FORWARD DEPLOYED
REGIONAL MAINTENANCE CENTER

Expanding Expeditionary & Deployed Maintenance for Naval Platforms

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Regional Maintenance Centers: The Force Behind the Fleet

Regional Maintenance Centers (RMCs) execute maintenance and modernization of U.S. Navy ships around the world, providing real warfighting advantage to our global U.S. Navy Fleet:

- This includes **contract management oversite (CMO), intermediate-level maintenance, fleet technical assistance (FTA), and readiness assessments of homeported ships.**
- **Voyage Repair** (VR) including mid-deployment voyage repairs (MDVR) and emergent VRs of deployed ships
- **Maintenance and modernization of other assets** (Military Sealift Command (MSC) ships and Aegis Ashore sites)
- The U.S. Navy operates **two forward-deployed RMCs responsible for 24/7 deployed maintenance** as well as maintenance, modernization and assessments for homeported ships in their areas of responsibility:
  - Forward Deployed Regional Maintenance Center servicing U.S. Fifth and Sixth Fleets
  - Ship Repair Facility Japan servicing U.S. Seventh Fleet

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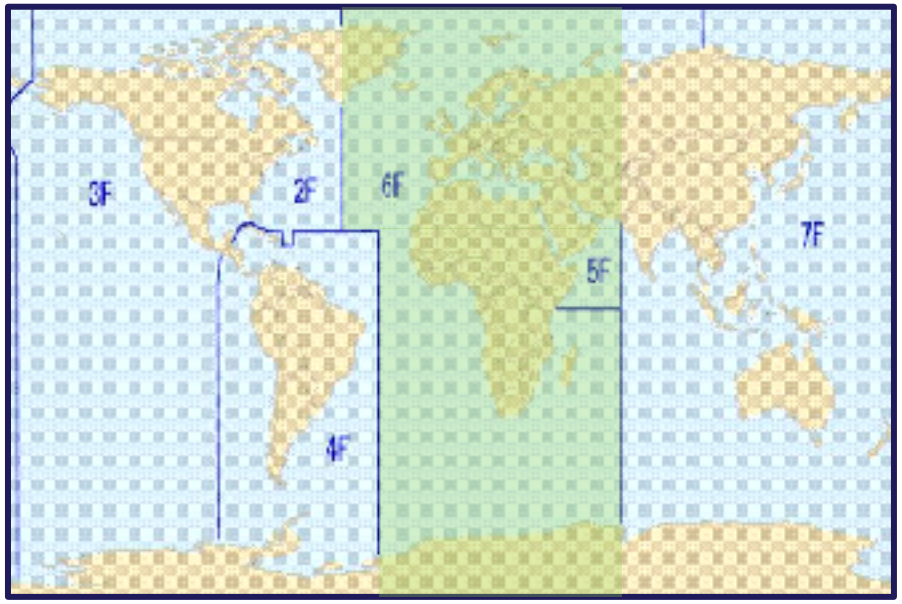
FDRMC's Mission Impact In Theater

FDRMC's Strategically Vital Role

- FDRMC is the only forward-deployed RMC supporting **two numbered fleets**, serving **three combatant commanders**, and **conducting work on three continents.**
- **Robust team of Dept. Of Navy personnel** across three locations: Manama, Bahrain (U.S. Fifth Fleet); Naples, Italy and Rota, Spain (U.S. Sixth Fleet).
- Provide **maintenance, modernization and readiness assessments** for the **homeported ships** (DDGs, MCMs) in Spain and Bahrain and **MSC ships,** the **Expeditionary Sea Bases** as well as **Aegis Ashore sites** in Poland and Romania.
- Provide **24/7 emergent support and maintenance for all forward-deployed ships** operating throughout U.S. Fifth and Sixth Fleets.



FDRMC responsible for C6F and C5F homeported & deployed surface ships and Aegis Ashore sites in Romania and Poland

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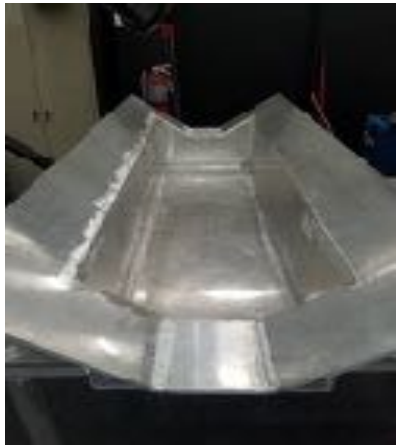
FDRMC's Mission Impact In Theater

In-Theater Capabilities Critical for Rapid Response

- **Subject matter experts for critical systems** deployed in theater to provide distance support or on-board technical assistance
- **Intermediate-level maintenance facilities** providing critical repair capabilities to include welding, inside machining, pump overhauls, and flexible hose fabrication
- **Fully-equipped dive locker** that can deploy throughout the 5th and 6th Fleets when needed
- **Project managers and shipbuilding specialists** that execute contract management oversight
- **Quality assurance experts** that ensure adherence to U.S. Navy standards
- **Waterfront-based Technical Warrant Holders** that support rapid engineering decisions
- **Additive manufacturing tools** that allow for unique solutions to repairs when available



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Key Efforts To Expand Forward Deployed Maintenance

FDRMC is known throughout the Fleet for successfully executing maintenance and repairs across our area of operations.

