

COMMONWEALTH OF VIRGINIA



Information Technology Resource Management (ITRM)

ENTERPRISE ARCHITECTURE

**NATIONAL INFORMATION EXCHANGE MODEL (NIEM)
CORE PERSON DATA EXCHANGE STANDARD**

Virginia Information Technologies Agency (VITA)

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1 Publication Version Control

The following table contains a history of revisions to this publication.

Version	Date	Revision Description	Contact
1.0	02/01/2013	Initial Document	Joe Grubbs
1.1	02/11/2013	Revised based on comments from Chief Enterprise Architect	Joe Grubbs
1.2	02/15/2013	Revised based on comments from OAG	Joe Grubbs
1.3	04/02/2013	Revised based on comments from VITA executives/staff	Joe Grubbs
1.4	05/23/2013	Revised based on comments received via ORCA	Joe Grubbs
1.5	07/19/2013	Revised to reflect date of adoption by the Secretary	Joe Grubbs

Identifying Changes in This Document

- See the latest entry in the revision table above
- Vertical lines in the left margin indicate the paragraph has changes or additions. Specific changes in wording are noted using italics and underlines; with italics only indicating new/added language and italics that is underlined indicating language that has changed.

The following examples demonstrate how the reader may identify updates and changes:

Example with No Change – The text is the same. The text is the same.

Example with Revision – The text is the same. *A wording change, update or clarification is made in this text.*

Example of New Text – *This text is new.*

2 Reviews

- VITA's Commonwealth Data Governance (CDG) staff prepared the first draft of this publication based on information from the National Information Exchange Model (NIEM) Program Management Office (PMO) and the Integrated Justice Information Systems (IJIS) Institute, the certified vendor for NIEM training and technical assistance.
- The publication was revised based on comments provided by the Commonwealth's Chief Enterprise Architect.
- The publication was revised based on comments provided by VITA's counsel in the Office of the Attorney General.
- The publication was revised based on comments from members of VITA's leadership team and staff. The Chief Information Officer (CIO) of the Commonwealth reviewed the draft Scope and Compliance strategy and authorized proceeding with public comment phase of development.
- The publication was revised based on public comments received from two (2) Commonwealth agencies via VITA's Online Review and Comment Application (ORCA) and in preparation of the final decision package.

3 Definitions

The terms used in this Business Narrative comply with the adopted definitions maintained in the Commonwealth of Virginia's Information Technology Resource Management (ITRM) Glossary. The ITRM Glossary can be accessed at http://www.vita.virginia.gov/uploadedFiles/VITA_Main_Public/Library/PSGs/PSG_Sections/COV_ITRM_Glossary.pdf

4 Background

In May 2012, the General Assembly adopted language under Item 427 of the 2012 Appropriation Act ("Item 427") requiring the Secretary of Technology to work with Cabinet Secretaries and their agencies to standardize all "citizen-centric" data, including personnel data, recipient information, and other common sources of information for Persons gathered by the Commonwealth and exchanged by agency systems.

Virginia Information Technologies Agency (VITA), acting on behalf of the Secretary and the Chief Information Officer (CIO) of the Commonwealth, has oriented its Item 427 compliance strategy around migrating Commonwealth agencies toward conformance with the National Information Exchange Model (NIEM).¹ By integrating NIEM into the Item 427 data standardization requirements, VITA will be able to enforce a common discipline, an established set of standards, and a shared vocabulary to support standardization of Person data across state government.

NIEM started in 2005 as an outgrowth of the U.S. Department of Justice's Global Justice Extensible Markup Language (XML) Data Model project and has become a collaborative partnership across levels of government and private industry. NIEM provides a set of core data elements for data exchange development and harmonization. These core data elements serve as building blocks, which offer a consistent baseline for creating exchange schemas and transactions across all government domains. Use of these core data elements gives the sender and receiver of information a common vocabulary and shared understanding of the data definitions.

NIEM has been endorsed by the National Association of State CIOs (NASCIO) as the set of standards and governance structure for information exchange at all levels of government:

"NIEM should be integrated into state government enterprise architecture and data management strategy specifically for planning and implementing inter-governmental information exchanges. NIEM provides a broad range of products and capabilities for planning and implementing enterprise-wide information exchanges...What is needed is a common discipline for information sharing that is employed by all government lines of business. NIEM exists as that discipline for federal, state and local government." NASCIO, April 28, 2011

The Commonwealth's adoption of NIEM will support VITA's ongoing move toward enterprise data standardization. The Commonwealth has made significant progress in standardizing data within the health information technology (IT) domain, with guidance from its Health IT Standards Advisory Committee (HITSAC). More than 125 health IT standards have been adopted during the past two years based on HITSAC recommendations. Migration to NIEM also will align the Commonwealth with industry best practices, Federal standards and existing data standards, as required by Item 427.

¹ VITA has documented its proposed Item 427 compliance strategy in the *Commonwealth Data Standardization: Interim Plan*, submitted by the Secretary of Technology to the General Assembly on November 1, 2012. For more information, visit <http://www.vita.virginia.gov/oversight/DM/default.aspx?id=6442470861>

Development of the NIEM Core Person Data Exchange Standard represents a major step in VITA's Item 427 compliance strategy. The standard will give Commonwealth agencies the ability to meet the Item's data standardization requirements without having to modify the underlying data architecture of existing systems or commercial-off-the-shelf (COTS) solutions. Standardization of Person data will be achieved through mapping core data elements in to a NIEM-conformant Information Exchange Package Documentation (IEPD).

