



Pacific Missile Range Facility

**Mr. J.F. Benzie
Technical Director**



PMRF – Alignment with CPF Vision

MISSION

To provide integrated range services in a modern, multi-threat, multi-dimensional environment, assuring safe conduct and evaluation of **Force Readiness Events**

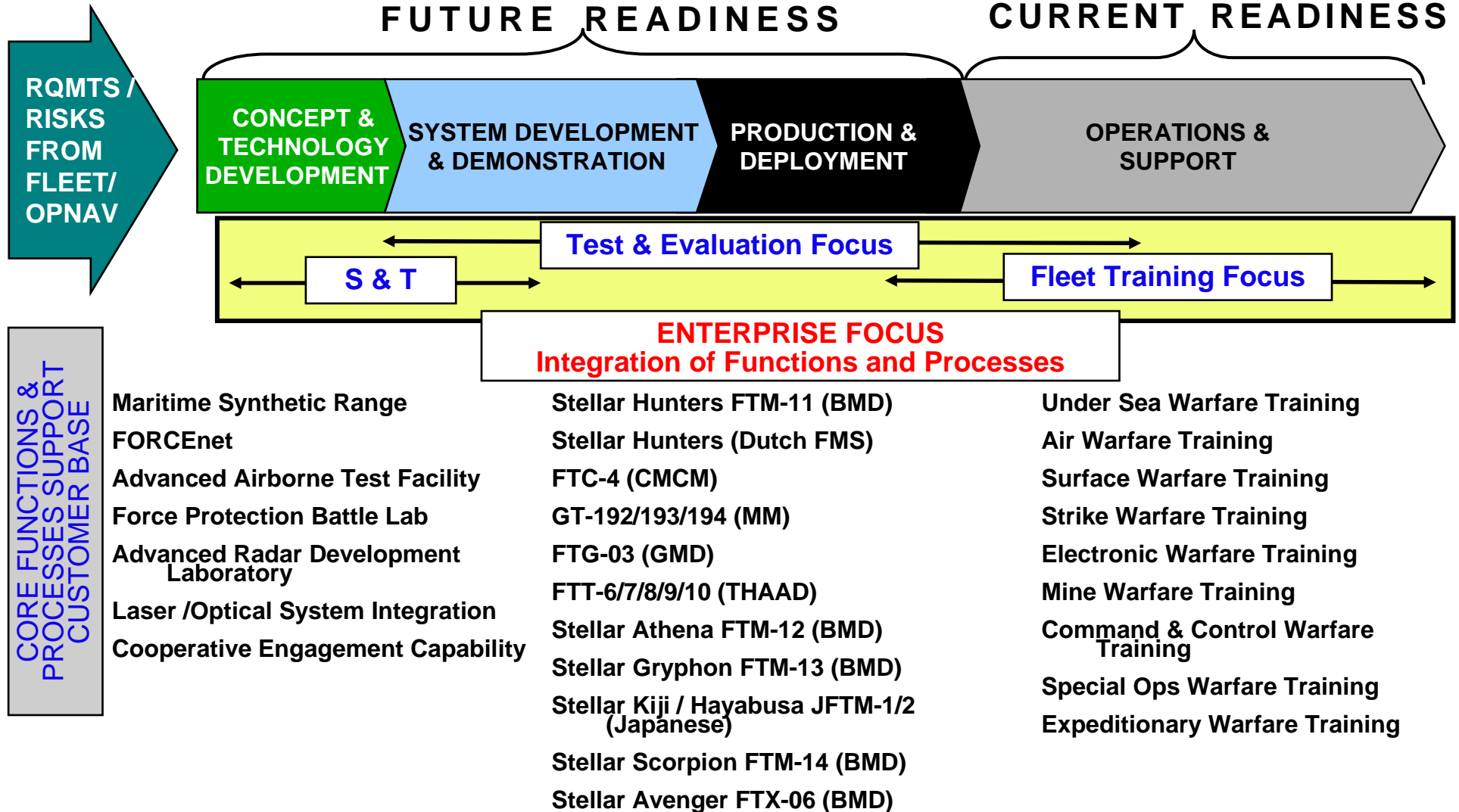
VISION

Provide Premier Range services to meet present and future Warfighting requirements with **clear** and **measurable** benefits throughout the **Pacific Theater**

