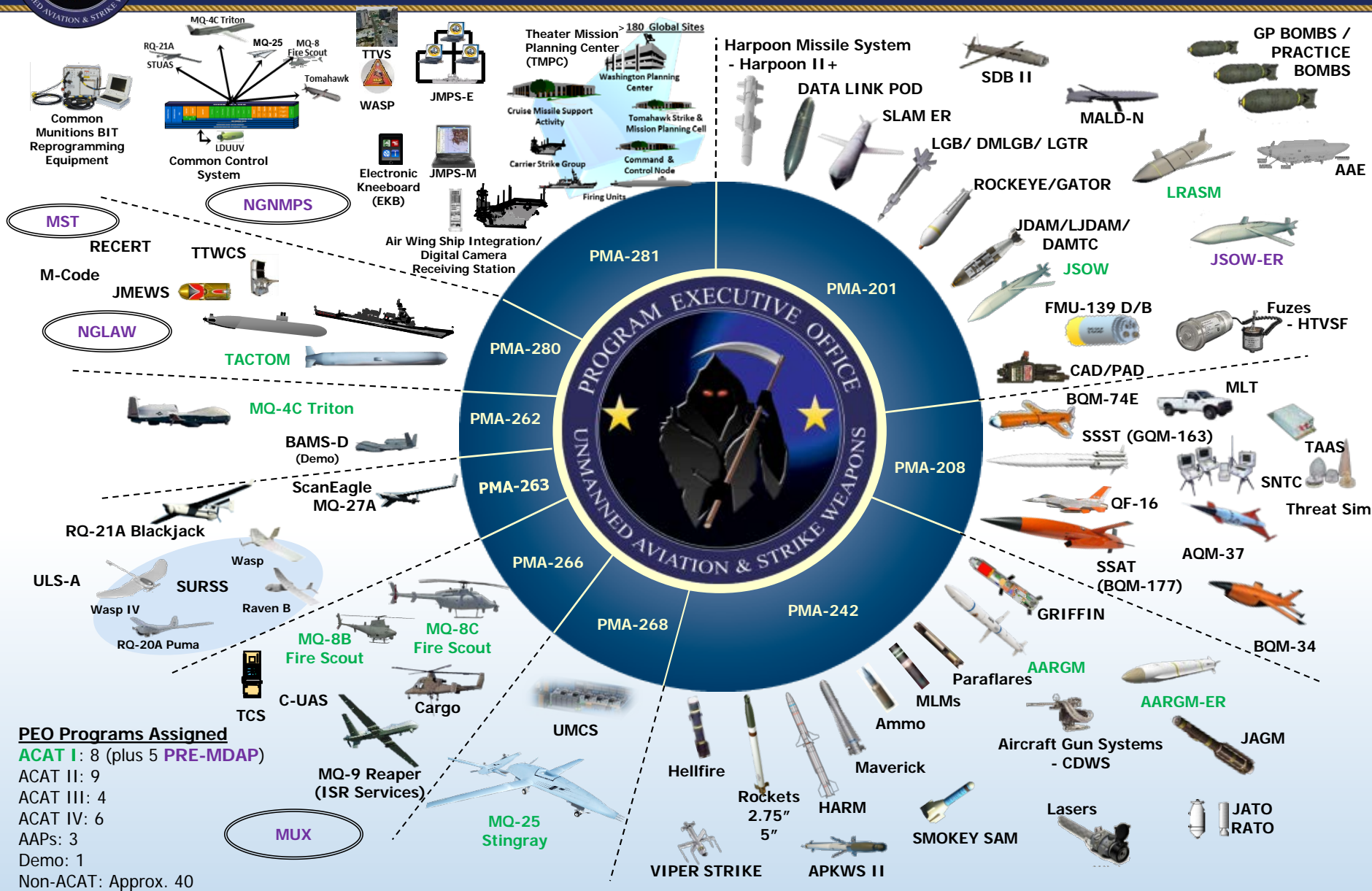






PEO(U&W) Portfolio





PEO(U&W) Industry Day Events

Presented by:

