



# Naval Oceanography enterprise (NOe)

*Protecting the Fleet from destructive weather and enhancing the warfighter  
through decision superiority*

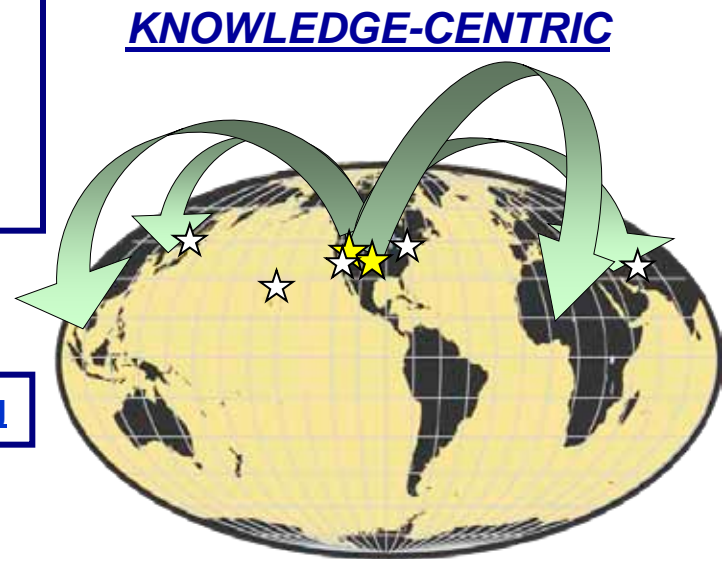
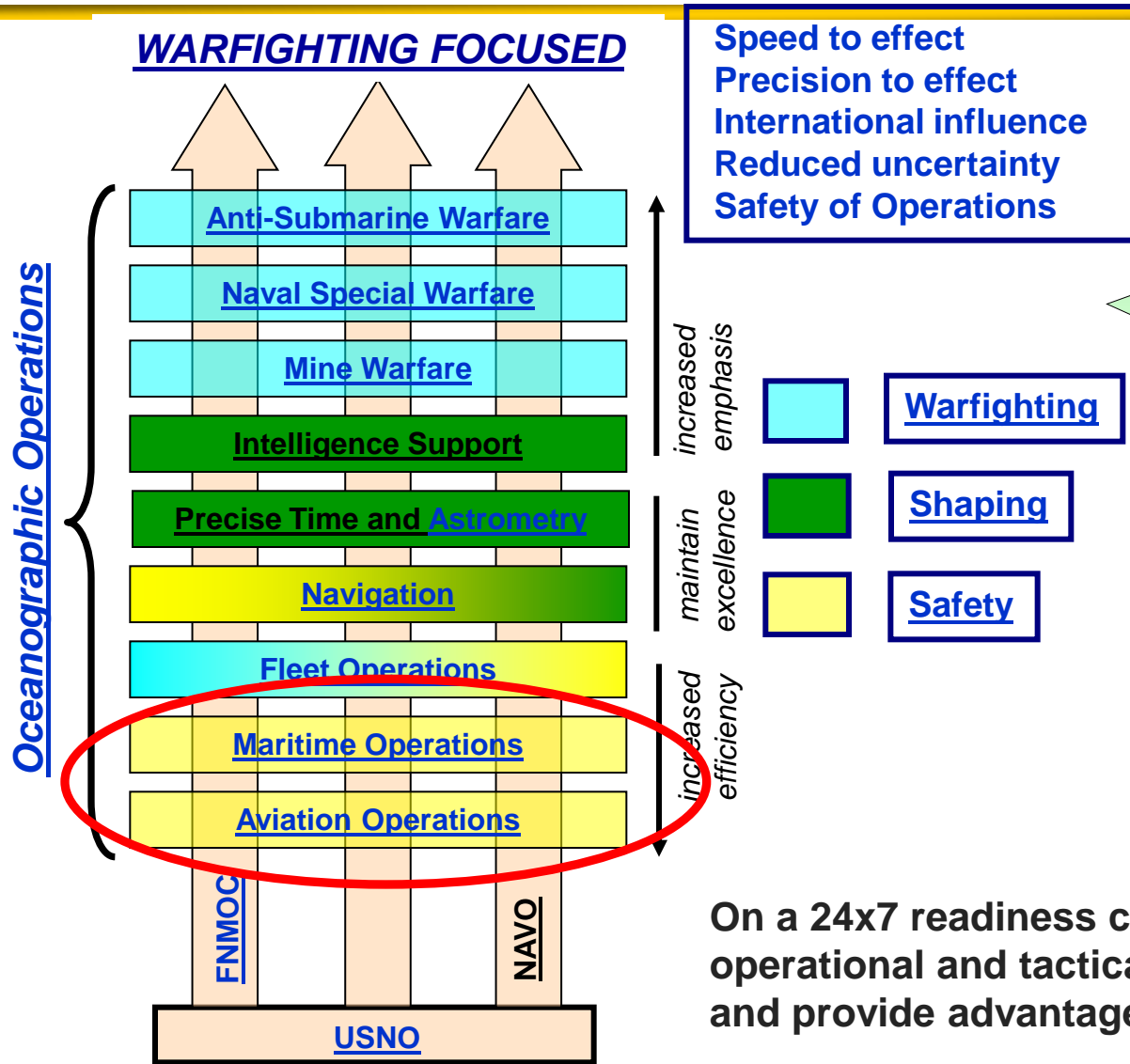
**Multi-Function Phased Array Radar Symposium II**

