ISPAB

NIST Updates to the Cybersecurity Framework

Cherilyn Pascoe | Senior Tech Policy Advisor & Lead, NIST CSF Program

Adam Sedgewick | Senior IT Policy Advisor

July 13, 2022

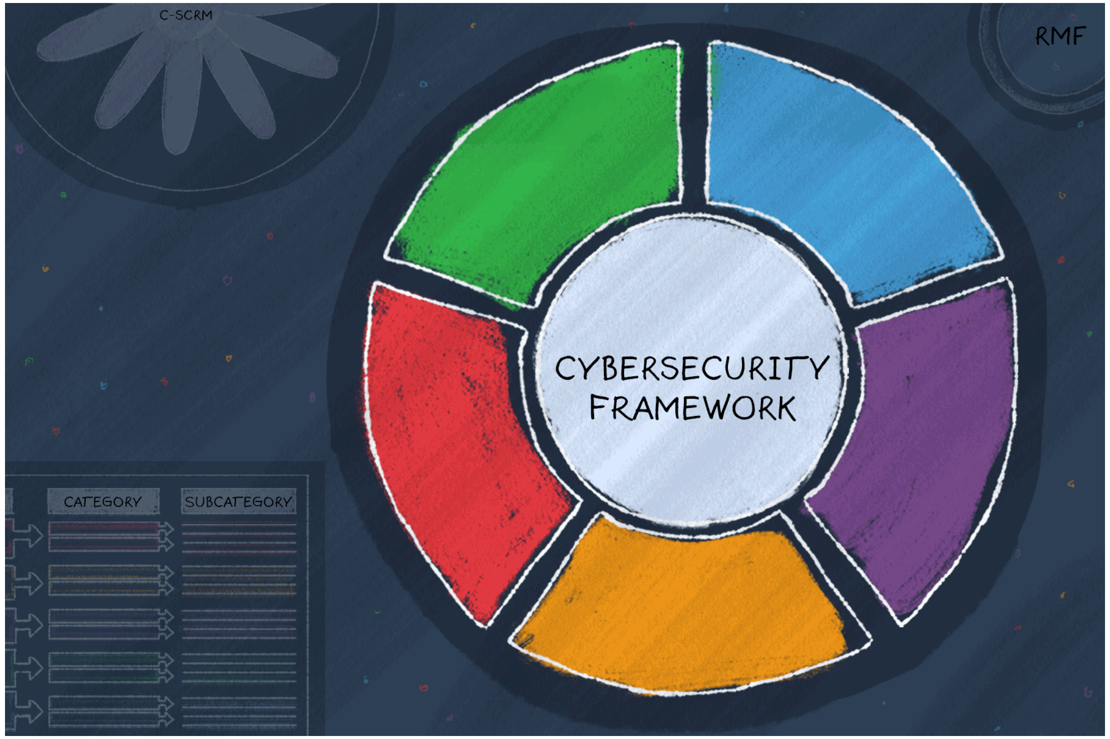
NIST

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

U.S. DEPARTMENT OF COMMERCE

Journey to Cybersecurity Framework 2.0

- NIST has begun the process of updating the Cybersecurity Framework.
- The update will address the evolving cybersecurity risk and standards landscape and make it easier for organizations to address risks.
- NIST is actively relying on and seeking diverse stakeholder feedback in the update process.
- Ways to engage: https://www.nist.gov/cyberframework



Cybersecurity Framework History

- February 2013 | Executive Order 13636: Improving Critical Infrastructure Cybersecurity
- **February 2014 | CSF 1.0**
- December 2014 | Cybersecurity Enhancement Act of 2014 (P.L. 113-274)
- May 2017 | Executive Order 13800: Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure (CSF required for federal agencies)
- **April 2018 | CSF. 1.1**
- April 2022 | NIST RFI on CSF Update Closed
- **Future | CSF 2.0**

Cybersecurity RFI on CSF 2.0

In February, NIST launched a RFI to solicit input on its cybersecurity resources, including relationship of the CSF with other resources

Cybersecurity Framework

Use of and potential updates to the NIST Cybersecurity Framework (CSF).