Paul Hood,
DPEO(U&W) Advanced Technology



Goals for Industry Day Events

- Establish a meaningful dialog between government reps and Industry partners
- Share UAS and Weapons Innovation needs with Industry
- Provide Industry with operational context and fleet capability needs
- Enable Industry to provide informed solutions, via White Papers, that meet our technology needs
- Facilitate Small and non-traditional DoD business engagement and crosstalk
- Provide “match-making” opportunities for small and large businesses



Administrative Remarks

- This meeting is UNCLASSIFIED
- All attendees must check-in
- Cell Phones – Silent or OFF
- No recording
- Coffee, Tea and Water
 - Morning Only! Today Only!
 - \$3.00 per person
- Lunch on your own
 - Food trucks will be available outside for today and tomorrow (“Blue Wind Gourmet” / “Days Off Deli”)
 - Map of local area restaurants available at front desk



Administrative Remarks (Cont.)

- Badges
 - Keep badge for days two and three
 - Return them when you leave
- Slides will NOT be posted to FedBizOpps
- Feedback Forms
 - One form combined for Day 2 & 3



Agenda

Day 2 – 19 June – Morning Session

- 0700 – 0800 **CHECK-IN**
- 0800 – 0815 *Admin & Overview* Paul Hood PEO(U&W)

Setting the Stage: The Vision from Leadership

- 0815 – 0915 *ASN-RDA Vision* Mr. Daniel Nega ASN-RDA
OPNAV N98 Vision Ms. Angie Knappenberger OPNAV N98
- 0915 – 0945 *PEO(U&W) Vision* RADM Brian Corey, USN PEO(U&W)
- 0945 – 1000 **ROBOBEE Intro / Break** Larry Branthoover Robobees
- 1000 – 1030 *HQMC APX Vision* Col Jay Frey, USMC HQMC

PEO(U&W) Portfolio Review: Weapons, Targets and Mission Planning

- 1030 – 1040 *PMA-201 Portfolio* CAPT John Dougherty, USN PMA-201
- 1040 – 1050 *PMA-208 Portfolio* CAPT Molly Boron, USN PMA-208
- 1050 – 1100 *PMA-242 Portfolio* CAPT M. Commerford, USN PMA-242
- 1100 – 1110 *PMA-280 Portfolio* CAPT John Red, USN PMA-280
- 1110 – 1120 *PMA-281 Portfolio* CAPT Paul Mitchell, USN PMA-281
- 1120 – 1150 *Weapons, Targets & Mission Planning* Panel Discussion/Q&A Wpns, Tgts. M.P. PMAs
- 1150 – 1315 **LUNCH**



Agenda

Day 2 – 19 June – Afternoon Session

PEO(U&W) Portfolio Review: Unmanned Aircraft Systems

- | | | | |
|---------------|--------------------------|--------------------------|----------|
| • 1315 – 1325 | <i>PMA-262 Portfolio</i> | CAPT Dan Mackin, USN | PMA-262 |
| • 1325 – 1335 | <i>PMA-263 Portfolio</i> | Col John Neville, USMC | PMA-263 |
| • 1335 – 1345 | <i>PMA-266 Portfolio</i> | CAPT Eric Soderberg, USN | PMA-266 |
| • 1345 – 1355 | <i>PMA-268 Portfolio</i> | CAPT Chad Reed, USN | PMA-268 |
| • 1355 – 1430 | <i>UAS</i> | Panel Discussion/Q&A | UAS PMAs |
| • 1430 – 1445 | BREAK | | |

Getting Connected: Organizations That Can Help

- | | | |
|---------------|--|-----------------|
| • 1445 – 1455 | NAVAIR Office of Small Business | Victoria Butler |
| • 1455 – 1505 | NAVAIR Small Business Innovative Research | Donna Attik |
| • 1505 – 1515 | NAWCAD Technology Transfer Office | Rick Tarr |
| • 1515 – 1525 | Naval Aviation Systems Consortium | Carol Frisch |
| • 1525 – 1535 | Innovation & Modernization PAX River (IMPAX) | Rob Winston |
| • 1535 – 1545 | The Patuxent Partnership | Jennifer Brown |
| • 1545 – 1555 | Maryland Defense Network | Lisa Swoboda |
| • 1555 – 1605 | St. Mary's Office of Economic Development | Chris Kaselemis |
| • 1605 – 1615 | University of Maryland TechPort | Brad Bartilson |
| • 1615 – 1625 | Small Business Development Center | Wynne Briscoe |
| • 1625 – 1635 | MD Procurement Technical Assistance Center | Mary Lee Kolich |
| • 1635 – TBD | SOCIAL (Location & Directions Provided) | |



