



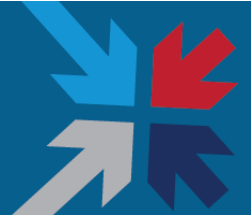
# NATIONWIDE HEALTH INFORMATION NETWORK

NIEM @ ONC

May 20, 2010

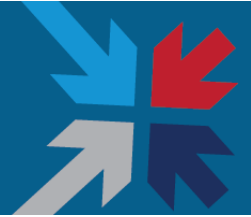


# Agenda



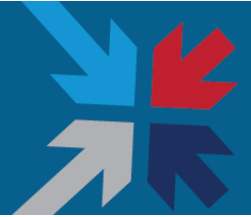
- » Objectives for Using NIEM with NHIN
- » Progress So Far
- » NIEM@ONC Process Outline
- » Next Steps

# High Level Objectives



- » A Computable Description of Payload And Behaviors – Standards Based and Interoperable
- » An OMG/UML based description of Exchanges
- » A Complete Package

# Objectives for Using NIEM



- » Adopt NIEM in order to
  - Create a structured, easily repeatable process for developing computable, reusable Standards & Interoperability (S&I) specifications
  - Maximize reuse by producing standardized artifacts and publishing these artifacts in publicly accessible repositories
  - Leverage NIEM governance principles to create a transparent governance structure for developing and managing S&I artifacts
- » Address unique challenges of health information exchange
  - Engage with variety of existing standards developing organizations
  - Address health information privacy concerns
- » Provide input and feedback to NIEM
  - Suggest possible service extensions, tooling, repositories, etc.
  - Develop tooling to generate service aware IEPD-like packages to describe operations in addition to data packages
  - Provide repositories for artifacts generated by S&I development process

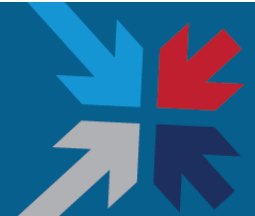
# A Bottom Up Approach



**Use SSA Disability Determination business scenario as a starting point to explore application of NIEM framework to health information exchange**

- » Outline NIEM **process** to develop NHIN implementation specifications based on the SSA use case
  - Modeling standards and guidelines
- » Develop **artifacts** for SSA use case using NIEM process
  - SSA business scenario wiki page
    - Business scenario and use cases
  - Computable use case model
  - SSA content (data) IEPD – will include XSDs
  - SSA transaction (behavior) IEPD – will include XSDs and WSDL
- » Identify **tools** needed for NIEM processes

# NIEM@ONC Process Outline



Biz scenarios identified by:

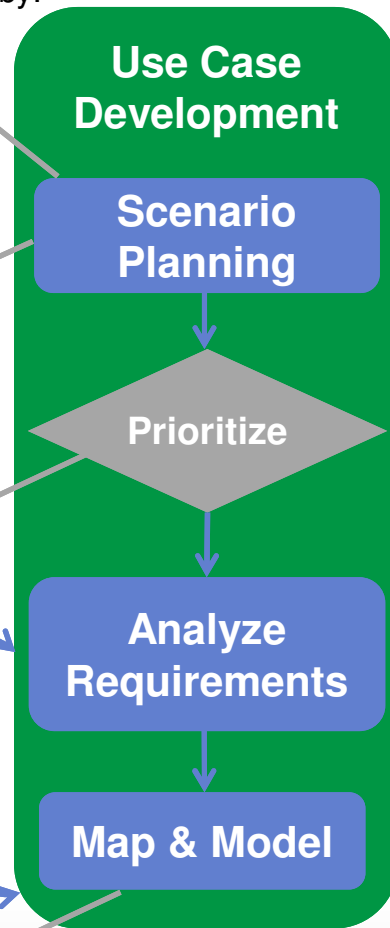
- Health community
- ONC
- Federal agencies

- Document high-level biz requirements
- Document use cases related to biz scenario