Cybersecurity Resources

Feedback on NIST cybersecurity resources, including relationship of the CSF with other NIST and other resources.

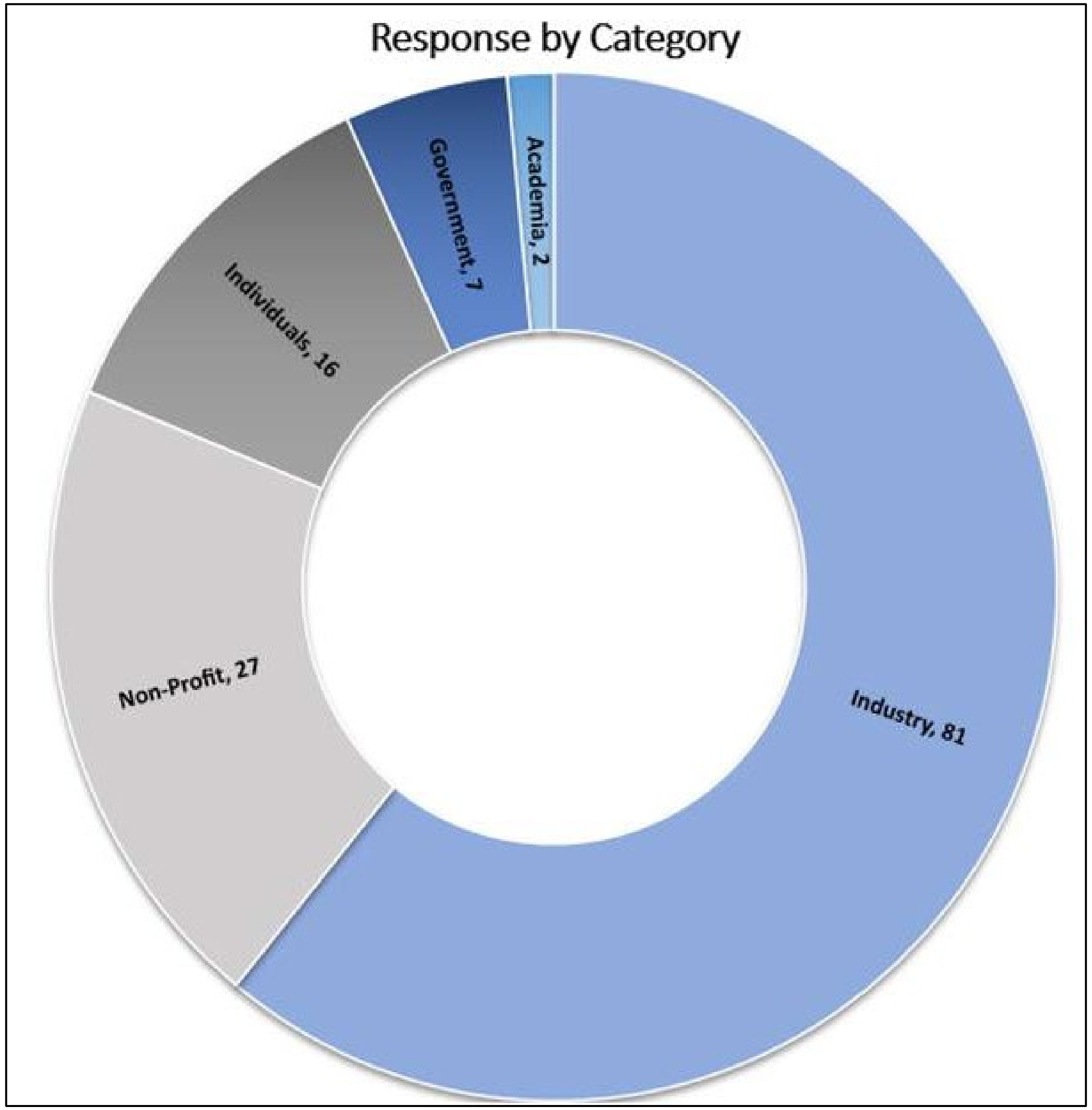
Supply Chain Cybersecurity

The National Initiative for Improving Cybersecurity in Supply Chains.

