

# ***MCM Forces Readiness***

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***Mine Warfare Association Conference***



***VADM Terry Etnyre***

***10 May 2007***

# Surface Force Transformation

**CNSF Mission: Deliver trained, highly effective, and technologically capable Surface forces that are certified across a full spectrum of warfare areas...**

**Today's  
SURFACE  
FORCE**



**Surface Warfare  
Enterprise**

Personnel

Maintenance/  
Modernization

**SURFOR TRANSFORMATION**

Training

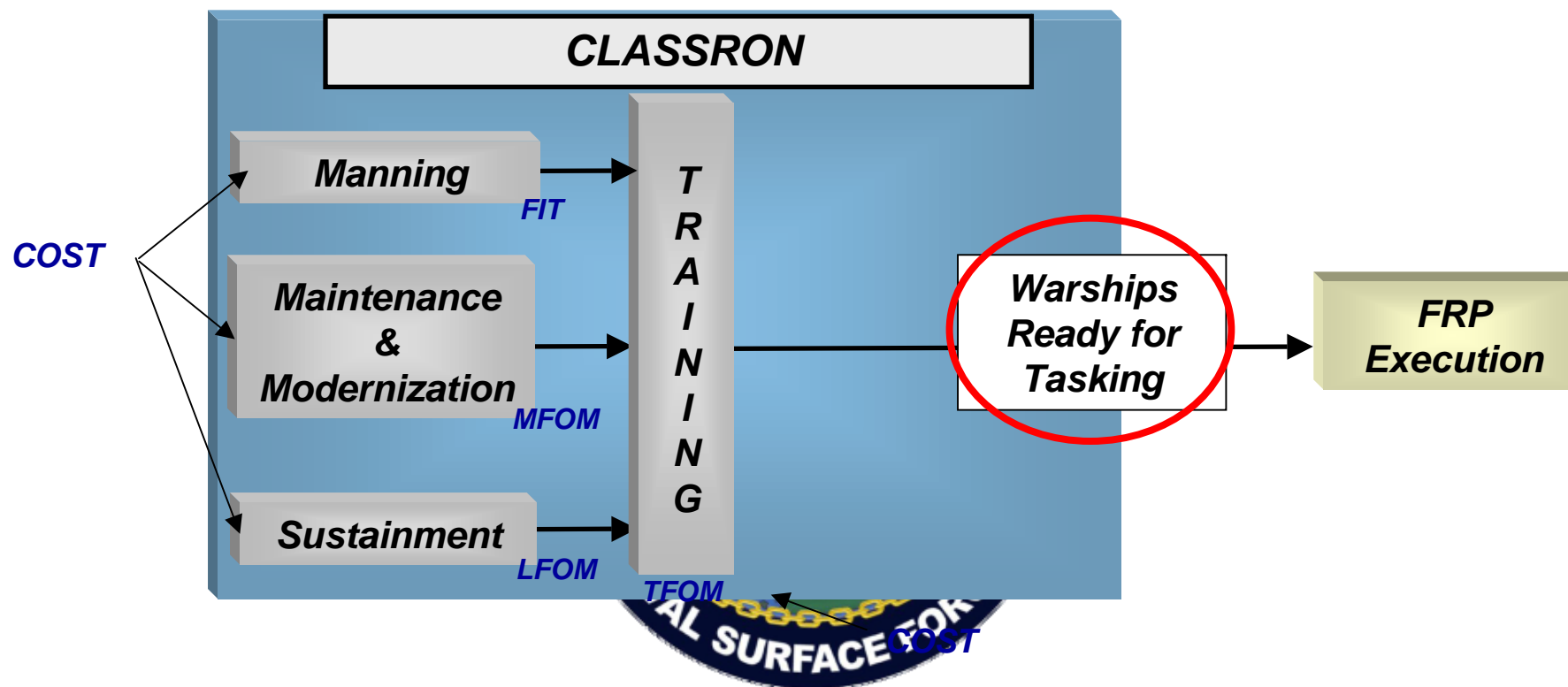
Logistics

