Department of the Navy Rapid Innovation Fund:

Funding for Small Business Technology Acquisition

August 2017

Navy Program Offices & Systems/Engineering Commands

Secretary of the Navy

Assistant Secretary of Navy for Research, Development and Acquisition	Assistant Secretary of Navy for Manpower & Reserve Affairs	Assistant Secretary of Navy for Financial Management & Comptroller	Assistant Secretary of Navy for Installations & Environment	Chief of Naval Operations	Commandant of the Marine Corps
ASN (RD&A)	ASN (M&RA)	ASN (FMC)	ASN (I&E)	CNO	CMC

ASN (RD&A)

PEO Ships

PEO Submarines

PEO Littoral Combat Ships

PEO Aircraft Carriers

PEO IWS

PEO Air ASW, Assault & Special Missions

PEO Tactical Air

PEO Unmanned Aviation & Strike Weapons

PEO JSF

PEO C4I

PEO Space Systems

PEO Enterprise Information Systems

PEO Land Systems

Strategic Systems Program (DRPM)

Chief of Naval Research

CNO

Bureau of Medicine

Naval Sea Systems

Naval Air Systems

Space and Naval Warfare System

Strategic Systems Program

Naval Facilities Engineering

Naval Supply Systems

CMC

Logistics

Systems

Combat Development

DoN Rapid Innovation Fund (RIF) Program

Source Selection Authority

Assistant Secretary of the Navy for Research, Development and Acquisition

ASN (RD&A)

Program Management

Office of Naval Research

ONR

Topics, Reviews and Contracts

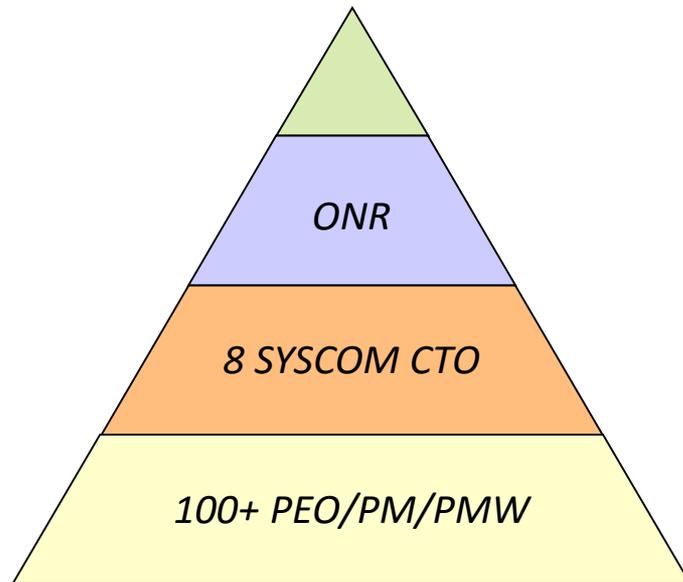|			
Naval Sea Systems Command	**Naval Air Systems Command**	**Space and Naval Warfare Systems Command**	**Marine Corps Systems Command**
NAVSEA	NAVAIR	SPAWAR	MCSC
Naval Facilities Engineering Command	**Naval Supply Systems Command**	**Strategic Systems Programs**	**Bureau of Medicine and Surgery**
NAVFAC	NAVSUP	SSP	BuMed

DoN Rapid Innovation Fund (RIF) BAA Topics

- Navy BAA Topics are related to, but different from, Navy Requirements

- Majority of topics come directly from the acquisition program offices
- (PEO-Program Executive Offices or PM/PMW – Program Management Offices) with input from the fleet, warfighters and Naval RDT&E community

- Topics are sent from Program Offices to corresponding Naval System Command (SYSCOM) Chief Technology Offices (CTO).

