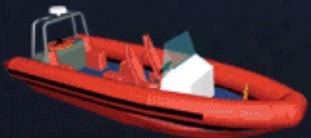




DEEPWATER



Status of the Deepwater Program

18 November 2003



Integrated Deepwater System



Performance Based:

- Focus on capabilities not assets

Acquisition Strategy:

- **Partner** with system integrator

- Acquire **integrated system of** surface, air, C4ISR, and logistics **systems**

Overarching Objective:

- **Maximize Operational Effectiveness while Minimizing Total Ownership Costs**





System – Assets



Maritime Patrol Aircraft (MPA)



High Altitude Endurance UAV



HC-130



VTOL Unmanned Air Vehicle (UAV)



VTOL Recovery and Surveillance Aircraft



Multi-Mission Cutter Helicopter



Offshore Patrol Cutter (OPC)



National Security Cutter (NSC)



Fast Response Cutter (FRC)



Short Range Prosecutor



Long Range Interceptor



Modified 123' Patrol Boat



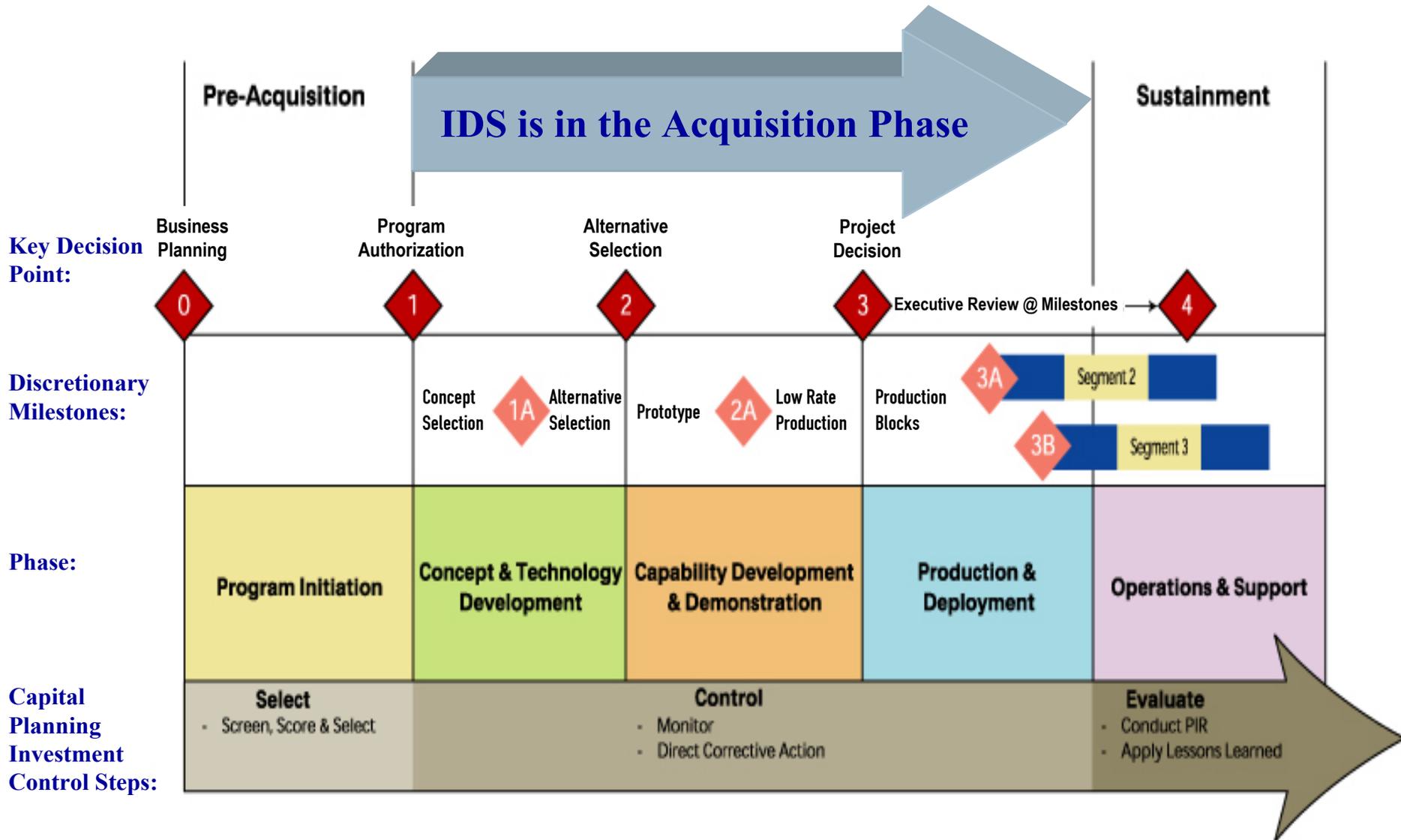


System Solution – Network Centric





The Acquisition Process





The Status of the Integrated Deepwater System



- **IDS has completed the Pre-Acquisition Phase of a major capital program.**
- **IDS is in the Acquisition Phase at this time.**
- **Due to the size and system of systems approach, various assets are in:**
 - **Concept & Technology Development Phase**
 - **Capability Development and Demonstration Phase**
 - **Production and Deployment Phase**



