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# NIEM ENGAGEMENT PROCESS

USER GUIDE  
VERSION 2.0

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# 1. Introduction

## 1.1. Overview

As interest in the National Information Exchange Model (NIEM) continues to grow across the federal, state, local, international and private sectors, a structured framework is needed to help organizations assess the value of applying NIEM to their information sharing and exchange activities and to develop a NIEM adoption strategy based on their specific capabilities and needs (business and technical). To address this need, the NIEM PMO developed the NIEM Engagement Process (NEP).

The NEP was initially piloted with two agencies that have expressed commitment to using NIEM through the CIO Council's 2010 "Agency Information Exchange Function Standards Evaluation: Adoption and Use of NIEM". The NIEM PMO facilitated the pilots and guided participants through all activities needed to complete the NEP for each pilot. The NIEM PMO has leveraged the lessons learned and feedback obtained during the pilots to enhance the NEP, so that organizations (currently involved in NIEM or potential adopters) can conduct the NEP as a self-service process to meet individual needs and priorities. After the pilots completed, the NIEM PMO is available to provide guidance and support to any organization carrying out the self-service process.

## 1.2. Scope

This User Guide provides detailed guidance for anyone carrying out the NEP. This User Guide gives an overview of the NEP, describes the steps for conducting the process, explains how to use the corresponding tools and templates, and outlines a path for successful NIEM adoption once the process has been completed.

## 1.3. Target Audience

This User Guide should be referenced by anyone carrying out the NEP to assist with completing each of the proposed steps described.

## 2. NEP Overview

### 2.1. Scope

The NEP provides a structured framework for organizations to explore the use of NIEM for their information sharing and exchange activities. The process is intended to help an organization evaluate the potential costs and benefits of NIEM and develop a targeted NIEM adoption strategy based on its information sharing capabilities and needs. The NEP will also provide organizations with the opportunity to perform self-evaluation of information sharing and exchange activities to develop a business case for adopting the NIEM program. The flexibility of the process enables it to be applied to a wide range of organizations with varying capabilities, needs, and technical environments.

Any organization that is interested in adopting NIEM may complete the NEP to obtain an understanding of how NIEM can add value to their information sharing and exchange activities and determine the steps they would need to take to implement NIEM successfully. The NEP evaluates NIEM adoption for individual programs. The organization should select one or more programs for assessment and apply the process separately to each program.

### 2.2. Roles

Role	Description
<b>Facilitator</b>	An individual or group that carries out the NEP on behalf of an organization. Facilitators may be representatives of the NIEM PMO or designated individuals within the organization being assessed. The facilitator should have at least a basic understanding of NIEM and be familiar with the NIEM case studies available on NIEM.gov.
<b>Sponsor</b>	A representative of the organization being assessed (typically an executive or program manager) that oversees the NEP for an individual program, provides feedback, and validates the results of the process.
<b>Functional/Business Owner</b>	A member of the organization being assessed (e.g., Program Manager) who oversees, has in depth knowledge of, or has continuous collaboration with the business and/or functional operations of the information sharing and exchange activities.
<b>Technical Architect/Technical Expert</b>	A member of the organization being assessed (e.g., Software Architect, Data Architect) who oversees, has in depth knowledge of, or has continuous collaboration with technical operations of the information sharing and exchange activities.

## 2.3. Methodology/Approach

The NEP is comprised of a series of steps designed to be easily repeatable and reusable. These steps guide the facilitator through a standardized methodology for gathering information about the organization’s information sharing and exchange activities, assessing the readiness of the organization to adopt NIEM, analyzing potential costs, and developing a roadmap for NIEM adoption.

The process is grounded in the NIEM Core Capabilities document, which defines a standard set of key indicators for successful NIEM adoption. These indicators provide a consistent baseline for assessing NIEM readiness and developing a NIEM adoption strategy. An accompanying set of tools and templates facilitates the execution of the process.

The NEP has been designed so that organizations are not required to complete each of the recommended steps. Each step can be tailored to the needs and priorities of the organization being assessed. Each of the templates and tools can be used to assess the overarching enterprise or down to a specific exchange activity. This methodology/approach has been designed so that if an organization already has adopted NIEM for an exchange activity yet looking to expand, one or more of the steps may not be needed in order to develop a timeline for adoption.

The graphic below illustrates the relationship of the tools and templates to the NIEM Engagement Process.