**Norman, OK**

**CAPT Michael Angove, USN**



# Naval Oceanography Alignment



On a 24x7 readiness cycle, the people deliver strategic, operational and tactical effects that continually shape and provide advantage in the battlespace:



# Leveraging MPAR Capability



**Protecting the Fleet from Destructive Weather is the Naval Oceanography enterprise's (NOe) Top Priority. MPAR Could Enhance CONUS Resource Protection By:**

- **Faster Volumetric Scans**
- **Adaptive Sampling to focus on the severe weather**
- **Better Tornado and Hail Prediction**
- **Increasing Hazardous Weather Warnings Lead Times**



**\$150B of Ships, A/C and Shore Assets**





# MPAR and the Way Ahead with NOe



- **NOe heavily dependent on NOAA/NWS in CONUS**
  - Use of the Commander Naval Installation Command (CNIC) Wide Area Alert Network (WAAN) for auto-push of location relevant National Weather Service (NWS) warnings.
  - Dependent on the WSR-88D network for Installation/Airfield resource protection
  - Communications with Storm Prediction Center/National Hurricane Center when conditions warrant
  - Cover domestic “gaps” with organic capability (e.g., Fallon).
  - Significant investment OCONUS (Yokosuka, Iwakuni, Diego Garcia, GITMO, Souda Bay, Rota, Sigonella)
- **Share Information and Technology Related To Weather Detection Using Phased Array Radars**
  - HWDDC/TEP (Tim Maese): Leverage SPS-48E/SPY-1 air search radar to display weather information. Scheduled to be deployed all carriers, large deck amphibious ships (SPS-48) and projected for Aegis (SPY-1) capable platforms. NRL Monterey linkage: NWP.
  - Leverage Open Architecture (Robert Sexton—DDR&E) and frequency deconfliction (Richard Soares—NSWC) work (outside NOe)
- **Continue Participation in MPAR WG.**
  - Maintain an active role/SA in the MPAR WG