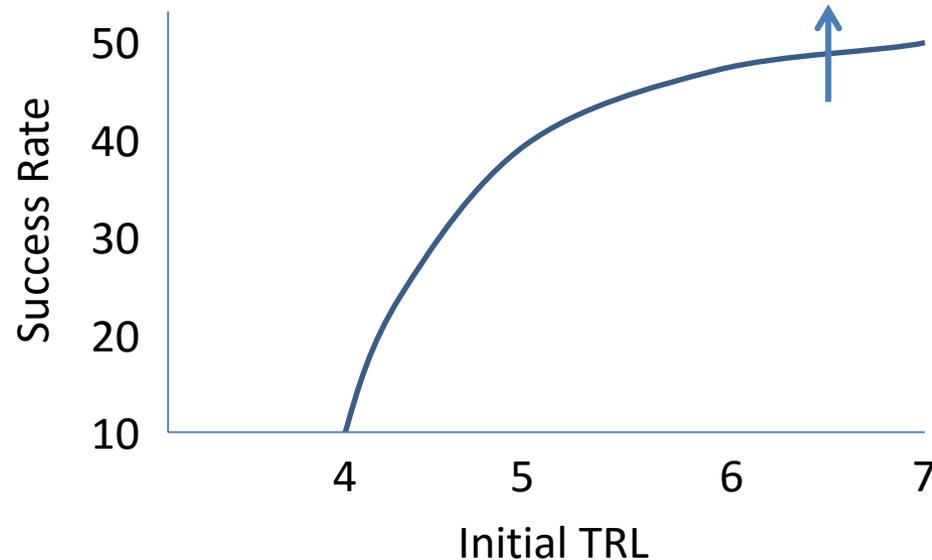- SYSCOM CTO prioritize and send to DoN RIF PM for review & submission

(top — green)	*OSD Broad Agency Announcement*
ONR	*Review Topics and Check Against Navy Requirements*
8 SYSCOM CTO	*Consolidate Top Topic Submissions*
100+ PEO/PM/PMW	*Collect Topics from Fleet, Warfighters and Naval RDT&E Community*

DoN Rapid Innovation Fund (RIF) BAA Topics

Navy is very focused on Technology Readiness Level (TRL) & Transition. Technology really needs to be at TRL 6 at beginning of program

DoN RIF is a technology pull, not technology push program !
- We are looking for transition to acquisition program in 36 months
    - Cannot happen without direct Acquisition PM involvement
    - Cannot happen with immature technology regardless of benefit
- Do not transition out of SBIR too soon
    - Use SBIR Phase 2/2.5 to mature technology to TRL 6-7
    - Use SBIR Phase 2/2.5 to get Acquisition PM to submit requirement
    - Use SBIR Phase 2/2.5 to define required testing (time & cost)

DoN Rapid Innovation Fund (RIF) Criteria

Source Selection Preference:
    Small Business Proposals

Source Selection Criteria:
    1. Contribution to the Requirement
    2. Technical Approach / Qualifications — Transition
    3. Schedule
    4. Cost

Technology Readiness Level (TRL)

6 System/subsystem model or prototype demonstration in a relevant environment

7 System prototype demonstration in an operational environment

8 Actual system completed and qualified through test and demonstration

9 Actual system proven through successful mission operations

• **Maturity Goal: TRL 6 – 9**

• **Low TRL accepted ONLY if:**
  ○ Breakthrough capability or operational game-changer
  ○ Cost neutral to the acquisition program
  ○ Accommodated within program schedule

4 Component and/or breadboard validation in a laboratory environment

5 Component and/or breadboard validation in a relevant environment

Award By Exception

Required for Majority of Awards: Facilitates Transition

Technology Readiness Assessment Guidance - - http://www.acq.osd.mil/ddre/publications/docs/TRA2011.pdf

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WHAT TO INCLUDE:
Your technology solution
• How it addresses the RIF requirement
• Clear, concise synopsis of approach
• What's innovative – what sets your technology apart from competition
• Enough technical specification to get tech evaluators 'comfortable'
Some key data:
• Pictures & diagrams
• Key Government contacts that currently relate to this effort
• Summary of teaming arrangements
• Any prior testing & summary results

WHAT NOT TO INCLUDE:
• Technology looking for a solution (e.g., un-related to the requirement)
• Generic company overview (org chart)
• History of the problem
• Testimonials from other industry or lab researchers
• Detailed diatribe of charts and formulas stating why your technology is the best

DO NOT WAIT UNTIL LAST MINUTE !