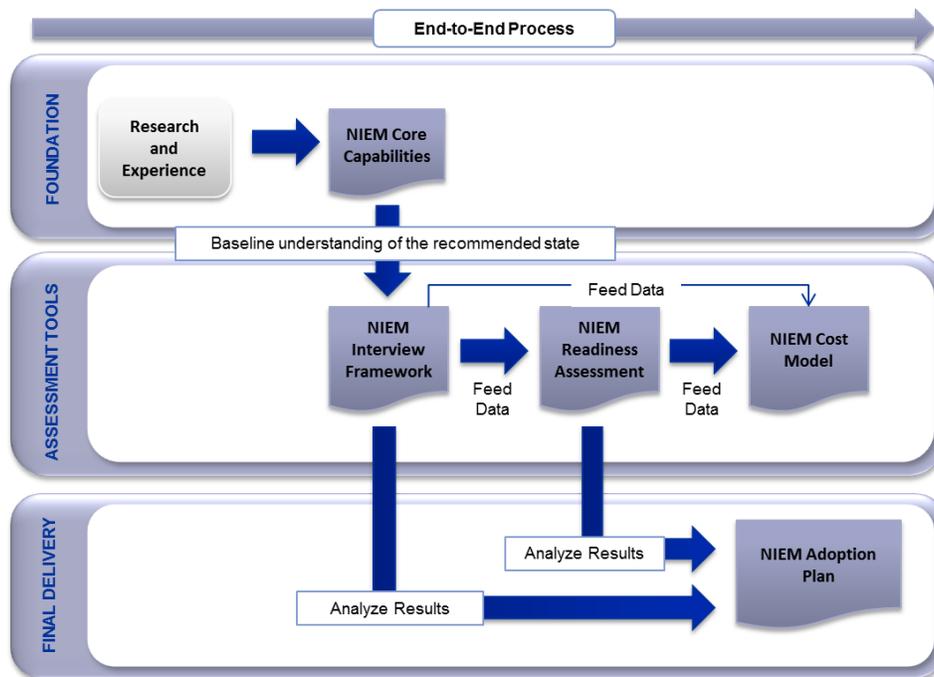


Figure 2.3.1 - NEP Tools and Templates Process Flow

## 2.4. Documents

The following documents, tools, and templates should be used to complete the NEP. The purpose and intended audience for each document are provided below.

Document	Purpose	Audience
<b>User Guide</b>	Provides instructions and guidance for facilitators performing the NEP. Gives background information for the facilitator to understand the purpose and objectives of the NEP.	Facilitators
<b>Core Capabilities</b>	Describes the critical elements recommended for successful NIEM adoption and lays the foundation for the NEP.	Facilitators
<b>Interview Framework</b>	Guides the facilitator in researching the organization's information sharing and exchange activities and conducting stakeholder interviews. Interview and research results are used to complete the <b>NIEM Readiness Assessment</b> and the <b>Cost Model</b> .	Facilitators
<b>Interview Framework</b> (Data Collection Tool)	Provides participants with a complete structure of questions to assist in the evaluation of how and why different aspects of information sharing and exchange activities are designed for their organization.	Functional/Business Owner Technical Architect/Technical Expert
<b>NIEM Readiness Assessment Tool</b>	Defines a framework for measuring the organization against the Core Capabilities. Once completed, the <b>NIEM Readiness Assessment</b> provides a visual scorecard representation of the NIEM-readiness of a program.	Facilitators
<b>Cost Model</b>	Tool for analyzing the quantitative costs and benefits of NIEM adoption.	Facilitators
<b>Road to NIEM Adoption Template</b>	This document provides a proposed timeline for NIEM adoption. The preparation, adoption and continuous engagement of stakeholders are defined as a foundation plan for adopting NIEM processes.	Sponsors

### 3. Executing the NEP

The steps for completing the NEP are outlined below. Each of these steps will be described in subsequent sections of this document and summarized in Appendix A.

**Note:** All duration times listed are subject to change depending on the priorities and size of the information sharing and exchange activities being assessed.

1. **Perform Research**
2. **Conduct Stakeholder Interviews**
3. **Complete NIEM Readiness Assessment**
4. **Quantify and Qualify the Value of NIEM**
5. **Adoption Planning**

#### 3.1. Perform Research

##### *Duration*

Two weeks

##### *Key Activities*

1. Conduct comprehensive research regarding the program's mission priorities and current information sharing and exchange activities. Performing thorough research is critical, as it will enable the facilitator to engage in targeted discussions during stakeholder interviews (*step 3.2*). Together, the information gathered during this initial research and the stakeholder interviews will enable the facilitator to complete the **NIEM Readiness Assessment** (*step 3.3*) and **Cost Model** (*step 3.4*).

