



NIEMOPEN

MilOps Stakeholder Engagement

Wednesday, 14 June 2023

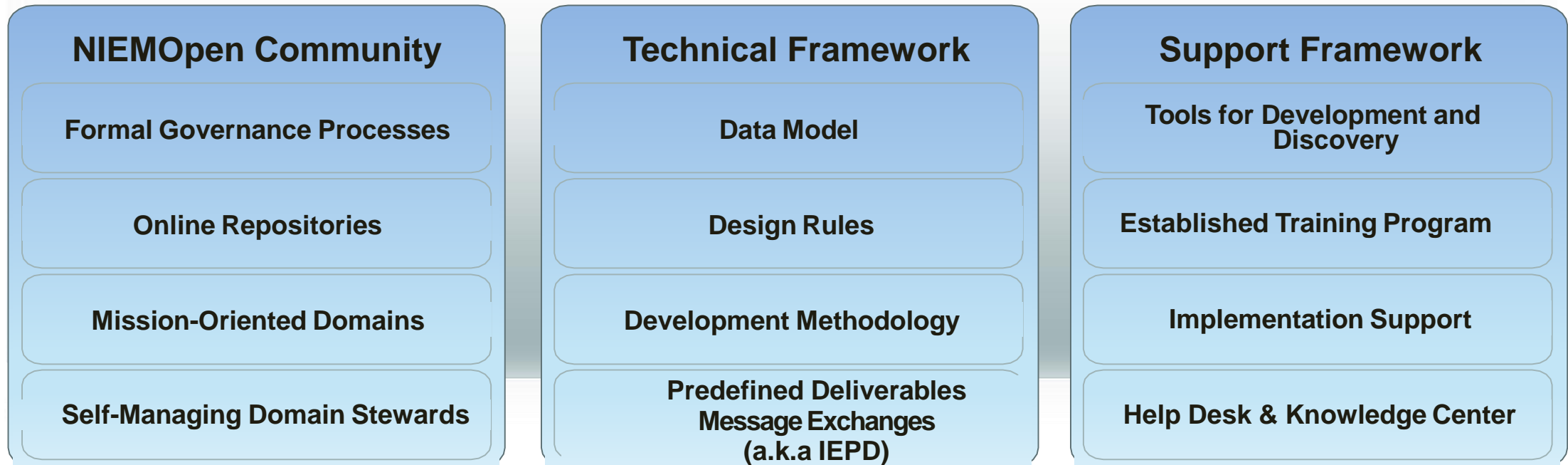
AGENDA



Time	Topic	Presenter
1000 – 1005	Opening Remarks / Introductions	Chuck Chipman
1005 – 1010	NIEMOpen	Chuck Chipman
1010 – 1015	MilOps	Chuck Chipman
1015 – 1025	IEPD Lifecycle	Christina Medlin
1025 – 1035	Tools	Tom Carlson
1035 – 1045	Subsetting Demo	Tom Carlson
1045 – 1050	Registries & Repositories	Chuck Chipman
1050 – 1055	Resources	Chuck Chipman
1055 – 1100	Discussion / Closing Remarks	Chuck Chipman

NIEMOPEN FRAMEWORK

- NIEMOpen is a community-driven, open source, standards-based approach to exchanging information
- Diverse communities can collectively leverage NIEMOpen to increase efficiencies and improve decision-making
- NIEMOpen is available to everyone, including public and private organizations
- NIEMOpen includes a data model, governance, training, tools, technical support services, and an active community to assist users in adopting a standards-based approach to exchanging data



NIEMOPEN MODEL CONTENT

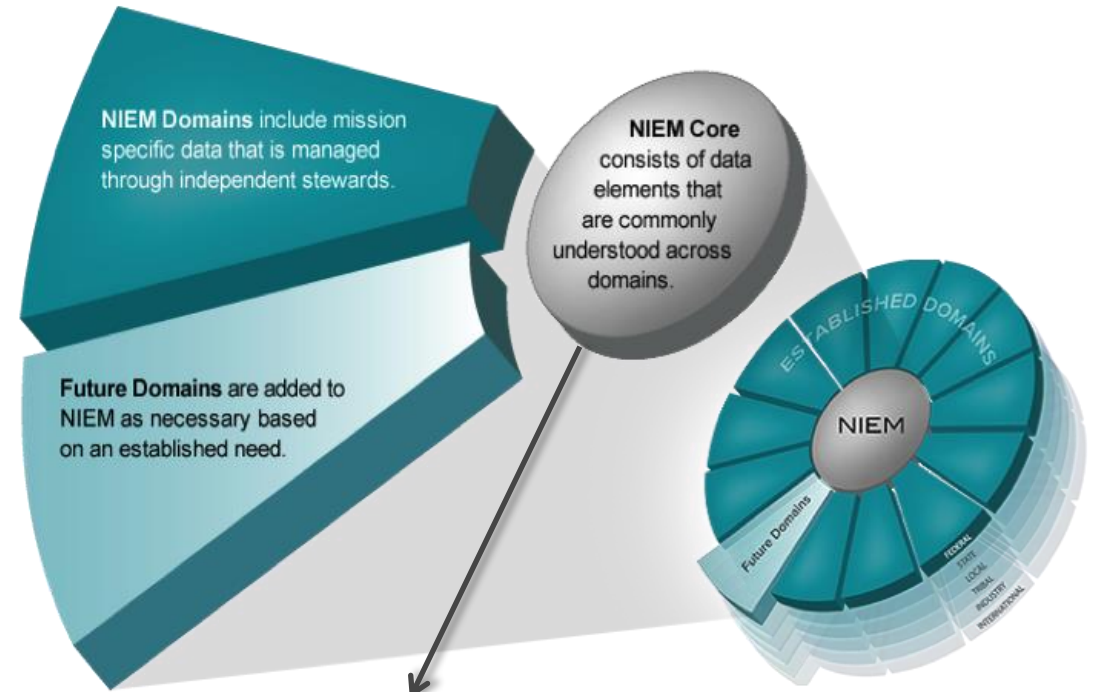
Think of the NIEMOpen data model as a mature and stable data dictionary of agreed-upon terms, definitions, and formats independent of how information is stored inside individual IT systems.

NIEMOpen 17 Domains

- Agriculture
- Biometrics
- Chemical, Biological, Radiological, & Nuclear
- Cyber
- Emergency Management
- Human Services
- Immigration
- Infrastructure Protection
- Intelligence
- International Trade
- International Human Services
- Learning & Development
- Justice
- Maritime
- Military Operations
- Screening
- Surface Transportation

Emerging Domains

- Acquisition – DoD A & S
- Identity Credentials – DHS
- Physical Security - DMDC



NIEM – THE BIG PICTURE

NIEM enables organizations to move information across organizational boundaries in order to interoperate – and act as one – while each maintains authority for their own existing systems

Common Language

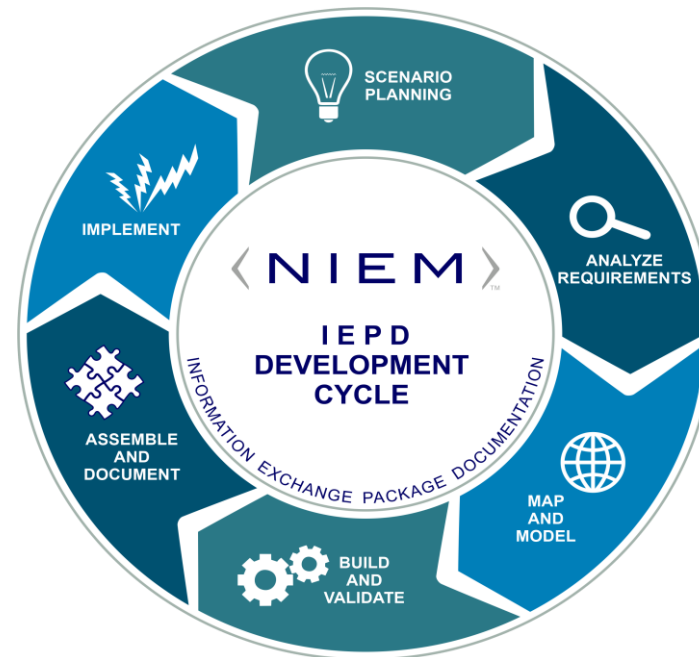
(Data Model Lifecycle)



Built and governed by users within the Federal, State, Local, Tribal, and Private Sectors

