH, STOWAGE & HANDLING

Progeny

Tools for VME Interactive Acoustic Analysis Process

Multi Tube Weapon Simulator

Common Weapon Launcher

TRI

Composite Torpedo Room Temp Berthing and weapon handling cradles