Guidelines for conducting research, including the types of materials to be reviewed, and research objectives can be found in the **Interview Framework**.

2. If appropriate, note any additional programs that have not yet been targeted for assessment but could potentially benefit from NIEM (future implementers of NIEM conformant exchange activity).

##### *Tools and Templates*

Interview Framework

## *Expected Outputs*

### **Research Notes**

The research notes should be used by the facilitator to prepare for stakeholder interviews. After stakeholder interviews have been completed, the research notes are compiled with interview responses in the **Data Collection Tool** to then determine indicator ratings for populating the **NIEM Readiness Assessment** (*step 3.3*) and **NIEM Cost Model** (*step 3.4*).

## 3.2. Conduct Stakeholder Interviews

### *Duration*

Four weeks

### *Key Activities*

1. Hold interviews with the functional/business owners, technical architect/technical expert, program points of contact (POCs), such as architects or program-level management, all identified by the sponsor. Each interview is at least a 60 minute guided discussion exploring the organization's information sharing and exchange activities with respect to the Core Capability areas. During the interview, the facilitator should draw upon their initial research to discuss both current and potential information exchange(s) with the POC. The interviews should provide the facilitator with all remaining information needed to complete the **NIEM Readiness Assessment** (*step 3.3*) and **NIEM Cost Model** (*step 3.4*).

Guidelines for conducting stakeholder interviews, including interview duration and discussion questions, can be found in the **NIEM Interview Framework**. The **NIEM Interview Framework** questions are designed to elicit the information needed to complete the **NIEM Readiness Assessment** and **NIEM Cost Model**, but the facilitator should be prepared to ask additional, more targeted questions as needed.

### *Tools and Templates*

Interview Framework

### *Expected Outputs*

#### **Interview Responses**

The interview responses, combined with the initial research, should provide the facilitator with all the information needed to complete the **NIEM Readiness Assessment** (*step 3.3*) and **NIEM Cost Model** (*step 3.4*).

### 3.3. Complete NIEM Readiness Assessment

#### *Duration*

One week

#### *Key Activities*

1. Compile the interview results and initial research to complete the **NIEM Readiness Assessment**.

The tool measures the organization's readiness to adopt NIEM by comparing the organization's current information sharing and exchange activities with the recommended state for each of the Core Capability indicators. The results of the assessment are summarized in a scorecard generated by the tool.

The assessment pinpoints specific areas where the organization is well prepared or requires development in order to adopt the NIEM framework.

#### *Tools and Templates*

NIEM Readiness Assessment Tool

#### *Expected Outputs*

##### **Completed NIEM Readiness Assessment**

The **NIEM Readiness Assessment** establishes a baseline understanding of the organization's current and desired future state of information sharing and enables the facilitator to develop a tactical adoption plan and areas of improvement for NIEM adoption.

### 3.4. Quantify and Qualify the Value of NIEM

#### *Duration*

Three weeks

#### *Key Activities*

1. Complete the **NIEM Cost Model** by inputting cost variables, values from the **NIEM Readiness Assessment**, and other data gathered through stakeholder interviews and research. The **NIEM Cost Model** compares the potential quantitative costs and benefits of using NIEM vs. custom exchange for information sharing and exchange over a four year period, based on the nature of the planned information exchange(s) and the NIEM readiness of the organization.
2. Define performance metrics for the exchange. The facilitator and the organization should collaboratively identify specific items that can be assessed over time to measure the success of the exchange toward meeting business goals and mission objectives. After defining the

performance metrics, establish a baseline current state and goal for each metric. Organizations will be able to interact and follow-up with the NIEM PMO for future checkpoints and updates on status of the implementation.

## *Tools and Templates*

NIEM Cost Model

### *Expected Outputs*

- **Completed NIEM Cost Model**

The facilitator evaluates the generated estimates, along with potential qualitative costs, to determine whether NIEM would offer a good value proposition to the organization and to develop a NIEM adoption plan.

- **Performance Metrics**

After the **NIEM Engagement Process** has been completed, the organization can use generated metrics from the **NIEM Cost Model** to track progress toward meeting information sharing goals for the exchange.

