North American Transmission FORUM

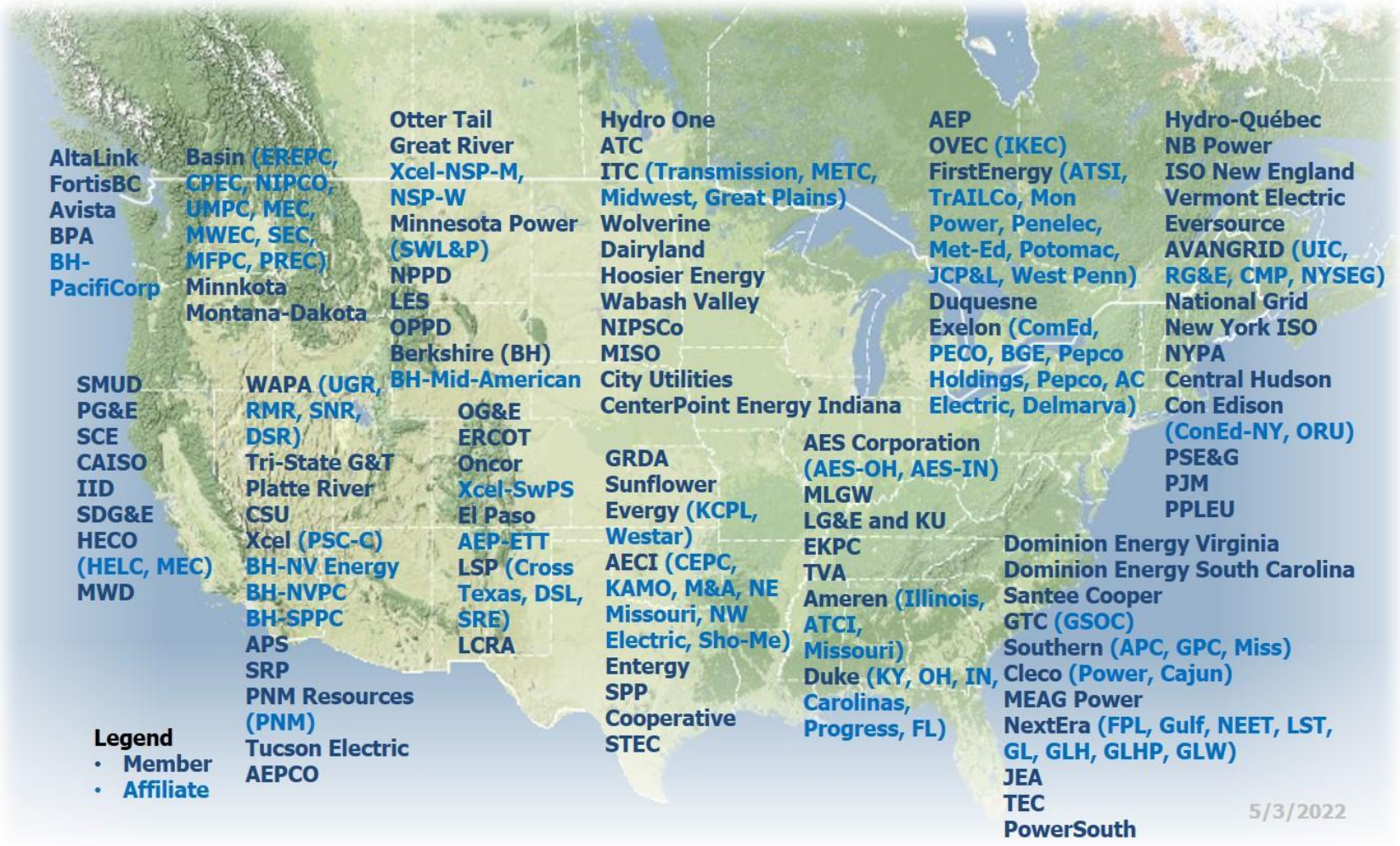
Community *Confidentiality* *Candor* *Commitment*