Today's Testing Leads to Tomorrow's
Training with Systems our Warfighters
Must Have to Win in Combat



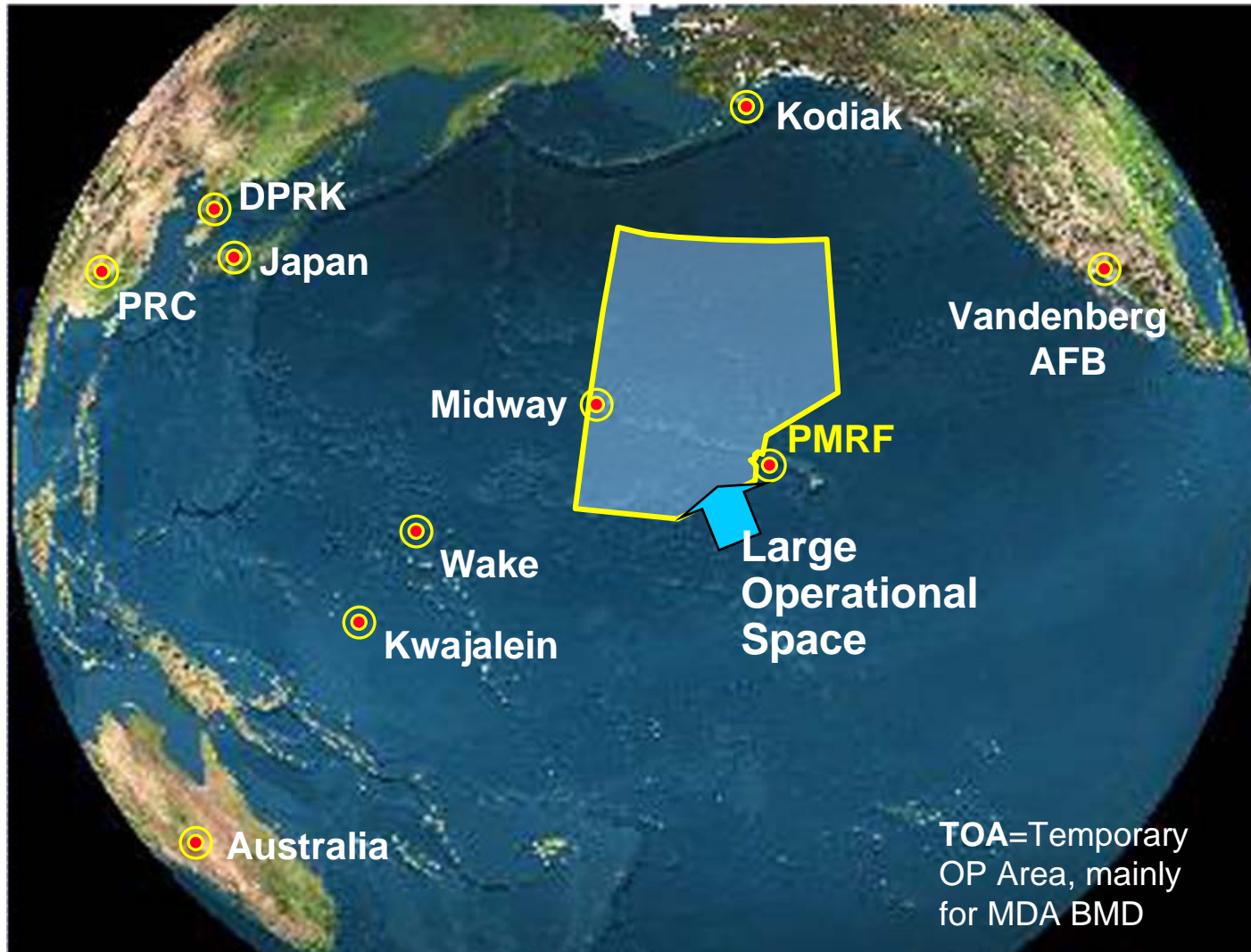
PMRF Alignment with Acquisition and Operational “Navy Readiness Enterprise Continuum”