Repeatable, Reusable Process

(Exchange Specification Lifecycle)



TRANSFER OF GOVERNANCE



- 20 October 2022
NIEMOpen ESC is Sunset
and NIEMOpen
Governance Transitions to
the NIEMOpen OPEN
Project Governing Board
(PGB) under the Auspices
of OASIS OPEN Project
- ESC Principals remain in an
Advisory Role



CHIEF DIGITAL AND ARTIFICIAL INTELLIGENCE OFFICER
9010 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-9010

October 20, 2022

MEMORANDUM FOR NATIONAL INFORMATION EXCHANGE MODEL EXECUTIVE
STEERING COUNCIL

SUBJECT: Transition of the National Information Exchange Model to the Organization for the
Advancement of Structured Information Standards Open Project Program

On September 21, 2021, the National Information Exchange Model (NIEM) Executive Steering Council (ESC) approved the transition of NIEM to the Organization for the Advancement of Structured Information Standards (OASIS) Open Project Program. On October 20, 2022, NIEM governance shifts to the new NIEM Open, Project Governing Board (PGB). The PGB exercises leadership, provides guidance, establishes policy, and approves model releases and content under the auspices of the OASIS Open Project Program. The PGB is supported by two Technical Steering Committees: NIEM Business Architecture Committee (NBAC) and NIEM Technical Architecture Committee (NTAC). The NBAC and NTAC provide day-to-day operational oversight.

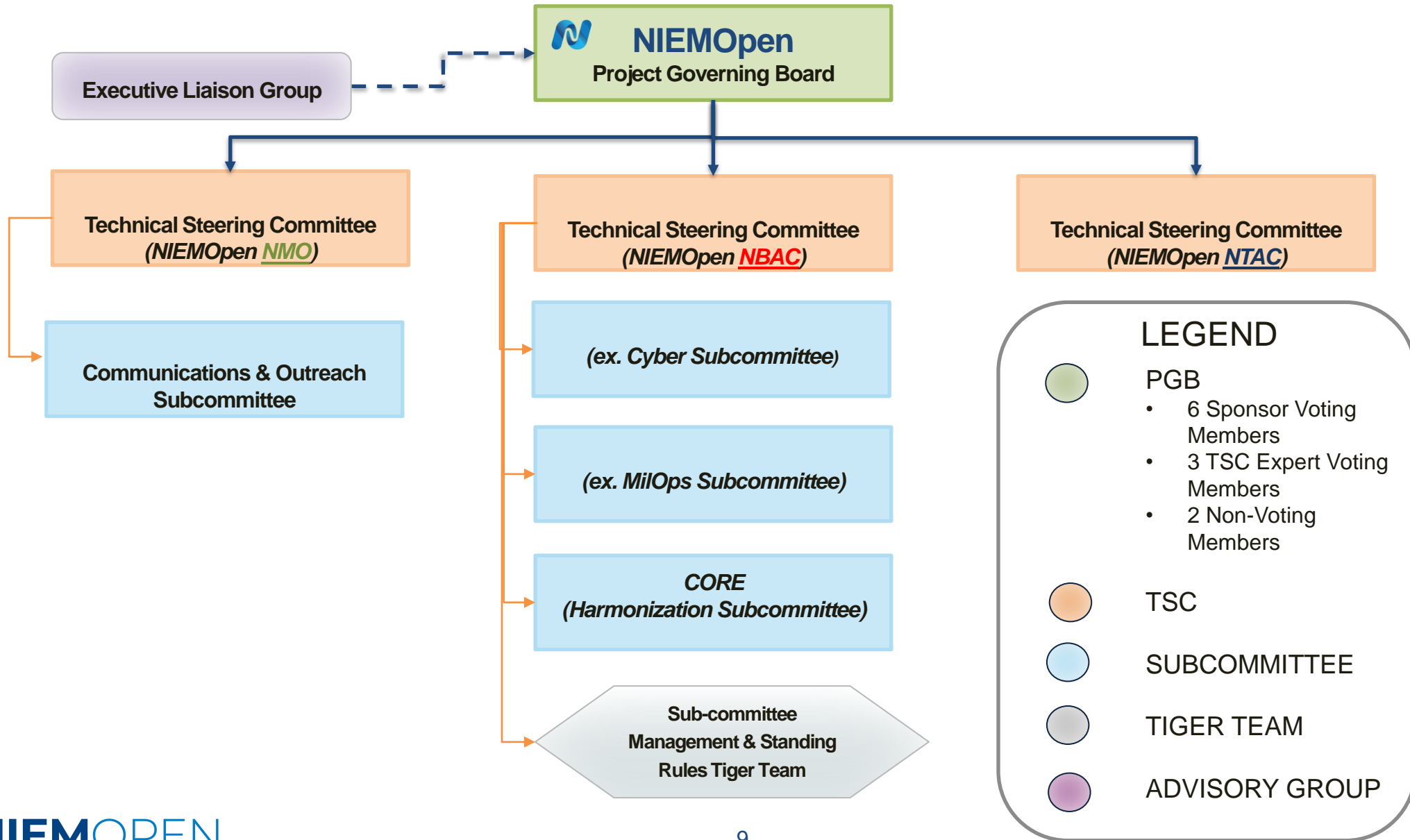
The NIEM ESC is hereby sunset effective October 20, 2022, with the instantiation of the NIEM OPEN PGB. I encourage ESC members to continue to participate in an advisory capacity to the NIEM Open, PGB. Details of Open Project Sponsorship can be found online at "<https://www.oasis-open.org/join-2/>" and by contacting Dee Schur, the OASIS Open Source and Standards Advocate at dec.schur@oasis-open.org.

J. Clark Cully, Ph.D.
Deputy Chief Data Officer
Department of Defense

Dr. Cully Transition Memo



NIEMOpen Organization



PGB VOTING MEMBERS MAY 2023



Ms. Katherine Escobar
PGB Chair
 Deputy Division Chief, Data and Standards Division at Joint Staff J6 and NIEMOpen Managing Director



Ms. Christina Bapst-Stump
 Science and Technology Directorate, US Department of Homeland Security



Mr. Gary Egner
 Director Business Development, Equivalent



Mr. John Wandelt
 Principal Research Scientist, Georgia Tech Research Institute



Mr. Duncan Sparrell
 CSO sFractal Consulting



Ms. Maria Cardiellos
 Executive Director Integrated Justice Information Systems Institute



Mr. Payton Lamb
 Data Engineer Commonwealth of Virginia Office of the secretary of Administration Office of Data Governance and Analytics



Ms. Jennifer Stathakis
 Biometric Standards SME, Enterprise Data Standards Team Criminal Justice Information Systems Division, Federal Bureau of Investigation



Premier



Premier



IJIS Institute



Premier



NIEMOpen SPONSORS

10 Sponsors, 3 Premier

Sponsors

- JS J6
- DHS S&T
- CJIS (FBI)
- GTRI
- sFractal
- NAJIS
- IJIS
- DOT
- ODGA (Virginia)
- Equivant



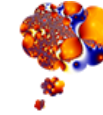
Premier



Premier



Premier



Think Evilily, Act Ethically
sFractal Consulting LLC
the closer you look, the more you see



IJIS Institute



In Discussions

- Microsoft
- DHS OBIM
- MITRE



Expressed Interest

- Government of Canada
- Veterans Administration
- Tyler technologies
- Ernst & Young
- NIST



VA U.S. Department of Veterans Affairs



Ms. Carol Geyer

- OASIS Open Chief Development Officer



NIEM 6.0

- Next version of the NIEMOpen model (core + domains)
 - New modeling formalism (CMF and XSD supported)
 - Supporting transformations from CMF or NIEM XML to NIEM JSON schema
 - Simplified message specification guidance
 - Simple XML and other benefits for message implementers to follow
-
- NIEM 6.0 architecture changes project note draft coming for public review later this month

DOD INFORMATION SHARING POLICY & GUIDANCE

28 March 2013



DOD CIO NIEM Adoption Memo states:

“ ... DOD will adopt the National Information Exchange Model (NIEM) as best suited for standards-based data exchanges.” “DOD organizations shall first consider NIEM for their information sharing solutions...”

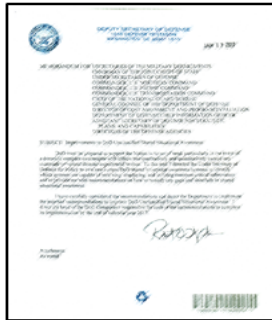
DoDI 8320.07:

August 2015

“ ... the use of NIEM-based exchanges must be considered for all new Extensible Markup Language (XML) information exchanges created and for all XML information exchanges being modernized as part of the normal lifecycle management for these information exchanges.”