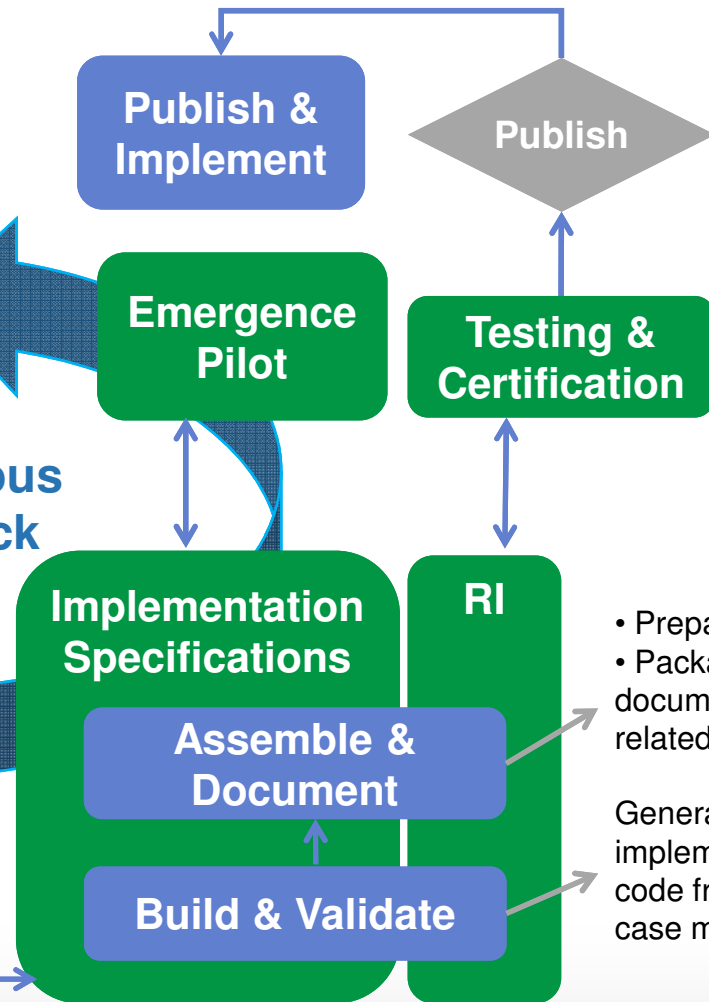
Elaborate tech and business requirements for exchange

**Harmonize Standards**

Develop computable use case model

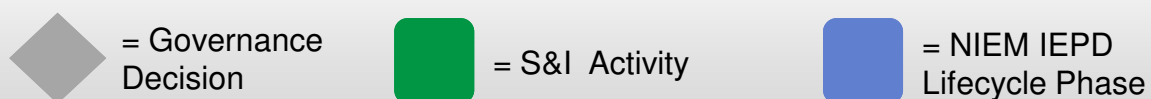


**Continuous Feedback**

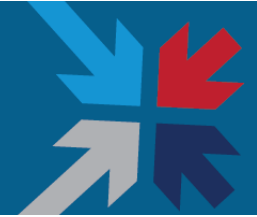


- Prepare IEPDs
- Package all documents and related artifacts

Generate implementable code from use case model



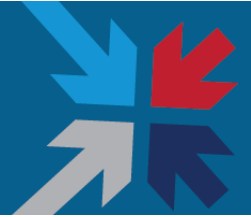
# Initial NIEM Process Outline



Participants	S&I Development Phases						
	Capability Formulation		Capability Elaboration		Construction	Release & Publication	
NIEM Lifecycle	Scenario Planning		Analyze Requirements	Map & Model	Build & Validate	Assemble & Document	Pub. & Impl.
Use Case Steward							
Use Case Development							
Harmonization							
Spec Development							
RI							
Cert & Testing							
Health Community							
S&I Governance							



# Completed Sprint Plan Activities: SSA Business Scenario Wiki



## >> SSA business scenario overview

SSA Disability Determination (NHIN Development)