Agenda

Day 3 – 20 June

- 0700 – 0800 **CHECK-IN**
- 0800 – 0815 *Admin & Security* Paul Hood PEO(U&W)

FACILITATED DISCUSSION

- 0815 – 1145 *Networked Battlespace* Lance Floyd NAWCWD
Derek Ikehara NIWC
- 1145 – 1300 **LUNCH**
- 1300 – 16:45 **NETWORKING & ONE-ON-ONE's AT THE SMHEC (UNCLASS)**



Naval Force The Nation Needs

James "Hondo" Geurts

Assistant Secretary of the Navy
(Research, Development and Acquisition)

Naval Force the Nation Needs

- 1. Deliver and Sustain Lethal Capacity**
- 2. Increase Agility**
- 3. Drive Affordability**
- 4. Build Workforce to Compete & Win**



Deliver & Sustain Lethal Capacity



JLTVs delivering ahead of schedule



Hydraulic Shop contributed to readiness with highest number of FA-18 IPG-1s



NIWC Atlantic Enterprise deploying cloud



SAMPSON returned 1 day ahead of schedule to Fleet



NRL's Center for Corrosion develops new paint formula

Increase Agility

VFA-22 receives new
IRST capability at speed



Agility & Accountability
Awards Program

Awarding Bold Moves

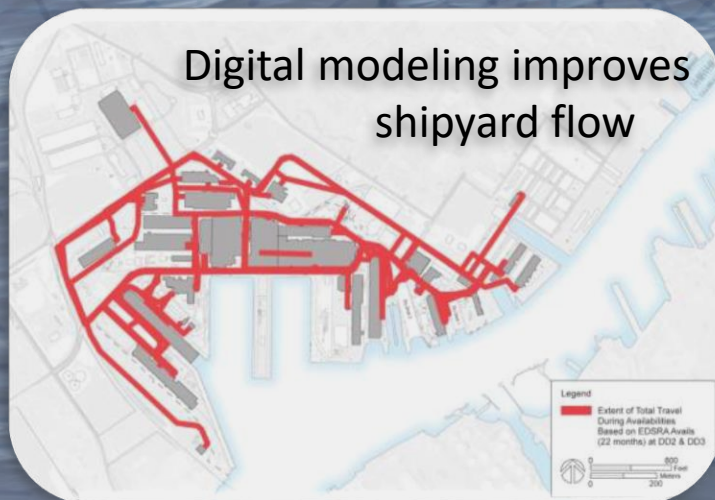
New Agility & Accountability Awards

Across the Department our talented Sailors, Marines, and Civilians are accountable to our customers to continually deliver mission outcomes. Every day, our workforce develops superb solutions to a range of complex problems encountered while reforming our business operations to create agility in our globally deployed forces. The Agility & Accountability Awards Program (AAP) identifies and acknowledges these pioneering Naval leaders, units, and activities in order to inspire the problem solvers of the future.



ANTX West testing emerging tech

Digital modeling improves
shipyard flow



Agility champions



Navy Seal puts programming expertise
to perfect virtual reality trainer

Drive Affordability



Using waste plastic for additive manufacturing



Excellence in development and government transition of a cost-saving tool



Breaking tradition... FA-18 and FORD contracts



Small business driving big savings

Build a Workforce to Compete & Win



NAVSUP employees driving STEM



Mobilizing **talent** for Pentagon LAB Day... Collective RD&A scientists and engineers working next generation capabilities



NavalX... marketplace for connecting tech

 NavalX
3w

#NavalX & #DEFWashingtonDC are co-hosting the next Drink & Think at thegardenus. This event will showcase the recent launch of NavalX w/ additional speakers from SOFWERX and AFWERX. Sign up here: <https://bit.ly/2lq2BBc> and bring a friend! #innovation #defense @NavalAgility

**NAVALX**
SEASIDE CHATS

April 25, 2019 at 1800-2100
National Capital Region 5380 Eisenhower Ave, Suite C
Alexandria, VA 22304