The Status of IDS Assets



Concept & Technology Development Phase	Capability Development and Demonstration Phase	Production and Deployment Phase
<ul style="list-style-type: none">• Offshore Patrol Cutter• Fast Response Cutter• Vertical Recovery & Surveillance Aircraft• Long Range Interceptor	<ul style="list-style-type: none">• Multi-Mission Helicopter• VUAV Eagle Eye• HAVUAV Global Hawk• Logistics	<ul style="list-style-type: none">• National Security Cutter• 123 Patrol Boat• Short Range Prosecutor• Maritime Patrol Aircraft• C4ISR



Implementation Plan/Assets

Surface Ship Implementation (02-07)



National Security Cutter

- **Production Readiness Review of 110-123 Modification completed**
- **Preliminary Design reviews of the National Security Cutter and Short Range Prosecutor completed**
- **Short Range Prosecutor Prototype Demonstration completed**
- **Short Range Prosecutor Critical Design Review and Production Readiness Review #1 completed**
- **Critical Design Review #1 of National Security Cutter completed**
- **Production Readiness Review of MPA completed**
- **CGC MATAGORDA, METOMPKIN, PADRE and ATTU arrived Bollinger Shipyards**



123' Patrol Boat



Short Range Prosecutor



National Security Cutter



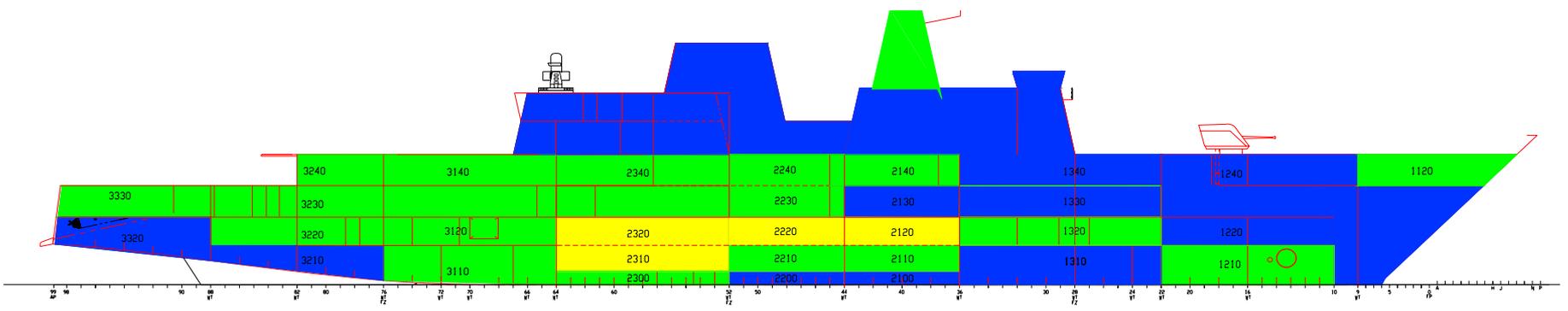
National Security Cutter [Delivery 2006 – 2013]