All comments publicly available: https://www.nist.gov/cyberframework

RFI Analysis

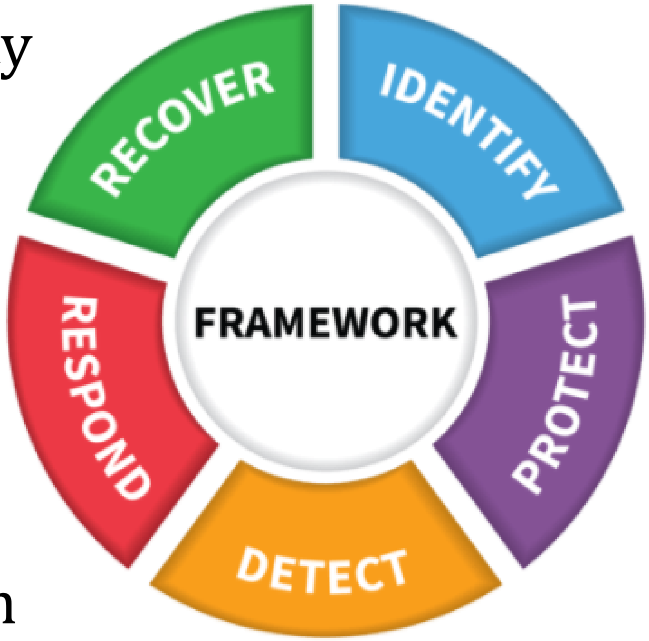
- **Received more than 130 RFI responses.**
- **In June, NIST reviewed the comments and published RFI Summary Analysis.**
- **Comments fall across 7 themes.**



RFI Analysis Theme 1 | CSF Key Attributes

Theme 1: Focus on maintaining and building on the key attributes of the CSF with the update.

- Subthemes: 1.1 The CSF is widely used and effective in helping organizations understand and manage cybersecurity risks.
- 1.2 The flexible and voluntary nature of the CSF has been beneficial for implementation by organizations of varying sizes and capabilities.
- 1.3 Ensure the CSF is simple and easy to use.
- 1.4 Keep the CSF effective in enhancing communication with non-IT and security stakeholders, including the C-suite.
- 1.5 Maintain backwards compatibility.



RFI Analysis Theme 2 | Alignment

Theme 2: Align the CSF with existing efforts by NIST and others.

- Subthemes: 2.1 Align the CSF with recent NIST efforts reflected in a variety of resources.
- 2.2 Make it easier to understand how the CSF can be used with other cybersecurity guidance; provide more mappings with the NIST National Online Informative References Program (OLIR) and Informative References.
- 2.3 Address the important role of governance in cybersecurity risk management, although there are several different approaches for doing so.
- 2.4 Improve alignment between the CSF and NIST privacy resources.
- 2.5 Engage with other federal agencies to ensure effective use of the CSF for policy, legal, and regulatory purposes.
- 2.6 Increase international collaboration and engagement, including alignment with the ISO 27000 series.

