



# **Spectrum Access Industry Day**

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for Research and Engineering  
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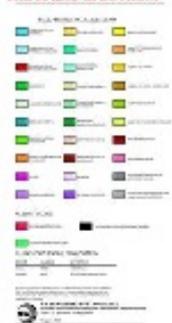
# Spectrum: The Problem

## DoD Need For Spectrum Increasing:

- Increasing Data Rate needed for DOD data-rich applications (imagery, video, etc)
- Resiliency to net attack and jamming

UNITED STATES FREQUENCY ALLOCATIONS

THE RADIO SPECTRUM



## DoD Required To Vacate Spectrum:

- Commercial mobile data traffic growing: Cisco predicts growth to 15.9 exabytes per month by 2018, nearly an 11-fold increase over 2013



Mission Success Requires Assured Spectrum **ACCESS**... In Spite of Increased Congestion and Contention



# AND It's Also An Opportunity...



DoD “giving up” Spectrum is an opportunity...

- Chance to get more for what is spent
- Tech development needed to ensure access to spectrum when and where needed
- Same technologies that enable dynamic sharing, access in compressed bands, and relocation also enable additional “features”
  - Electronic Protection
  - Situational Awareness of Electromagnetic Spectrum Domain

**Let's Upgrade Our Systems When We “Relocate/Share”**



# Today's DoD Environment: Identifying the Best Technologies

## Better Buying Power (BBP) 3.0:

- BBP 1.0: Best Practices
- BBP 2.0: Critical Thinking
- BBP 3.0: Achieving dominant capabilities through **innovation and technical excellence.**

## Defense Innovation Initiative:

- Identify and invest in **innovative ways to sustain and advance** our military dominance for the 21st century, and improve business operations.

## DoD Long Range Research and Development Plan (LRRDP):

- Solicits information to study and prioritize **novel or unconventional applications of technology** that would provide significant, enduring advantage



**“...DoD no longer has exclusive access to the most cutting-edge technology.”**



# Defense Innovation Marketplace: Resource for Industry and the DoD



## Connecting Industry and DoD – Spectrum Consortium Updates...

**DEFENSE INNOVATION MARKETPLACE**

HOME RESOURCES FAQs NEWS & EVENTS ABOUT CONTACT US Search

### CONNECTING INDUSTRY & DoD

The Defense Innovation Marketplace is a centralized resource for market research:

**For Industry**, to learn about Department of Defense (DoD) S&T/R&D investment priorities, capability needs and technology interchanges.

**For Government**, to access search tools to assess and then leverage industry IR&D projects for current and future programs.