Follow directions / template as provided in the submission portal(s)

DoN Rapid Innovation Fund (RIF) FY17 BAA Topics

https://www.fbo.gov/index?s=opportunity&mode=form&id=2695be1caea596c95b54e77e8db5e61e&tab=core&_cview=0

ANP: Reduced Naval Total Ownership Cost (TOC)
ANP: Power and Energy Systems
ANP: Development of the Additive Manufacturing (AM) Technology

AIR: Micro Militarized Mode 5/S IFF for Small Tactical UAS
AIR: Aircraft Life Limited Component Tracking
AIR: Power for Endurance in Small Tactical UAS
AIR: Multi-Level Secure Multi-Vehicle Mission Planning
AIR: Terrestrial Navigation in GPS Denied Environment
AIR: F-35 Improved Life Cycle Affordability
AIR: F-35 Follow on Development Maturation and Acceleration
AIR: Electronic Warfare Techniques Improvement to Enhance Anti-Submarine Warfare (ASW) Signal Intelligence Mission Capabilities
AIR: V-22 Nacelle Heat Exchanger
AIR: Adaptive Clutter Equalization for Airborne Maritime Radar
AIR: Standoff ice detection for manned and unmanned aircraft
AIR: Robust Unmanned Aircraft System (UAS) airborne communication relay capability for distributed ship operations
AIR: Threat Avoidance, Detection, and Countermeasure Systems

SPAWAR: Information Transport & Infrastructure (ITI)
SPAWAR: Information Security and Assurance (ISA)
SPAWAR: Data Integration and Decision Support (DDS) and Environmental Battlespace Awareness (EBA)
SPAWAR: Electromagnetic Spectrum Operations (ESO) and Non-Kinetic Fires (NKF)
SPAWAR: Assured Positioning, Navigation and Timing (APNT)
SPAWAR: Enhanced Targeting and Fire Control
SPAWAR: Human-Systems Interface: Improved Cognition in Complex Operating Environs
SPAWAR: Ultra High Frequency (UHF) Satellite Communication (SATCOM) End-to-End Capabilities
SPAWAR: Ocean Sensing Payloads for Small/Nano/CubeSats

DoN Rapid Innovation Fund (RIF) FY17 BAA Topics

https://www.fbo.gov/index?s=opportunity&mode=form&id=2695be1caea596c95b54e77e8db5e61e&tab=core&_cview=0

NAVSEA: Improving Warfighting Affordability, Capability, and Commonality
NAVSEA: Reducing Production, Operation, Maintenance and Decommissioning Costs
NAVSEA: Improving Cybersecurity Products and Processes
NAVSEA: Integrated Unmanned Maritime Systems
NAVSEA: Shipboard Passive/Augmented Detection and Evaluation (SPADE)
NAVSEA: Integrated Training Systems

MCSC: Advanced Biometric Device
MCSC: Long Range Obscurant System
MCSC: Portable Ruggedized Energy Efficient Medical Sterilizer
MCSC: Conditioned-Based Maintenance Plus (CBM+) Advanced Prognostics / Diagnostics for the M777A2
MCSC: Meteorological Exploitation of Radar
MCSC: Autonomous Construction Equipment and Sensing (ACES)
MCSC: River Flood and Storm Surge Inundation Modeling and Prediction

NAVFAC: Technology to Enable & Maximize Usage of Indigenous Bulk Materials in the Additive Manufacturing of Expeditionary Structures.
NAVFAC: Fully Automated Type II Waterside Security Barrier (WSB)

NAVSUP: Leverage Data Visualization Technology and the Logistics Cell (Logcell) to improve all Naval Aviation Enterprise (NAE) Availability and Readiness Goals
NAVSUP: Auditability Enhancements for Navy Shipping and Accounting Systems

