National Institute of Standards and Technology
U.S. Department of Commerce

Applying the Cybersecurity Framework to the Space Eco System

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Why did we do this

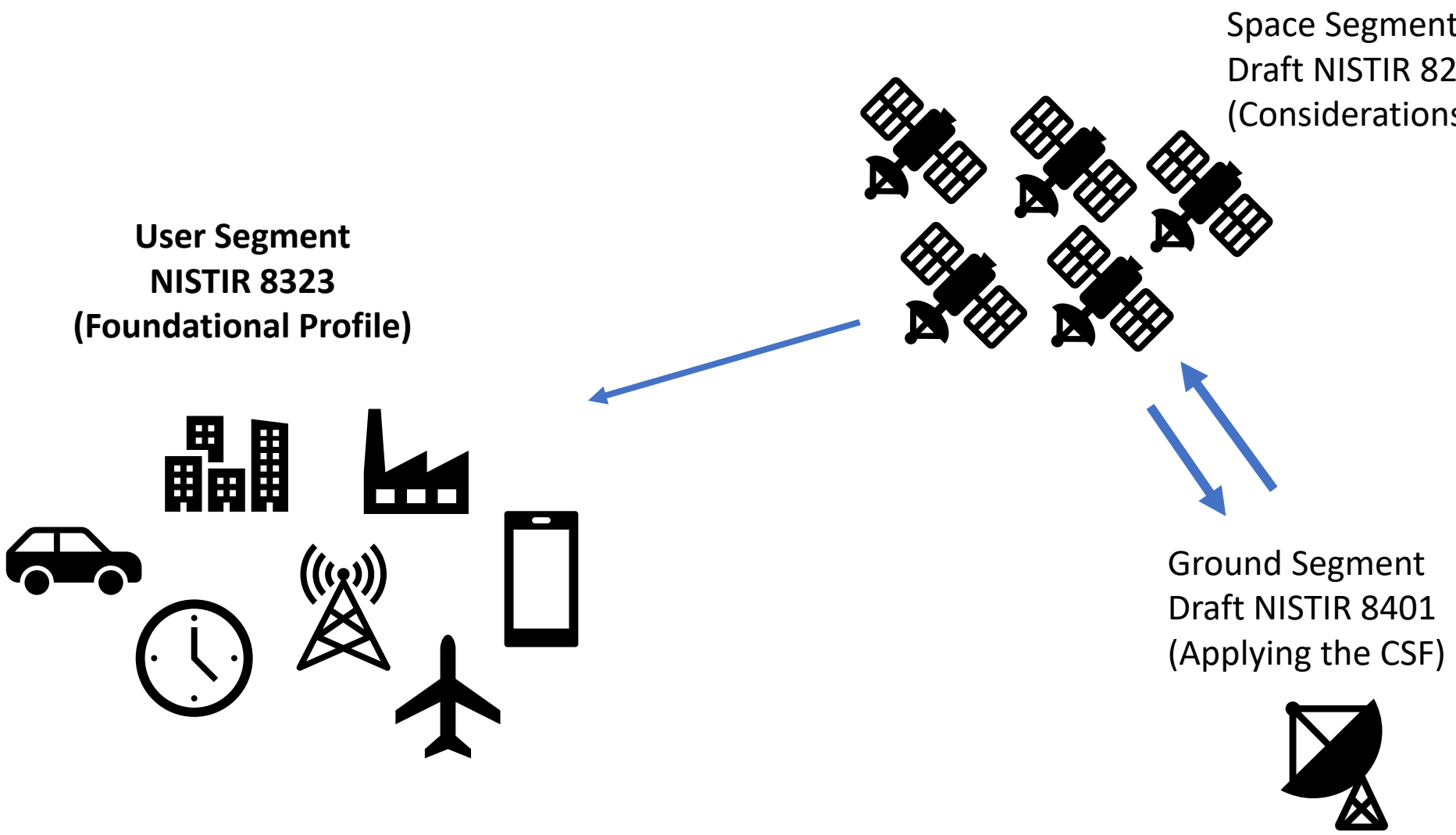
Executive Order (EO) 13905, *Strengthening National Resilience Through Responsible Use of Positioning, Navigation and Timing Services*

US Cybersecurity Strategy of 2019

EO

Interagency Agreement with the Department of Defense and Office of Space Commerce

Based on the CSF; Scoped intentionally



The CSF as the Base

- The Framework is voluntary,
- Based on existing standards, guidelines, and practices
- Used to manage and reduce cybersecurity risk.
- Helps organizations manage and reduce risks
- Fosters risk and cybersecurity management communications
  Created for the CI community as part of EO 14028.