PMRF CONDUCTS OPERATIONS ACROSS THE ENTIRE NAVY READINESS ENTERPRISE

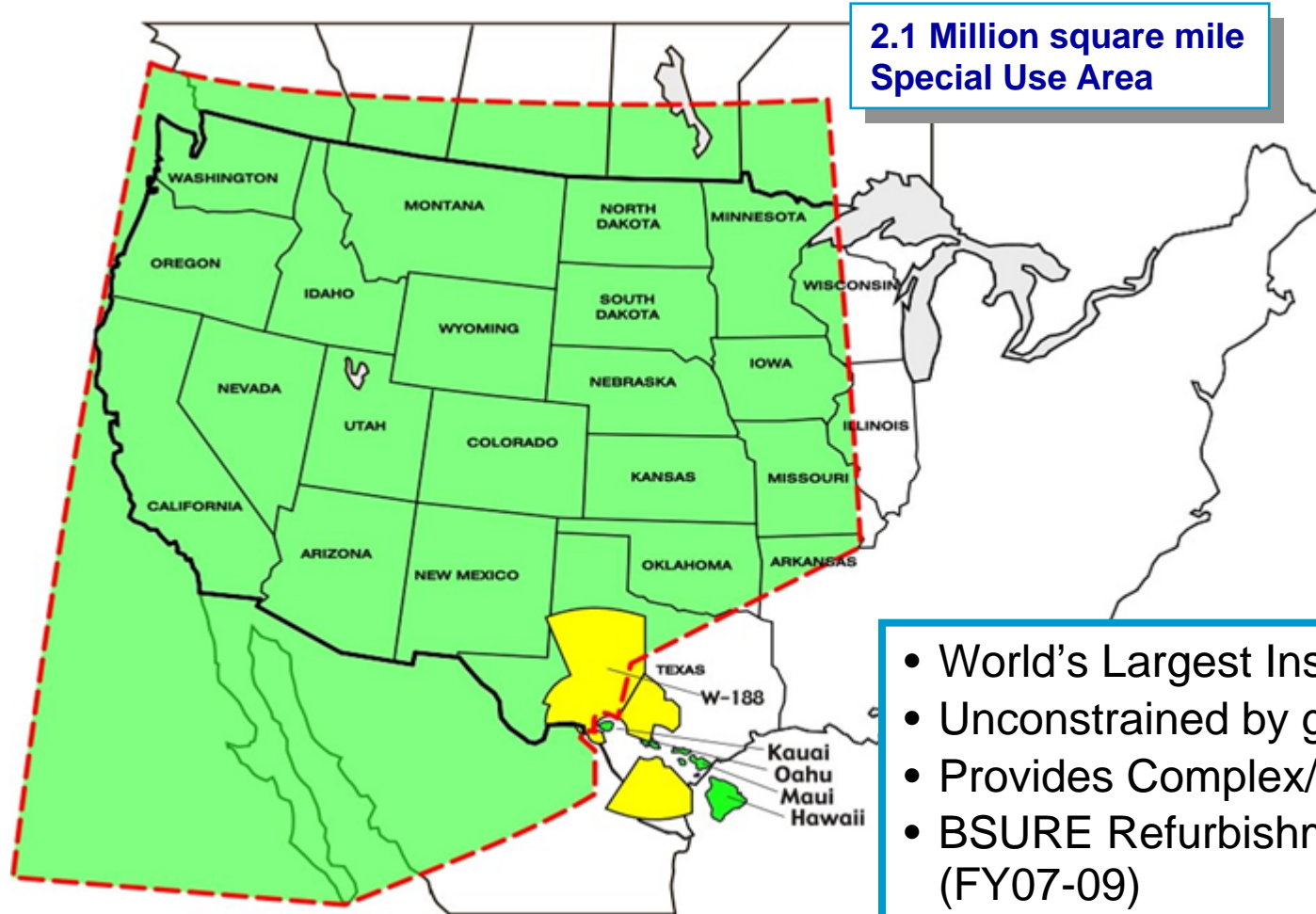


PMRF - Crossroad of the Pacific





PMRF Provides a Multi-Dimensional Range Capability



- World's Largest Instrumented Range
- Unconstrained by geography
- Provides Complex/Realistic Scenarios
- BSURE Refurbishment Funded (FY07-09)