**Warships Ready For Tasking**

**SURFACE  
FORCE of the  
Future**



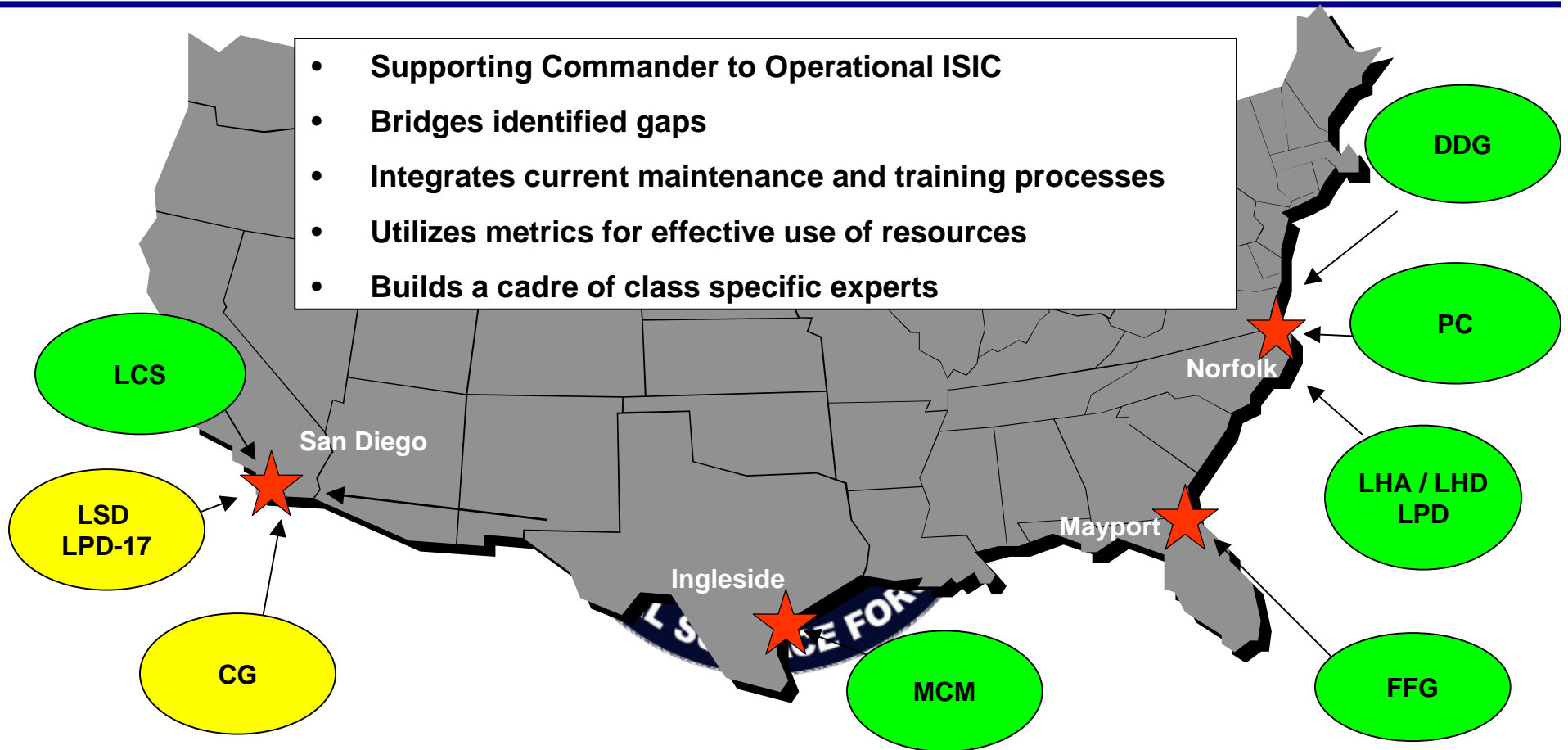
# Surface Force Readiness



**Understanding and Controlling Costs drives Productivity**

**Accountability is Key**

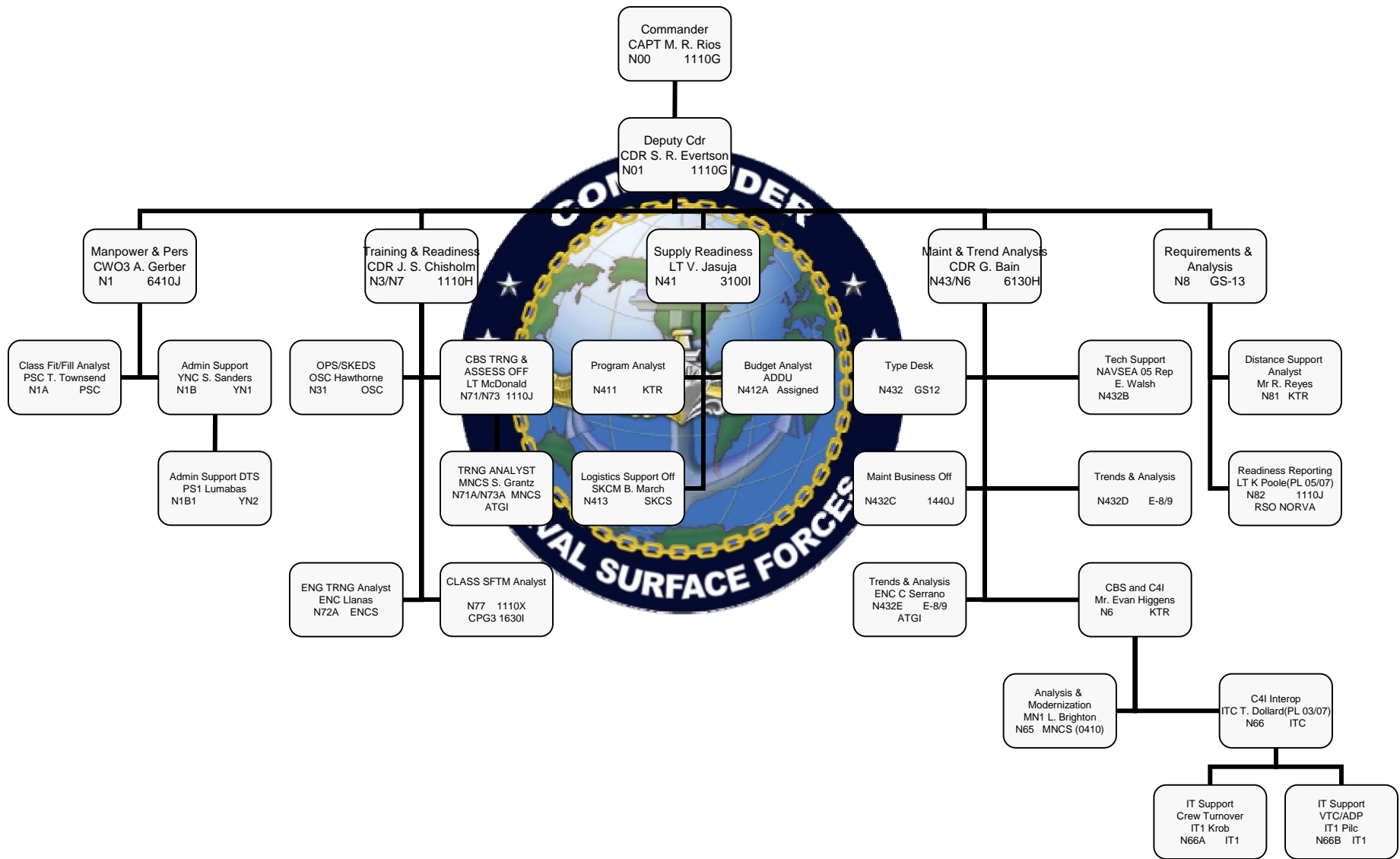
# CLASSRON



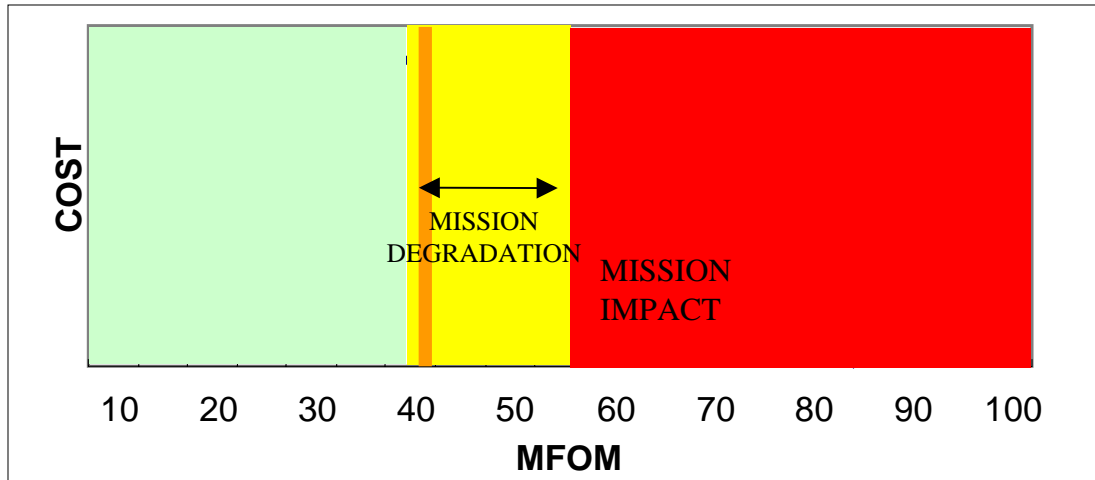
● Operational

● In progress

# MCM CLASSRON Organization

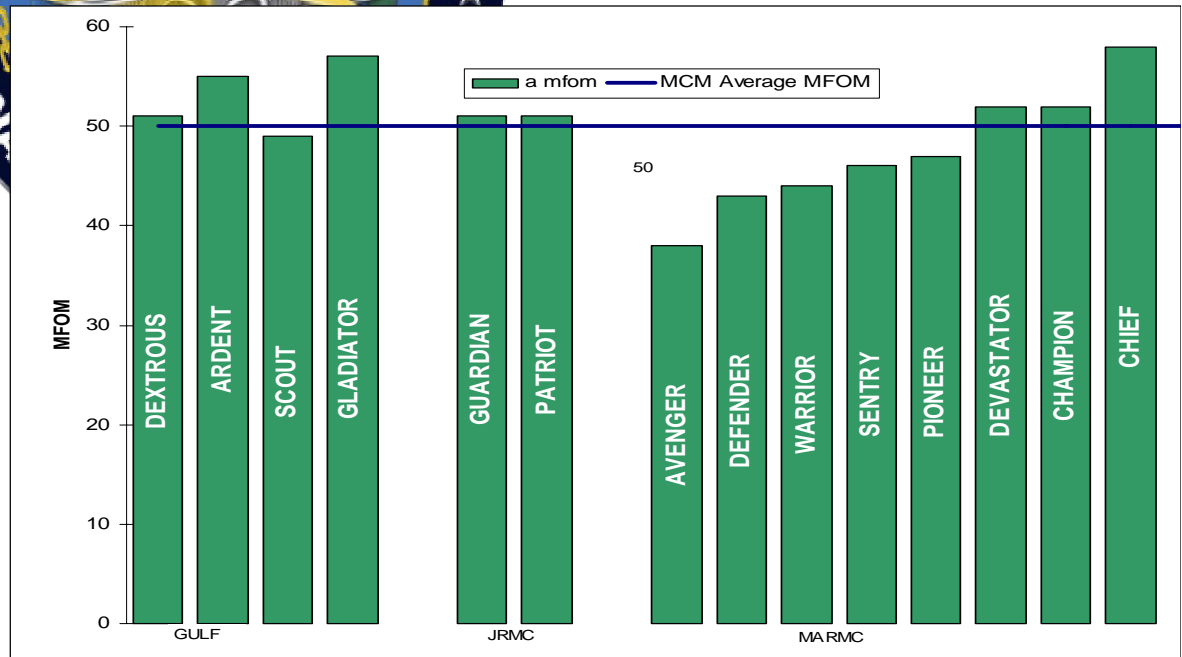


# Readiness / MFOM Relationship



**FORCE MFOM AVG: 41**  
**FORCE MCM AVG: 50**

**The Right Maintenance  
 at the Right Time for  