Accelerating training at Naval shipyards

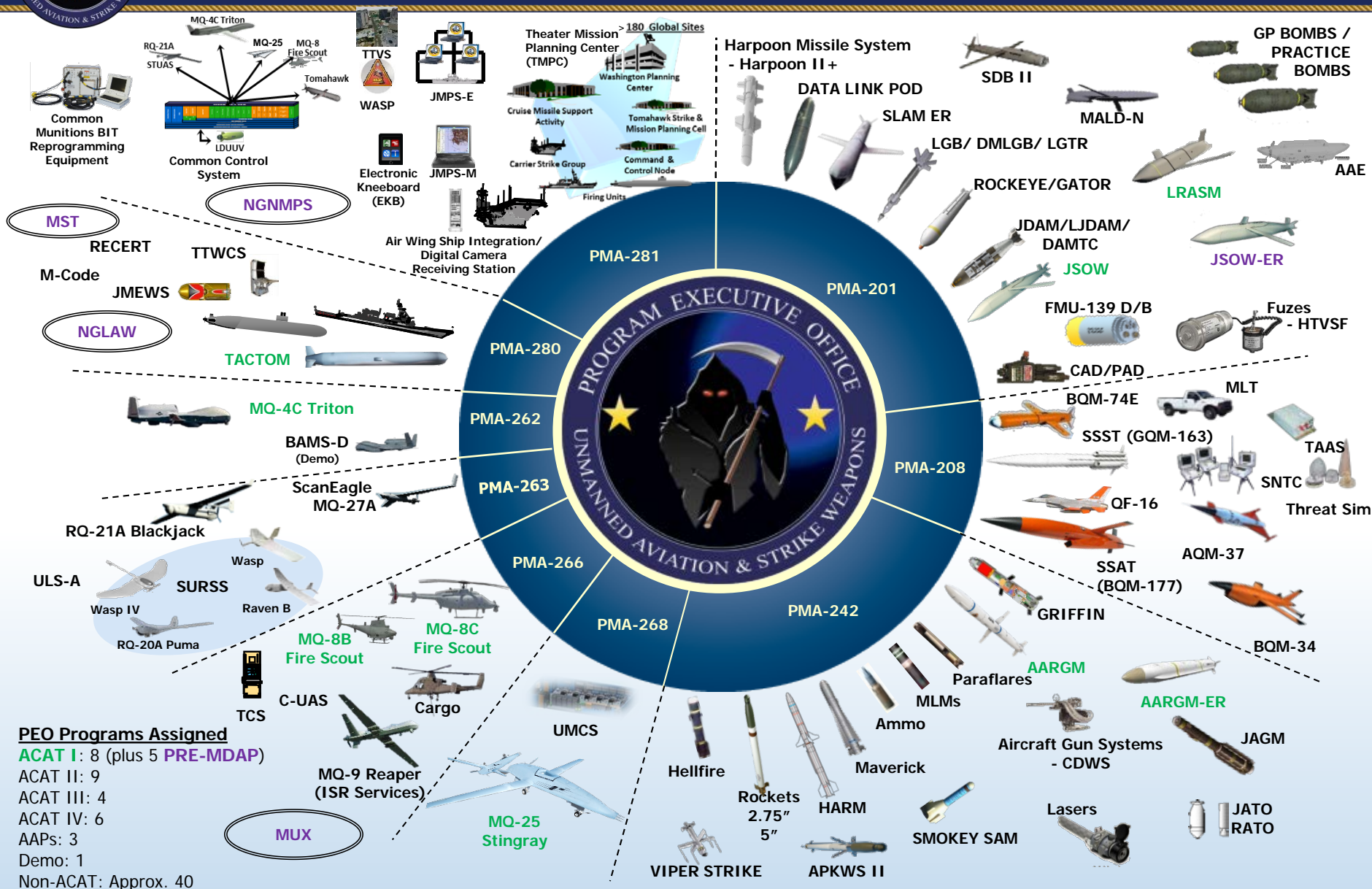


N98 Perspective

Ms. Angie Knappenberger
Deputy Director for Air Warfare



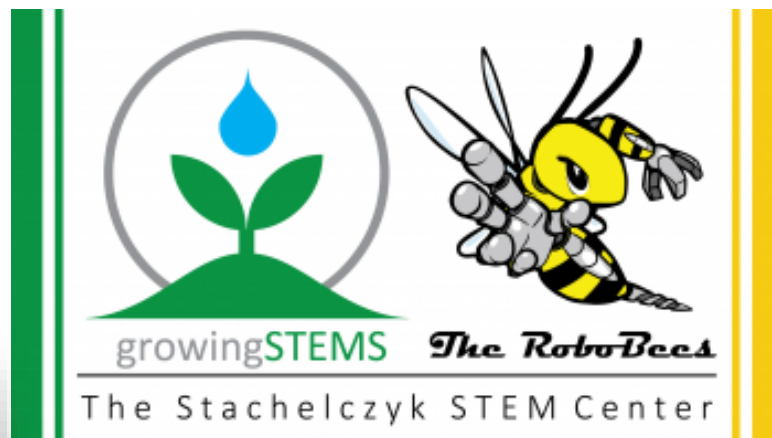
PEO(U&W) Portfolio





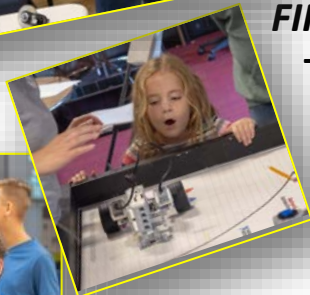
Our Goal

Ensure that all St. Mary's County students have a meaningful STEM experience by the time they reach 7th grade



Community Outreach

STEM Activities
Teach it, Touch it, Take it (T³)
Lego Top Spinners
Local Robotic Competitions
Boy & Girl Scout Activities
Festivals & Events



2019 ROBOTICS PROGRAMS

FIRST Robotics Challenge (FRC), 9th-12th grade
- **Team 836, The RoboBees** (25-40 students)

FIRST Tech Challenge (FTC), 6th-9th grade
- 5 Teams, 8-10 students each

FIRST Lego League (FLL), 4th-6th grade
- 4 teams, 4-6 students each

FIRST Lego League Junior (FLL Jr.), K-3rd grade
- 3-4 teams, 4 students each





Marine Corps Update

PEO(U&W) Industry Day

19 June 2019

Col James W. "Chewy" Frey

HQMC Aviation

Aviation Weapons Requirements (UAS/TACAIR)

20190613



USMC Programs under PEO(U&W)

- UAS
 - RQ-21A Blackjack
 - MQ-9A COCO services
 - MQ-9 GOGO / POR
 - MUX (MAGTF UAS Expeditionary)
- Counter UAS
- A/G Weapons