January 2017



DepSecDef Memo Improvements to DoD Unclass Shared Situational Awareness:

“ ... Commander, NORTHCOM and PACOM will use NIEM in accordance DoDI 8320.07 leveraging existing DoD capabilities, to provide DoD mission partners with a clear and concise DoD central authoritative data source for the sharing of unclassified information related to disasters....”

December 2018

CNO Message R 261805Z DEC 18 Transforming Our End-to-End Information Environment – Compile To Combat In 24 Hours Implementation Framework:
References the DOD CIO Memo and directs “... Adoption of the National Information Exchange Model (NIEM) with the DOD, and establishing that model as the DOD mandated data sharing model..”



MILOPS ACTIVITIES



• **2022 Highlights**

- Showcased NCDF capabilities in CWIX 2022
- Transitioned from APAN to OASIS repositories
- Approval of NIEMOpen as a key JADC2 standard
- Continued support of UC2 language standard development
- Added DoD Minimum Essential Metadata
- Added 8,787 USMTF properties & types
- Supported DCSA development of SF86 IEPD and DCSA reference model
- Supported DISA with development of SAAR IEPD and DISA Enterprise ICAM model
- Supported AFRL with development of 6 cyber incident messages; will demonstrate in CWIX 2023

• **2023 Objectives**

- Showcase improved NCDF data lake capabilities in CWIX 2023
- Complete USMTF transition to NIEMOpen NDR and MilOps Domain content additions; support transition to NIEMOpen IEPD (DISA Brian O'Shea)
- Increased adoption of NIEM:
 - ✓ JADC2 enterprise stakeholders
 - ✓ Universal Command & Control (UC2)
 - ✓ Background Investigations/Continuous Vetting (BI/CV) Information Exchange (SF 86/85/85P)
 - ✓ Enterprise ICAM model, SAAR IEPD (DISA)
 - ✓ AFRL Cyber exchanges
 - ✓ JWX 2023 (data fabric demo)
 - ✓ Interference Incident Reporting from non DoD stakeholders (DISA/DSO)

IEPD LIFECYCLE



Design and build a NIEM IEPD / message specification:

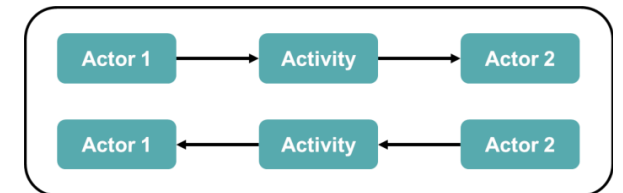
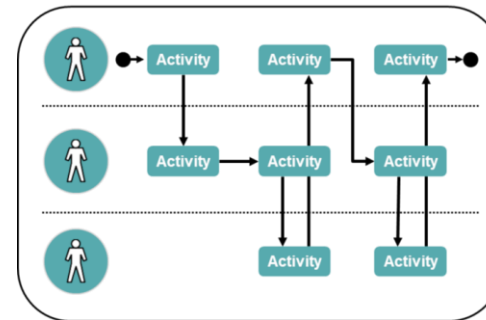
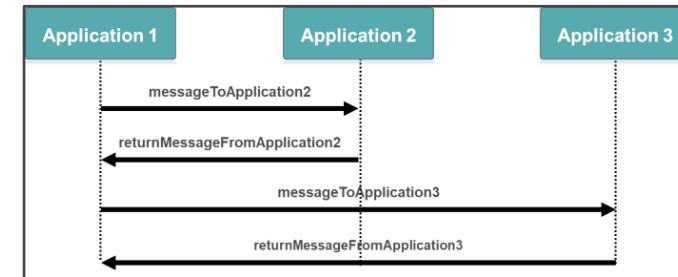
- Scenario Planning
- Analyze Requirements
- Map and Model
- Build and Validate
- Assemble and Document
- Publish and Implement

<https://niem.github.io/reference/iepd/lifecycle/>

1. SCENARIO PLANNING

Review background information related to your information exchange, assess resource impact, understand business context, and identify information exchange business scenarios.

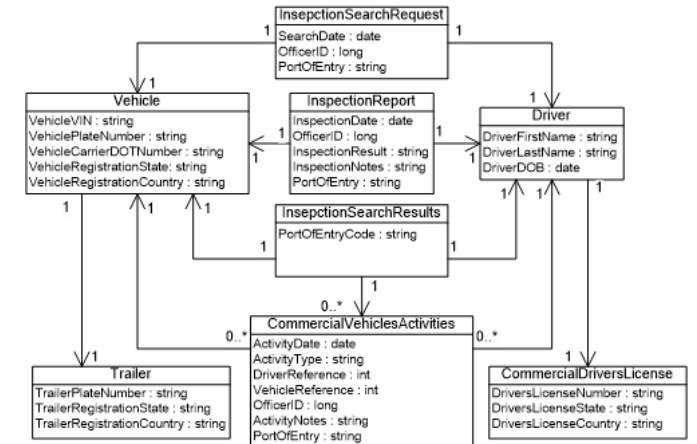
- Describe the scenario
- Identify areas of concern
- Determine whether to use NIEM
- Define business requirements
- Assess effort level
- Build scenario models



2. ANALYZE REQUIREMENTS

Further elaborate on the information exchange scenario to understand and document the data requirements and business rules.

This includes capturing data requirements, business rules, and other detailed requirements.



Field	Type	Definition	Min	Max	Constraints	Comments
first	string	First name	1	1		
middle	string	Middle name	0	unbounded		
last	string	Last name	1	1		
DOB	date	Birthday	0	1	Valid only between 1900-01-01 and current date	Check to see if this field needs to be required
eye color	code set		0	1		

Type	Code	Definition
eye color	BLK	black
eye color	BRN	brown
eye color	BLU	blue
eye color	GRN	green
eye color	HZL	hazel
eye color	OTH	other or unknown

3. MAP AND MODEL

Map

- Review the data requirements and look for matches in NIEM.
- Document results in a mapping spreadsheet.

Property Name	Data Type	Definition	Mapping		Target			
			Code	Notes	NS Prefix	Property Name	Qualified Data Type	Definition
award	Text	An award won by or for this item. Supersedes awards.	no match					
birthDate	Date	Date of birth.	map		nc	PersonBirthDate	nc:DateType	A date a person was born.
birthPlace	Place	The place where the person was born.	map		nc	PersonBirthLocation	nc:LocationType	A location where a person was born.
email	Text	Email address.	map		nc	ContactEmailID	niem-xs:string	An electronic mailing address by which a person or organization may be contacted.
familyName	Text	Family name. In the U.S., the last name of an Person. This can be used along with givenName instead of the name property.	map		nc	PersonName	nc:PersonNameType	A combination of names and/or titles by which a person is known.
familyName	Text	Family name. In the U.S., the last name of an Person. This can be used along with givenName instead of the name property.	map		nc	PersonSurName	nc:PersonNameTextType	A last name or family name of a person.
givenName	Text	Given name. In the U.S., the first name of a Person. This can be used along with familyName instead of the name property.	map		nc	PersonGivenName	nc:PersonNameTextType	A first name of a person.
netWorth	MonetaryAmount or PriceSpecification	The total financial value of the person as calculated by subtracting assets from liabilities.	no match					
netWorth	MonetaryAmount or PriceSpecification	The total financial value of the person as calculated by subtracting assets from liabilities.	map		nc	Amount	niem-xs:decimal	An amount of money.
netWorth	MonetaryAmount or PriceSpecification	The total financial value of the person as calculated by subtracting assets from liabilities.	map		nc	CurrencyAbstract	NONE	A data concept for a unit of money or exchange.
netWorth	MonetaryAmount or PriceSpecification	The total financial value of the person as calculated by subtracting assets from liabilities.	map		nc	CurrencyCode	iso_4217:CurrencyCodeType	A unit of money or exchange.

<https://niem.github.io/reference/iepd/artifacts/mapping-spreadsheet/>

Model

- Begin modeling the data requirements without NIEM matches (extensions)
- Follow NIEM Naming and Design Rules

The Basics

Fundamentally, a NIEM release consists of a set of namespaces, each of which define properties and types (referred to more generally as components). An IEPD reuses components from a release that meet its requirements, and creates new properties and types in local namespaces as needed. These namespaces, properties, and types are basic building blocks of NIEM.

