NIEM Tools Requirements

NIEM Management Office

Jan 23, 2020

A description of requirements for a NIEM tool suite.

# Assumptions

## Timeline

* 1-year first phase
* 5 year roadmap

## Level of effort

* 1 developer full time
* Management support & oversight

## Impact on NIEM 5.0

This NIEM tool development will not affect NIEM 5.0 release schedule or artifacts released as part of the NIEM 5.0 release

# Functions

## Search & browse

* additional search targets
  + NIEM release repository
  + EIEM
  + local folder
  + git repository
  + IEPD
* Search for NIEM components

## Mapping

* going from local data requirements to niem content
  + subset
  + extension
* right now we tell people to use a spreadsheet

## Data model development

Creation of NIEM-conformant data models. For example, the creation of extension schemas and message envelopes.

## Artifact production

Formats:

* Zip file
* XML Schema document set
* JSON Schema + JSON-LD context
* OpenAPI
* Spreadsheet
* UML XMI
* Clicky diagrams
* Documentation
  + e.g., Word doc
* Database schema
* IDL
* Google Protocol Buffers
* Apache Thrift

## Artifact import

This has an overlap with data model development. Data models could be built from artifacts imported into a tool, such as a spreadsheet or extension schema.

## Validation

* sample instance
* iepd conformance

## IEPD repository

* search / fetch
* publish / push

## User management

* publication
* collaboration
* credentials
* privileges
* groups
* session management
  + pause & resume
  + delayed login
    - let people get started before they have to create an account
    - roll over in-progress content to the new account

## Help & guidance

* online / tool documentation
* human intervention & support
  + helpdesk
* tutorial mode

# User interfaces

* map & model grid interface
* data model search interface
* conformant instance / message validation against an iepd
* iepd files / folder interface
* iepd metadata / manifest entry forms
* niem version migration
* start page / landing page