UNDERWATER RANGE / REFURBISHMENT

2007/OCTOBER

(BSURE)

Depths: 1000 - 2500 Fathoms
 Area: (22.5 x 40 NM)
 900 Square Miles
 (Existing) 18 Hydrophones @ 20 Hz - 20 KHz. (2) UQC
 (Refurbished) 41 Hydrophones @ 50 Hz - 40 KHz (12) UQC

(BARSTUR)

Depths: 300 - 1000 Fathoms
 Area: (12 x 10 NM)
 120 Square Miles
 (36) Hydrophones @ 8 KHz-50 KHz
 (6) Hydrophones @ 50 Hz - 50 KHz

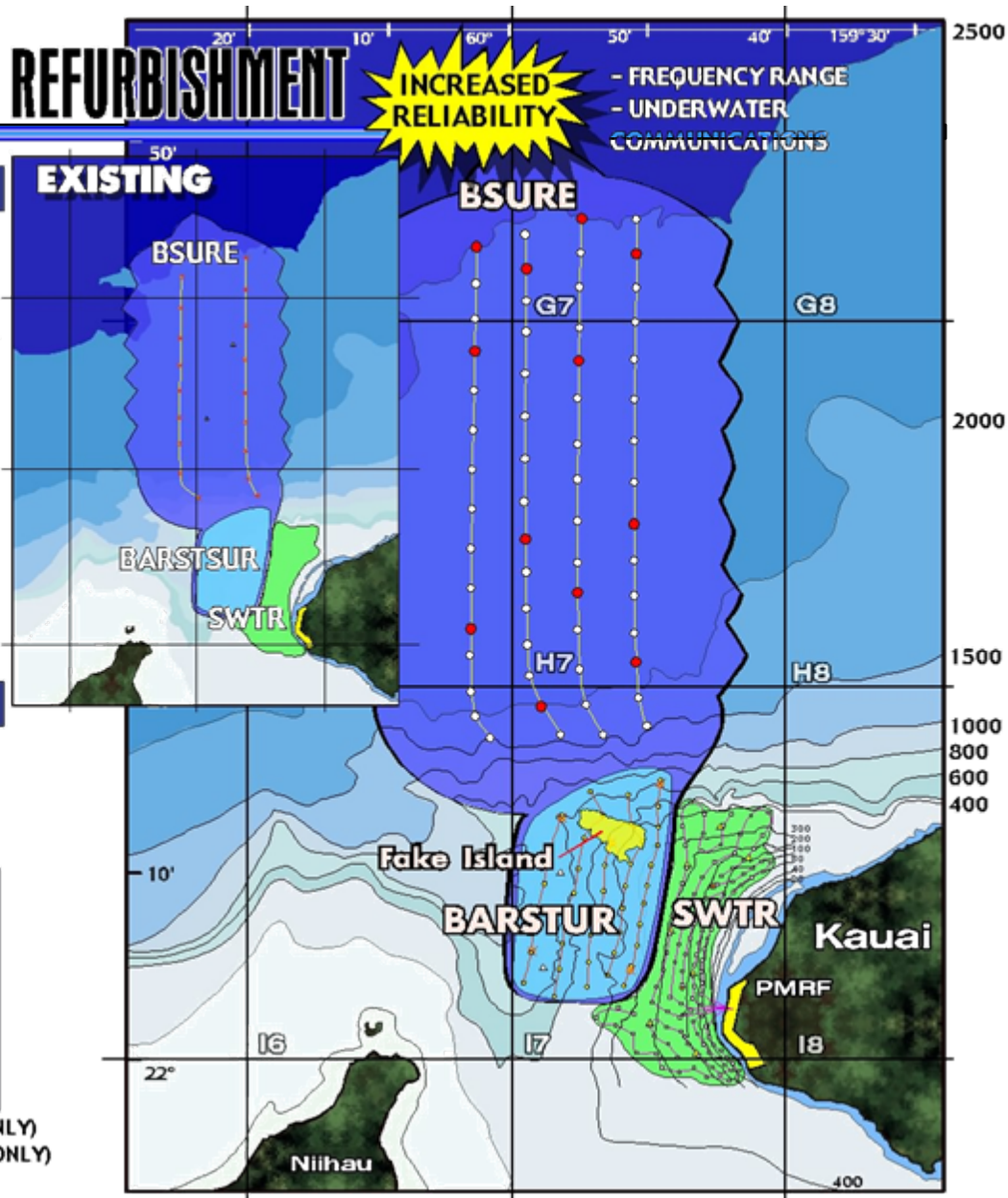
(SWTR) SHALLOW WATER TRAINING RANGE

Depths: 20 - 300 Fathoms
 Area: (12 x 10 NM)