Namespaces

Learn about namespaces in NIEM and see schema examples and templates with header information at the XML and JSON links below.

Namespaces	A namespace is a collection of properties and types, managed by a common authoritative source.	XML	JSON
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Properties

A property represents a concept, idea, or thing.

Properties	A property represents a concept, idea, or thing.	XML	JSON
Elements	An element represents a concept. In an instance, it acts as a container that may carry either a simple value or an object, and optionally attributes.	XML	JSON
Abstract Elements	An abstract element is an element defined as a placeholder in a schema that must be replaced with an appropriate substitution in an instance.	XML	JSON
Substitutable Elements	A substitutable element is one that can replace another element in an instance.	XML	JSON
Attributes	An attribute is a property that may carry a simple value only.	XML	JSON

<https://niem.github.io/reference/concepts/>

4. BUILD AND VALIDATE

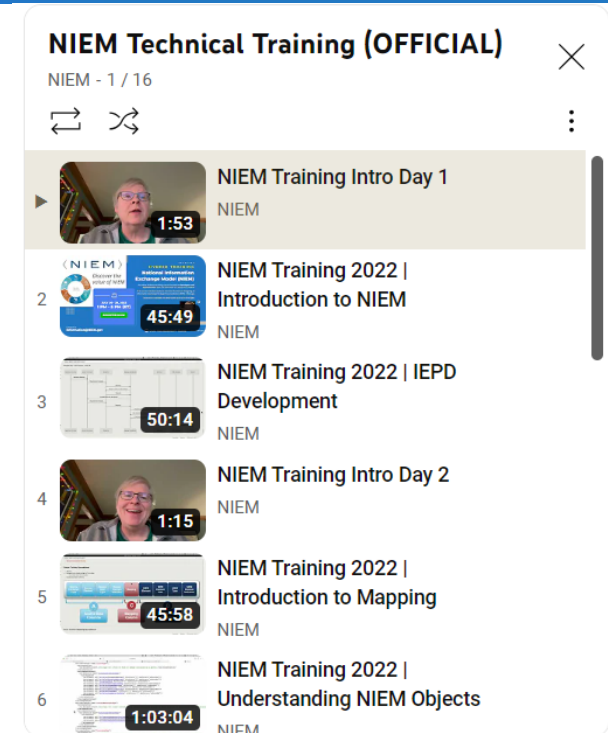
Create subset schemas, extension schemas, and sample instances based on the previous mapping and modeling work. Verify that schemas and instances are valid and that they meet NIEM conformance requirements described by the NIEM Naming and Design Rules (NDR) specification.

- Build
 - NIEM subset schemas
 - Local extension schemas
 - Sample instances
- Validate
 - Check extension schemas are valid
 - Check extension schemas pass NDR conformance rules
 - Check sample instances are valid against extension schema
 - Check sample instances carry all expected data



HYBRID TRAINING
NIEM Technical Training
Sponsored by the NIEM Management Office

An online technical training course focused on developers and implementers who are interested in a deep-dive of NIEM.



NIEM Technical Training (OFFICIAL) ×
NIEM - 1 / 16

- ▶ NIEM Training Intro Day 1
NIEM 1:53
- 2 NIEM Training 2022 | Introduction to NIEM
NIEM 45:49
- 3 NIEM Training 2022 | IEPD Development
NIEM 50:14
- 4 NIEM Training Intro Day 2
NIEM 1:15
- 5 NIEM Training 2022 | Introduction to Mapping
NIEM 45:58
- 6 NIEM Training 2022 | Understanding NIEM Objects
NIEM 1:03:04

<https://github.com/NIEM/NIEM-Training>

YouTube: Search for “NIEM Training” for the playlist

5. ASSEMBLE AND DOCUMENT

Create any additional documentation needed for the IEPD, fill out the IEPD catalog, assemble all of the artifacts, and bundle the files into the final IEPD zip file package.

- Document
 - IEPD Catalog
 - Change log
 - Readme
 - Optional artifacts
- Assemble
 - Add schemas, instances, mapping spreadsheet, diagrams, readme, IEPD catalog, etc., to a zip file.
 - See guidance for recommended folder layout
- Final review

```
myIEPD-2.0/  
  
iepd-catalog.xml      # IEPD catalog  
changelog.*          # Change log  
conformance-assertion.* # Conformance assertion  
readme.*             # Readme  
  
base-xsd/            # Schema folder  
  
  niem/              # NIEM subset schemas  
  xsd/  
    adapters/  
    codes/  
    domains/  
    external/  
    utility/  
    niem-core.xsd  
    wantlist.xml     # SSGT wantlist  
    xml-catalog.xml  
  
  extension/        # IEPD extension schemas  
  extension1.xsd  
  extension2.xsd  
  ...  
  xml-catalog.xml  
  
  external/         # Schemas from external standards  
  ic-ism/  
  ...  
  xml-catalog.xml  
  
  iep-sample/       # Sample messages  
  message1.xml  
  message2.xml  
  
  documentation/   # Human-readable documentation  
  ...
```

<https://niem.github.io/reference/iepd/artifacts/>

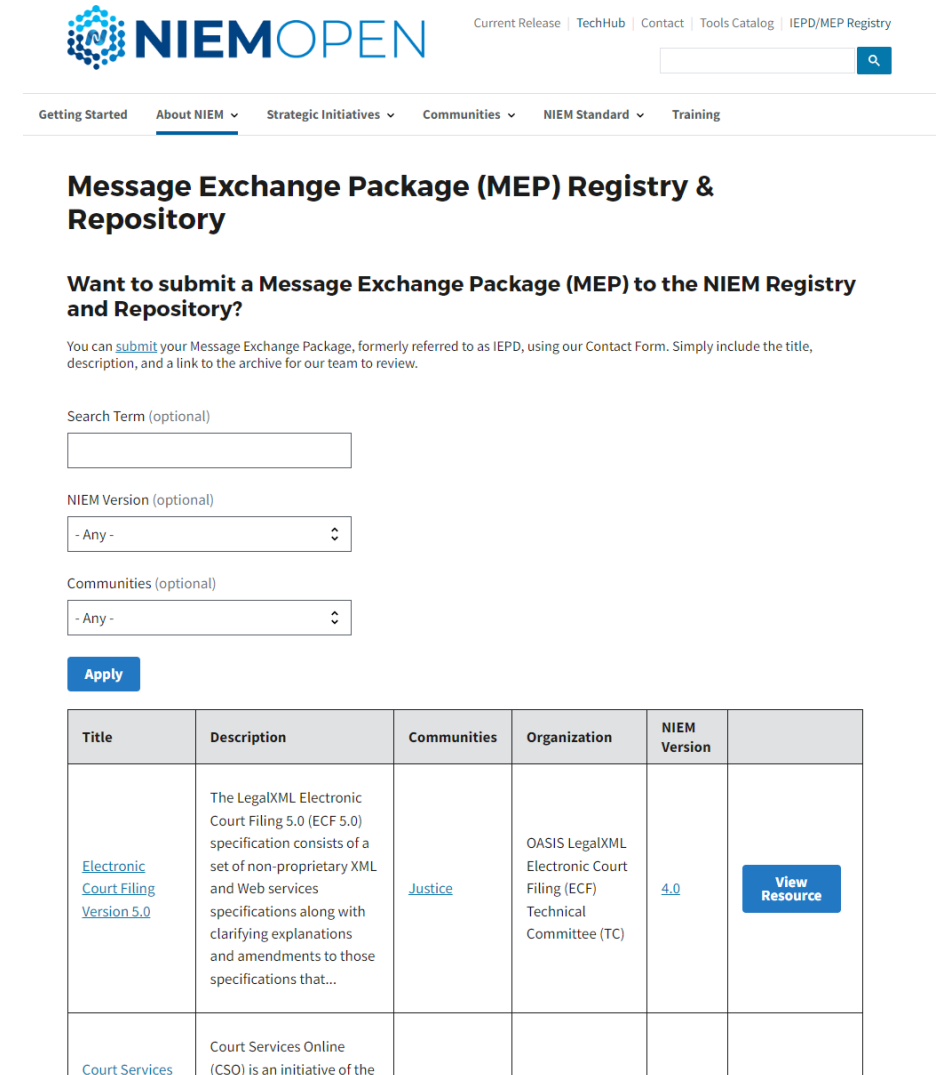
6. PUBLISH AND IMPLEMENT

Publish

- Separate public and restricted repositories are available to publish and share IEPDs.
- Public IEPD repo is available from <https://niemopen.org>.
- Restricted IEPD repo is available on the WMA Portal.