## 3.5. Adoption Plan

### *Duration*

Two weeks

### *Key Activities*

1. Create a roadmap that provides an overall NIEM adoption recommendation.
  - a. Analyze the results of the **NIEM Cost Model**, **NIEM Readiness Assessment**, and other research to create a summary of key findings. Key findings include a brief research summary, the results of the **NIEM Readiness Assessment**, and the NIEM value proposition, including potential qualitative and quantitative costs and benefits. As appropriate, include steps that the organization may take to achieve the recommended states for the Core Capability indicators.
  - b. Based on analysis of key findings, develop a recommendation on whether NIEM offers a good value proposition and should be adopted for the program. This recommendation is a key takeaway for the sponsor to decide if they should adopt NIEM.
2. Design a tactical implementation plan that outlines a tailored NIEM adoption strategy, including a timeline and specific actions for the organization to take in order to apply the NIEM framework to their information sharing and exchange activities.

## *Tools and Templates*

Road to NIEM Adoption

## *Expected Outputs*

### **Completed Adoption Plan**

The adoption plan is the end product of the NEP and is shared with the sponsor (if not self-conducting NEP), who provides feedback and validates the results. The plan should provide the sponsor with essential information to decide whether to proceed with NIEM adoption and the steps needed to move forward.

## 4. Path to Successful NIEM Adoption

After completing the NEP, the organization should execute the implementation plan and follow the NIEM readiness recommendations provided in the **Road to Adoption**. The NIEM PMO will be available to provide guidance and advice to organizations during and after implementation.

To support successful NIEM adoption, organizations should perform the following activities:

NIEM Adoption Activity	Description
<b>Monitor Exchange Performance</b>	The organization should periodically assess progress toward meeting goals and objectives for the exchange using the performance metrics identified during the NIEM Engagement Process. By tracking and monitoring performance, both the organization and the NIEM PMO can evaluate and report on NIEM adoption success. A tracking log is provided in the Recommendation Roadmap for recording metric progress.
<b>Hold Check-ins</b>	On a periodic basis, the NIEM PMO and the organization should hold check-ins to discuss NIEM adoption successes, challenges, and progress toward meeting performance goals. During check-ins, the NIEM PMO can offer advice and help address any challenges.
<b>Engage in the NIEM Community</b>	Organizations are encouraged to get involved in the NIEM community as appropriate based on their needs and interests. Stakeholder engagement is key to the success of NIEM – active stakeholder involvement promotes cross-domain coordination and enables NIEM to adapt to changing business needs. Community involvement may range from attending NIEM events to participating in NIEM domain governance activities. The NIEM PMO can help the organization to identify opportunities for involvement.
<b>Develop a Long-Term NIEM Strategy</b>	The organization should consider developing a long-term NIEM strategy that explores how current/future business needs might be addressed using NIEM. This may also include plans for engaging with the NIEM community. The strategy should be revised as business needs change over time.

By adopting NIEM for information exchange, organizations can realize the following benefits:

<b>NIEM Adoption Benefits</b>	
<b>Enhanced Mission Capabilities</b>	By increasing interoperability between diverse organizations, NIEM can help agencies to enhance services across key mission and functional areas.
<b>Reduced Costs</b>	Reusing NIEM components and leveraging the repeatable NIEM development approach can reduce development and maintenance costs.
<b>Community Support</b>	NIEM is driven by a large, diverse, and actively engaged stakeholder community that can offer support for issues ranging from governance to exchange development.

## Appendix A - NIEM Engagement Process

NIEM Engagement Process					
Step #	1	2	3	4	5
<b>Step</b>	Perform Research	Conduct Stakeholder Interviews	Complete NIEM Readiness Assessment	Quantify and Qualify the Value of NIEM	Adoption Plan
<b>Duration</b>	2 weeks	4 weeks	1 week	3 weeks	2 weeks
<b>Key Activities</b>	<p>1) Conduct research regarding the program's mission priorities and current information sharing and exchange activities.</p> <p>2) If appropriate, note any additional programs that could potentially benefit from NIEM.</p>	<p>1) Hold interviews with the program points of contact (POCs) identified by the sponsor. During the interview, draw upon initial research to discuss current and potential information exchange(s).</p>	<p>1) Compile the interview results and initial research to complete the NIEM Readiness Assessment.</p>	<p>1) Complete the Cost Model by inputting cost variables, values from the NIEM Readiness Assessment, and other data gathered through stakeholder interviews and research.</p> <p>2) Define performance metrics for the exchange.</p>	<p>1) Summarize key findings.</p> <p>2) Design a tactical implementation plan.</p> <p>3) Validate the Adoption Plan with participants.</p>
<b>Tools and Templates</b>	NIEM Interview Framework	NIEM Interview Framework	NIEM Readiness Assessment Tool	NIEM Cost Model	Road to NIEM Adoption
<b>Expected Outcomes</b>	Organizational research	Interview responses	Completed NIEM Readiness Assessment	Estimated costs Performance metrics	NIEM Adoption Plan