SSP: Miniaturized Real-Time Monitoring Sensor Suite for Sustained Support Equipment Maintenance
SSP: Application of Model Based System Engineering (MBSE) to Strategic Weapon System (SWS) Trade-space Analysis and Multi-disciplinary Design Optimization

DoN Rapid Innovation Fund (RIF) FY17 BAA Topics

Full Topic Example

Requirement #: FY17-DoN-RIF-MCSC-01
Title: MCSC: Advanced Biometric Device
Military System or Acquisition Program Customer: Program Manager Marine Air Ground Task Force (MAGTF) Command, Control, Communications Systems (PMMC3), Force Protection Systems (FPS), Identity Dominance System – Marine Corps (IDS-MC)
Description: In satisfaction of IDS-MC requirements and in seeking to lighten the MAGTF, PMMC3 seeks an Android operating system-based common handheld platform capable of performing biometric collection (of requisite quality), data standardization, local matching, storage, and lateral sharing functions without requiring new unique hardware or equipment. Alternatively, seeking small and lightweight biometric collection peripherals compatible with a standard Android operating system-based device and associated device software to conduct enhanced biometric collection, standardization, matching, storage, and sharing functions.
Further sought are improved or enhanced biometric algorithms resulting in: faster location and collection of biometric signatures (e.g., fingerprints, faces, irises), improved performance in collection of biometrics under sub-optimal conditions (e.g., environmental conditions and subject proximity or cooperation), improved performance in enrollment processing/templatization speeds, faster match responses of collected biometrics against local biometric watch lists, biometric matching with reduced False Reject/False Accept Rates and False Match/Non-Match Rates, reduced local biometric records storage requirements, and reduced biometric data transmission sizes.
Technical POC: Teresa Sedlacek, 703-432-9821, Teresa.sedlacek@usmc.mil or Bradford Crane, 703-432-8729, bradford.crane@usmc.mil

DoN Rapid Innovation Fund (RIF) FY15 Awards

http://www.defenseinnovationmarketplace.mil/resources/FY15_RIF_Awards.xlsx

Advanced Electronic Guidance and Instrumentation System (AEGIS)/Ship Self Defense System (SSDS) Cybersecurity Toolkit Integration

Next Generation Secure Communications Controller

Strengthening Existing Naval Data-at-Rest Encryption Using Attribute-Based Encryption (ABE)

MH-60R Embedded Antisubmarine Warfare (ASW) Simulation

Computational Anthropomorphic Virtual Experiment Man (CAVEMAN) Model for Injury Assessment in Kinetic Events

Hyper Converged Infrastructure (HCI) for Consolidated Afloat Networks and Enterprise Services (CANES)

Improved Battery for Diver Propulsion Device

High-Bandwidth Acoustic Communications Supporting MK18 Mod 2 Unmanned Underwater Mine Counter-measure (MCM) Operations

Metamaterial Enhancement of E-2D Advanced Hawkeye Sensor System

Small Form Factor Mobile User Objective System (MUOS) Radio

Multi-Asset Planning and Execution Monitoring System

Electromagnetic Interference (EMI) Mitigation for Acute Spectrum Sensing and Awareness

Low Cost, Light Weight Unmanned Underwater Vehicle for Mine Identification (ID) and Explosive Ordinance Disposal (EOD)

Collaborative Mission Planning, Tasking, and Scheduling for Maritime Tactical Command and Control

Modular Refrigeration System (MRS)

Portable Augmented Reality Virtualization Tools for Aircraft Maintainers

Mobile Fuel & Energy Management

Interference Mitigation and Removal

Edge Modernization Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)

Land Based Persistent Radar Periscope and Surface Surveillance

Holistic Modular Aircrew Physiologic Status Monitoring System

High-Performance Peripheral Component Interconnect Express Networking

Surface Combatant Composite Mid-Frequency Sonar Dome

Shipboard Automatic Test and Re-test

Environmental Wideband Acoustic Receiver and Source (EWARS)