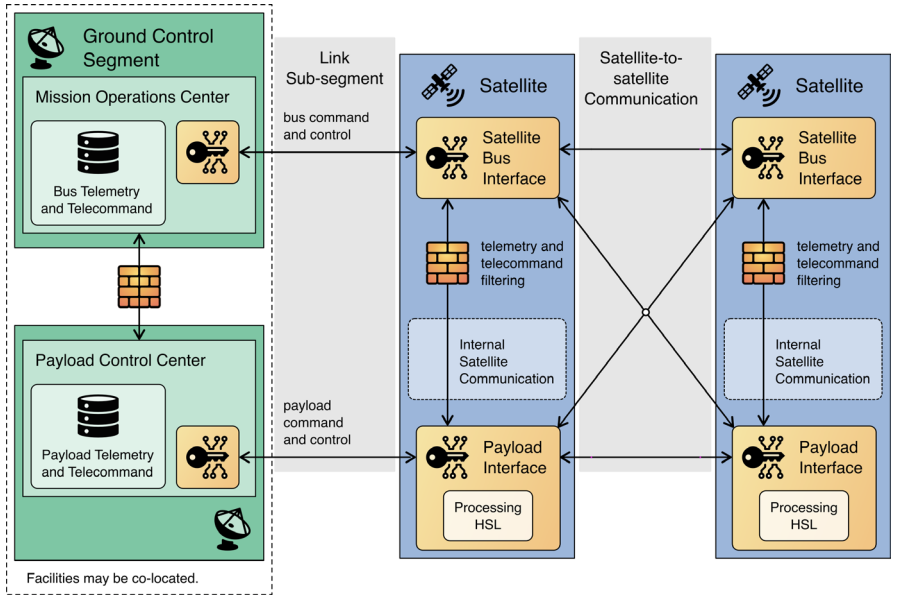
CSF – Going Deeper

Asset Management (ID.AM): The data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to organizational objectives and the organization's risk strategy.	ID.AM-1: Physical devices and systems within the organization are inventoried	· CIS CSC 1 · COBIT 5 BAI09.01, BAI09.02 · ISA 62443-2-1:2009 4.2.3.4 · ISA 62443-3-3:2013 SR 7.8 · ISO/IEC 27001:2013 A.8.1.1, A.8.1.2 · NIST SP 800-53 Rev. 4 CM-8, PM-5
	ID.AM-2: Software platforms and applications within the organization are inventoried	· CIS CSC 2 · COBIT 5 BAI09.01, BAI09.02, BAI09.05 · ISA 62443-2-1:2009 4.2.3.4 · ISA 62443-3-3:2013 SR 7.8 · ISO/IEC 27001:2013 A.8.1.1, A.8.1.2, A.12.5.1 · NIST SP 800-53 Rev. 4 CM-8, PM-5
	ID.AM-3: Organizational communication and data flows are mapped	· CIS CSC 12 · COBIT 5 DSS05.02 · ISA 62443-2-1:2009 4.2.3.4 · ISO/IEC 27001:2013 A.13.2.1, A.13.2.2 · NIST SP 800-53 Rev. 4 AC-4, CA-3, CA-9, PL-8
	ID.AM-4: External information systems are catalogued	· CIS CSC 12 · COBIT 5 APO02.02, APO10.04, DSS01.02 · ISO/IEC 27001:2013 A.11.2.6 · NIST SP 800-53 Rev. 4 AC-20, SA-9
	ID.AM-5: Resources (e.g., hardware, devices, data, time, personnel, and software) are prioritized based on their classification, criticality, and business value	· CIS CSC 13, 14 · COBIT 5 APO03.03, APO03.04, APO12.01, BAI04.02, BAI09.02 · ISA 62443-2-1:2009 4.2.3.6 · ISO/IEC 27001:2013 A.8.2.1 · NIST SP 800-53 Rev. 4 CP-2, RA-2, SA-14, SC-6

What is Recommended

Use the Framework to Apply Your-

- Context
- Risk Models
- Business Priorities
- Current Capabilities
- Risk Tolerances



What is coming?

Next Generation Cryptography

Supply Chain Management

Trusted Software

AR/VR/Metaverse

Next Gen Communications/Bandwidth

ML/AI

Quantum

The Combinatorial Effects of All of the Above