NATF Resources Available to Industry for Optimizing Supply Chain Risk Management

Ken Keels
Director, Initiatives

David James Earley
Program Manager,
Cybersecurity & Supply Chain

NATF Overview



94 members

89 affiliates

Member Types

IOUs

Federal/Provincial Cooperatives

State/Municipal

ISOs/RTOs

Coverage (US/Canada)

~85% miles 100 kV+

~90% net peak demand

NATF Mission, Vision, Approach

Mission

- **Promote excellence**

Vision

- **Continuously improve**

Approach

- **Timely sharing**
- **Constructive peer challenge**
- **Superior practices**

Objectives of NATF Supply Chain Initiatives

Security

Identify and address security risks introduced via supply chain

Industry Convergence

Achieve industry and supplier convergence on an approach (NATF Model) to facilitate assessment of suppliers' security posture

Efficiency and Effectiveness

Convergence on common approaches to achieve reasonable assurance of suppliers' security practices

Compliance

Implementation guidance to meet supply chain related CIP standards

Don’t Reinvent the Wheel!

Conducted in open collaboration

- Industry
- Suppliers
- Third-party assessors
- Solution providers

Leverage existing frameworks

- NIST
- IEC/ISO
- SOC

Tailor to needs of electric industry

- Scalable as to size/organization type
- Usable by related industries/infrastructures

Development of the Supply Chain Security Assessment Model

- To achieve these objectives, NATF led development of a model, criteria, and questionnaire on which to build convergence
- Developed in collaboration with industry, suppliers, third-party assessors – the “Industry Organizations Team”

NATF-led Industry Organizations Team

Organizations, Forums and Working Groups

- AGA
- CEA
- EEI
- LPPC
- APPA
- TAPS
- NAGF
- NAESB
- ConEd Working Group
- NERC CCC/RSTC/SCWG
- NRECA

Suppliers

- Hitachi ABB Power Grids
- GE Grid Software Solutions
- OSI
- Siemens Industry, Inc.
- Schneider Electric
- Schweitzer Engineering
- Dell

Third-Party Assessors

- Ernst & Young
- KPMG LLP
- PWC
- Deloitte

Organizations providing support products or services

- EPRI
- Fortress/A2V
- KY3P
- UL

NATF Resources Available to Industry

NATF Supply Chain Security Assessment Model

- NATF Supply Chain Security Assessment Criteria
- Energy Sector Supply Chain Risk Questionnaire
- NATF Criteria and Questionnaire Revision Process

NATF CIP-013 Implementation Guidance-Independent Assessments of Vendors (ERO Endorsed)

NATF CIP-013 Implementation Guidance-Supply Chain Risk Management Plans (ERO Endorsed)

Additional Resources from suppliers, third-party assessors, and solution providers are available on the NATF Public Website

Supply Chain Security Assessment Model

NATF Supply Chain Security Criteria V3.0

Provides a basis for measuring a supplier's security posture/practices (i.e., a "best practices" list)