 the Right Cost**



# *Improving MCM Readiness*

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- **C5F Readiness Improvement Initiatives**
  - Instituted SHIPMAIN process in Bahrain
  - Increased Presence (ISIC, CLASSRON, OEM, RMC)
- **Upcoming Modernization Installations**
  - Aft Deck Gear – Electrical conversion of all sweep gear winches
  - Propulsion Plant Improvement Program (PPIP) Upgrades for Isotta-Franchini Engines
  - Klein Side Scan Sonar (POS ships remain)
  - High Frequency Wide band sonar upgrade for SQQ-32(V)3
  - Expendable Mine Neutralization System (EMNS) replace Mine Neutralization Vehicle (MNV)



# ***MCM Reliability Improvement Plan***

SYSTEM	FY07 (\$M)	POM 08 (\$M)	INSTALL DATES
SQQ-32 (V3) High Frequency Wide Band (HFWB) Upgrade	9,531	128,165	FY10 - FY13
Expendable Mine Neutralization System (EMNS)	13,760	116,232	FY08 - FY11
Isotta-Fraschini Planned Product Improvement Program (PPIP)	7,600	13,500	FY07 - FY08
Acoustic Minesweeping Improvement Program: Advanced Acoustic Generator (AAG) and Infrasonic Advanced Acoustic Generator (IAAG)	3,881	7,000	FY07 - FY10