 80 Square Miles
 (118) Hydrophones @ 7 KHz-50 KHz

TOTAL AREA 1100 SQUARE MILES

Underwater Tracking:
 Up to 12 Mk-84 coded pulse pingers on 13 kHz, 17 kHz or 37 kHz
 Splash Point Metric
 Location Capability
 Tracking: 10 Feet
 Splash Point: 30 Feet
 Depths are in Fathoms

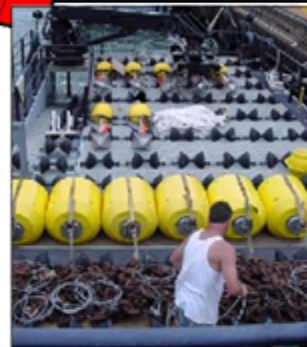
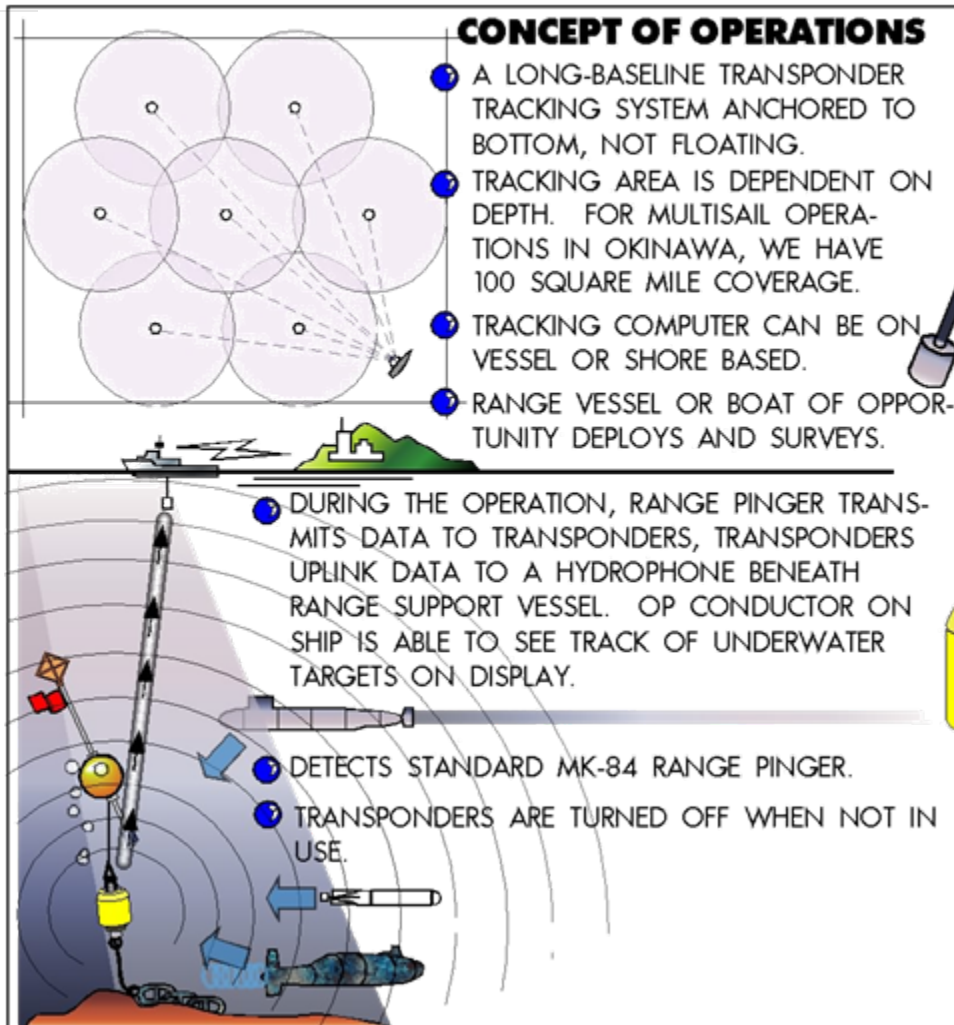
UCS = Underwater Communications System (BSURE ONLY)
 UQC = Utility Underwater Communications (BARSTUR ONLY)
 LFA = Low Frequency Alarms