- In April 2003, two subcontracts totaling \$129 million were awarded to Northrop Grumman Corporation's Ships Systems sector initiating detail design and long-lead material procurement for the National Security Cutter.
- Proceeding with design changes
 - Combat Management System (CMS)
 - SCIF
 - Crewing
 - Stern launch and recovery of small boats
- Navy Type/Navy Owned Weapons and Sensor Suite





NSC Overall Engineering Assessment to Support Production



OVERALL ENGINEERING STATUS

- AHEAD OF SCHED
OR COMPLETE
- ON
SCHED
- BEHIND SCHED
NO DWG RELEASE
IMPACT
- BEHIND SCHED
DWG RELEASE
IMPACT



Offshore Patrol Cutter



Offshore Patrol Cutter [Delivery 2012 – 2022]

- **FY04 Appropriation includes \$20M**
- **Linkage to Littoral Combat Ship**





Fast Response Cutter



- **Initial Concept Study Complete**
 - Reviewing multiple options
 - Hull material
 - Hull form
 - Capabilities
- **Assessment of Business Case**
- **FY04 Appropriations included**
 - \$66M for Patrol boats (FRC and 123 conversion)





123' Patrol Boat



123' Patrol Boat (Legacy 110' SLEP) [Delivery 2003–2010]

- **MATAGORDA – Delivery planned 2Q FY04**
 - Delivery delayed due to C4ISR installation and integration challenges
 - 1ST Short Range Prosecutor scheduled to be delivered with MATAGORDA
 - Post-Delivery Maintenance Availability planned
- **METOMPKIN – Delivery planned 3Q FY04**
- **PADRE – Delivery planned 3Q FY04**
- **ATTU – Delivery planned 3Q FY04**



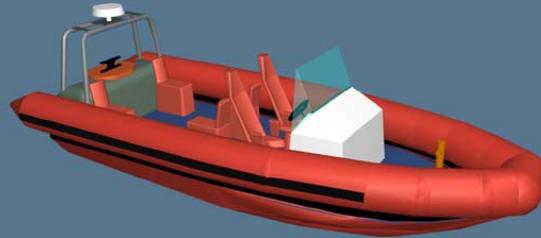
MATAGORDA



Short Range Prosecutor



SRP [Delivery: 2003 – 2022]



Short Range-Prosecutor

- **Propulsion** – Water Jet Engine for Stern Ramp Capability
- **Capacity** – Up to 10 Personnel With 150 lbs of Cargo
- **Speed** – 36 Knots

SRP

Features

- Slam-Mitigating Seats
- Improved Communication
- Excellent Sea Keeping
- Stern Ramp Deployment/Recovery

Benefits

- Decreased Fatigue for Boarding Teams
- Increased Control
- Prosecution in Rough Water
- Faster, Safer Operations With Less Crew



Implementation Plan/Assets



Aviation Assets Implementation (02 – 07)



**Maritime Patrol
Aircraft**

- Contract awarded for Concept & Technology Development of CASA CN-235 Maritime Patrol Aircraft (MPA)
- Delivery of first two stock CASA aircrafts scheduled for early 2006 with mission modification to the aircraft for Coast Guard use to be completed by late 2006



**Vertical recovery
and Landing
Unmanned Air
Vehicle**

- Contract awarded for Concept & Technology Development of Bell Helicopter HV-911 “Eagle Eye” VUAV
- Conducted MPA and VUAV System Requirements Reviews
- Conducted VUAV Subsystem Design Reviews
- Completed MPA Concept and Technology Development



Maritime Patrol Aircraft (MPA) Characteristics



EADS CASA 235-300M "Persuader" MPA – [Delivery 2006-2012]