MCM Aft Deck Upgrades	10,339	12,465	FY07 - FY10
Solar Magnetic Minesweeping Gas Turbine Generator (MMGTG) Upgrade/Replacement	0	0	NO POR
MCM Communications Modernization	9,026	9,111	FY05 - FY10
Navigation Command and Control (NAVC2): AN/SSN-2 (V5)	6,794	3,930	FY06 - FY10
Waukesha Engine Enhanced ILS	0	5,300	ILS SUPPORT
OK-520 WINCH UPGRADES	1,058	479	FY04 - FY08

# Aft Deck Improvements

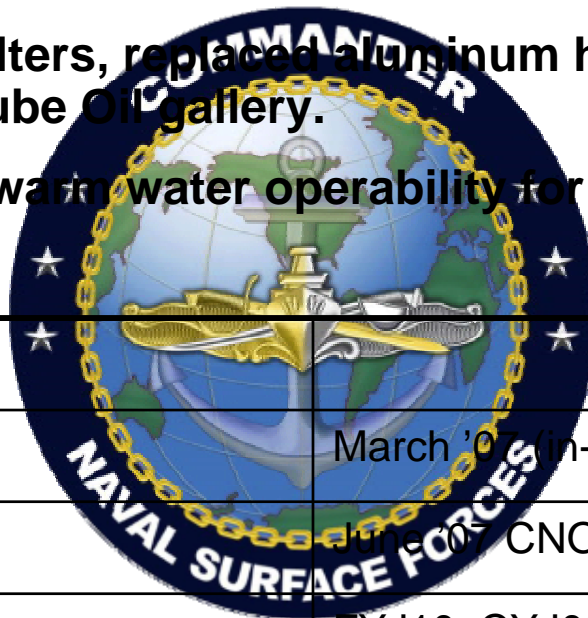
- Deck Gear – Electrical conversion of all hydraulic sweep gear winches/motors. Provides more robust Fantail Sweep reliability.