Implement

- Specific implementations are outside the scope of NIEM.



The screenshot shows the NIEMOPEN website interface. At the top, there is a navigation bar with links for 'Current Release', 'TechHub', 'Contact', 'Tools Catalog', and 'IEPD/MEP Registry'. Below this is a search bar. The main navigation menu includes 'Getting Started', 'About NIEM', 'Strategic Initiatives', 'Communities', 'NIEM Standard', and 'Training'. The page title is 'Message Exchange Package (MEP) Registry & Repository'. A sub-header asks 'Want to submit a Message Exchange Package (MEP) to the NIEM Registry and Repository?'. Below this, there is a brief instruction: 'You can submit your Message Exchange Package, formerly referred to as IEPD, using our Contact Form. Simply include the title, description, and a link to the archive for our team to review.' There are three optional search filters: 'Search Term (optional)' with a text input, 'NIEM Version (optional)' with a dropdown menu set to '- Any -', and 'Communities (optional)' with a dropdown menu set to '- Any -'. An 'Apply' button is located below the filters. The main content area features a table with the following data:

Title	Description	Communities	Organization	NIEM Version	
Electronic Court Filing Version 5.0	The LegalXML Electronic Court Filing 5.0 (ECF 5.0) specification consists of a set of non-proprietary XML and Web services specifications along with clarifying explanations and amendments to those specifications that...	Justice	OASIS LegalXML Electronic Court Filing (ECF) Technical Committee (TC)	4.0	View Resource
Court Services	Court Services Online (CSO) is an initiative of the				

SSGT

- Exploration tool
- Generates subsets

- Tool URL:
 - <https://tools.niem.gov/niemtools/ssgt/index.iepd>

- More info:
 - <http://niem.github.io/reference/tools/ssgt/>

tools.niem.gov/niemtools/ssgt/SSGT-SearchSubmit.iepd

NATIONAL INFORMATION EXCHANGE MODEL

TECHHUB NIEM RELEASES TOOLS CATALOG

GETTING STARTED ABOUT NIEM COMMUNITIES TRAINING CONTACT US

Schema Subset Generation

Search

Search Generate Documents Options Selected Release: NIEM-5.2

Schema Subset [Hide | Edit Cardinality] Data Model Search Show Advanced

Search for a Property person Search

Types

The schema subset includes the following type definitions; those requested are in bold:

- nc:DateType
- nc:PersonType**
- niem-xs:date
- xs:date

Attributes

(The schema subset does not include any attribute declarations.)

Elements

The schema subset includes the following element declarations; those requested are in bold:

- nc:Date**
- nc:DateRepresentation (nillable="true")
- nc:PersonBirthDate (nillable="true")

nc:Person details
type: (nc:PersonType)

Add Add All

nc:EmployeeContactInformation (nc : ContactInformationType)
details

nc:PersonAccentText (nc : TextType) details

nc:PersonAgeDescriptionText (nc : TextType) details

nc:PersonAgeMeasure (nc : TimeMeasureType) details

nc:PersonAugmentationPoint abstract details

nc:PersonBirthDate details
type: (nc:DateType)

Add Add All

nc:DateAccuracyAbstract abstract details

nc:DateAugmentationPoint abstract details

nc:DateMarginOfErrorDuration (niem-xs : duration) details

nc:DateRepresentation abstract details

substitutable by:

nc:MonthDate (niem-xs : gMonth) details

nc:DateTime (niem-xs : dateTime) details

nc:YearDate (niem-xs : gYear) details

nc:DayDate (niem-xs : gDay) details

CONTESA

- “Conformance Testing Assistant”
- Validates your work
 - Not a certification
 - Only catches some errors
- Tool URL:
 - <https://tools.niem.gov/contesa/>
- More info:
 - <http://niem.github.io/reference/tools/contesa/>

ConTesA Conformance Report
Generation Date: Tue Aug 30 13:38:44 UTC 2022
Validation Object: CrashDriver.xsd

Skip to: [Rule Contexts Summary](#) | [Rule Results](#) | [Auto Fail Rules](#) | [Manual Fail Rules](#) | [All Rules](#)

Rule Summary

Statistical information about all passing/failing rules in the system.

Auto Pass - 54 (34%)
There were 54 rules that automatically passed validation. The "Auto Pass" category describes rules that are automatically executed by ConTesA, and result in a "Success" or "Information" status.

Auto Fail - 0 (0%)
There were 0 rules that failed validation. The "Auto Fail" category describes rules that are automatically executed by ConTesA, and result in a "Warning", "Failure", or "Error" status. Each rule may have failed one or more times. See the "Auto Fail Rules" section for specific locations of the failures in your schema file(s). This category may also contain "Partial" rules. Partial rules are rules that cannot be fully automated by ConTesA and require the user to verify their status. Partial rules are placed into the "Auto Fail" category if their automated checks result in a status of "Warning", "Failure", or "Error".

Manual Pass - 0 (0%)
There were 0 rules that were manually verified by the user. The "manual" category describes rules that must be checked by the user because they are either not yet implemented, cannot be automated, or are only partially implemented in ConTesA. "Partial" rules are in the manual category, because the user must verify the portions of the rule ConTesA cannot automate. A rule is considered to be in the "Manual Pass" category if a user has verified that the manual rule will result in a "Success" status.

Manual Fail - 0 (0%)
There were 0 rules that were not automatically checked by ConTesA, and require manual verification by the user. The "manual" category describes rules that must be checked by the user because they are either not yet implemented, cannot be automated, or are only partially implemented in ConTesA. "Partial" rules are in the manual category, because the user must verify the portions of the rule ConTesA cannot automate. Partial rules are placed in the manual fail category only if their partial rule implementation results in "Success" or "Information", otherwise they are placed in the auto fail category. They are placed in the manual fail category because they cannot be verified as being successful until they have been checked by the user.

Not Run - 104 (65%)
There were 104 rules not run by ConTesA. The "Not Run" status indicates that either the rule did not apply to the selected file, or the selected file did not contain the data to which the rule applies. It does not suggest that a file passed or failed a rule. It only means the rule could not be run against the selected file.

Rule Summary (158 Rules)

● Not Run 104 (65%)
● Auto Pass 54 (34%)

Rule Contexts Summary

A statistical analysis of business rules, based on which context they belong in.

Context Name	Description	Auto Pass	Auto Fail	Manual Pass	Manual Fail	Not Run	Total
NDR 5 Rules for extension XML Schema documents	No Description Found (add sch:p element to your pattern).	54	0	0	0	104	158
Totals		54	0	0	0	104	158

MIGRATION TOOL

- Migrates subsets
- One version at a time
 - e.g. 4.2 → 5.0 → 5.1
- Does not migrate extensions