Open Distribution

			Required by NERC Reliability Standards?		Mapping to Existing Frameworks: NIST							CIS Controls v7.1	IEC 62443	ISO 27001
Criteria Identification Number	Risk Area	NATF Supply Chain Security Criteria	Good security practices; exceeds NERC CIP Standards' requirements	CIP-013 requirement or supports other standards	Governance and all criteria NIST SP 800-161, 800-53	Access NIST SP 1800-2	Asset Chg Config - NIST SP 1800-5	Info Protection - NIST SP 800-171	Incident Response - NIST SP 800-184, 800-150, 800-61	Vulnerability Mgmt - NIST SP 800-64, 800-160, 800-82, 800-115, 800-125	Cybersecurity Framework Version 1.1			List other versions of ISO 27001.xxxx, 2700 if applicable
1	Access Control and Mgmt	Supplier establishes and maintains an identity and access management program that ensures sustainable, secure product manufacturing/development		R1.2.3 R1.2.6	PR.AC 1-5 Rev. 4 AC-1-6 IA Family AC-16-20 CM-7 PE-2-6 PE-9 SC-7						PR.AC-1 PR.AC-4 PR.AC-5 PR.AC-6 PR.AC-7 PR.PT-3	CSC 14: Controlled Access Based on the Need to Know CSC 16: Account Monitoring and Control	2.4 SP.03.01 2.4 SP.03.07 2.4 SP.03.08	A.9.1.1 A.9.4.1
2	Access Control and Mgmt	Supplier establishes and maintains a program that ensures storage security at supplier's site (e.g. chain of custody)	x		PR.AC-4 Rev. 4 AC-16 MP-4						PR.AC-1 PR.AC-4 PR.AC-5 PR.AC-6 PR.AC-7 PR.PT-3	CSC 14: Controlled Access Based on the Need to Know CSC 16: Account Monitoring and Control	2.4 SP.03.10	A.15.1.2
3	Access Control and Mgmt	Supplier's personnel vetting process allows supplier to share background check criteria and results with entity for confirmation of process or verification of sampled employees	x	Supports CIP-004 R3.4										7.1.1
		Supplier has a process that requires supplier to have background checks (e.g. personnel risk assessments) conducted for all of its employees and contractors. Please provide a list of any exempted employees or ntry of employment (i.e. by country) r to conduct background checks at not require at least every 7 years, plier's process requires	x	Supports CIP-004 R3	PR.AC-1 Rev. 4 PS-3									7.1.1
					PR.AC-4 Rev. 4									

Maps criteria to multiple security frameworks (e.g., ISO, IEC, NIST…)

Developed by NATF-led team of industry SMEs; Updated with input from industry, suppliers, third-party assessors, ERO, and FERC

NATF Supply Chain Security Criteria v3.0

63 criteria for supplier security practices within 6 risk areas:

- ✓Asset control and management
- ✓Asset change and configuration management
- ✓Governance
- ✓Incident response
- ✓Information protection
- ✓Vulnerability management

24 organizational information considerations

Posted on https://www.natf.net/industry-initiatives/supply-chain-industry-coordination

Energy Sector Supply Chain Risk Questionnaire v3.0

Energy Sector Supply Chain Risk Questionnaire - Formatted
Open Distribution for Supply Chain Materials

Version 3.0 | Published 06/06/2022

Cybersecurity Program Management		Supplier Corporate Systems	Supplier Product	Product Development Systems	Additional Information	Guidance	NATF Criteria	Primary or Supporting for NATF Criteria
CSPM-01	Do you have a business continuity plan (BCP) to support ongoing operations of your systems and scope of equipment and/or services provided to the utility?						21	Primary (21) Supports (44)
CSPM-02	Are all components of the BCP reviewed at least annually and updated as needed to reflect change?							Supports (21)
CSPM-03	Has your BCP been tested in the last year?							
CSPM-04	Does your organization have a data privacy policy that applies to your computing systems?							Supports (38)
CSPM-05	Have overall system and/or application architecture diagrams, including a full description of the data communications architecture, been developed and documented for the product(s) and/or service(s) being purchased?							Supports (56)
CSPM-06	Do you have a media handling process (that is documented and currently implemented) including end-of-life, repurposing, and data sanitization procedures?							Primary (40) Supports (2)
	…n (e.g., …ta,							Primary (46)
	…u have …nd …n.							Primary (24)
	…onment,							

key supporting questions are identified

Developed by NATF-led team of industry SMEs; Updated with input from industry, suppliers, third-party assessors, ERO, and FERC

Provides a consistent set of questions that support the NATF Criteria and help obtain more-granular information on a supplier's security risk performance

Energy Sector Supply Chain Risk Questionnaire

221 questions plus 19 general information questions in 12 categories:

- ✓Company Overview
- ✓Identity & Access Management
- ✓Change & Configuration Management
- ✓Mobile Devices & Application
- ✓Cybersecurity Program Management
- ✓Risk Management
- ✓Cybersecurity Tools & Applications
- ✓Supply Chain & External Dependencies Management
- ✓Data Protection
- ✓Vulnerability Management
- ✓Event & Incident Response
- ✓Workforce Management

Questions for 3 Areas:

- ✓Supplier Corporate Systems
- ✓Supplier Product
- ✓Supplier Development System

Posted on https://www.natf.net/industry-initiatives/supply-chain-industry-coordination

Revision Process for Criteria and Questionnaire

Provides for an annual cycle for industry to modify or update the Criteria and Questionnaire

- Based on inputs from industry including utilities, suppliers, assessors, regulators, and other industry organizations

Intake of industry comments → **Consideration of comments** → **Modifications posted for comment** → **Comments resolved; modified Criteria or Questionnaire posted**

NATF Board Approved Updated Versions on June 3, 2022

- Inclusion of ERO review in review process to maintain ERO Endorsement of the NATF CIP-013 Implementation Guidance documents
- Addition of three new criteria and two new questions
- Removal of four duplicative questions
- Minor changes include additional notes and terminology updates for clarity

Prior versions are also posted for tracking ease

ERO Endorsed Implementation Guidance: Using Independent Assessments of Vendors

Describes how to leverage the work of others

- R1: How to incorporate reliance on independent assessments into supply chain risk management plans
- R2: How to document use of independent assessments when implementing supply chain risk management plan

Incorporates, by reference, NATF criteria, questionnaire, and associated revision process

Providing assurance of alignment between security and compliance

ERO Endorsed Implementation Guidance: Supply Chain Risk Management Plans

Describes how to use the NATF Supply Chain Security Assessment Model to develop a supply chain cyber security risk management plan(s)

- **Focus is on security**
- Addresses the six risk areas identified in Requirement R1, Part 1.2

Incorporates, by reference, NATF model, criteria, questionnaire, and associated revision process

Providing assurance of alignment between security and compliance

Third-Party Assessments

Why obtain a Third-Party Assessment?

A third-party assessment conducted by a qualified assessor will:

- Provide an objective assessment
- Provide you with a high level of assurance the information the supplier provides you is accurate
- Reduce the amount of review your organization needs to conduct
- Provide evidence for compliance

Common Third-Party Assessment Options

ISO 2700X

- Executed by independent third-party
- Provides summary level of results
- May or may not include testing of controls
- IT and organizational security focused

SOC2 / SOC for Supply Chain

- Performed by independent third-party
- Provides details of controls tested and results
- Gaps are also disclosed

IEC 62443

- Independent certification process
- Discrete security levels
- Applicability to asset owners, service providers, and product suppliers
- Focus on OT infrastructure