Improved Ocean Monitoring via Commercial Nanosats

Radio Inversion to Retrieve Refractivity from Radios

Affordable Multi-Fuel Multi-Engine Advanced Combatant Craft

DoN Rapid Innovation Fund (RIF) Award Status

	White Papers	Full Proposals	Contract Awards	Contract Awards ($)	Small Biz Awards	Previous SBIR Relationship
FY11	858	60	53	$106M	100% (53/53)	68% (36/53)
FY12	711	28	23	$44M	96% (22/23)	61% (14/23)
FY13	640	28	24	$51M	92% (22/24)	75% (18/24)
FY14	511	24	21	$45M	76% (16/21)	67% (14/21)
FY15	629	31	28	$59M	86% (24/28)	64% (18/28)
FY16	589	37	28*	$62M*	89%* (25/28)*	N/A

*Estimate. Awards still in progress.

DoN Rapid Innovation Fund (RIF) Contacts

DoN RIF Program				
	DoN RIF Program Manager:		Scott Bartlett	Scott.Bartlett@navy.mil
	DoN RIF Operations Manager:		Brad Pantuck	brad.pantuck@atsi.co
DoN RIF Technology Transition Coordinators				
	NAVSEA, MARCOR:		Joe Piff	jpiff@mcri.com
	SPAWAR:		Todd Johnston	Todd.m.johnston.ctr@navy.mil
	NAVAIR, NAVSUP, NAVFAC, SSP:		Calvin Reddick	calvin.reddick@atsi.co
	BUMED:		Brad Pantuck	brad.pantuck@atsi.co
DoN SYSCOM RIF Leads				
	Naval Sea Systems Command	NAVSEA	Allen McConnell	allen.mcconnell@navy.mil
	Naval Air Systems Command	NAVAIR	Janet McGovern	NAECTO@navy.mil
	Space and NavalWarfare Systems Command	SPAWAR	Shadi Azoum	shadi.azoum@navy.mil
	Marine Corps System Command	MCSC	Saber Fatnassi	saber.fatnassi@usmc.mil
	Naval Supply Systems Command	NAVSUP	Mark Deebel	mark.deebel@navy.mil
	Naval Facilities Engineering Command	NAVFAC	Philip Vitale	philip.vitale@navy.mil
	Strategic Systems Programs	SSP	Mark Hrbacek	Mark.Hrbacek@ssp.navy.mil
	Bureau of Medicine and Surgery	BuMed	CDR Paul Hauerstein	paul.g.hauerstein.mil@mail.mil

BACKUPS

Assistant Secretary of the Navy for Research, Development and Acquisition

ASN (RD&A)

Program Executive Office Aircraft Carriers

PEO Carriers

PMS 312: In-Service Carriers
PMS 378: CVN 78 Class
PMS 379: CVN 79/80 Program

Program Executive Office Integrated Warfare Systems

PEO IWS

IWS 1.0: AEGIS
IWS 2.0: Above Water Sensors
IWS 3.0: Surface Ship Weapons
IWS 4.0: International & FMS
IWS 5.0: Undersea Systems
IWS 6.0: Command & Control
IWS 7.0: Future Combat Systems
IWS 8.0: Frigate / LCS
IWS 9.0: Zumwalt
IWS 10.0: Ship Self Defense Systems
IWS 11.0: Terminal Defense Systems
IWS 12.0: NSPO

Program Executive Office Littoral Combat Ships

PEO LCS

PMS 406: Unmanned Maritime Systems
PMS 420: LCS Mission Modules
PMS 495: Mine Warfare
PMS 501: SeaFrame Construction
PMS 505: Fleet Introduction & Sustainment
PMS 515: Frigate Program Office

Program Executive Office Ships

PEO SHIPS

PMS 317: LPD-17/LX(R)
PMS 320: Electric Ships Office
PMS 325: Support Ships, Boats & Craft
PMS 377: Amphibious Warfare
PMS 385: Strategic & Theater Sealift
PMS 400: DDG-51
PMS 500: DDG-1000

