



# VSD | Navy & Coast Guard Total Force Training Solutions

## VSD's Corporate Capabilities at a Glance

- In-depth technical advice and analysis of manpower, personnel, and training issues
- State-of-the-art training systems based on immersive simulation and advanced technologies
- Tailored curriculum packages and certified instructor teams
- Training solutions operating in 14 countries in North America, Europe, Asia, and the Pacific

## VSD Ship Platform Experience



CARRIER



AMPHIBIOUS



CRUISER



DESTROYER



FRIGATE



CORVETTE



PATROL BOAT



LANDING CRAFT

## Integrated Training Systems to Address Operations, Maintenance, and Sustainment Needs

**Highly flexible training solutions – modularized simulators, adaptable curriculum and certified instructors – for both war fighting and multirole vessels and their crews.**

Naval/maritime vessels are the fastest growing segment of defense forces worldwide. Naval vessels of all shapes and sizes are viewed as a critical coastal defense and homeland security mission platform.

The expansion, operation and sustainment of a modern naval/maritime fleet is not without challenges. Many of the new missions – marine resource protection, anti-piracy, firefighting, search/rescue, disaster response – represent new and expanded duties for maritime crews and their officers. Not only is the equipment new but the rules of engagement and the tactics for applying force are new to these crews as well.

The skills required – especially the skills required to operate and maintain sophisticated new technologies – cannot be taught via traditional apprenticeships or through single-dimensional training courses. A more complete training solution – modern, crew-centric, and performance-focused – is required.

VSD's design and delivery teams have experience with virtually every type of mission, circumstance and technology that a ship and crew might encounter. We have advised, aided and led literally hundreds of operations training, equipment maintenance, and fleet sustainment program development efforts on 14 different classes of ships.

Our training solutions can be as complete as a fully integrated bridge/engine room/fire control

simulator (with a tailored curriculum package and a certified instruction delivery team) or as specific as a strategic assessment for a new fleet's command.

## How VSD's Total Force Training Solutions are Unique

Unlike other training companies, our expertise includes advice at the earliest stages of force expansion, with precise recommendations on the most appropriate doctrines & concepts, organizational structures and planning that are critical to fleet's manpower strategy.

Our proprietary problem-identification and problem-solving models, coupled with our in-depth understanding of naval operations and naval defense organizational processes, generate perspectives and real-world alternatives that others simply miss.

We excel in identifying and assessing the impact of the myriad of variables present in complex organizational systems. This systematic approach ensures that all alternatives have been properly and thoroughly assessed during the architecting of the training solution.

With the VSD process, rational and thoughtful decisions are made, yielding the best possible balance between operating requirements, capability targets, and budgets.



## VSD | Navy & Coast Guard | Total Force Training Solutions

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## From Concepts Through to Fully Operational Systems

More than advisors, we offer hands-on support for national-scale force expansion initiatives, providing logistics, program management, and manpower planning assistance on an extended basis.

Unlike specialized advisory firms, VSD is fully capable of implementing the recommendations and plans we produce. Through a combination of our in-house design and build capacity and through our defense industry partnerships, we have designed, built, and operated training systems (hardware, software, and facilities) that are the backbone of fleet training programs in many countries today.

The net result of engaging with VSD is a training solution that precisely fits the mission requirements, unique situations, and defense circumstances at hand.

## Training Assessments & Systems Planning

Training Strategies and Solution Architectures that fit each fleet's unique personnel, equipment and budgetary needs

- Fleet-level Assessments of Training-related Operations
- Front-end Performance Analysis & Capability Benchmarking
- Training Needs Analysis (performance improvement, training needs, gap analysis, job analysis, task analysis)
- Training Programming (scope definition, program chartering, program initiation)
- Maintenance and Sustainment Programming (fleet/unit level planning, technical specifications)
- Cost-benefit Analysis, Training Effectiveness Studies, Investment Justification Case Preparation
- Training Technology Strategy, Selection, and Specifications
- Fleet-wide, Ship-wide, and Crew-level Training Strategies

## Training Solutions Design & Build Services

Customer-focused production of all of the components — hardware, software, courseware, and facilities — necessary for a highly integrated, results-producing training system.

### State-of-the-Art Simulators

- **Full Mission Bridge Trainer (FMBT)** - a multipurpose, highly-realistic OPV simulation for bridge team training and mission rehearsals utilizing actual or simulated bridge controls, instrumentation, and equipment
- **Engine Room Trainer (ERT)** - for training personnel in the operation and monitoring of instrumentation and controls of the vessel's engine room
- **Communications Trainer (CT)** - used to train on equipment used for communication within a ship or vehicle as well as used to simulate radios used in external communication between units
- **Deployable Electronic Warfare Environment Trainer (DEWET)** - a state-of-the-art, dynamic electronic warfare simulation training system
- **Helicopter Flight Deck Operations Trainer (FDOT)** - for helicopter controllers in approaches and landing on ship flight decks
- **Fire Control Trainer (FCT)** - weapons simulator used to train OSV and Fast Interceptor personnel on tactical gun systems (30mm)
- **Small Arms Trainer (SAT)** - weapons simulator used for tactics and defensive decisions
- **Firefighting Trainer (FFT)** - simulates Class-A and B-type fires; relevant for disaster, terrorist, and war fighting situations
- **INSIGHT™ Target Recognition & Combat Identification Trainer** - Realistic 3D simulation trainer used to reduce friendly fire and increase combat mission effectiveness with recognition training tools for predeployment training, intelligence training, and mission rehearsal