GLOBAL FORCE DISPOSITION

AC: 186,400 AR: 2,300 RC: 1,300 TOTAL ACTIVE DUTY: 190,000

Operations
31

Amphibious Ops
3

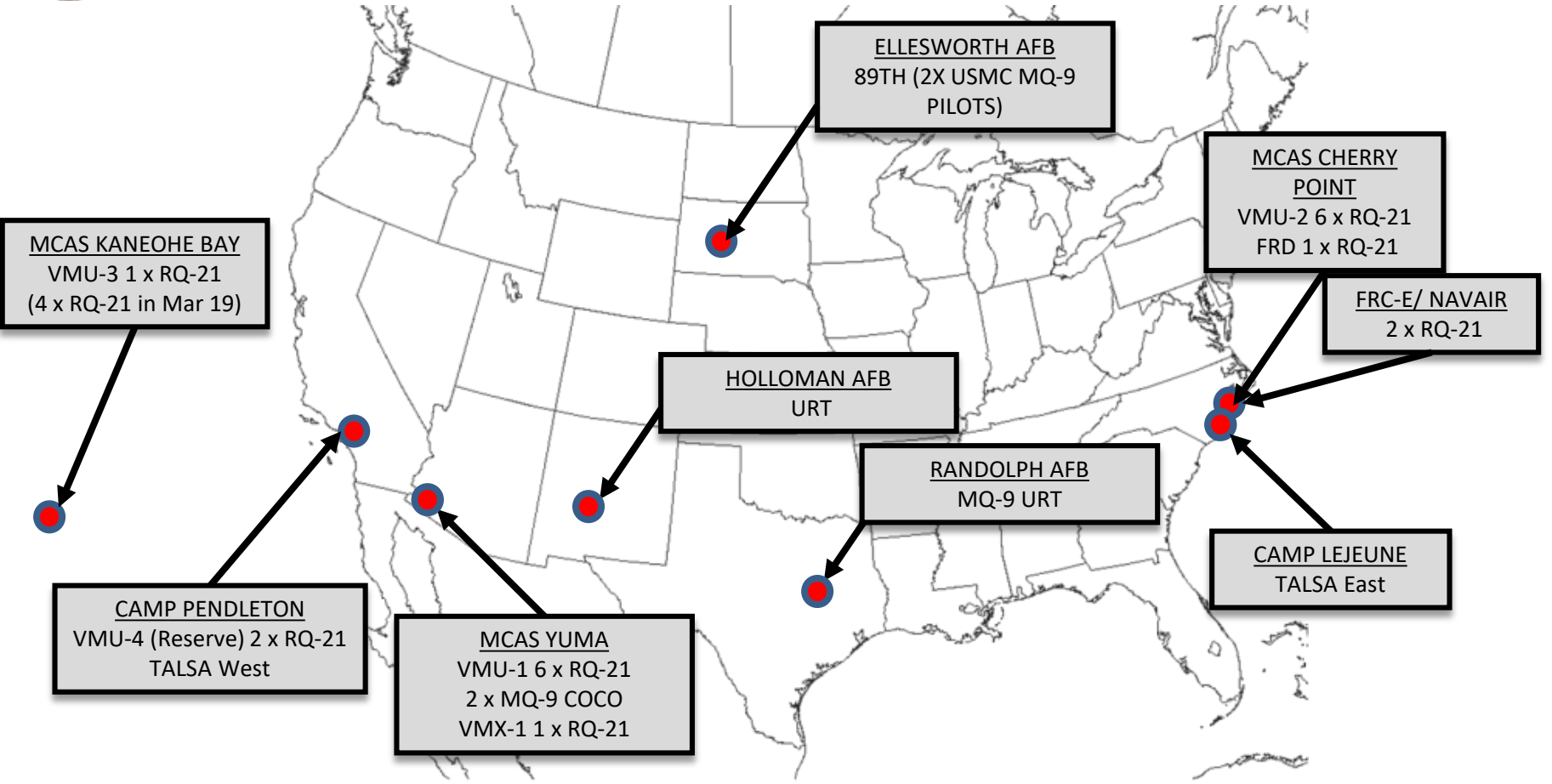
Exercise
2

TSC
24





Current VMU Force Laydown





RQ-21 Blackjack





RQ-21A Program Overview

RQ-21A System

In Situ Provided Equipment (Blue Gear)

2 GCS = 4 Workstations

OWS



Desktop UIM x 4

1 Desktop Includes:
2 Monitors
1 Joystick
1 Trackball



BASE-X 203 Tent Green or Tan



ITEG II 25kW Gen x 2



M1152 HMMWV x 3



MEPDIS R 15KW x 2



PPE for D-UIM x 4



Special Purpose Cables x 8

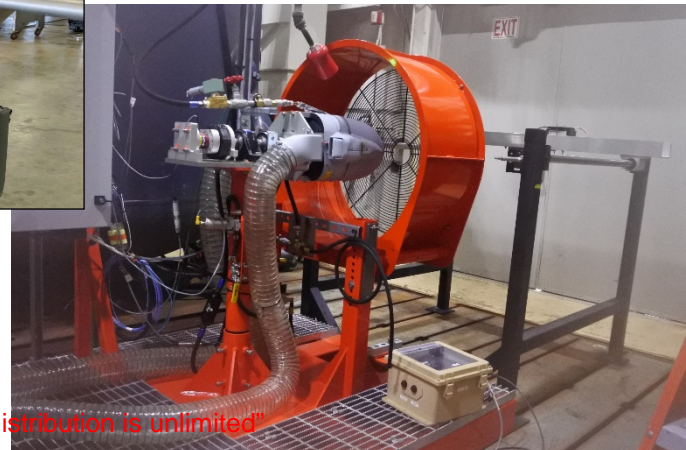


M1165 HMMWV



Planned Upgrades

- EOIR5 Turret with Laser Designator
- Software version 7.6.5 Update, improvements include:
 - stability improvement, multiple video feed viewing, and improved recovery rate
- V3 Engine
 - Projected 250 hour TBO and service life increase
- VTOL Kit Development
 - Working with NSW