SHIP	TIME
USS DEVASTATOR	11 JUL – 13 SEP
-Initial installation on MCM-1 Class -SCD funded and programmed for entire class over next five years	

# I-F Engine Improvements

- Propulsion Plant Improvement Program (PPIP) Upgrades –
  - >70 % Complete in MCM Force
  - Enhanced fuel filters, replaced aluminum heads with steel/aluminum and improved Lube Oil gallery.
  - Provides better warm water operability for I-F engines.



SHIP	TIME
USS DEXTROUS (FDFNF)	March '09 (in-progress)
USS SENTRY (ROS)	June '09 CNO Avail
USS ARDENT (FDFNF)	FY '10 CY '09 (Oct-Dec) Tentative
USS CHIEF (INGL)	FY '09 CY '08 (Oct-Dec) Tentative

# Mine Detection / Q-Routing Improvements

- Klein side scan sonar
- Four Bahrain ships plus PIONEER and CHIEF at NSI presently have Klein sonar.



SHIP	TIME
USS CHIEF	Recently Installed
USS DEFENDER (ROS)	Not Scheduled
USS SENTRY (ROS)	Not Scheduled

# MCM Multi-Crewing

## CONUS Based MCMs

### Homeport: Ingleside, TX

\*AVENGER (MCM 1)

\*DEFENDER (MCM 2)

\*SENTRY (MCM 3)

\*CHAMPION (MCM 4)

DEVASTATOR (MCM 6)

PIONEER (MCM 9)

WARRIOR (MCM 10)

CHIEF (MCM 14)

**4 Crews (Silver)**

## 5<sup>th</sup> FLEET Based MCMs

### Homeport: Bahrain

ARDENT (MCM 12)

DEXTROUS (MCM 13)

GLADIATOR (MCM 11)

SCOUT (MCM 8)

**8 Crews (Blue/Gold)**

## JAPAN Based MCMs

### Homeport: Sasebo

GUARDIAN (MCM 5)

PATRIOT (MCM 7)

**2 Crews**

*14 Ships - 14 Crews*

*120 Day  
Deployments*

*Dedicated Off-hull  
period for schools  
and certification*

*\*ROS*

***Provides Continuity, Improved LOK, and  
Fosters Ownership***

# MCM Crewing Model



# MCM Blue/Gold/Silver



IMPERVIOUS

**CONUS**

MCM-14



**CHIEF**  
Training Hull



FEARLESS



CONFLICT

**C5F**

MCM-12



ARDENT



IMPLICIT

MCM-9



**PIONEER**  
Training Hull



EXULTANT















CONSTANT

MCM-13



DEXTROUS

# Remaining MCM crews provide...

<p>MCM-1</p>  <p>AVENGER</p>	 <p>IMPERVIOUS</p>	<p>MCM-2</p>  <p>DEFENDER</p>	 <p>IMPLICIT</p>	<p>MCM-3</p>  <p>SENTRY</p>	 <p>BULWARK</p>
<p>MCM-6</p>  <p>DEVASTATOR</p>	 <p>REAPER</p>	<p>MCM-8</p>  <p>SCOUT</p>	 <p>PERSISTENT</p>	<p>MCM-10</p>  <p>WARRIOR</p>	 <p>SWERVE</p>

## Support for:

- Sea Shield; HLD/HLS – w/one crew per ship, no Crew Swap
- East & West Coast Deployments; Fleet Engagement
- Augment Training Hulls as needed to assist Silver Crews

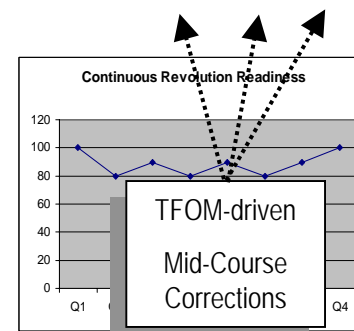
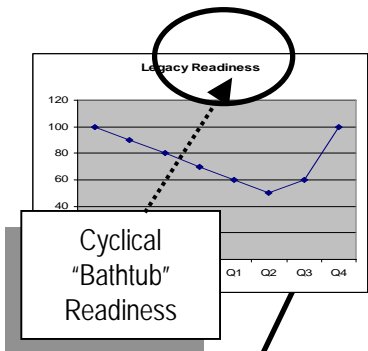
# SHIPTRAIN: Continuous Training

Yesterday's Legacy Training ...