RFI Analysis Theme 3 | Guidance

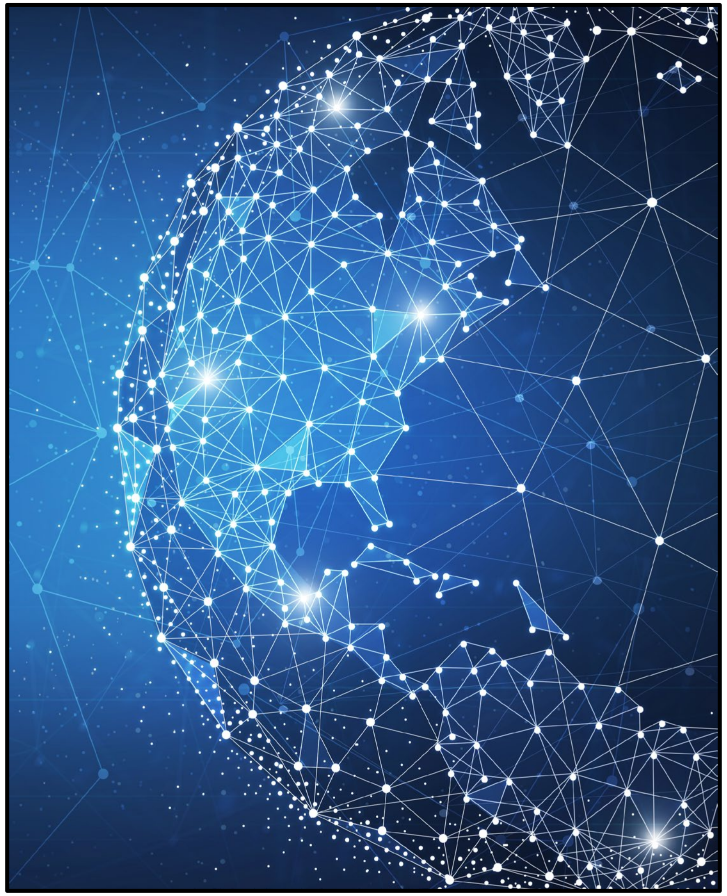
Theme 3: Offer more guidance for implementing the CSF.

- Subthemes: 3.1 Offer more guidance on CSF implementation.
- 3.2 Provide specific guidance on developing CSF profiles.

RFI Analysis Theme 4 | Technology

Theme 4: Ensure the CSF remains technology neutral but allows it to be readily applied to different technology issues – including new advances and practices.

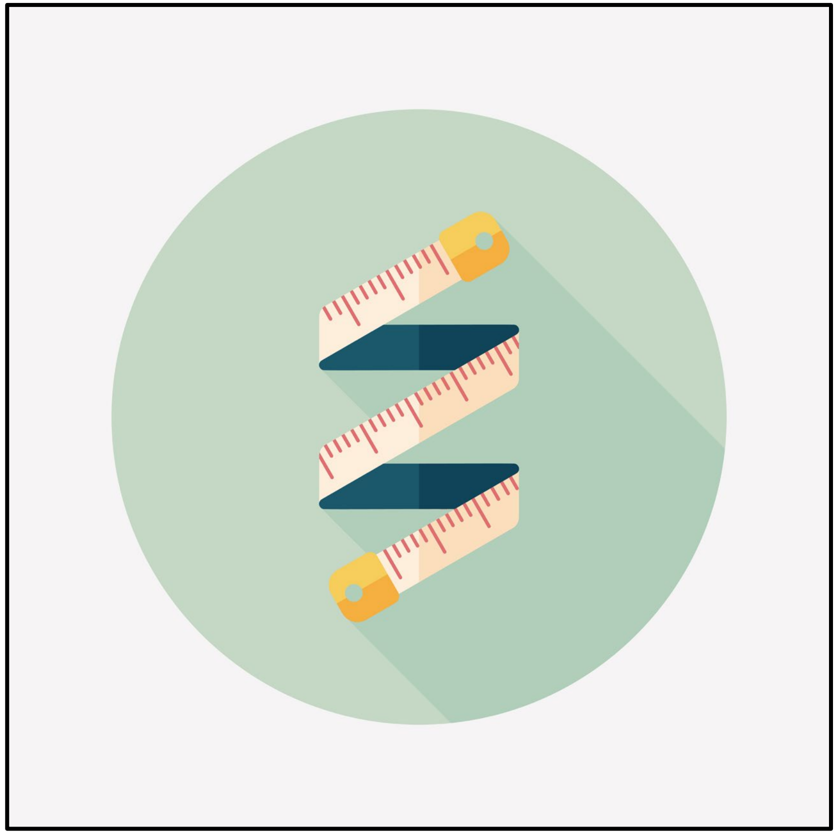
- Subthemes: 4.1 Ensure the CSF remains technology neutral while providing guidance on how it is used to address cybersecurity risks in IT, OT, and IoT.
- 4.2 Consider the importance of software security, either as part of the CSF or in conjunction with the CSF.
- 4.3 Ensure the CSF remains technology neutral yet can be applied to specific and emerging topics; such as cloud, hybrid work, and zero trust.