To remain a **warfighting advantage for the Fleet**, we must continue to **expand our efforts and capabilities**. Specifically, we are focused on:

- Conducting maintenance outside of traditional sites
- Growing relationships with industry partners in key areas throughout each theater through Industry Day events, on-site ship checks and availabilities in identified ports
- Expanding Intermediate-level maintenance capabilities
- International standards and specifications compared to U.S Navy requirements and engagement with maintenance providers to secure certifications for key services

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Strategic Maintenance Locations: Places vs. Bases

With three locations across two fleets, FDRMC **provides resources to ships whenever and wherever needed regularly operating outside of maintenance hubs.**

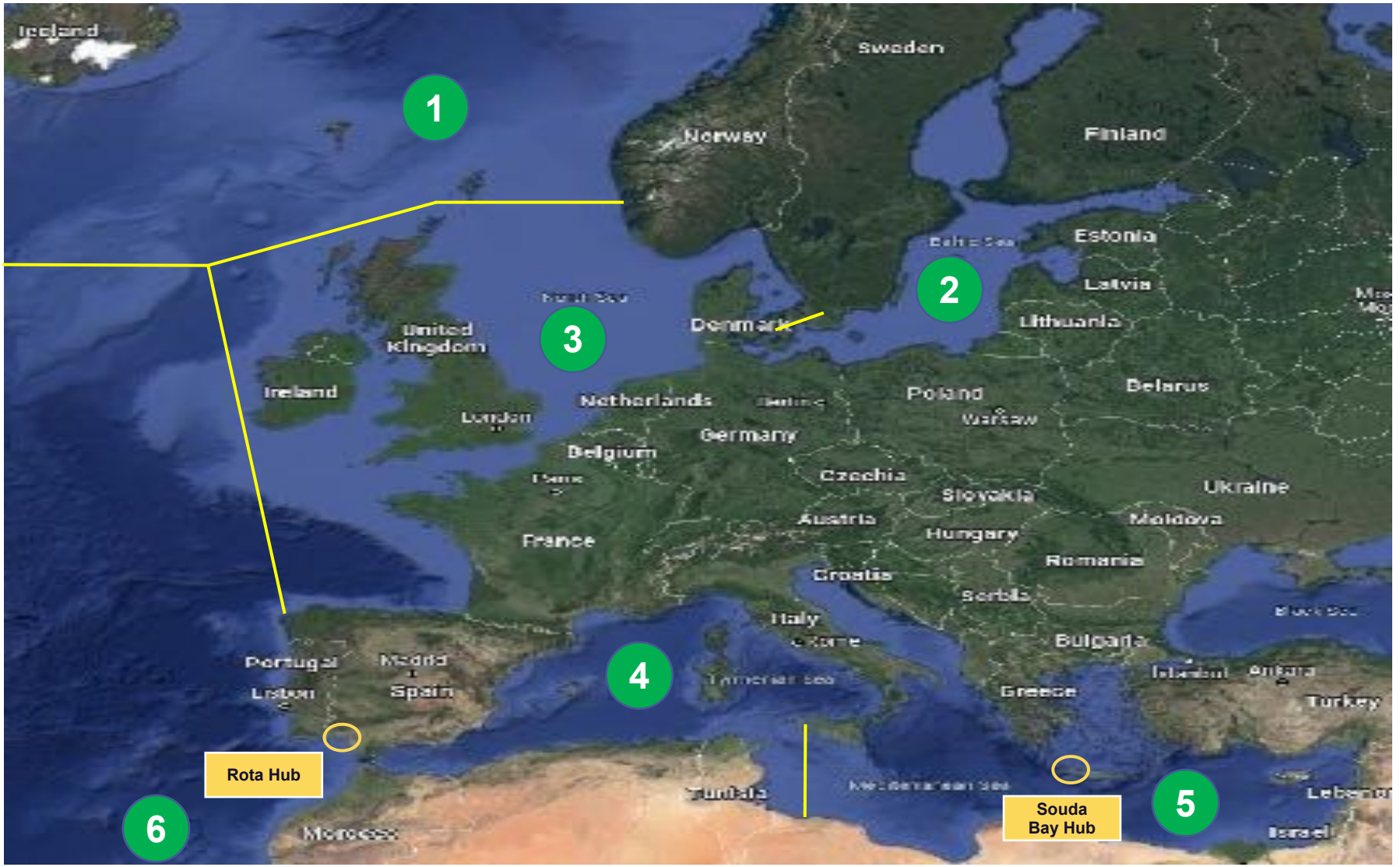
Places vs. Bases: Efforts to expand our experience and industry partners outside of our maintenance hubs is crucial for theater-wide maintenance and repair.

