RMF used by DoD defined by

NIST 800-37 v2 - Risk Management Framework for Information Systems and Organizations: A System Life Cycle Approach for Security and Privacy

Preparation is the step not listed:

Step 1: Categorize/ Identify – Assets, boundaries, roles and responsibilities

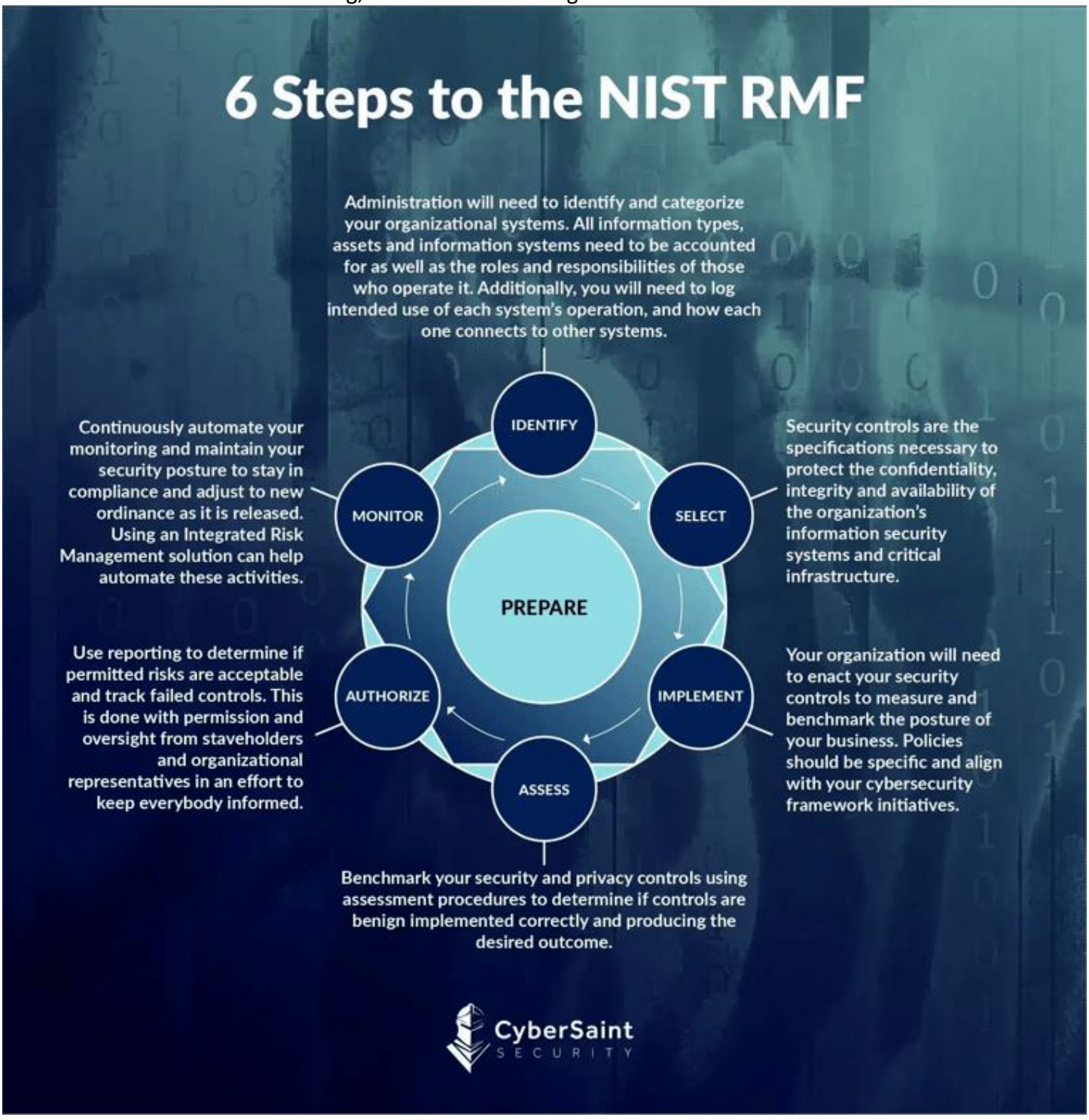
Step 2: Select – Security Controls to protect CIA triad