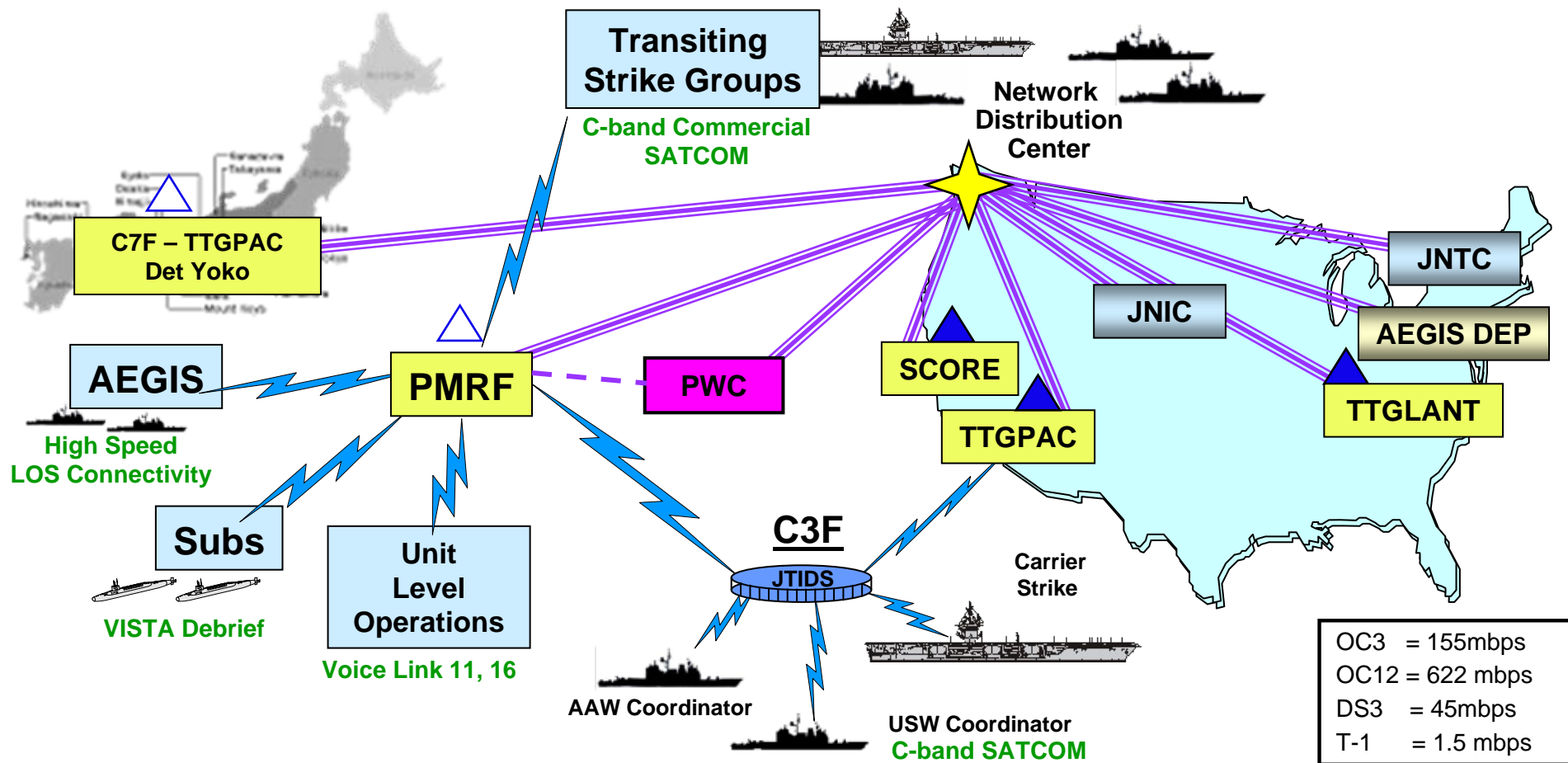
Portable Underwater Tracking Range

CONCEPT OF OPERATIONS





Implementing CPF Strategic Vision to Integrate the Hawaiian Range Complex into JNTC