# MPAR Risk Reduction

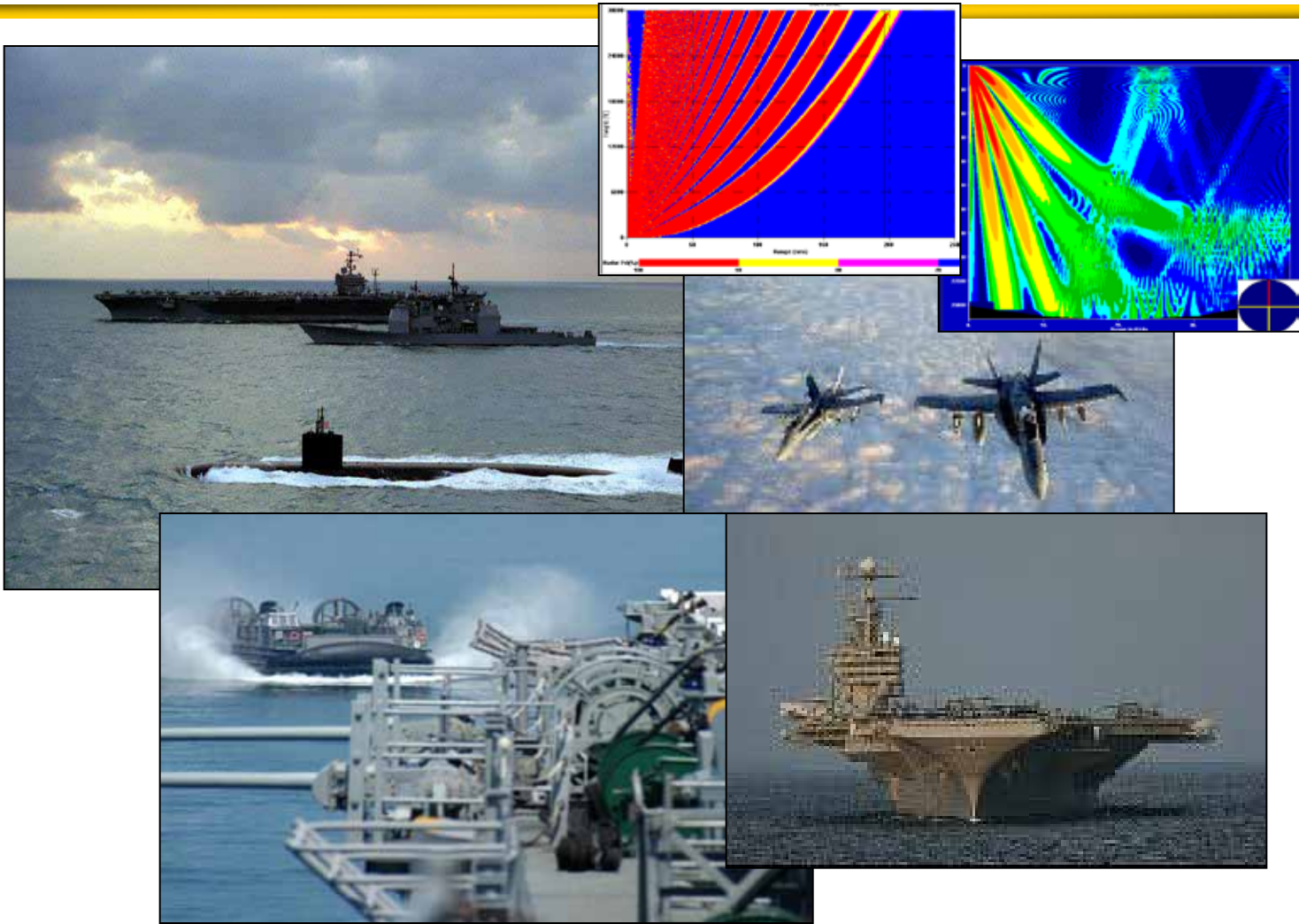


- **Minimize Mission Creep**
  - Requirements Vetted and Finalized
  - “Perfect” enemy of “good enough”
- **Agencies tailor R&D towards requirements**
- **Leverage Navy Lessons Learned from HWDDC**
- **Utilize COTS/GOTS Solutions**
- **Determine Cost/Benefits and Agency “stakes”**
  - “If you’re not talking about money you’re not having a conversation” (CAPT Jim Etro, 1995)