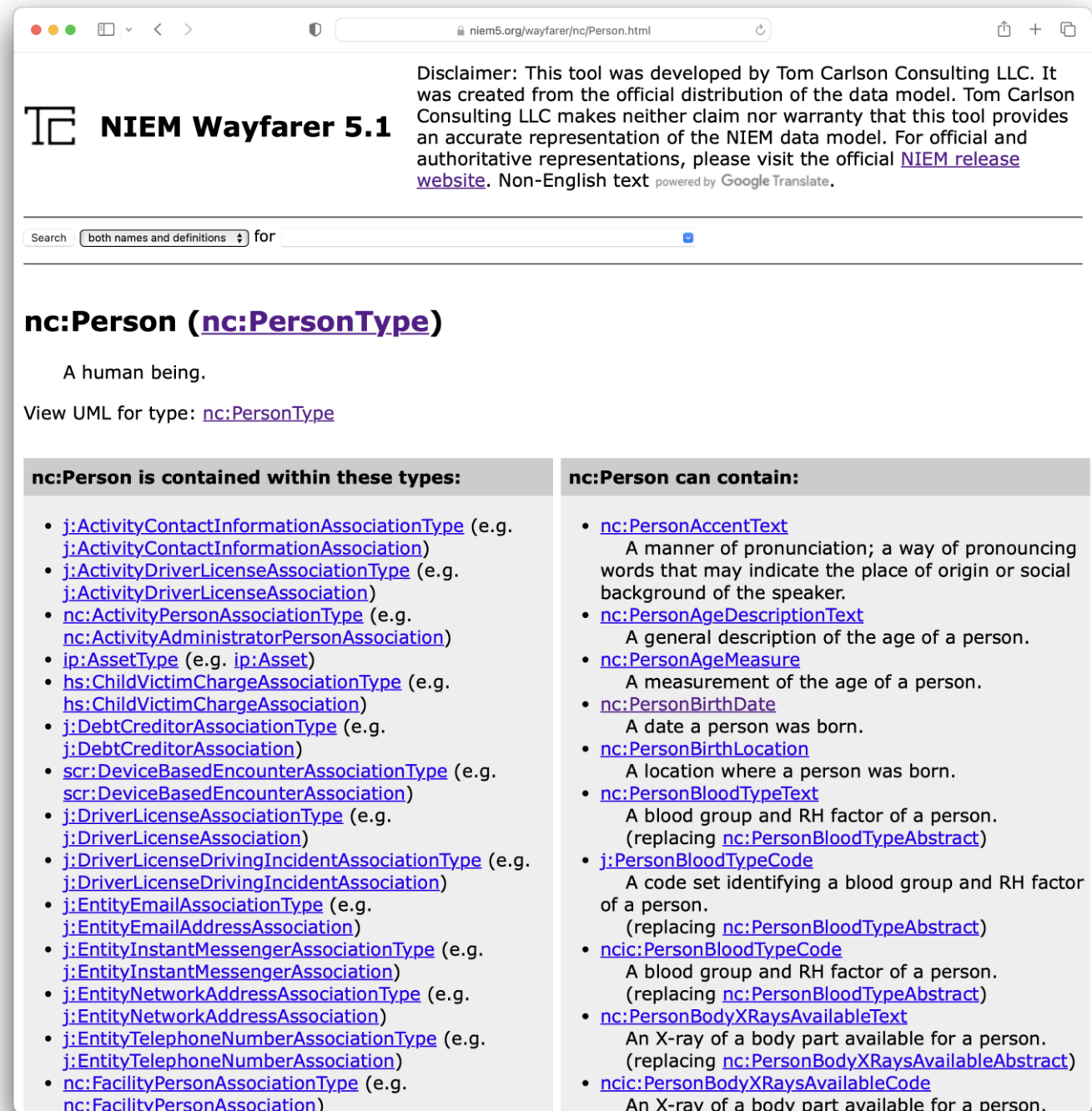
- Tool URL:
 - <https://tools.niem.gov/niemtools/migration/index.iepd>

- More Info:
 - <http://niem.github.io/reference/tools/migration/>

The screenshot shows the web interface for the NIEM Migration Tool. The browser address bar displays `tools.niem.gov/niemtools/migration/index.iepd`. The page header includes the NIEM logo and navigation links for TECHHUB, NIEM RELEASES, and TOOLS CATALOG. A secondary navigation bar contains GETTING STARTED, ABOUT NIEM, COMMUNITIES, TRAINING, and CONTACT US. The main content area is titled "Migration Tool" with the instruction "Provide the wantlist you wish to migrate." Below this is a large "Upload Wantlist" section. It features a "Choose File" button, a "no file selected" status, and a "Migrate Wantlist" button. A section titled "Supported Wantlist Migrations" lists various conversion paths, such as "NIEM 5.1 to NIEM 5.2 conversion" and "GJXDM 3.0.3 to NIEM 2.0 wantlist conversion". A "Migration Output" section lists the types of results generated, including a migrated wantlist, a migrated subset, and a detailed migration report.

WAYFARER

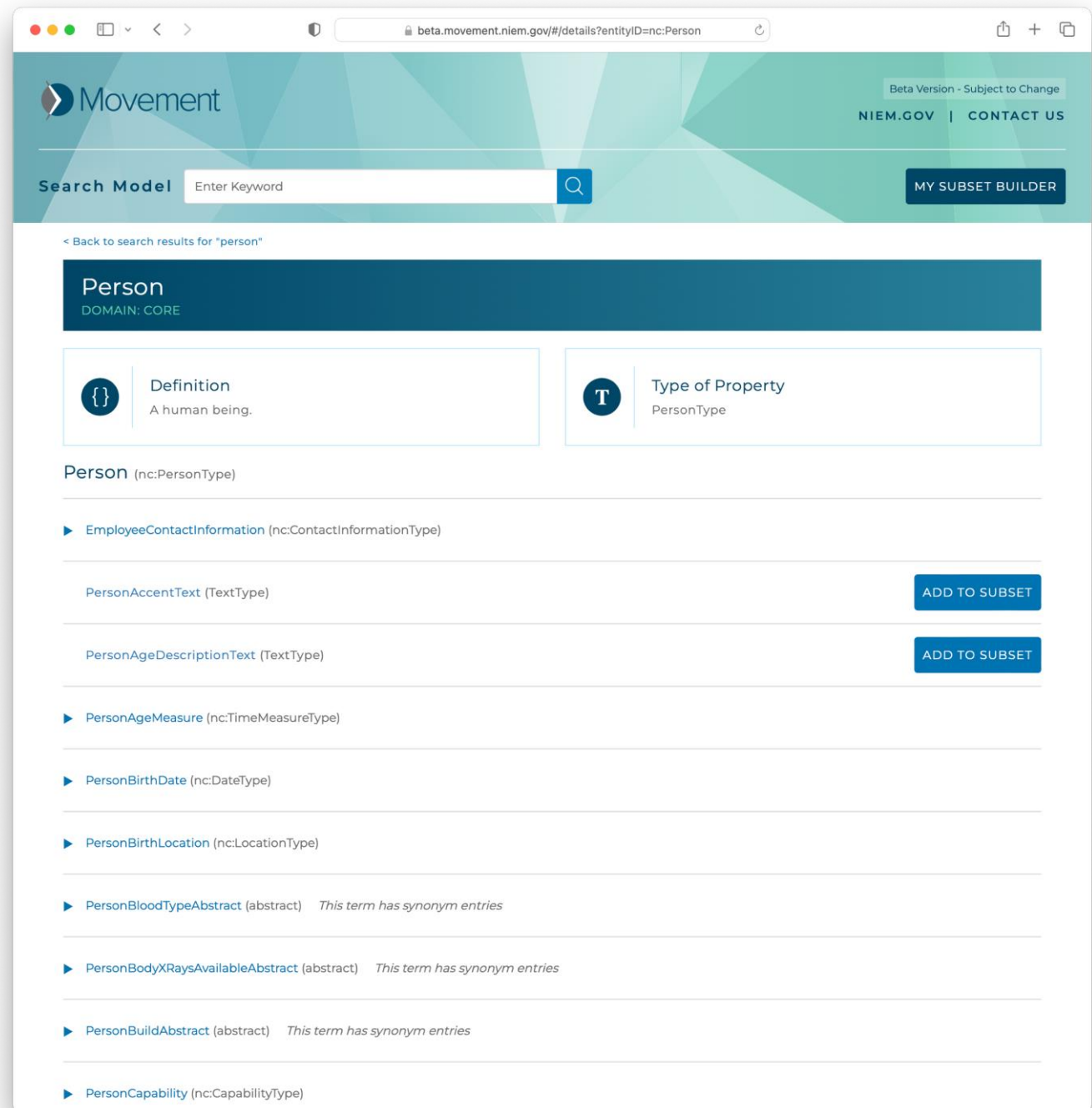
- Exploration tool
- Third party
- Tool URL:
 - <https://niem5.org/wayfarer/>



The screenshot shows the NIEM Wayfarer 5.1 web application. At the top, there is a disclaimer: "Disclaimer: This tool was developed by Tom Carlson Consulting LLC. It was created from the official distribution of the data model. Tom Carlson Consulting LLC makes neither claim nor warranty that this tool provides an accurate representation of the NIEM data model. For official and authoritative representations, please visit the official [NIEM release website](#). Non-English text powered by Google Translate." Below the disclaimer is the NIEM Wayfarer 5.1 logo and a search bar with the text "both names and definitions" and "for". The main content area displays the definition for **nc:Person (nc:PersonType)**, which is "A human being." and includes a link to "View UML for type: nc:PersonType". Below this, there are two columns: "nc:Person is contained within these types:" and "nc:Person can contain:". The first column lists various association types such as [j:ActivityContactInformationAssociationType](#), [j:ActivityDriverLicenseAssociationType](#), [nc:ActivityPersonAssociationType](#), [ip:AssetType](#), [hs:ChildVictimChargeAssociationType](#), [j:DebtCreditorAssociationType](#), [scr:DeviceBasedEncounterAssociationType](#), [j:DriverLicenseAssociationType](#), [j:DriverLicenseDrivingIncidentAssociationType](#), [j:EntityEmailAssociationType](#), [j:EntityInstantMessengerAssociationType](#), [j:EntityNetworkAddressAssociationType](#), [j:EntityTelephoneNumberAssociationType](#), and [nc:FacilityPersonAssociationType](#). The second column lists types that nc:Person can contain, such as [nc:PersonAccentText](#), [nc:PersonAgeDescriptionText](#), [nc:PersonAgeMeasure](#), [nc:PersonBirthDate](#), [nc:PersonBirthLocation](#), [nc:PersonBloodTypeText](#), [j:PersonBloodTypeCode](#), [ncic:PersonBloodTypeCode](#), and [nc:PersonBodyXRaysAvailableText](#).