General Characteristics

Length	70 ft 3 in
Wingspan	84 ft 8 in
Cabin Length	31 ft 6 in
Cabin Height	6 ft 1 in
Cabin Width	8 ft 9 in
Maximum Take-off Weight	36,380 lb
Maximum Landing Weight	36,380 lb
Maximum Payload	11,200 lb
Fuel Capacity	1,379 gal
Number of 88" x 108" Pallets	2
Maximum Cruising Speed	232 kias

Take-off Distance to 50 ft (S/L, ISA, MTOW)	3,360 ft
Landing Distance from 50 ft (S/L, ISA, MTOW)	2170 ft
Maximum Range	2,165 nm
Range with 4000 kg Payload (8800 lb)	1,030 nm
Engines	2 x General Electric CT7-9C3 turboprop engines
Propellers	Hamilton Standard 14RF-37 (Four Bladed)

- Proven Military Twin Turboprop
- Extended Range Fuel System
- In Service as MPA
- Most Cost-Effective MPA Alternative
- Palletized Fully Integrated Tactical System
- Quick Change to Cargo or Passenger Role
- Rear Cargo Ramp



FLIR/EO

Radar Radome

Observation Bubble Window



Vertical Unmanned Air Vehicle Characteristics



**Bell HV-911 "Eagle Eye" VTOL
Unmanned Air Vehicle – [Delivery
2006-2018]**

Flight-Ready Configuration



General Characteristics

- All Composite Construction
- Fully Shipboard Deployable
- Low Maintenance (<1 MMH/FH)
- Up to 4 VUAVs per NSC or OPC
- Modular Mission Payloads (FLIR/EO, Radar, etc.)
- High Speed Dash (220 kts), Cruise (200 kts)
- Airplane Loiter (90 kts)
- 5.9 Hour Endurance
- Height 5.7 ft
- Maximum Length 17.23 ft
- Maximum Wing Span 23.6 ft



MCH Characteristics



HH-65 MCH – [Delivery 2007-2015]

General Characteristics

Length	46.91 ft <i>(44.4 ft)</i>
Wing/Rotor Span	41.33 ft Rotor
Maximum Takeoff Weight	9,500 lbs <i>(9,200 lbs)</i>
Payload Weight (w/Fuel)	3,190 lbs
Empty Weight	6,333 lbs
Fuel Capacity	2,164 lbs <i>(1,969 lbs)</i>
Maximum Airspeed	165 kts
Cruise Speed	120 kts
Economy Speed	75 kts
Service Ceiling	15,000 ft/ 7,510 ft Hover
Maximum Endurance	3.5 hrs <i>(2.9 hrs)</i>
Maximum Range	467 nm <i>(348 nm)</i>
Operational Radius	178 nm <i>(150 nm)</i>
Number of Engines	2
Cargo Sling Hoist Capability	1,500+ lbs
Rescue Hoist Capability	600 lbs

- Leverages USCG Legacy Asset
- Low-Cost, Low-Risk Major Airframe Upgrade
- Increased TOGW, Range, Endurance
- New Avionics Common Fully Shipboard Deployable
- Margins for Use in Armed Helo Role
- Complements VUAV on NSC, OPC, and WMEC 270



Upgrade



4-Blade Main Rotor

Improved Fenestron

Extended Nose



VTOL Recovery and Surveillance Characteristics



Bell-Agusta Aerospace AB-139 VTOL Recovery and Surveillance (VRS) [Delivery 2014-2022]

General Characteristics

Length O/A	54.67 ft	Main Rotor	5 Blade Fully Articulated Elastomeric
Max Airspeed	185 kts	Tail Rotor	4 Blade Fully Articulated Elastomeric
Cruise Airspeed	157 kts	FAA Single Pilot IFR	Certified 3/2003
Economy Airspeed	80 kts	Rotor Span	45.27 ft
Service Ceiling	16,750 ft	Max T/O Weight	14,550 lbs
Maximum Endurance	5.0 hrs	Useful Load	5,250 lbs
Maximum Range	511 nm	Fuel Capacity	4,088 lbs
Propulsion	2 Pratt & Whitney PT6C-67C		
Cargo Ceiling Capacity	6,000 lbs		
Rescue Hoist Capacity	600 lbs		
Radius Of Action (SAR)	211 nm		