Today's Continuous Training ...

**Basic Phase:**  
16 wks

**Phase I:**  
ULT Goal: 10 wks



24 month Employment Period

24 month Employment Period

Standard 16 Week Unit Level Training

ATG ULTRA (Large Scale)

E-SURGE/SURGE

LTT

DEPLOYMENT

ULTRA (Small Scale) ALL Ships

DEPLOYMENT ULTRA

SRA

ATG ULTRA (Large Scale)

Standard 16 Week Unit Level Training

SRA

ULTRA (Small Scale) Select Ships

LTT

**Phase II:**  
ULT Goal: 2-4 wks

**INCREASES WARSHIPS READY FOR TASKING BY 75% OVER FRP CYCLE**

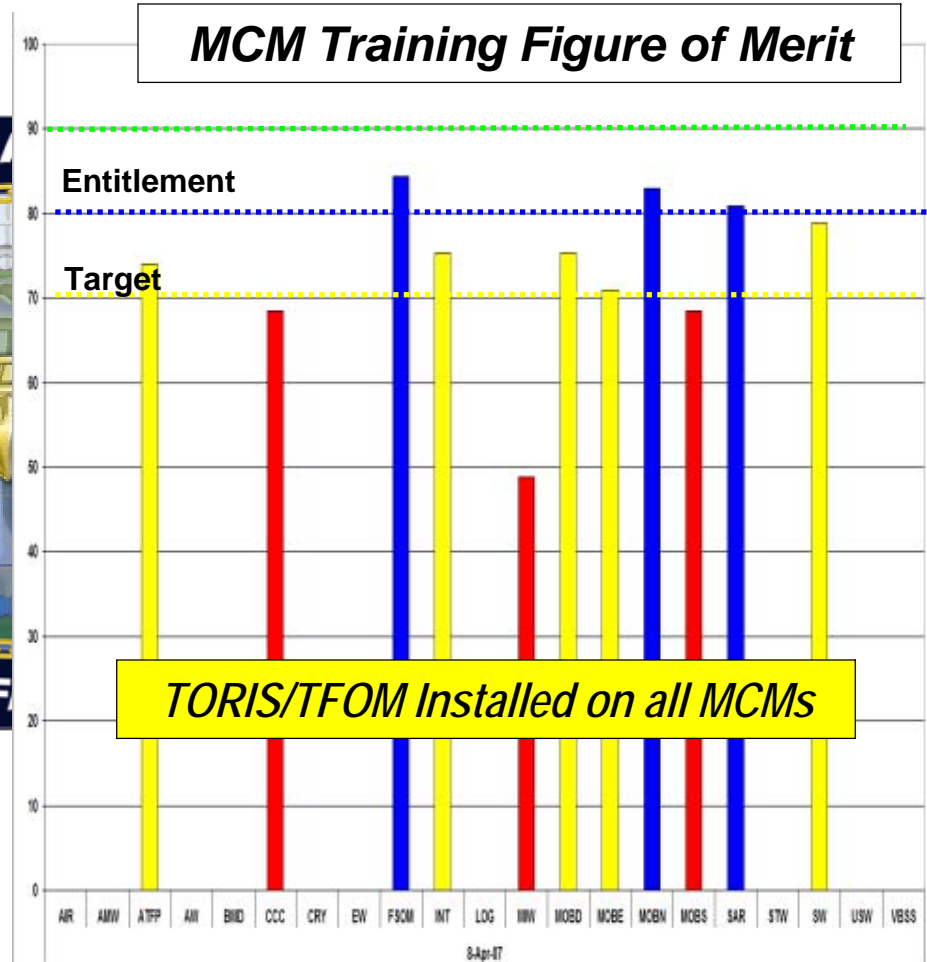
# MCM Continuous Training

## Blue/Gold Crewing provides

- ✓ Predictable deployment cycle
- ✓ Dedicated time for re-certification/proficiency training
- ✓ Crews that remain proficient, continually certified, and operationally current