MOVEMENT

- Simplified exploration tool
- Use alongside something like the SSGT
- Tool URL:
 - <https://beta.movement.niem.gov/>
- More Info:
 - <http://niem.github.io/reference/tools/movement/>



The screenshot shows the Movement website interface. At the top, there is a navigation bar with the 'Movement' logo, a search bar labeled 'Search Model' with the text 'Enter Keyword', and a 'MY SUBSET BUILDER' button. The page content is titled 'Person' with the domain 'CORE'. Below this, there are two main sections: 'Definition' (A human being.) and 'Type of Property' (PersonType). A list of related entities follows, including 'EmployeeContactInformation', 'PersonAccentText', 'PersonAgeDescriptionText', 'PersonAgeMeasure', 'PersonBirthDate', 'PersonBirthLocation', 'PersonBloodTypeAbstract', 'PersonBodyXRaysAvailableAbstract', 'PersonBuildAbstract', and 'PersonCapability'. Each entity has a corresponding 'ADD TO SUBSET' button.

MEP BUILDER

- Unified tool for building IEPDs
- Still under development
- Tool URL:
 - <https://sourceforge.net/projects/niem-mep-builder/>

The screenshot shows the NIEMOPEN MEP Builder web application. The browser address bar indicates the URL is localhost:3000/PackageBuilder/MapModel. The page header includes the NIEMOPEN logo, the text "NATIONAL INFORMATION EXCHANGE MODEL", and navigation links for "Current Release", "Contact", and "Search". The main navigation bar has tabs for "Getting Started", "My Home", "MEP Builder", and "Training". Below this, there is a "MEP Metadata" section with a "Show more" dropdown and input fields for "MEP Name" (Test IEPD), "Release" (5.1), "Revision" (1), "Status" (beta), "Point of Contact" (Tom), and "Email" (thomas.carlson@gttri.gatecl). There are "Save" and "Save & Close" buttons, and a "Hints" toggle switch.

The left sidebar contains a "Message Exchange Package Creation Guide" and a "Lifecycle Phases" menu with options: "Scenario Planning", "Analyze Requirements", "Map & Model" (selected), "Build & Validate", "Assemble & Document", and "Publish & Implement". Below this are sections for "Message Exchange Package Artifacts" and "Message Exchange Package Build Components".

The main content area is titled "Map and Model" and includes a "Show Less" link. It contains a text box with the message: "With the basic data requirements identified, now is the time to match them to NIEM data components." followed by a bulleted list of tasks: "Map user data requirements to NIEM data components", "Create custom model extensions", "Validate NIEM conformance on individual extension components", "Search SSGT for results for type or property", and "Search Common NIEM Components for popular types or properties". Below this is a paragraph: "To help visualize the information flow and content, you can graphically show the actors and information flow for your scenario. A visual representation can be useful especially if the scenario is complex."

At the bottom, there is a "Property" section with tabs for "Type", "Type-Has-Property", "Codes | Facets", "Namespace", "Local Terminology", "Type Union", and "Metadata". It features a table with columns for "Actions", "Source", "Mapping", and "Target". The table has a header row with "NS Prefix", "Property Name", "Data Type", "Definition", "Sample Value", "Code", and "NS Prefix". Below the header, there are dropdown menus for each column. A row of data is visible with a green checkmark and a red X in the "Actions" column, and values "NS Prefix", "Person", "Person T", "Definition", "Sample Val", "Code", and "NS Pref" in the other columns.

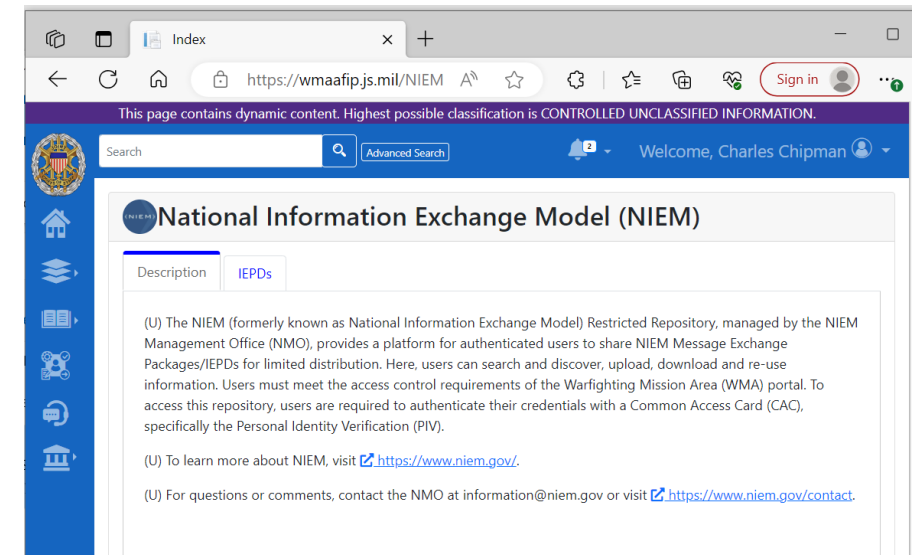
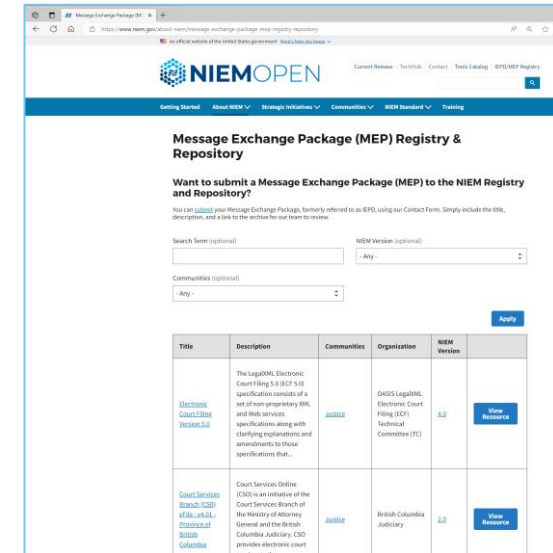


Registries & Repositories

Chuck Chipman

REGISTRIES & REPOSITORIES

- Message Exchange Package (MEP) Registry & Repository
 - <https://www.niem.gov/about-niem/message-exchange-package-mep-registry-repository>
- NIEM Restricted Registry & Repository
 - <https://wmaafip.js.mil/NIEM>

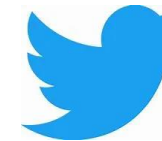


RESOURCES

- [OASIS Open - OASIS Open \(oasis-open.org\)](https://oasis-open.org)
- NIEMOpen/MilOps Web Presence:
 - <https://niemopen.org>
 - <https://www.niem.gov/>
 - <https://niem.github.io/>
 - <https://niem.github.io/community/milops/>
- Git Repos
 - NIEMOpen: <https://github.com/niemopen>
 - NBAC TSC (admin): <https://github.com/niemopen/nbac-admin>
 - NTAC TSC (admin): <https://github.com/niemopen/ntac-admin>
 - NMO TSC TBD: in-progress
- NIEMOpen Slack Channel:
 - https://join.slack.com/t/niemopen/shared_invite/zt-1n1brwp2p-bRBR~gklra0f5Btdzami5w
- Mailing Lists
 - NIEMOpen: <https://lists.oasis-open-projects.org/g/niemopen>
 - NTAC TSC: <https://lists.oasis-open-projects.org/g/niemopen-ntactsc>
 - NBAC TSC: <https://lists.oasis-open-projects.org/g/niemopen-nbactsc>
 - NMO TSC: <https://lists.oasis-open-projects.org/g/niemopen-nmotsc>
 - SLTT Tiger Team: <https://lists.oasis-open-projects.org/g/niemopen-sltd>
- Registry & Repository
 - Message Exchange Package (MEP) Registry & Repository: <https://www.niem.gov/about-niem/message-exchange-package-mep-registry-repository>
 - NIEM Restricted Repository: <https://wmaafip.js.mil/NIEM>
- Releases: <http://niem.github.io/niem-releases/>
- Tools Catalog: <https://www.niem.gov/tools-catalog>
- Training: <https://niem.github.io/training/>