Program Executive Office Submarines

PEO SUBS

PMS 397: Ohio Replacement
PMS 399: Special Operations Mobility
PMS 401: Submarine Acoustics
PMS 404: Undersea Weapons
PMS 415: Undersea Defensive Weapons
PMS 425: Submarine Combat Systems
PMS 435: Submarine Sensor Systems
PMS 450: Virginia Class

Assistant Secretary of the Navy for Research, Development and Acquisition

ASN (RD&A)

Program Executive Office Tactical Aircraft Program	Program Executive Office Air ASW, Assault & Special Mission Programs	Program Executive Office Unmanned Aviation & Strike Weapons	Program Executive Office Joint Strike Fighter
PEO (T)	**PEO (A)**	**PEO (U&W)**	**PEO (JSF)**
PMA 101: Multifunctional Information Distribution	PMA 207: Tactical Airlift	PMA 201: Precision Strike Weapons	Air Systems Engineering
PMS 213: Naval Air Traffic Management	PMA 261: Heavy Lift Helicopter	PMA 208: Aerial Target & Decoy Weapons	Air Systems Integration
PMA 231: E-2/C-2	PMA 264: Air ASW Systems	PMA 242: Direct & Time Sensitive Weapons	Air Systems Logistics
PMA 234: EA-6B Prowler	PMA 271: Airborne Strategic Command, Control & Communications	PMA 262: Persistent Maritime Unmanned Aircraft	Air Systems Production
PMA 251: Aircraft Launch and Recover Equipment	PMA 274: Presidential / Executive Lift Helicopters	PMA 263: Small Tactical Unmanned Aircraft	Air Systems Requirements
PMA 257: AV-8B Harrier	PMA 275: V-22 Osprey	PMA 266: Multi-Mission Tactical Unmanned Aircraft	Air Vehicle
PMA 259: Air-to-Air Missile Systems	PMA 276: Light / Attack Helicopters	PMA 268:Unmanned Combat Air Systems	Autonomous Logistics
PMA 265: F/A-18 & EA-18G	PMA 290: Maritime Patrol & Reconnaissance Aircraft	PMA 280: Tomahawk Weapons System	Business & Financial
PMA 272: Advanced Tactical Aircraft Protection	PMA 299: Multi-Mission Helicopters	PMA 281: Strike Planning & Execution Systems	Contracts
PMA 273: Naval Undergraduate Flight Training			International
PMA 298: Air Warfare Mission Area / From the Air			Legal
			Operations
			Propulsion
			Public Affairs
			Security
			Verification & Test

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ASN (RD&A)

Program Executive Office Command, Control, Communications, Computers & Intelligence

PEO C4I

PMW 120: Battlespace Awareness and Information Operations

PMW 130: Information Assurance and Cyber Security

PMW 150: Command and Control

PMW 160: Tactical Networks

PMW 170: Communications and GPS Navigation

PMW 740: International C4I

PMW 750 Carrier and Air Integration

PMW 760 Ship Integration

PMW 770 Undersea Integration

PMW 790: Shore and Expeditionary Integration

Program Executive Office Enterprise Information System

PEO EIS

PMM 110: Enterprise Software Licensing

PMW 205: Naval Enterprise Network

PMW 220: Navy Enterprise Business Solutions

PMW 230: Global Combat Support Systems

PMW 240: Sea Warrior Program

PMS 444: Navy Maritime Maintenance Enterprise Solution

DCAO: Data Center & Application Optimization

Program Executive Office Space Systems

PEO SS

PMW 146 Navy Communications Satellite Program Office

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ASN (RD&A)

**Program Executive Office
Land Systems**

PEO LS

AAA: Advanced Amphibious Assault

AC2SN: Air Command Control and Sensor Netting

GBAD-G/ATOR: Ground Based Air Defense / Ground Air Task Oriented Radar

LTV: Light Tactical Vehicles

M&HTV: Medium & Heavy Tactical Vehicles

TAS: Towed Artillery Systems

Naval Sea Systems Command

NAVSEA

AEGIS BMD	**Salvage & Diving**	**Ordnance, Safety & Explosives**	**Comptroller**
	SEA 00C	SEA 00K	SEA 01