S&I Development Efforts

SSA Disability Determination

Sitemap

[Edit sidebar](#)

[S&I Development Efforts >](#)

### SSA Disability Determination

**Business Scenario Description:**

For the purpose of disability determination, SSA seeks to obtain patient health summary information from the holder(s) of this data. Patient health summary data may be held by providers, Personal Health Records (PHRs), or Health Information Organizations (HIOs). To obtain health information for a particular patient, SSA first confirms that the patient is known by an entity that holds health information for that patient. Then, SSA requests the information holder to send relevant health information for the patient. This request must be accompanied by explicit authorization from the patient to release health information, as required by HIPAA. Once the information holder receives the request and authorization from SSA, the authorization is verified by the information holder. Finally, the information holder sends the requested health information to SSA.

**Behavior:** Actors and use cases are outlined below

**Content:** Described separately on SSA Disability Determination Content Requirements page

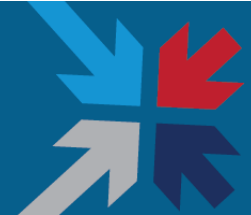
**Actors:**

Actor Name	Actor Description
Initiating Entity	Entity seeking health information for a patient
Responding Entity	Entity which responds to Initiating Entity request for health information

**Use Cases:**

Use Case Name	Use Case Description
<a href="#">Find a Patient</a>	Initiating Entity sends a request to locate a specific patient at an entity which holds health information for that patient. The Responding Entity determines whether to identify a mutually known patient by evaluating applicable permissions and policies.
<a href="#">Find Health Information</a>	Initiating Entity sends a request to identify health information pertaining to a specific patient that is available for retrieval. The Responding Entity determines whether to confirm availability of health information by evaluating applicable permissions and policies.
<a href="#">Retrieve Health Information</a>	Initiating Entity sends a request to retrieve targeted health information pertaining to a specific patient. The Responding Entity determines whether to send the requested

# Completed Sprint Plan Activities: SSA Business Scenario Wiki



## >> Detailed outline for three SSA use cases

Retrieve Health Information (NHIN Development)

[Edit sidebar](#)

**Use Case Summary:**

Use Case #	Use Case Name
	Retrieve Health Information

**Use Case Description**

Initiating entity sends a request to retrieve targeted health information pertaining to a specific patient from an entity which holds health information for that patient. Along with this request, Initiating entity also sends the responding entity explicit authorization from the patient to release health information. The responding entity determines whether to release the requested health information by evaluating applicable permissions and policies.

**Use Case Properties**

Functional Area	Behavior: Pull
Business Owners	
Organization	

**Revision History**

Version	Description	Date	Author
0.1	First draft	3/24/2010	Jackie Key

**Supporting Documents**

Related Use Case #	Name	Use Case Relationship
	Find a Patient	Super ordinate
	Find Health Information	Sub ordinate

**Triggers and Conditions**

Triggers	<ul style="list-style-type: none"> <li>Obtain information needed to retrieve targeted health information, such as document IDs, any associated metadata or the service endpoint for the responding entity</li> </ul>
Pre-Conditions	<ul style="list-style-type: none"> <li>Target health information for retrieval is identified by Initiating entity</li> <li>Target entity from which to retrieve health information is identified by Initiating entity</li> <li>Any information (document IDs, metadata, etc) needed to retrieve health information has been obtained by Initiating entity</li> </ul>