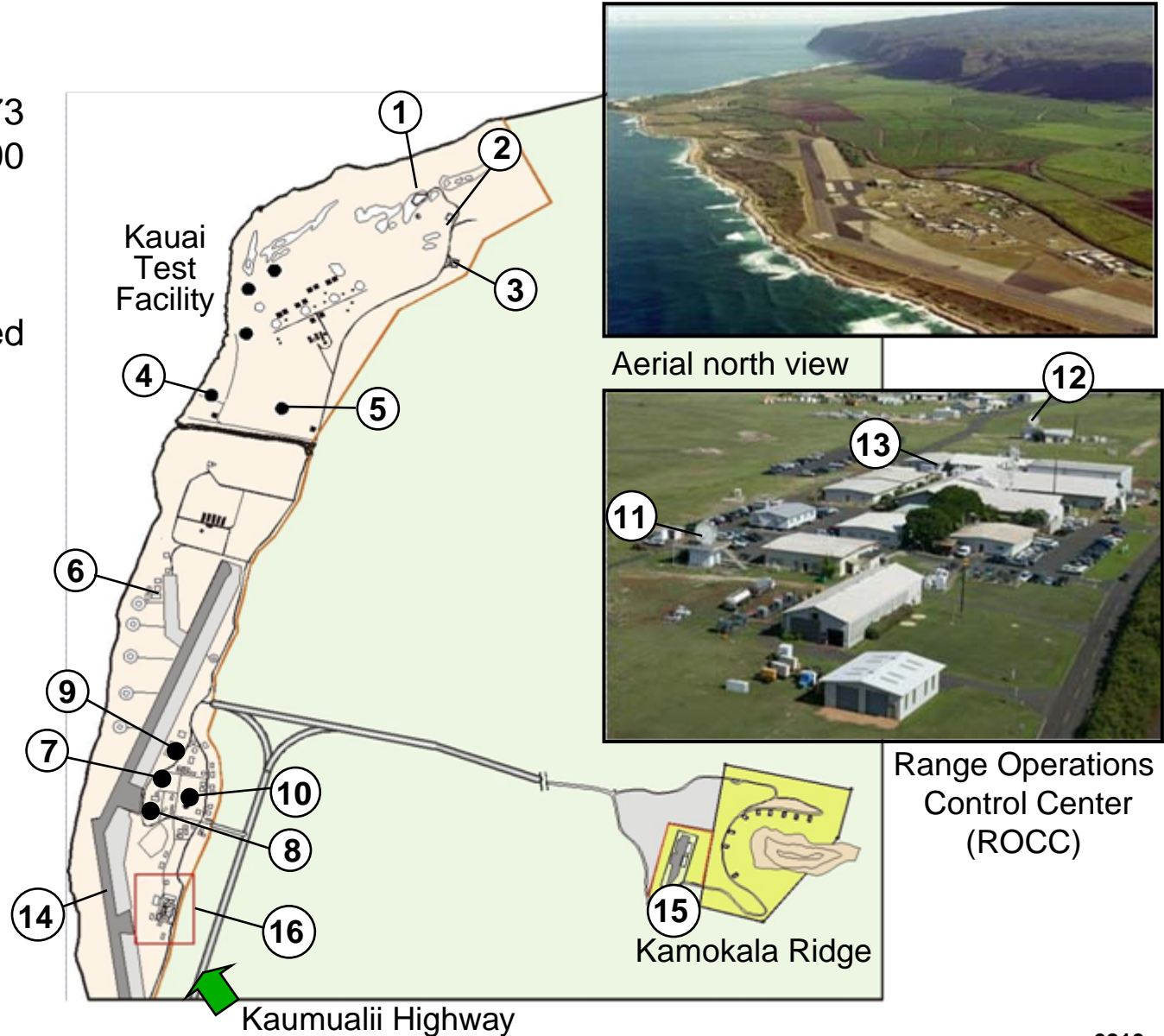


NCTE: Navy Continuous Training Environment
 JNTC: Joint National Training Capability
 JMTEC: Joint Mission Environmental Testing Capability
 TENA: Test and Training Enabling Architecture



Instrumentation Barking Sands

1. PMRF North Launch Complex
2. Missile Assembly Bldg. 573
3. Missile Assembly Bldg. 590
4. THAAD Launcher
5. THAAD Block House
6. Ordnance, Targets & Underwater Weapons (Red Label Area)
7. THAAD Contractor Logistics Support
8. Control Tower Crash/Fire Bldg. 300
9. Hangar Bldg. 384
10. THAAD Central Support Facility
11. MPS-25 ROSA (Queen 8)
12. MPS-25 ROSA (Queen 1)
13. SPS-67 (Queen 10)
14. Active Runway 16/34
15. Ordnance Magazine
16. Range Operations Area





Makaha Ridge

Surveillance,
Data Collection,
Electronic Warfare,
& Experimentation

- 1 - Telemetry Bldg 752
 - a. KAM TM antennas
 - b. 150-20 TM antennas
- 2 - Radar Maint. Bldg. 742
- 3 - DR COSIP(Queen-4)
- 4 - FPQ-10 (Queen 5&6)
- 5 - DR COSIP (Queen-15)
- 6 - SPS-48E Surveillance
- 7 - APS-134 Surveillance
- 8 - Comm. Bldg. 708
- 9 - Electronic Warfare
- 10 - MPS-25 ROSA (Queen 2)



Approximately seven nautical miles north of Barking Sands, Makaha Ridge overlooks the BARSTUR and BSURE ranges. Site elevations are between 1500 and 1700 feet, providing line-of-sight coverage to 60 nautical miles.