Other

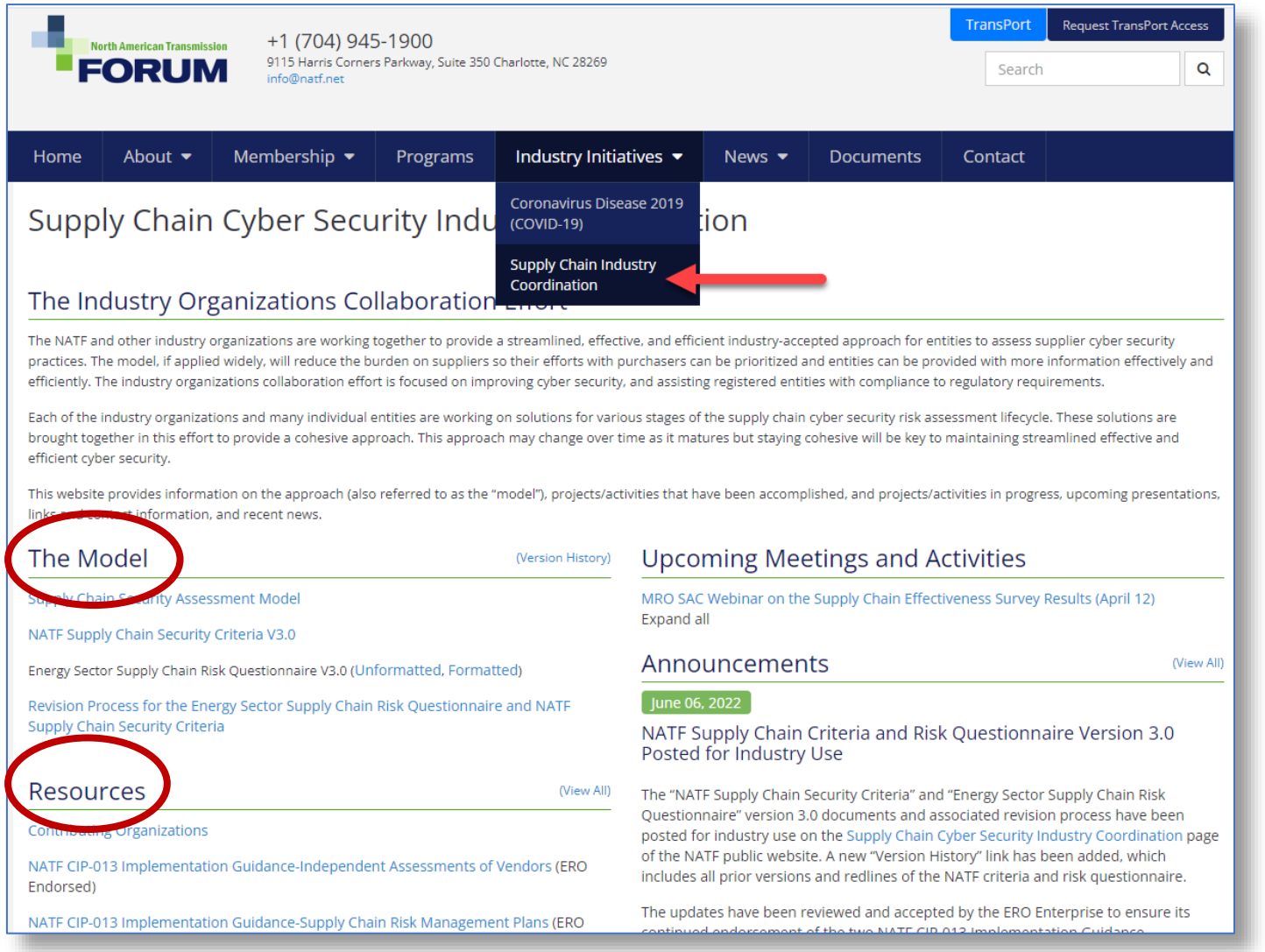
- Penetration tests, risk assessments, etc.
- May be independent or internal
- Understand what framework, if any, is being referenced

When Using Third-Party Assessments

From ERO-endorsed NATF CIP-013 implementation guidance

- Evaluate and confirm third-party's qualifications and framework used
- Review and evaluate methodology and scope of the assessment
- Review and evaluate results of assessment
- Document your evaluation of third-party's qualifications and the methodology and scope of the review, and your conclusions from the assessment