High Altitude Unmanned Air Vehicle (HAUAV) Characteristics



Northrop Grumman RQ-4A High Altitude (UAV) – [Delivery 2016]



Payload Bay Can Accommodate up to 2,000 Pounds of Payload

General Characteristics

- DoD Surveillance Asset
- Low Risk After USAF Production, Testing, Fielding
- Huge Surveillance Areas Covered per Mission
- >3,000 nm Range, >30 Hours Endurance
- High-resolution Sensors (FLIR/EO, SAR, ISAR/GMTI)
- Range Endurance Allows Operation from Only 2 Sites
- Centralized Control from Ground Control Station
- GCS Integrated into CG-C2 System

General Specifications

- Power Plant: Single Allison AE3007H (Approximately 7,000 Pounds Thrust)
- Length: 44 feet
- Height: 15 feet
- Weight: Approximately 25,600 Gross Take-off Pounds
- Wingspan: 116 feet
- Speed: 300 to 400 Kt True Air Speed (KTAS)
- Range: 1,200 nm Radius with 24 Hours On Station
- Loiter Altitude: 50,000 to 65,000 feet
- Fuel Capacity: 14,800 Pounds, JP-8



Logistics Milestones



- **Logistics Information Management System (LIMS) Systems Requirements Review completed**
- **Manpower Requirements Analysis delivered**
- **Support and Test Equipment Plan delivered**
- **System Integrated Support Plan delivered**



C4ISR Milestones



- **123' Patrol Boat C4ISR Preliminary Design Review completed**
- **C4ISR Test and Evaluation Program Plan delivered and Development Integration Test Center-LM Standup - 123 Suite completed**
- **Performance Specifications delivered and Development Integration Test Center-LM Standup - NSC Suite completed**
- **C4ISR Increment 1 Preliminary Design Review delivered**
- **CAMSLANT INMARSAT/SIPRNET installation completed**
- **CGC NORTHLAND SIPRNET installation completed**



FY03 – FY04 Budget



IDS Budget Categories	FY 02 Appropriation	FY 03 Appropriation	FY 04 Appropriation
	\$M	\$M	\$M
Aircraft		163.2	142.7
Maritime Patrol Aircraft (MPA)		146.3	25.0
VTOL Unmanned Air Vehicle (VUAV)			50.0
Other Contracts/Legacy Sustainment		16.9	67.7
Surface Ships		198.9	302.6
National Security Cutter (NSC)		131.9	208.0
Offshore Patrol Cutter (OPC)			20.0
Patrol Boats (110' to 123' Conversions and Fast Response Cutter [FRC])		60.4	66.0
Short Range Prosecutor (SRP)		2.8	1.6
Other Contracts/Legacy Sustainment		3.8	7.0
C4ISR		23.7	101.4
Command & Control System for Common Operating Picture (COP)			58.0
Cutter Upgrades - C4ISR			7.1
270' Cutter Upgrade – C4ISR		0.7	
210' Cutter Upgrade – C4ISR		1.4	
378' Cutter Upgrade – C4ISR		3.1	
Shore Sites		5.4	22.1
Other Contracts/Legacy Sustainment		13.2	14.2
Logistics		17.8	45.4
Integrated Logistics Support		16.8	19.2
Shore Sites		1.0	20.7
Facilities Design Required for Future Asset Deployments			5.5
Systems Engineering and Integration		43.4	42.1
Government Program Management		27.8	34.0
Total Capital Acquisition	(A) 320.2	(B) 474.9	668.2

(A) The appropriation in FY2002 started the acquisition and procurement stage of the program. For FY2002, a single IDS amount was appropriated

(B) \$478.0M was appropriated, but a .00165 recession resulted in \$474.9M being available for obligation

* FY2004 budget enacted 3 October 2003



The Bottom Line

Never Forget Why We Do What We Do



The World's Best Coast Guard