Focused Regions (Places)

AREA 1: High North / Norwegian Sea
AREA 2: Baltics
AREA 3: North. Atlantic / North Sea
AREA 4: West Mediterranean
AREA 5: East Mediterranean
AREA 6: West Africa

Maintenance Hubs (Bases)

Rota, ESP | Souda Bay, GRC



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Strategic Maintenance Locations: Places vs. Bases

Focused Regions (Places)

AREA 1: Persian Gulf

AREA 2: Gulf of Oman

AREA 3: Gulf of Aden

AREA 4: Red Sea

Maintenance Hubs (Bases)

Bahrain

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Successfully Executing Forward-Deployed Maintenance

Emergent Support and Repairs

- More than 50% of FDRMC's work is providing **Fleet Technical Assistance** (distance support and on-board technical assistance)
- Successful FTA requires a **proactive team and process** to address deficiencies quickly.
- FDRMC's **casualty reporting database** tracks the status of each report and allows quick assessment for next steps.
- FDRMC project team members, maintainers and divers are always prepared to **rapidly deploy to any location required** to execute substantial repairs
  - Twice in less than a year, FDRMC **team members from all three sites swarmed to support two major weld repairs**, returning both ships on-mission in time to support significant Fleet tasking.

Personnel from all three sites swarmed to execute a repair on USS San Jacinto in Souda Bay, Greece; days after the repair, the ship led a tri-nation PHOTOEX

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Fleet Focus: Additive Manufacturing (AM)

Additive Manufacturing's Warfighting Advantage

- **Limit vulnerability in supply base** by de-risking with AM.
- **Enhance capabilities** through mission-tailorable solutions and employment of designs not otherwise possible.
- **Maintain operational availability** by improving self-sufficiency capability at the point of need.

Key Initiatives

- **Technical Authority:** Develop technical publications for repeatable processes; Collaborate with industrial base
- **Afloat/Undersea Deployment:** Deploy & integrate advanced AM equipment; Provide engineering support
- **Digital Integration:** Identify file securing/transiting/storage solutions; Incorporate AM equipment to secure DoD IT infrastructure
- **Supply System Integration:** Incorporate components into logistics database; Enable part identification

Valve installed on a CVN

Example qualification build plate

Component designed with lattice structure

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Wartime Readiness

Lines of Effort

- **Expeditionary Maintenance** – FDRMC executes expeditionary maintenance as a core function, conducting repairs throughout C5F and C6F
- **Clear the Pier** – FDRMC conducts MDVRs and CMAVs on 96-hr and 72-hr tethers to support operational requirements
- **Battle Damage Assessment and Repair** – Team identified to cover continuum of BDA/R phases including dive team and technical assistance
- **Mission Assurance** – Engaged with C6F to develop Task Force Support, focused on ensuring maintenance and logistics flow during contested operations
- **Wartime Acquisition** – End users of acquisition and technology efforts such as LIDAR scanners; also preposition material

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Preparing for Conflict: Exercising Ship Wartime Repair and Maintenance (SWaRM)

- Exercising our battle damage assessment and repair (BDA/R) efforts is **critical to preparing for the future**.
- The Fleet is taking a **proactive approach** to wartime readiness.
- Exact damages can never be rehearsed perfectly, but **building muscle around key processes and testing new technology** is crucial for understanding capabilities and limitations.
- **SWaRM events are a focus for the Fleet at-large** with exercises occurring across the globe this year including BDA/R, salvage, voyage repairs, etc.
- In a forward-deployed environment, we must **actively engage with our Allies and partners** to execute a successful evolution.
- In 2022, FDRMC conducted the first BDA/R event in the European Theater, partnering with UK SALMO to execute an on-site Battle Damage Assessment exercise in the UK.

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Exercising BDA/R in 2024

Exercise Atlantic Thunder 2024

- This year, FDRMC, U.S. Sixth Fleet and UK SALMO will host the most complex BDA/R exercise ever executed in a non-U.S. port/facility.
- 2022 focused on initial proof of concept with on-site assessment and simulations of repair.
- 2024 will implement the next phase to include new technologies and on-site repair work by Sailors and contractors.
  - Full project team with on-site technical warrant authority
  - At-sea assessment will be conducted with divers meeting the ship upon arrival
  - Exercising contract solicitation, award and execution for repairs
  - Sailor-led intermediate-level repair team
  - LiDAR scanning and comparison to baseline scanning data
  - Expeditionary Maintenance And Repair Container (EMARC) which provides mobile intermediate-level repair capabilities
  - Follow-on Industry Day to connect with potential industry partners

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Forward-Deployed Impact & Future

The ability to execute forward-deployed maintenance throughout our AOR provides our Fleet an asymmetrical advantage.

FDRMC remains **focused on today's mission** while working to **adapt for tomorrow's Fleet** by:

- Growing capabilities and maintenance locations alongside our Allies and partners
- Staying flexible and employing innovative processes like AM
- Preparing for future conflict through wartime readiness lines of effort and BDA/R exercises

Questions?

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Delivering and maintaining mission-ready ships

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