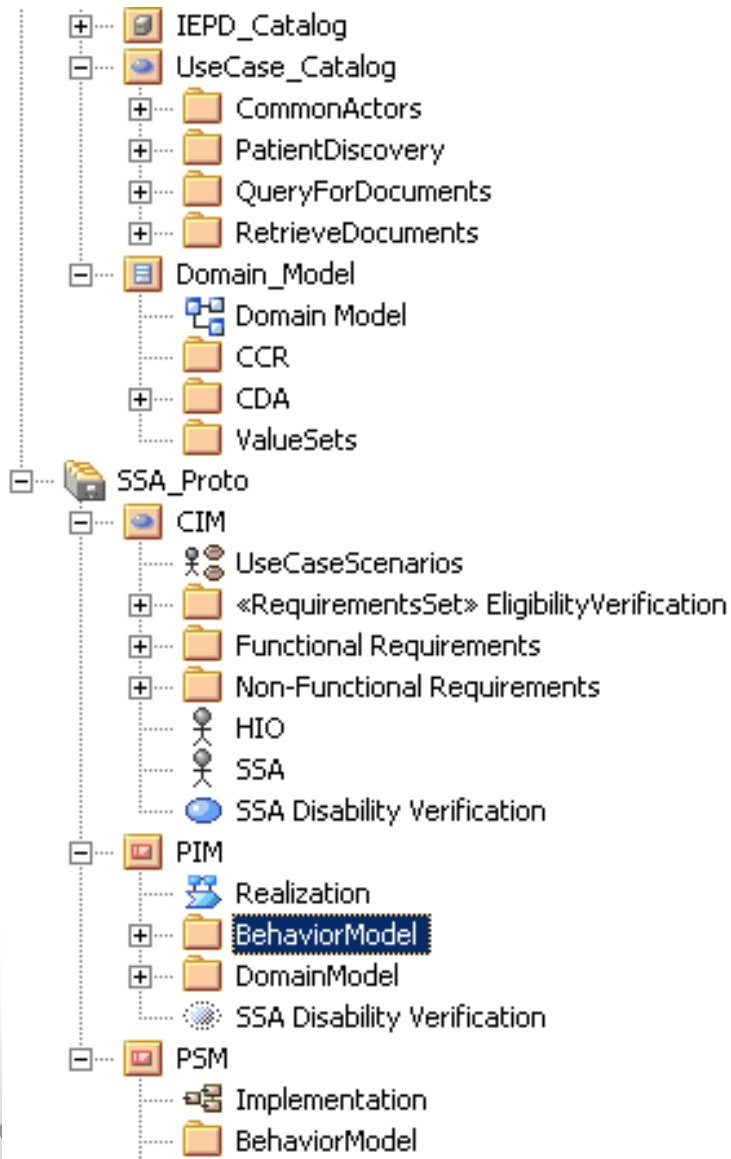
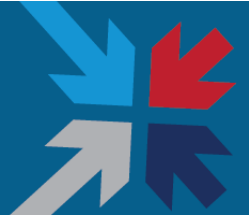
**Basic Flow**

Step	Actor Action	System Response	Business Rules
Sheet1			

Attachments (0)