Where to find resources: the NATF Public Website



Available at:

https://www.natf.net/industry-initiatives/supply-chain-industry-coordination

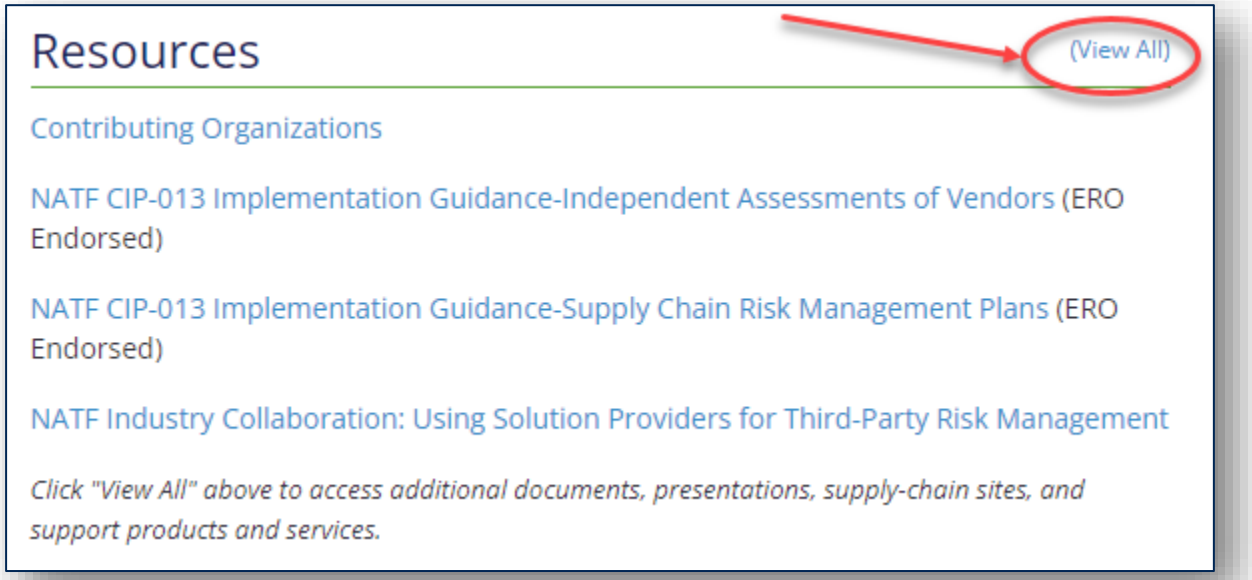
Additional Resources (in “View All”)

Resource Types

- Documents
- Presentations
- Supply Chain Sites
- Support Products and Services

Provided by

- Industry Entities
- Suppliers
- Third-Party Assessors
- Solution Providers
- Industry Organization Team Members
- Other Industry Sector Organizations



Additional Resources (examples)

Documents

- APPA's Cyber Supply Chain Risk Management
- EEI Model Procurement Contract Language
- Understanding Third-Party Assessment
- Using Solution Providers for Third Party Risk Management
- Advancing Supply Chain Security in Oil and Gas: An Industry Analysis

Presentations

- Large Entity Use Case Webinar (Parts 1 & 2)
- Industry Organizations Aligned Approach for Supply Chain Cyber Security
- Securing Your Supply Chain – Designing and Implementing Supply Chain Security Programs (APPA)
- Various technical solution provider presentations (e.g., EPRI, Network Interface Cards)