Kokee Park

At an elevation above 3,800 feet, Kokee Park extends the line-of-site coverage from Kauai to 90 nautical miles.

Parcel "D"

- (1) FPS-16
- (1) MPS-25
- (1) 150-20' Telemetry Antenna



Parcel "E"

NASA VLBI
USB Antenna



Parcel "B"

Power Plant
Substation

Parcel "A"

Mk-74 X-Band Radar &
future central fiber node



Parcel "C"

(4) CCT
UHF/VHF COMMUNICATIONS





Niihau Island (North View)

The privately owned island of Niihau is 17 nautical miles southwest of Barking Sands

- 1 - Kekewaa Radar site (leased) has generator & helicopter landing pad
 - Moving Target simulator
 - EMESS Site

- 2 - Perch site (EW) (leased) has generator & helicopter landing pad
 - Optical Tracking
 - EMESS Site

 Potential EMESS site





Technology Areas of Interest

- Wide area surveillance/clearance
- Marine mammal detection and tracking
 - Behavior data to validate models
- Data transport
 - Acoustic telemetry (10Mbps)
 - Large quantity (terabytes)
 - Net centric environment
- Information assurance
 - CDS (Cross Domain Solutions)
 - Multi-level security
- Close-in tracking of multiple high speed objects
- Renewable Energy
 - Ocean Thermal Energy Conversion (OTEC)
 - Biofuels
 - Solar
 - Energy Storage