Step 3: Implement – Security Control to measure benchmarks, Policies to algin the cybersecurity frameworks

Step 4: Assess – Security Controls are implemented correctly

Step 5: Authorize and Step – Use reports for risk acceptance, track failed controls

6: Monitor – Continuous monitoring, automate monitoring



What is the Risk Management Framework?

- Flexible risk-based framework for managing cybersecurity risk throughout the system lifecycle
  - Used to manage Federal Gov't systems
  - 7 defined steps
- Leverages security and privacy controls from NIST SP 800-53
- Derived from the Federal Information Security Modernization Act (FISMA)

NIST SP 800-53B - Security and Privacy Controls for Information Systems and Organizations

Step 1 - Preparation is key

- Identify key risk management roles
  - Senior officials with defined responsibilities
- Establish risk management strategy
  - Risk assessments
  - Continuous monitoring
- Determine organizational risk tolerance
  - Established thresholds

PREPARATION IS KEY TO MANAGING RISK ACROSS THE ORGANIZATION

Step 2 - Categorize based on information types

- Information Types inform categorization
  - NIST SP 800-60 Volumes 1 & 2 (Mapping Guidelines, Information Types w/ provisional security impact level assignments)
- Determine adverse impact on confidentiality, integrity, and availability
  - FIPS-199 System Categorization

SCOPING OF APPROPRIATE PROTECTIONS IS DRIVEN BY DATA TYPES

FIPS PUB 199 – (FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION)
Standards for Security Categorization of Federal Information and Information Systems

FIPS PUB 200 - Minimum Security Requirements for Federal Information and Information Systems

Step 3 - Select the appropriate security/privacy controls

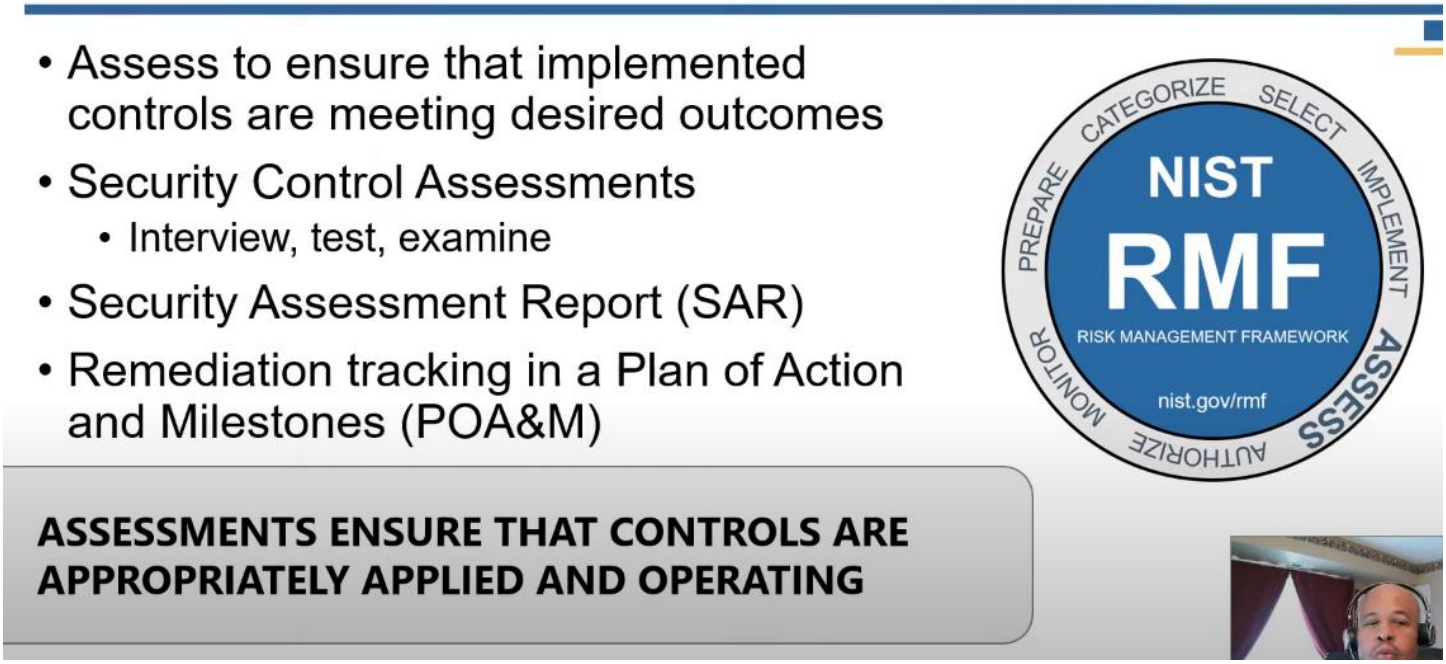
- Control selection is based on risk, informed by Security Categorization
  - NIST SP 800-53 Security and Privacy Controls
  - Low, Moderate, High Baselines
- Additional considerations
  - Privacy Impact Assessment (PIA)
  - Business Impact Analysis (BIA)

