



# COI Annual Update: Guidance 18-20 April 2017



# Space COI Annual Update - Overview



## COI Description

–The goal of the Space COI is to 1) Facilitate collaboration and leveraging of complementary investments of the space S&T efforts across the community in support of the intent of the nation's Space interests; and 2.) Identify gaps, establish and maintain a set of S&T roadmaps to guide Space Community research program investments, perform portfolio assessments, and provide future resource recommendations to leadership

## COI Purpose

–The Space S&T COI is a forum for sharing new ideas, technical directions and technology opportunities, jointly planning programs, measuring technical progress, and exchanging advances in space S&T

## Portfolio Focus

–DoD S&T investments in space-unique technologies that are essential to maintain and advance existing U.S. conventional and asymmetric military advantages enabled by space systems at the strategic, operational, and tactical levels

Technology Sub-Area 1

### Satellite Communications

Technology Sub-Area 2

### Missile Warning, Missile Defense, Kill Assessment and Attack Assessment

Technology Sub-Area 3

### Positioning, Navigation and Timing

Technology Sub-Area 4

### Intelligence, Surveillance and Reconnaissance

Technology Sub-Area 5

### Space Control and Space Situational Awareness

Technology Sub-Area 6

### Space Access

Technology Sub-Area 7

### Space and Terrestrial Environmental Monitoring

Technology Sub-Area 8

### Command and Control; and Satellite Operations

Technology Sub-Area 9

### Space Enablers

Technology Sub-Area 10

### Space Resilience

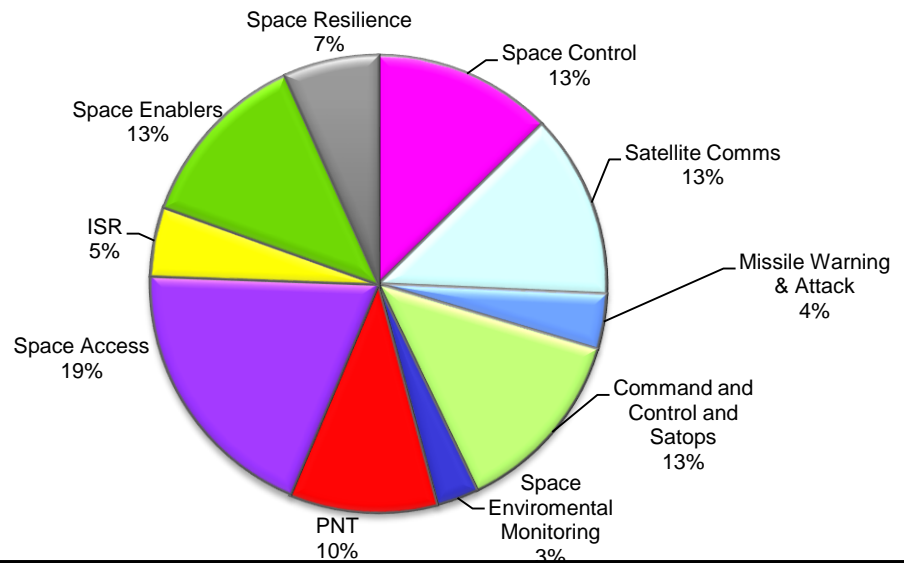
(new subarea in FY15)



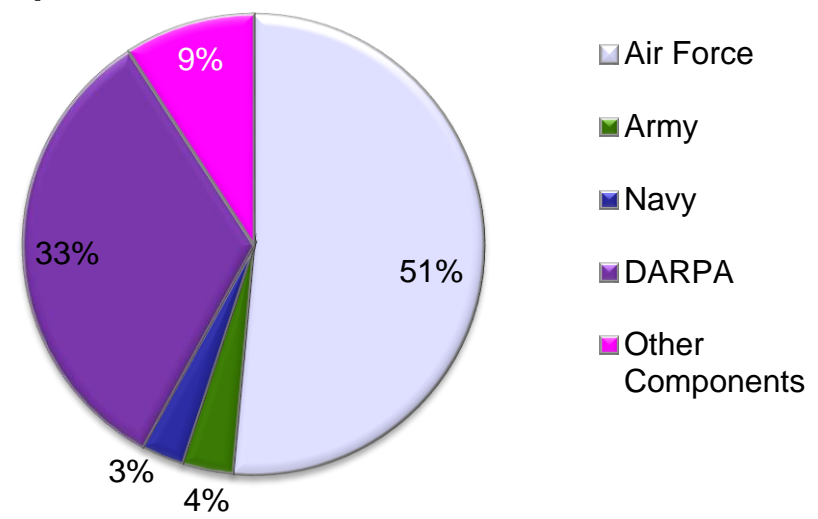
# Space S&T COI Investment and Performers