Contracts	**Maintenance & Industrial Ops**	**Engineering**	**Acquisition & Commonality**
SEA 02	SEA 04	SEA 05	SEA 06
	Naval Shipyards	NAVSEA Chief Engineer (SEA05)	
	Supervisor of Shipbuilding	Technology Office (SEA 05T)	

Undersea Warfare	**Nuclear Propulsion**	**Total Force & Corporate Ops**	**Surface Warfare**
SEA 07	SEA 08	SEA 10	SEA 21
SUBMEPP			SURFMEPP
			INACTSHIPOFF

Naval Surface Warfare Center	**Naval Undersea Warfare Center**	**Naval Regional Maintenance Center**
NSWC	NUWC	CNRMC

NSWC		NUWC	CNRMC
Carderock	Indian Head	Newport	Mid-Atlantic RMC
Crane	Panama City	Keyport	Southeast RMC
Corona	Philadelphia		Southwest RMC
Dahlgren	Port Hueneme		Forward Deployed RMC

Naval Air Systems Command

NAVAIR

Acquisition Program Management	Contracts
AIR-1.0	AIR-2.0

Research & Engineering	Test & Evaluation	Logistics & Industrial Ops / Fleet Readiness Centers	Corporate Operations & Total Force
AIR-4.0	AIR-5.0	AIR-6.0	AIR-7.0

AIR-4.0

Aircraft Division (NAWCAD)

Naval Test Wing Atlantic

Training Systems

AIR-5.0

Weapons Division (NAWCWD)

Naval Test Wing Pacific

AIR-6.0

FRC Southwest

FRC Southeast

FRC East

NAVAIR Pacific Repair Activity

NAVAIR Technical Data & Engineering Service

Space and Naval Warfare Systems Command

SPAWAR

Fleet Readiness Directorate

SPAWAR Washington Operations

Comptroller	**Contracts**	**Office of Counsel**	**Logistics & Fleet Support**
1.0	2.0	3.0	4.0

Chief Engineer	**Program Management**	**Science and Technology**	**Corporate Operations**
5.0	6.0	7.0	8.0

SPAWAR Space Field Activity	**SPAWAR System Command Pacific**	**SPAWAR Systems Command Atlantic**
SSFA	SSP	SSA

Marine Corps Systems Command

MCSC

Marine Corps Tactical Systems Support Activity

CO MCTSSA

AVTB: Amphibious Vehicle Test Branch

Program Manager Training Systems

PM TRASYS

Program Manager Light Armored Vehicle

PM LAV

Portfolio Manager Ground Combat Element Systems

PfM GCES

PM IW: Infantry Weapons
PM ICE: Infantry Combat Equipment
PM Fires: Fires

Portfolio Manager Logistics Combat Element Systems

PfM LCES

PM ENG SYS: Engineer Systems
PM SUP/MAINT SYS: Supply & Maintenance Systems
PM AMMO: Ammunition

Portfolio Manager Command Element Systems

PfM CES

PM INTEL: Intelligence Systems
PM C2 SYSTEMS: Command & Control Systems
PM COMMS: Communication Systems

Portfolio Manager Supporting Establishment Systems

PfM SES

PM NI: Network & Infrastructure
PM CS3: Customer Support & Strategic Sourcing
PM APPS: Applications

Marine Corps Combat Development Command / Combat Development & Integration

MCCDC & CD&I

Training and Education

TECOM

Marine Corps Warfighting Lab / Futures	Capabilities Development	Joint Capabilities Integration	Operational Analysis
MCWL/Futures	CDD	JCID	OAD
PM IW: Infantry Weapons PM ICE: Infantry Combat Equipment PM Fires: Fires	PM ENG SYS: Engineer Systems PM SUP/MAINT SYS: Supply & Maintenance Systems PM AMMO: Ammunition	PM INTEL: Intelligence Systems PM C2 SYSTEMS: Command & Control Systems PM COMMS: Communication Systems	PM NI: Network & Infrastructure PM CS3: Customer Support & Strategic Sourcing PM APPS: Applications