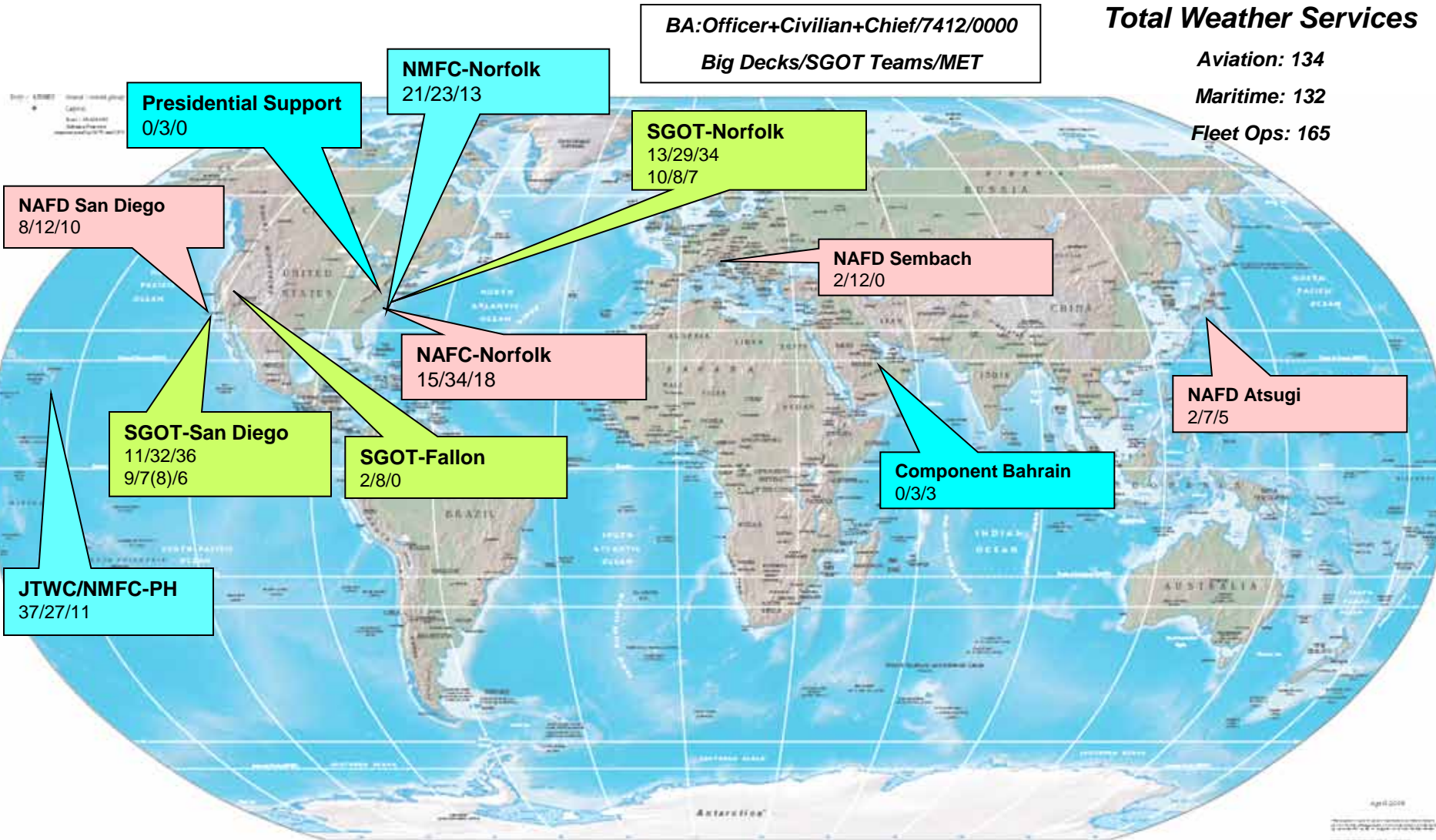


# Back-up





# Weather Services Laydown

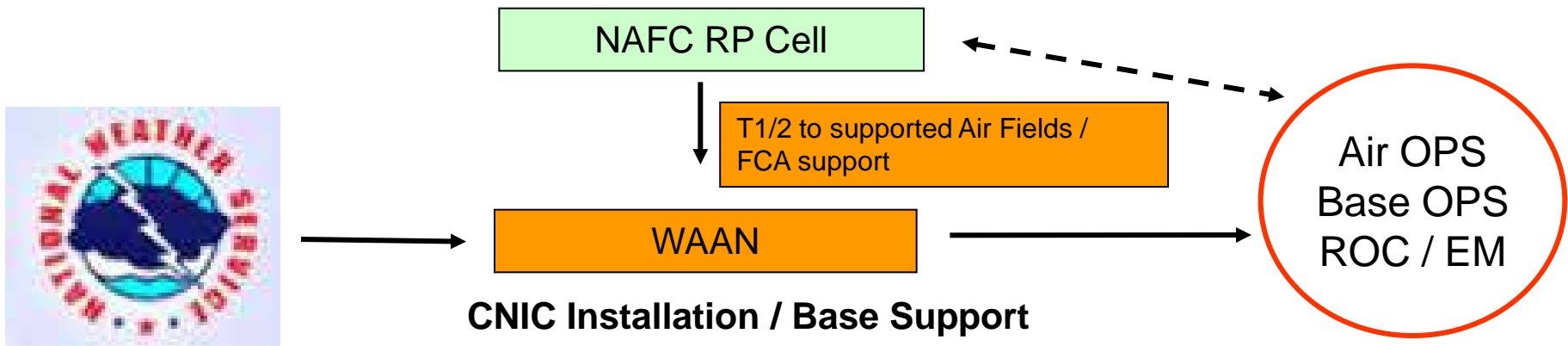




# CONUS Resource Protection



- **Enterprise Endorsement (CNIC)**
  - CNIC N3 and EM
  - CNIC Semi-Annual Emergency Managers Meeting
- **OPNAVINST 3140.24 – TS COR vice warnings, support use of NWS**
- **New CNIC 3140.24**
  - Institutionalize a Standard Service Delivery (WAAN and Comms)
  - Explicitly lays out CONUS use of NWS and WAAN
  - Annex to address JB
  - NAFC RP cell provides T1/T2 for Naval Air Stations





# MPAR Symposium / Implementation Strategy

## MPAR Risk-Reduction Implementation Strategy

### Navy Leveraging Opportunities