SECURITY AND PRIVACY CONTROLS SELECTED COMMENSURATE WITH IDENTIFIED RISK

NIST SP 800-53B - Security and Privacy Controls for Information Systems and Organizations

SSP - Information System Security Plan
NIST SP 800-18 Rev. 1 - **Guide for Developing Security Plans for Federal Information Systems**
FIPS 200 under SYSTEM SECURITY PLAN from NIST SP 800-18 Rev. 1
CNSSI 4009-2015 under system security plan (SSP) from NIST SP 800-18 Rev. 1
NIST SP 800-137 under System Security Plan from FIPS 200
NIST SP 800-30 Rev. 1 (Guide for Conducting Risk Assessments) under System Security Plan
NIST SP 800-39 (Managing Information Security Risk) under System Security Plan
NISTIR 8170 (Approaches for Fed Agencies to Use the Cybersecurity Framework) under System Security Plan
CNSSI 4009-2015 - Committee on National Security Systems (CNSS) Glossary

CMP - Configuration Management Plan
NIST SP 800-128 - Guide for Security-Focused Configuration Management of Information Systems



Security Control Assessment
NIST SP 800-53A - Assessing Security and Privacy Controls in Information Systems and Organizations

SAR - Security Assessment Report
The SAR describes the risks associated with the vulnerabilities identified during [System Name]'s security assessment and also serves as the risk summary report as referenced in NIST SP 800-37 Revision 1, Guide for Applying the Risk Management Framework to Federal Information Systems.

POA&M - Plan of Action and Milestones

Step 6 - Authorize the system to operate

- Senior official determines if residual security and privacy risks are acceptable
  - Reviews the authorization package (e.g., SSP, SAR, POA&M)
- System may be Authorized to Operate (ATO) by the Authorizing Official (AO)

SYSTEM ATO IS A MAJOR MILESTONE BUT NOT THE END OF THE JOURNEY

System is documented
Security controls have been implemented
Tested and validated the controls are in place
Senior official to authorize the system
After reviewing the SSP, SAR and POAM you make a final determination whether the system is

- ATO - Authorization to Operate
- IATO - Interim Authorization to Operate
- IATT - Interim Authorization to Test
- DATO - Denial of Authorization to Operate

Step 7 - Monitor to ensure acceptable security posture

- After ATO, continuous monitoring ensures the security and privacy posture is maintained
- Continuous Monitoring Plan driven by a defined strategy
  - Vulnerability scanning, penetration testing, POA&M updates
- Supports ongoing authorizations

MONTIORING ENSURES THE CONTINUED ADEQUACY OF IMPLEMENTED CONTROLS