National Spectrum Strategy

Pillars 3 and 4 Overview

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The content of this briefing represents the speaker's individual opinion.

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2023 National Spectrum Strategy

Best understood as two independent strategies

Pillar 1. Near-term band studies for potential repurposing

Pillars 2,3,4. Lay foundation for future spectrum management, spectrum R&D, and workforce development

- Dynamic spectrum sharing emphasized throughout

2024 National Spectrum Strategy implementation plan

Identify specific outcomes for each strategic objective of the NSS

For each outcome:

- responsible Federal agencies
- contributing agencies and organizations
- start date of work
- duration

NSS Pillar 3 – Spectrum Research & Development (R&D)

3.1 Facilitate investments in new technologies (details: slide 6)

3.2 Promote spectrum R&D (details: slide 7)

3.3 Spectrum policies that accommodate innovation

- Identify incentives for investments in spectrum innovation
- Receiver performance improvement
- Enhance analytical and statistical modeling of interference and propagation
- Create a national spectrum R&D plan
- Establish a national testbed for dynamic spectrum sharing – within 12-18 months
- Do a “moonshot” program on dynamic spectrum sharing – within 12-18 months
- Establish spectrum “sandboxes” for R&D – expedited approval of experimental licenses
- Periodic assessment of spectrum policy from an innovation perspective

NSS Pillar 4 – Spectrum Expertise and Awareness

4.1 Workforce development (details: slide 8)

4.2 Improve policymaker understanding

4.3 Improve public understanding and awareness

- Create a National Spectrum Workforce Plan
- Identify needed education and training programs
- Provide policymakers with tailored education and tools
- Public outreach to attract people to the field, spotlight role of spectrum

Iplan outcomes for objective 3.1 – new/emerging tech

3.1(a)	Process to identify enabling technologies for spectrum-dependent systems to enhance spectrum efficiency and foster coexistence	Sep-25	Mar-26	NTIA/FCC	Federal Agencies, NSF, CSMAC (Collaboration Framework)
3.1(b)	Published, recommended key motivating factors for driving Federal and non-Federal investment in spectrum innovation	Mar-26	Sep-26	NTIA/FCC	Federal Agencies, NSF, CSMAC (Collaboration Framework)
3.1(c)	A roadmap for improving receiver resistance to harmful interference	Mar-25	Dec-25	NTIA/FCC	NSF, Federal Agencies, CSMAC (Collaboration Framework)
3.1(d)	Recommendations for potential investment based on assessment of smart spectrum management technologies	Mar-26	Sep-26	NTIA/FCC	NSF, Federal Agencies, CSMAC (Collaboration Framework)
3.1(e)	Designation of a Global Standards for Advanced Spectrum Sharing and Technologies Team	Mar-25	Jun-25	NTIA/FCC	CSMAC (Collaboration Framework), NIST
3.1(f)	Recommendations for a common platform for shared spectrum access	Sep-24	Mar-25	NTIA	Federal Agencies, CSMAC, FCC

Iplan outcomes for objective 3.2 – research & development

3.2(a)	Development and publication, National Spectrum R&D Plan	Mar-24	Sep-24	OSTP	NTIA, NSF, FCC, ISAC, Federal Agencies, Public
3.2(b)	Revision of the National Spectrum R&D Plan	Mar-25	Mar-26	OSTP	NTIA, NSF, FCC, ISAC, Federal Agencies, Public
3.2(c)	Process for a national (government, industry, and academia) assessment and certification of spectrum R&D infrastructure and tools	Mar-26	Sep-26	NTIA	CSMAC (Collaboration Framework), NSF, NIST, Federal Agencies, FCC
3.2(d)	Data collection and spectrum utilization program	Sep-25	Sep-26	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.2(e)	Spectrum Sandbox Program	Dec-25	Jun-26	NTIA	CSMAC (Collaboration Framework), FCC, NASCTN, Federal Agencies
3.2(f)	Advanced Dynamic Spectrum Sharing (DSS) demonstration and report	Mar-24	Sep-25	DoD	NSF, NTIA, FCC
3.2(g)	National DSS Testbed	Mar-24	Sep-25	NTIA	NSF, DoD, FCC, Federal Agencies

Iplan outcomes for objective 4.1 – spectrum workforce

4.1(a)	A National Spectrum Workforce Plan	Mar-25	Mar-26	NSF	EOP, NTIA, FCC, CSMAC (Collaboration Framework), Federal Agencies
4.1(b)	Agency spectrum workforce programs	Mar-24	Mar-25	Federal Agencies	NTIA, NSF, FCC, Academic Institutions, Professional Societies

NSS Outcome 3.2(a) – National Spectrum R&D Plan

Responsible: White House Office of Science and Technology Policy

- Austin Bonner, OSTP working closely with Matt Pearl, NSC

Author group

- Subcommittee of WSRD
  - the Wireless Spectrum R&D interagency working group of the National Information Technology R&D office
- Co-chairs: John Chapin, NSF and Michael DiFrancisco, NTIA

Status

- Public RFI Feb 2024, responses posted at https://www.nitrd.gov/coordination-areas/wsrd/89-fr-12871/
- Public workshop May 2024, as part of NSF Spectrum Week
- Draft currently circulating for interagency review
- Publication expected September 2024
- First revision will happen in 2025

NSS Outcome 4.1(a) – National Spectrum Workforce Plan

Responsible: NTIA and NSF

Current POCs:

- NTIA: John Alden, Fred Matos, Office of Spectrum Management
- NSF: Josh Reding, John Chapin, ESM Unit

Potential path forward (under review)

- RFI fall 2024
- Series of workshops over 2025
  - Broad participation by academic, industry, government, and other stakeholders
- Oversight by government working group organized under the Interagency Spectrum Advisory Council (ISAC)

Thank You