**MCM Training Figure of Merit**



**Brutal Self-Assessment Required**

# Mainstreaming MIW

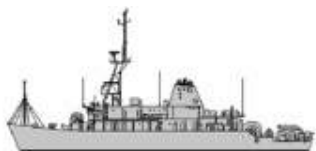
- **Perception of mine warfare neglect**
  - Homeports are off the beaten path
  - “Dicey” Career Move
  - Absent from major exercises
  - Out of sight...
- **Traditional MIW ships**
  - Slow
  - Heavy Lift Into Theater
  - Require intensive support
  - Lightly armed
  - No aviation capability



# MCM Laydown

## JAPAN

USS GUARDIAN (MCM 5)



USS PATRIOT (MCM 7)



## INGLESIDE

USS AVENGER (MCM 1)



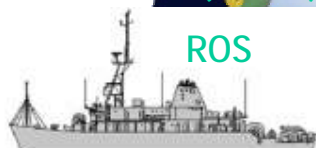
ROS

USS DEFENDER (MCM 2)



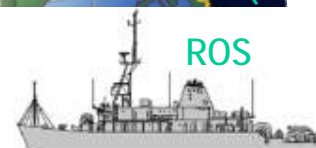
ROS

USS SENTRY (MCM 3)



ROS

USS CHAMPION (MCM 4)



ROS

USS DEVASTATOR (MCM 6)



USS PIONEER (MCM 9)



USS WARRIOR (MCM 10)



USS CHIEF (MCM 14)



## BAHRAIN

USS SCOUT (MCM 8)



USS GLADIATOR (MCM 11)



USS ARDENT (MCM 12)



USS DEXTRIOUS (MCM 13)



# Next Generation MIW Ships



Key Performance Parameters	THRESHOLD	OBJECTIVE
Sprint Speed (kts)	40	50
Mission Package Payload (mt)	180	210
Range @ Transit Speed (nm)	3500 @ 18 kts	4300 @ 20 kts
Navigational Draft (ft)	20	10
Core Crew manning	50	15
Interoperability (compliance with IERs)	All Critical	All
Conduct DTE Scenario (ASW, MIW, SUW)	OBJ = THR	OBJ = THR

# MIW MP

Mine Warfare Alpha Modules (Baseline)	
Mission Systems	USV (x1) USSS (x1) RMMV (x2) OASIS (x1) AMNS (x1) ALMDS (x1) AN/AQS-20A (x3) RAMICS (x1) COBRA (x2)
Other	Support Equipment



Unmanned Surface Vehicle



EDM

Unmanned Surface Sweep System



EDM

Remote Multi Mission Vehicle



LRIP

Organic Air & Surface Influence Sweep



EDM

Airborne Mine Neutralization System



EDM

Vertical Takeoff Tactical Unmanned Aerial Vehicle



LRIP

Coastal Battlefield Reconnaissance & Analysis



LRIP

Airborne Laser Mine Detection System



LRIP

Rapid Airborne Mine Clearance System



EDM

Minehunting Sonar



LRIP

MH60S



Production

# *LCS-Mainstreaming MIW*

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- **MIW as a priority**
  - Twenty percent of the fleet MIW capable
  - Twenty-four mission packages
  - Open-loop detailing
  - First mission package on first LCS deployment
- **Challenges**
  - Unknown peacetime demand signal
  - Spiral Development
  - Tactical development
  - Making system of systems work



***Committed to Mine Warfare***

# *Discussion*

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