Value of Convergence on NATF Model

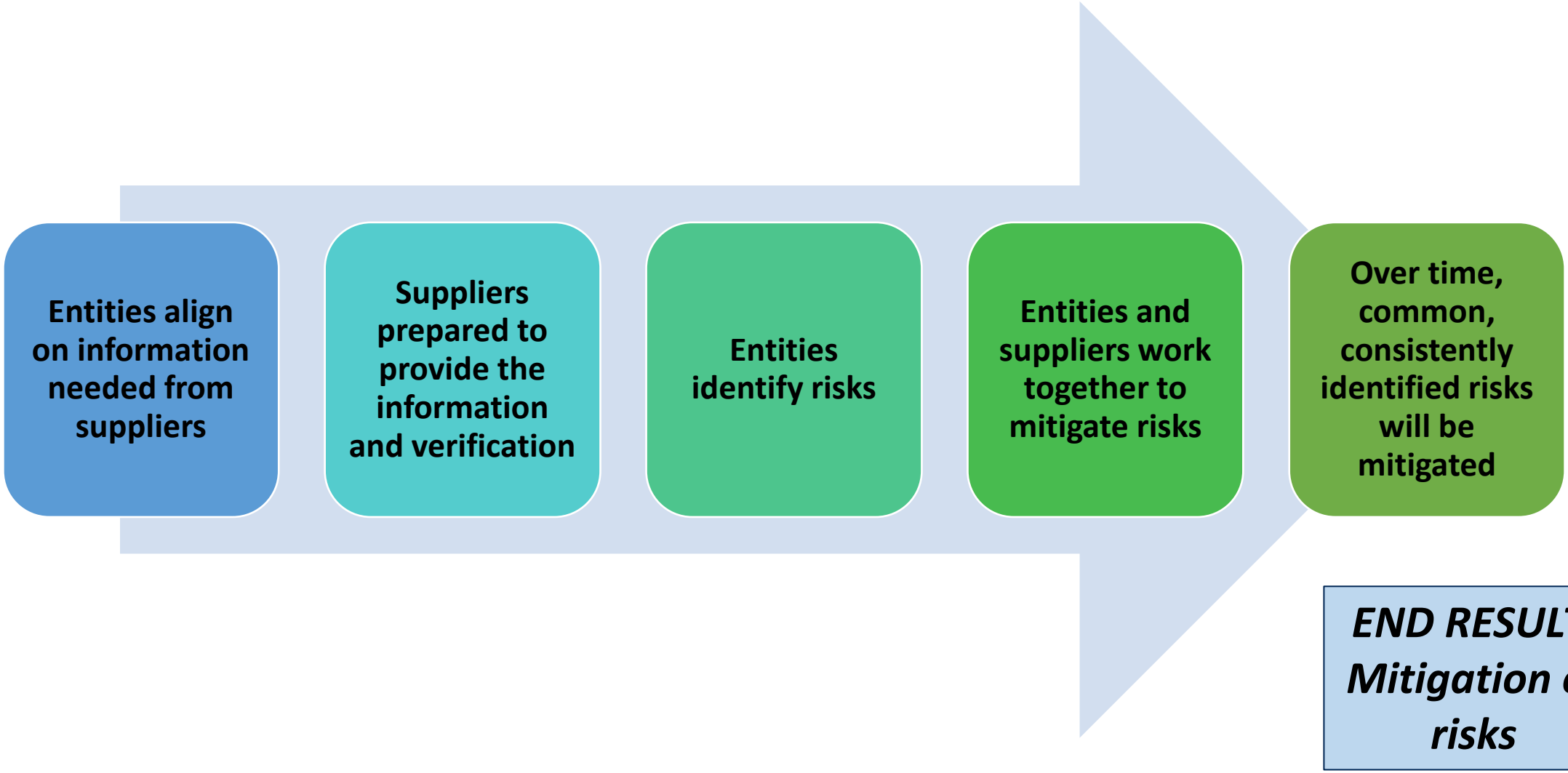
Effective and Efficient for Industry

- Convergence on information needed to evaluate risk
- Relevant and manageable amount of data

Effective and Efficient for Suppliers

- Information consistency provides for faster supplier response
- Enables use of existing tools/frameworks
  - Criteria are mapped to multiple security frameworks (e.g., NIST, ISO 27001, IEC 62443, and SOC)

Value of Convergence



END RESULT: Mitigation of risks

Building Industry Consensus

Entities

- Request responses to the criteria or questionnaire **in their entirety** from suppliers
- **Inform NATF** if additional questions are needed to the criteria or questionnaire
- **Use a risk-based approach** to determine which responses to use in the risk assessment *(e.g., all or a partial set of either the criteria or questionnaire)*

Suppliers

- Completed responses and any third-party assessments/certifications **at the ready**

Regulators

- Continued support of NATF CIP-013 **implementation guidance** documents
- **Support/recognition/acceptance** of a possible supplier certification

Questions