

The Office of Infrastructure Protection

National Protection and Programs Directorate
Department of Homeland Security

Update on DHS PNT activities

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Navigation and Timing Office



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DHS is the Federal Coordinator for U.S. Critical Infrastructure

Critical infrastructure: the systems, assets, and networks that maintain our way of life. It is diverse and complex, includes varied organizational structures and operating models (including multinational ownership), interdependent functions and systems in both physical and cyber space, and governance constructs that involve multi-level authorities, responsibilities, and regulations.



Courtesy of DHS

Critical Infrastructure Defined: "Assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof."



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Unclassified

What We Know About GPS in Critical Infrastructure

- GPS is used in every critical infrastructure sector and its use continues to expand
- GPS is the primary source of timing and synchronization for many aspects of critical infrastructure
- Position and navigation data often requires augmentation before use and is used in a wide variety of applications
- The specifications for a backup system or systems to GPS have not been defined.



National Defense Authorization Act 2017

- Timing Studies
 - No significant changes from previously known information
 - Cellular networks and PMR highly reliant on GPS for synchronization
 - Other sectors use precision time - impacts on operation varies
 - Final coordination draft – end of September
 - Distribute to SSA for final review October
- Position and Navigation Studies
 - Contract in place
 - Focus in understanding system and user requirements
- AoA
 - Contract awarded
 - RFI being developed
 - Base recommendation on findings from studies mentioned above and information gathered through RFIs



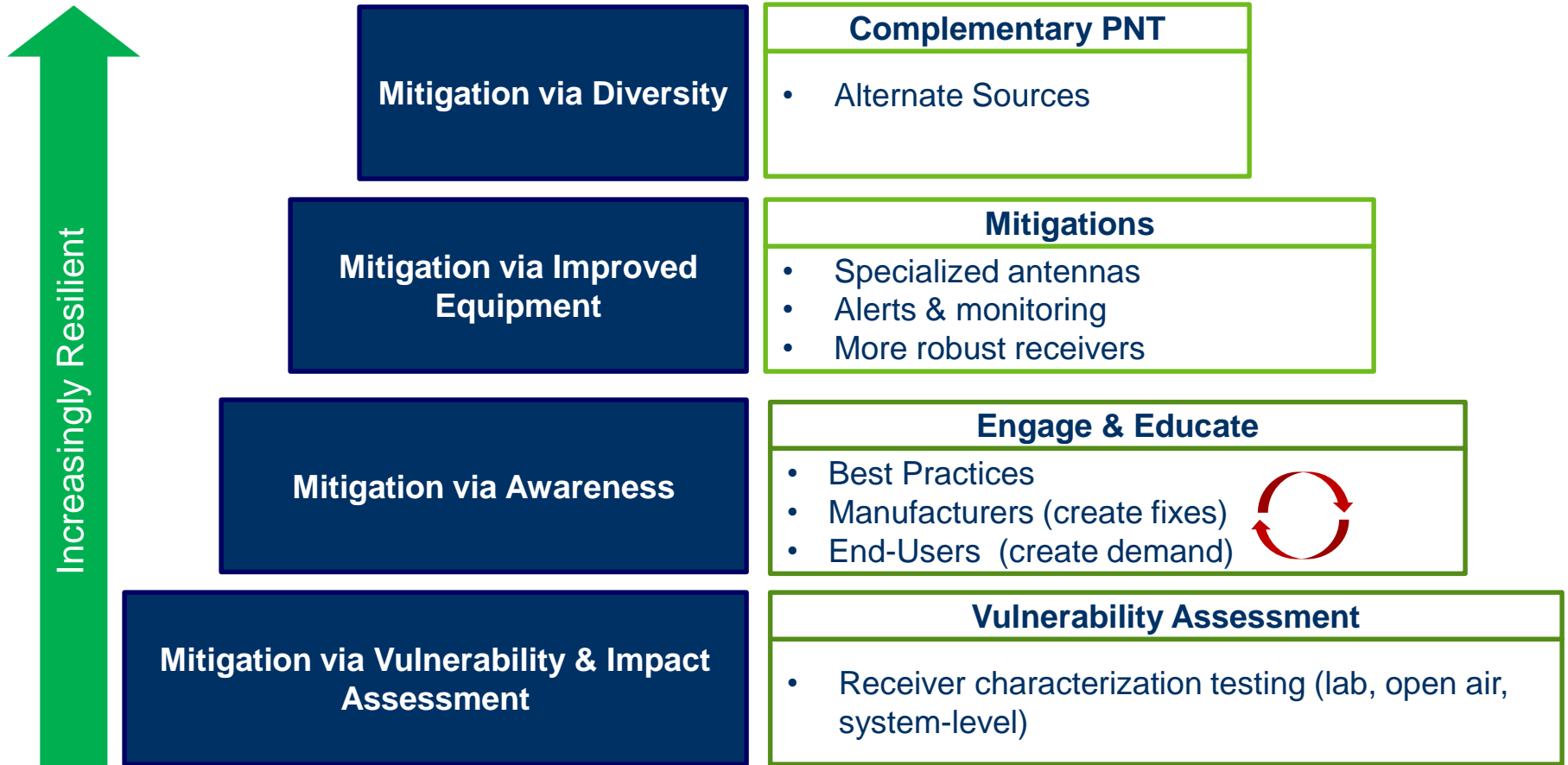
National Defense Authorization Act 2017

- Way Ahead
 - Need to move from generalities to specifics
 - Backup what and why
 - Adoption potential for specific applications
 - Assess numerous studies on topic
 - DHS National Risk Assessment
 - UK 2017
 - NIST Economic impact study
 - And others
 - Develop / Conduct Risk Analysis
 - FY 18 NDAA proposes Demonstration
 - Included in version that passed the house (\$10M funding to DoD)
 - Waiting Senate action



DHS Risk Management & Program Strategy

Holistic view with a layered approach



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