## Modularized Courseware

- **OPV Orientation Courses**
  - Vessel/Capability Overview
  - Safety Information
  - Operational/Mission Profile
- **OPV Shipboard Management/Command & Control Courses**
  - Command & Control Concepts
  - Watch Organization
  - Integrated Command & Control Operations Overview
  - Integrated Command & Control Engineering Overview
  - Underway Operations Preparation
  - Emergency Operations
  - Force Protection (antipiracy and anti-terrorism operations)
  - Special Mission Operations
- **OPV Deck Operations Courses**
  - Basic Seamanship
  - Rescue at Sea Operations
  - Environmental Response Operations
  - Rigid Hull Inflatable Boat Operations
  - Deck Machinery & Equipment Operations
  - Vertical Replenishment Operations
  - Shipboard Deck Operations
  - Fast Assault Boat/Fast Interceptor Training
- **Combat Systems Courses**
  - Gunnery Commands, Battle Damage Assessment, and Small Arms Deployment Tactics
  - Ships Weapons Doctrine
  - General Weapons/Ammunition Safety and Handling
  - Weapons Systems Operation and Maintenance (deck-mounted gun systems)
  - Rules of Engagement/Use of Force
- **Navigation Courses**
  - Introduction to Navigation
  - Compasses
  - The Nautical Road
  - Dead Reckoning, Piloting, and Electronic Navigation

- Ship's Bridge and Equipment
- Dynamic Positioning System
- Navigation Simulation
- Navigation Shipboard Familiarization Training

#### • Communications Courses

- Shipboard Communication Organization
- Radio Procedures
- Distress Communications
- Communications Equipment and Functions
- Communications Simulator Training/ Operation

#### • Radar Courses

- Basic Radar Principles
- Radar Operation Characteristics and Target Tracking
- Radar Limitations
- Radar Simulator Training

#### • Damage Control/Firefighting

- Basic Damage Control
- Safety Precautions & Hazards
- Damage Control Organization
- Damage Control Communications
- Firefighting Fundamentals
- Portable Firefighting Equipment
- Battle Damage Repair
- Compartment and System Isolation
- Portable Dewatering Equipment
- Installed Firefighting System
- Firemain System
- Personnel Protective Equipment (PPE)
- Fire Alarm & Detection System
- Firefighting (MFFT) Simulator

#### • Engineering Plant Maintenance

- Effective Engineering Maintenance
- Main and Emergency Generator Maintenance
- Marine Transmission Gearbox Maintenance

- Main Propulsion Engine Maintenance
- Auxiliary Plant Maintenance
- Deck Equipment Maintenance
- Engineering Plant Maintenance Familiarization Training

#### • Engineering Plant Operations Courses

- Engineering Plant Characteristics
- Electrical Plant Equipment
- Auxiliary Plant Equipment
- Deck Mechanical Equipment
- Engineering Equipment Alignment in Port
- Engineering Equipment Alignment Underway
- Engineering Equipment Alignment at Anchor
- Engineering Equipment Alignment during Casualty Conditions
- Engineering Plant Operations Simulator Training
- Engineering Plant Operations Familiarization Training

#### • Integrated Watch Team Training

- Transiting from Homeport
- Antipiracy Scenarios
- Antismuggling Scenarios
- Terrorism Response Scenarios
- Disaster Response Scenarios
- Port/Coastal Security Patrols
- Maritime Resource Security Patrols
- Naval War Scenarios
- Returning to Homeport

#### Learning Facilities

- Facility Requirements Plan and Specifications
- Facility Layouts/Classroom Configuration
- Layout/Containerization of a Simulator-based Learning Systems
- Facility Engineering & Design Services
- Production Oversight & Logistics
- Assembly & Testing
- Packaging, Transport, Reassembly & Handover

## OPV Training System Implementation & Sustainment

Implementation of all systems and subsystems of the solution through an experienced team of technicians, instructors, and program executives.

### Curriculum Management

- Curriculum Asset Management (validation, updating, documentation, publication)
- New Content & Vendor Sourcing (identification, evaluation, pricing, selection)
- New Curricula Development (computer-based, instructor-led, web-delivered, simulator-based)
- Curricula Hosting, Enterprise Portals, E-Learning Platforms, Learning Management Systems

### Instructor Resources

- Instructor, Professional and Adjunct Staff Recruitment
- Instructor Candidate Vetting, Testing, and Certification
- Instructor Onboarding and Train-the-Trainer programs
- Instructor Evaluation; Excellence in Training programs

### Life Cycle Support

- Training and Education Operations Planning
- Educational Facility & Classroom Design
- Classroom Technology Selection, Installation and Upgrades
- Executive, Senior and Professional Operations Staff
- Scheduling, Standardization, Policies & Procedures
- Testing & Certification per National/ International Standards
- Content/Curriculum License Maintenance
- Student Management and Communications