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#### NEW IN THE MARKETPLACE

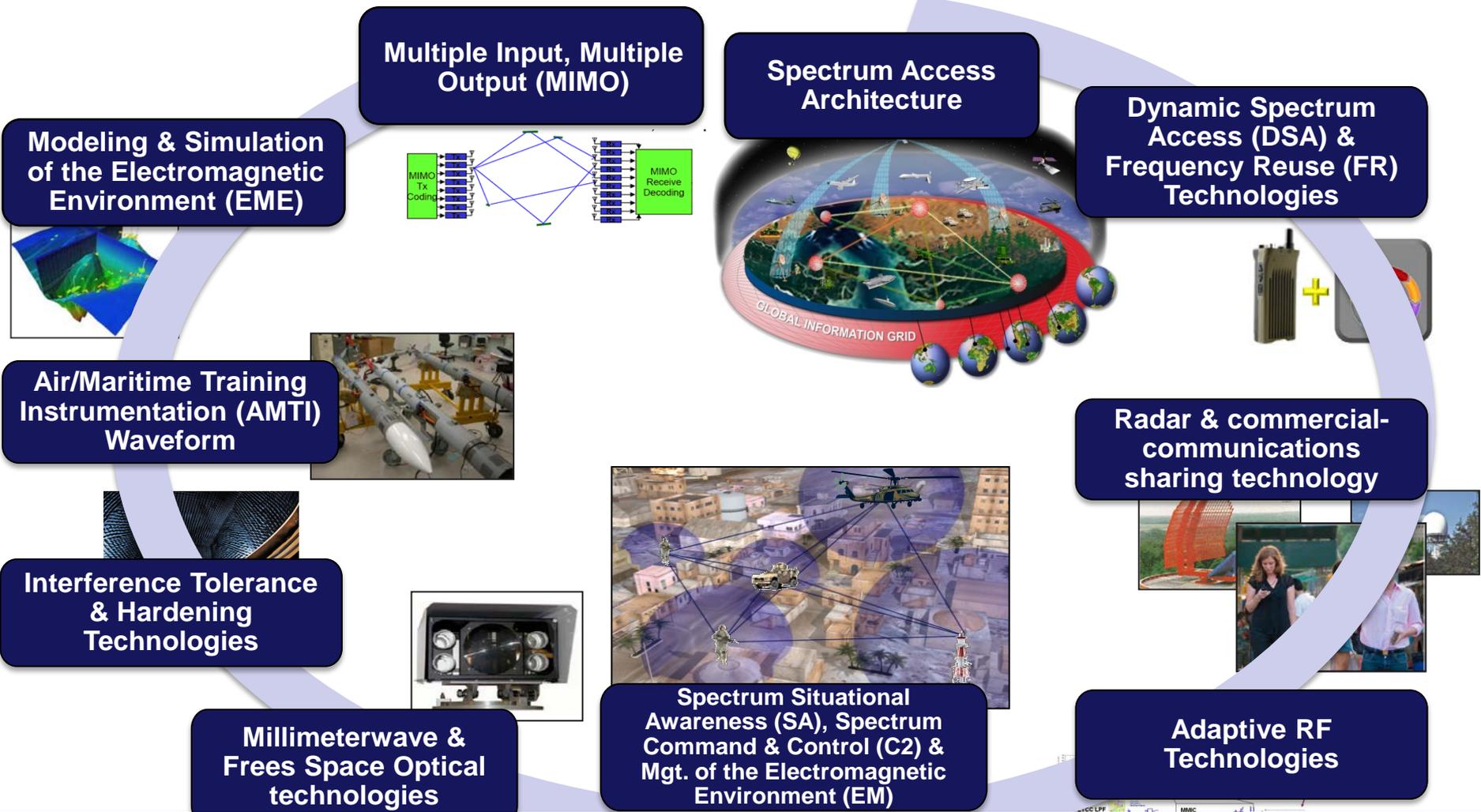
Strategic Documents	Doing Business with DoD	News & Events
<ul style="list-style-type: none"> <li>Defense Innovation Initiative <b>**NEW**</b></li> <li>U.S. Army S&amp;T Campaign Plan 2015-2035</li> <li>AF Global Strike Command 2014 Strategic Master Plan</li> <li>DoD R&amp;E Enterprise Strategic Direction: Presentation to TechAmerica</li> <li>Navy Cyber Center of Excellence: Strengthening Critical Infrastructure</li> <li>ISR Joint Force 2020 White Paper</li> <li>More...</li> </ul>	<ul style="list-style-type: none"> <li>The Department's Long-Range Research and Development Plan <b>**NEW**</b></li> <li>Army Night Vision &amp; Electronic Sensors Directorate <b>**NEW**</b></li> <li>Air Force Next-generation Aerial Directional Data Links and Networking RFI</li> <li>Air Force High Definition Infrared Light Emitting Diode (HD-ILED) Array</li> <li>More...</li> </ul>	<ul style="list-style-type: none"> <li>Robert Work Provides an Overview of the Defense Innovation Initiative <b>**NEW**</b></li> <li>Top Downloads for October</li> <li>Dynamic Spectrum Industry Day</li> <li>Air Force Industry Day 2015</li> <li>Army (AMRDEC) Futures Brief to Industry</li> <li>DARPA Electrical Prescriptions (ElectRx) Proposer's Day</li> <li>AT&amp;L Time Critical Targeting Industry Day</li> <li>More...</li> </ul>

Updated 12/3/14

- *Find the R&D / S&T Priorities of the DoD*
  - *What technologies are being sought?*
- *S&T / R&D Solicitations*
  - *What are the opportunities to do business with DoD?*
  - *Learn about Virtual Technology Interchanges*
- *Independent Research and Development (IR&D) efforts*
  - *Share your innovative R&D projects with DoD personnel*
  - *More than 15,000 projects shared to date*
  - *Aligned to DoD Communities of Interest (COIs)*



# Spectrum Sharing Technologies



## Areas of "Opportunity"



# *Intellectual Property (IP)...*



## DoD using Other Transactional Agreements (OTAs)...

- For each contract – IP Rights will be negotiated on a case-by-case basis
  - Government will not *assume* all General Purpose Data Rights
- Independent Research and Development (IR&D) is NOT federally funded, and as such – all IP rights remain with the firm
  - IP rights to IR&D efforts of interest would be subject to negotiation

**Focus on removing ‘barriers’ for interested participants**



# Summary



- Spectrum access is vital for both National Military Security and National Economic Security
- Both DoD needs and industry needs have to be balanced
- This consortium provides an opportunity to identify the best technologies that allow this balance
- Stay connected to DoD S&T/R&D efforts through the Defense Innovation Marketplace and @DoDinnovation

[www.DefenseInnovationMarketplace.mil](http://www.DefenseInnovationMarketplace.mil)



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