Operations

Operational Overview

- VMU-1: 2303 hrs / 444 sorties
- VMU-2: 2078 hrs / 623 sorties
- VMU-3: 75 hrs / 17 sorties
- VMU-4: 68 hrs / 5 sorties
- 22 MEU: 568 hrs / 79 sorties
- 24 MEU: 573 hrs / 67 sorties
- 26 MEU: 409 hrs / 63 sorties
- 15 MEU: 410 hrs / 67 sorties
- 13 MEU: 261 hrs / 56 sorties
- UASTD: 110 hrs / 47 sorties
- VMX-1: 2 hrs / 1 sorties
- MARSOC: 2088 hrs / 241 sorties

TOTAL: 8945 hrs / 1710 sorties



MQ-9A BLOCK 5 (COCO)



MQ-9 Milestones

➤ **Urgent Need: Persistent ISR**

- 13 September COCO IOC (230 sorties / 3600 hrs total)
- Proof of concept: Builds the expertise, infrastructure, and bridges the gap to MUX
 - VMU 1 Marines perform Mission Commander duties for MQ-9 flights in support of TFSW 16hr-day/7days-week at MCE in Yuma



MQ-9A Block 5 (GOGO)

➤ Urgent Need: Persistent Strike

- FY 20 procurement of 3 MQ-9A Block 5
- Transition to government owned and operated required for advanced missions
- First USMC MQ-9 pilots and sensor operators completed training with USAF
- IOC 4thQ FY20 with hybrid USAF & USMC crews; RSO ops out of VMU 1 (Yuma); contractor L&R and CLS
- Continues Proof of concept: Builds the expertise, infrastructure, and bridges the gap to MUX
- ***DOTMLPF/C required to establish MQ-9 VMU / POR***





Marine Air Ground Task Force UAS Expeditionary (MUX)

The MAGTF Unmanned Expeditionary Capabilities UAS (MUX) will be the first STOVL capable Group 5 / Tier 3 UAS to provide the MAGTF with a network-enabled, digitally interoperable, and built to execute responsive, persistent, lethal, and adaptive full-spectrum operations from the sea base.



Primary missions:

Early Warning ISR
Electronic Warfare Communications Relay

Secondary mission:

Offensive Air Support

Tertiary missions:

Aerial Escort Cargo

Supports

- ✓ NDS
- ✓ MOC2025
- ✓ EABO



Ground Based Air Defense & Counter UAS

USMC Approach:

- MAGTF CUAS is a component of GBAD
- There is no “silver bullet” for CUAS
- System of systems approach: Marine Air Defense Integrated System (MADIS)
 - Active and passive sensors
 - Kinetic and non-kinetic defeat
- Leverage investments made to support “urgent” requirements from Theater to enable rapid development of program of record to modernize maneuverable ground based air defense

MADIS Program of Record

- JLTV mounted maneuverable SHORAD capability to modernize USMC expeditionary air defense
- Field to LAAD Battalions in early 2020s
- Modernization program in parallel with growth and reorganization of LAAD Battalions to increase capacity within MAGTF

Urgent Solutions

- To support forward deployed forces, developed multiple configurations of MADIS family of systems
- MADIS Increment 0
 - Detection and defeat system on MATV vehicle
- L-MADIS
 - Mount same capability as Inc0 on two MRZR dune buggies
 - Internal transport by USMC rotary-wing/tilt rotor aircraft
- E-MADIS
 - Static configuration for FOB defense
- Partnered with US Army on development of directed energy weapons





Weapons And Munitions Plan

2018

2020

2030

TACAIR



2.75" Rockets	APKWS II	M282	
General Purpose Bombs / LJDAM		Small Diameter Bomb II	
HARM / AARGM			AARGM-ER*
LMAV			

Rotary Wing



GAU-17 / GAU-21			
LAU-61/68			DRL*
2.75" Rockets / APKWS II	M282 MPP		2.75" MRIP*
Hellfire		JAGM	
AIM-9M			AIM-9X

Harvest HAWK



Hellfire		JAGM	
Griffin			
Viper Strike			

Tilt Rotor



Gun	Enhanced Defensive Weapon/SOPGM*
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UAS



Miniature Guided Munition*