RFI Analysis Theme 5 | Measure

Theme 5: Emphasize the importance of measurement, metrics, and evaluation in using the CSF.

- Subthemes: 5.1 Consider and highlight how the CSF is used as an assessment tool, including when to consider additional guidance on assessment (for self, suppliers, products, and services).
- 5.2 Provide a means to measure CSF implementation.
- 5.3 Expand on (or, in contrast, remove) Tiers and include (or do not include) guidance on maturity models.



RFI Analysis Theme 6 | Supply Chain

Theme 6: Consider cybersecurity risks in supply chain in the CSF.

- Subthemes: 6.1 Address supply chain risks, either in the CSF or separately.

RFI Analysis Theme 7 | NIICS

- **Theme 7: Use the National Initiative for Improving Cybersecurity in Supply Chain (NIICS) to align practices and provide effective practices, guidance, and tools to bolster cybersecurity supply chain risk management.**
    - Subthemes: 7.1 Align cybersecurity supply chain risk management practices, including federal activities and resources.
    - 7.2 Offer more guidance on component inventories; such as software bill of materials and hardware bill of materials.
    - 7.3 Engage on open-source software security issues.
    - 7.4 Offer more guidance on supplier relationship management and contracts.
    - 7.5 There are opportunities for NIICS to research, analyze, and develop tools and techniques for better managing cybersecurity risks in supply chains.

CSF Update Next Steps

- **NIST will rely on significant stakeholder feedback to inform the update.**
  - Discussion will focus around the RFI themes
  - Direct engagement with stakeholders
  - Public workshops – in-person and virtual
  - Comment on CSF 2.0 draft
  - Continuing to seek and develop CSF resources, success stories, mappings to other frameworks and standards

Update on NIST CSF Resources

Recently published:

- **Ransomware***:* *Ransomware Risk Management: A Cybersecurity Framework Profile (NISTIR 8374)*
- **March White House Fact Sheet**: *Cybersecurity Framework Profile: White House Fact Sheet (by Seamless Transition)*

In draft:

- **PNT:** *Foundational PNT Profile: Applying the Cybersecurity Framework for the Responsible Use of Positioning, Navigation, and Timing (PNT) Services (NISTIR 8323 Rev. 1) (Draft) – comments open now*
- **Satellite Ground:** *Applying the Cybersecurity Framework to Assure Satellite Command and Control (NISTIR 8401) (draft)*
- **Hybrid Satellite Networks:** *Cybersecurity Profile for the Hybrid Satellite Networks (HSN) Cybersecurity (draft outline) – comments open now*
- **LNG (with DOE):** *Cybersecurity Framework Profile for Liquefied Natural Gas (draft)*
- **Elections:** *Cybersecurity Framework Election Infrastructure Profile (NISTIR 8310) (draft)*

Update on CSF International

- Translated into Japanese, Spanish, Portuguese, Arabic, Bulgarian, Polish, Indonesian, French, Ukrainian.
- Adapted into national cybersecurity policies, strategies, and requirements.
- Use cases identified in all regions.