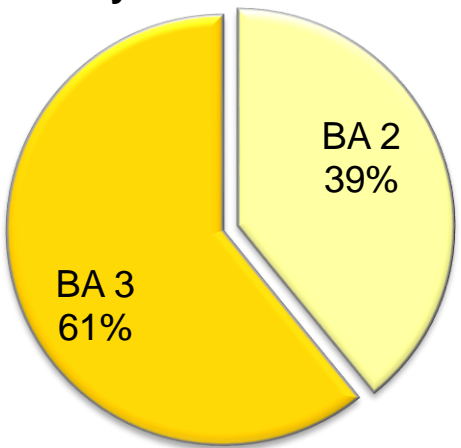
## COI Sub-Areas PB17



## Component Investment



## Budget Activity



## Intramural vs. Extramural split:

- Army - 6.2 47/53; 6.3 38/62
- Navy - 6.2 60/40; 6.3 40/60
- Air Force - 6.2 48/52; 6.3 20/80

## Major Performers:

- Aerojet-Rocketdyne, APL, BAE Systems, Ball Aerospace, Boeing, Dynetics, Honeywell, Lockheed Martin, MIT-LL, Northrop Grumman, NRL, Orbital/ATK, Raytheon, Sandia National Laboratory, Teledyne Brown



# 1) Overview of Space COI Portfolio Changes



- **Membership**

- New Space S&T COI Chair – Thomas Cooley, AFRL
- Representatives from Air Force (AFRL), Army (SMDC), Navy (ONR and NRL); **NEW**: MDA, NRO, DARPA

- **Investment Influences**

- AFSPC Space Enterprise Vision (SEV) adjusting acquisition focus toward resilience and technologies that support resilience.
- Increases in space budget have not reached Space S&T Community
- JICSPOC causing new strain on S&T budget to meet STRATCOM Joint Urgent Emerging Need (JEON). Focus BMC2 efforts.
- Growing demands spur creative collaboration but increase program risk

- **Roadmaps Stable**

- “New Space” commercial enterprises providing new opportunities



## 2) Space COI Activity In-Year



- **New areas of cross-Service collaboration**
  - Reduced RF spectrum and growing commercial use of laser communication opening new applications for Laser-Comm Channels
- **Major accomplishments**
  - Space BMC2 STRATCOM need has galvanized S&T community
  - ANGELS Transition to Operations
  - First GEO STP-led mission established with multiple payloads (STPSat-6)
- **External Engagements**
  - Expanded DoD internal participants to include MDA & DARPA
  - Leveraging touch-points to coordinate investments of NRO, NASA
  - Expanding International Space Partners Japan (JAXA), UK, NATO, STRATCOM Combined Space Operations (AUS/UK/CAN/NZ + FRA/GER/JAP/ROK)



# 3) Issues for S&T ExCom



- **“Satellite Buying Power is Lowest in 30 Years” – CAPE Finding 2017**
  - Space Industrial base review highlights critical needs for investment to turn the tide and meet current challenges in space
- **Space Prototyping missions and STP Program critically important for space access**
  - Foundational Space S&T enabled by program with close ties to operational community
  - AF ensuring relevance to Space Enterprise Vision (SEV)
- **Commercial and International investments are accelerating investments / DoD minority player and shrinking.**
  - New models such as for timely agile engagement with commercial and international partners needed such as DIUX