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<https://www.youtube.com/channel/UCg9qV22PXLBJG41hc-EwVrQ>

BACKUP

NIEMOPEN MILSTDS, CJCSIS, DODIS & STANAGS

Effort	Partner ORGs	Overview	Status
Integrating NIEMOpen via STANAGs NCDF STANAG 5653	JS J6, Germany, NATO ACT / NCIA)	Semantics: MIP Information Model (MIM) UML format to NIEM-conformant XML creation. Syntax: NATO XML Naming Design Rules to mimic NIEM	Share COMPSPOT IEPD with German MTF Rep Nico (already approved by ACC). Once Nico's support contract is in place, continue to engage and share as appropriate USMTF work already done. This will ensure quicker alignment between U.S. and NATO.
MILSTD 6040 (USMTF) NIEMOpen Conformance approach, STANAG 7149/APP-11	USMTF CCB	Onboard/Technical Support to transform existing USMTF XML into a NIEMOpen conformant construct. Potential to include 20,000 new data components into the MilOps Domain	USMTF migrating to NIEMOpen XML; anticipate completion FY23; NATO MTF to evaluate U.S. product once released.
MILSTD 6016 (Link-16) Tactical Data Link J-series messages XML standardization STANAG 5516	Joint Multi-TDL CCB	Approved Draft Interface Change Proposal to develop Appendix to provide guidelines for generation of J-Series message data as NIEMOpen conformant XML	The appendix to 6016 will provide for the conversion of J-series binary messages to XML; and back to binary. One of the primary considerations of this effort is NIEMOpen conformance. Two challenges currently being worked: <ul style="list-style-type: none"> a. J-Series messages do not convert directly to NIEM. b. Identification of a binary to XML conversion that will support NIEMOpen conformance. c. NATO ahead of U.S. w/ DFDL; U.S. considering leveraging DFDL to produce NIEMOpen conformant XML of J-series messages
MILSTD 6520	NATO, Greece	C3B Interim Measure regarding geographical Entities for C3 Standards Addendum 2 to AC/322-N(2017)0092	
MILSTD 2525 Symbology STANAG 2019/APP-6	NATO	Standardized set of graphical symbols for the display of Information in C2 Systems and Applications.	Both U.S. and NATO standards aligned; NIEMOpen v3.0 and v4.0 support exchanging SIDC codes.
Joint All Domain Command and Control (JADC2)	Joint Staff, CDAO, OUSD, DOD MPE Exec Agency	Warfighting Capability intended to Sense, make Sense and Act at all levels and phases of war and across all domains with partners, to deliver information advantage at the speed of relevance.	Currently being implemented through five stable and enduring Lines of Efforts, objectives and tasks to achieve strategic goals. Multiple reafferences to NIEMOpen in the JADC2 RA Enclosure D (JADC2 Capability Development and Analytical Framework) within the Application and services, Interface and Data & Information principals. Also, Referenced at the JADC2 RD Standard View 2.

NIEMOPEN MILSTDS, CJCSIS, DODIS & STANAGS

Effort	Partner ORGs	Overview	Status
CJCSM 3265.01A JOINT COMMAND AND CONTROL (C2) REQUIREMENTS MANAGEMENT PROCESS AND PROCEDURES	Joint Staff		Currently reference NIEMOpen section 5.3 Mission Partner Interoperability, Section 7 Data
CJCSI 6610.01F TACTICAL DATA LINK STANDARDIZATION AND INTEROPERABILITY	Joint Staff		Currently reference NIEM
DODI 8110.01 MISSION PARTNER ENVIRONMENT INFORMATION SHARING CAPABILITY IMPLEMENTATION FOR THE DOD	DoD CIO		Section 1.2. Policy f 1 Section 2.10 OSD AND DOD COMPONENT HEADS, EXCEPT FOR DOT&E Currently require compliance with NIEM
DODI 8320.07 Implementing the Sharing of Data, Information, and Information Technology (IT) Services in the Department of Defense	DoD CIO		NIEMOpen First Policy
DODD 819001e Defense Logistics Management Standards (DLMS)	USD (A&S)		Chg.3 Enclosure 2 page 6 Incorporates changes to ASC X12 standards into DLMS in accordance with the NIEMOpen
DoD Instruction 8170.01 ch 1, Aug 2021 Online Information Management and Electronic Messaging			Section 3.11 Data b. Architect new DoD electronic messaging services for openness and expose high-value data and content as Web APIs at a discrete and digestible level of granularity with metadata tags, in accordance with the May 23, 2012 Federal CIO Memorandum and the tagging concepts and standards found in DoDI 8320.07
IC Data-Centric Framework and Joint Guidance Plan, 24 Jan 2023	NSA	The IC Joint Guidance Plan is a living document, reviewed periodically, and based on lessons learned from the mission sprints and refinement of the Data-Centric Framework. 42	NIEMOpen is mentioned under for data-related activities, "an organization should adopt controlled vocabularies and terminologies". Also, NIEMOpen is under the reference standards under guidance such as "IC Elements should conform to NIEMOpen standards to enable humans querying"

NATO CORE DATA FRAMEWORK (NCDF) CWIX 2023 AND FEDERATED MISSION NETWORKING (FMN)



- ***NCDF ~ NIEM in NATO***

- Adopt NIEM-like technical specifications (e.g NDR, IEPDs)
- Adopt NIEM-like business processes (e.g. core and domain models)
- Draft NCDF STANAG (standardization agreement); will enter ratification process this year
- NATO Semantic Reference Model (SRM) Vision: create a Common Cross Community SRM (CXCSR)

- ***CWIX 2023 – NCDF Data Lake demonstration***

- Use NCDF model as basis for structural data stored in the data lake
- Includes transformation from several formats to NCDF (e.g. MIP, MTF, OTH-G, NVG, KML, native XML)
- Data tagged for discovery/search/access control (IAW STANAGs 4774/4778/5636)
- Includes data from various COIs: Maritime, CBRN, C2, Medical, Cyber, ISR, Space, Land

- ***NCDF in FMN***

- FMN is NATO effort to establish min federation capabilities to ensure Day 1 interoperability for NATO operations
- Includes set of Procedural Instructions and Service Instructions
- FMN Spiral 5 Service Instruction for Cross Community Information Sharing (NCDF Data Lake)

NIEM 5.2 MILOPS MISSION SPECIFIC (MOMS)

- Separate release for distribution restricted content, typically published 3 months after public release; currently includes:
 - Distribution Statement C – Federal gov't and contractors
 - Distribution Statement D – DoD and contractors
- MOMS content/sources include: ASW COI, DCSA, JP 3-52 (Airspace Control), Link-16, USMTF, VMF, and more
 - Additional USMTF content to be added to MOMS 5.2
- MOMS releases include restricted content versions of the Conformance Testing Assistant (ConTesA) and the Schema Subset Generation Tool (SSGT), which are available upon request due to file size
- MOMS releases are available on the NIEM Restricted Repository hosted on the Warfighting Mission Area – Architecture Federation and Integration Portal (WMA-AFIP) at <https://wmaafip.js.mil/NIEM>

MILOPS DOMAIN

- Main landing page - <https://www.niem.gov/communities/military-operations>
 - Become a member - <https://www.niem.gov/contact>
 - Governance
 - Explore MilOps model content
 - Download the current NIEM release which includes updates to MilOps model content - <https://niem.github.io/niem-releases/>
 - NIEM Restricted Repository - <https://wmaafip.js.mil>
 - View model content using Movement - https://beta.movement.niem.gov/#/results?q=*&selectedFacets=domain:%22Military%20Operations%22&page=1
 - Success Stories - <https://www.niem.gov/about-niem/success-stories>
 - Get involved - <https://niem.github.io/community/milops/>