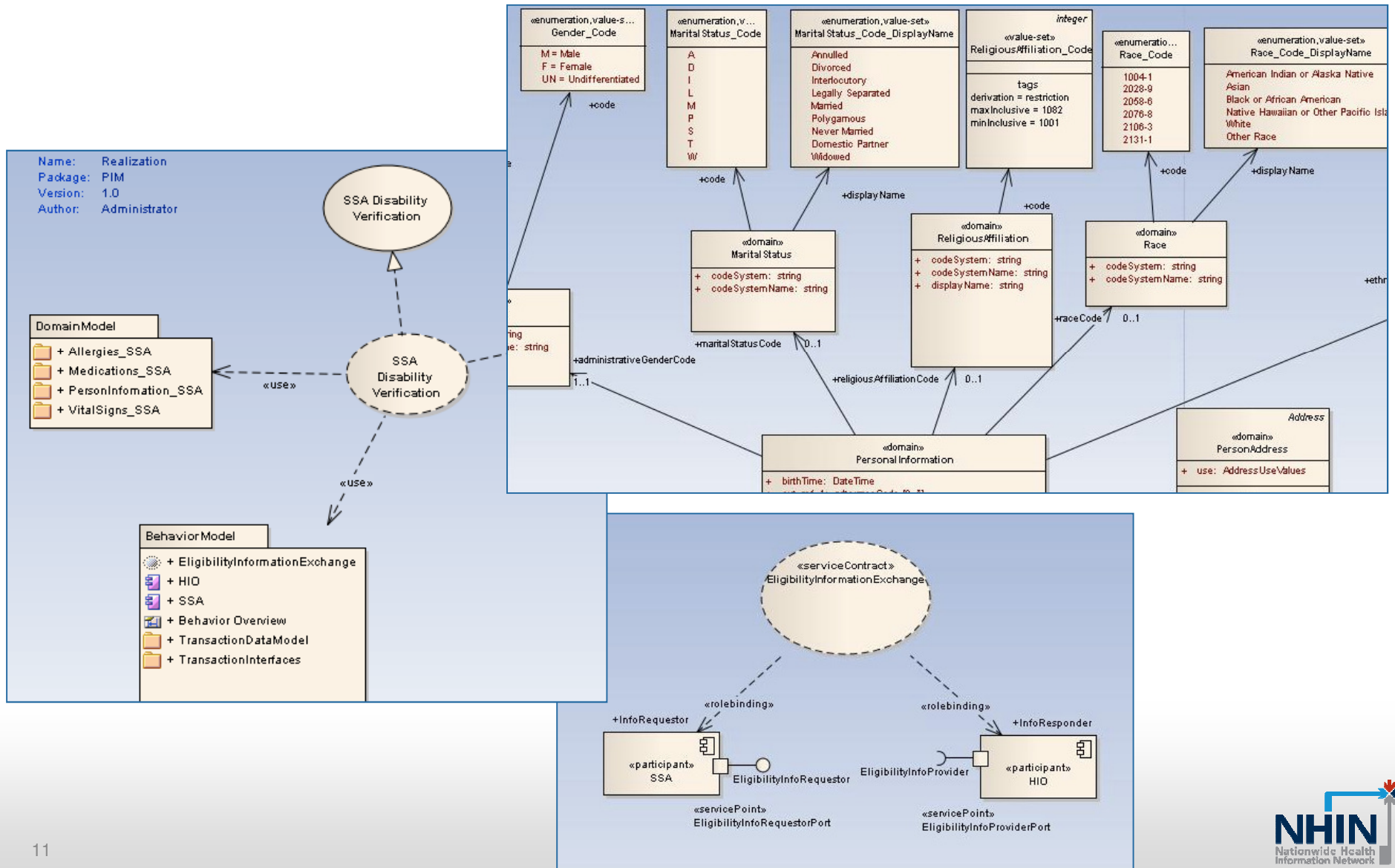
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# Completed Activities: Computable Model for SSA Use Case

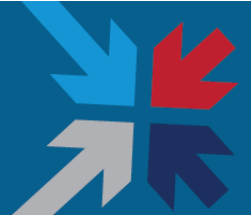


- » Utilize a Model Driven Architecture (MDA) approach to capture domain and behaviors of the SSA use case
  - Computational Independent Model (CIM)
  - Platform Independent Model (PIM)
  - Platform Specific Model (PSM)
- » Define additional UML semantics to capture the information required for a NIEM based IEPD as well as a services aware IEPD
- » Create a re-usable domain model based on CDA

# Completed Sprint Plan Activities: Computable Model for SSA Use Case

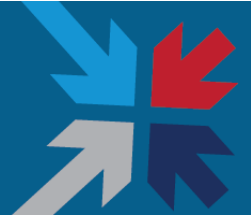


# Next Steps



- » Finalize outline for NIEM development process
- » Publish IEPDs in the HHS Enterprise Architecture Repository
- » Enhance Existing Tools:
  - Repositories
  - IEPD Packaging Tools
  - Repositories for Value Sets, Controlled Vocabularies, etc.
- » Collaborate with NIEM PMO to Implement Feedback

# Questions



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