Due to the complexity of implementing the NIEM Core Person Data Exchange Standard, implementation of the standard shall be completed in a phased process. Details on the phasing process and compliance deadlines have been provided in the Compliance section of this document.

In formulating the NIEM Core Person Data Exchange Standard, VITA staff engaged in three sets of activities to promote Commonwealth agency understanding of NIEM:

1. NIEM Training/Executive Briefing: VITA hosted a three-day NIEM technical training in October 2012 and a NIEM Executive Briefing for agency leadership in November 2012. More than 25 agency data stewards, business leads and technical staff from across Commonwealth Secretariats participated in the technical training, and approximately 40 management staff attended the Executive Briefing. Both events were facilitated by trainers from the Integrated Justice Information Systems (IJIS) Institute.
2. NIEM IEP/IEPD for Enterprise Data Management (EDM): VITA staff developed a NIEM-conformant IEP/IEPD for the EDM solution, the enterprise data management service being implemented for the Commonwealth's Electronic Health and Human Resource (eHHR) Program, by mapping the EDM Person Data Exchange Standard (EDS-R-126) attributes to NIEM elements, and building a NIEM-conformant exchange schema. This process enabled VITA staff to enhance its NIEM subject matter expertise to support other Commonwealth agencies and resulted in an NIEM exchange schema that will be implemented by agencies for in-scope systems.
3. NIEM Cost Model: VITA staff implemented the NIEM Cost Model to estimate the fiscal impact of developing and implementing NIEM-conformant IEPs/IEPDs for Person data. The per-system cost estimates for NIEM conformance will be included in the *Commonwealth Data Standardization: Final Plan*, prepared for the Secretary of Technology to submit to the General Assembly by July 1, 2013, as required by Item 427.

Finally, adoption of the NIEM Core Person Data Exchange Standard will reinforce the Commonwealth's current implementation of NIEM. In October 2011, the Secretary of Technology approved NIEM (NIEM Messaging Standard, EDS-R-125) as the messaging standard governing the Commonwealth's participation in the Federal Prescription Monitoring Program (PMP), administered by the Department of Health Professions (DHP). The NIEM Core Person Data Exchange Standard will align with, and support interoperability between, DHP's and other Commonwealth agency NIEM implementations.

5 Scope

The NIEM Core Person Data Exchange Standard establishes as a Commonwealth ITRM Standard the NIEM Core Person data elements. The NIEM Core Person Data Exchange Standard shall be applicable to all "citizen-centric" data exchanged by Commonwealth agencies, including personnel data, recipient information, and other common sources of information for Persons gathered by the Commonwealth and exchanged by agency systems, pursuant to Item 427 of the 2012 and 2013 Appropriation Acts ("Item 427").

However, the NIEM Core Person Data Exchange Standard shall not abridge the scope or applicability of the Commonwealth's adopted health IT standards, such as Health Level 7 (HL7), Logical Observation Identifiers Names and Codes (LOINC), Systematized Nomenclature Of Medicine Clinical Terms (SNOMED), American National Standards Institute Accredited Standards Committee X12 (ASC X12) or other governing external (national or international) standards for Person data. Compliance with adopted Commonwealth health standards or other governing external standards for Person data, pursuant to Item 427, shall take precedence over the NIEM Core Person Data Exchange Standard.

For the purpose of the NIEM Core Person Data Exchange Standard, the term "systems" shall be defined as information systems, database solutions, Web services, message handlers and other platforms, applications, solutions and services that support the exchange of "citizen-centric" (Person) data with other systems external to the in-scope agency, as defined below. Systems that do not exchange data ("stand-alone") or exchange only within the agency shall not be in scope for the standard. VITA shall be responsible for determining whether a system is in scope for the NIEM Core Person Data Exchange Standard.

For the purpose of the NIEM Core Person Data Exchange Standard, the term "legacy" shall be defined as systems that went into production prior to, and remain in operation at the time of, adoption of the standard.

The scope of NIEM Core Person Data Exchange Standard shall cover the following:

- **New Systems:** Agencies proposing new in-scope systems, including replacement of existing ("legacy") systems, on or after July 1, 2013, shall at the time the system goes into production comply with the NIEM Core Person Data Exchange Standard or have an approved Commonwealth Enterprise Architecture exception. For information on exceptions, refer to Section 10 (Compliance) of this document. Agencies shall demonstrate in the project documentation their plan for implementing a NIEM-conformant IEPD. Compliance with the NIEM Core Person Data Exchange Standard or documentation of the approved Enterprise Architecture exception shall be a requirement for project approval.
- **Item 427 Systems:** Agencies with systems cited as projects in Item 427 ("Item 427 systems") shall prepare for compliance with the NIEM Core Person Data Exchange Standard. Agencies responsible for the Item 427 systems shall submit to VITA by July 1, 2014, a plan for compliance with the NIEM Core Person Data Exchange Standard or have an approved Commonwealth Enterprise Architecture exception. The compliance plan shall include a cost estimate and project schedule.

VITA shall be responsible for determining whether a system will be considered in-scope for the NIEM Core Person Data Exchange Standard. VITA will base its scope determination on whether the system will exchange Person data with systems outside of the agency implementing the system. The scope review will be applicable to only major IT projects subject to VITA/Project Management Division (PMD) review. Non-major projects or modifications to existing systems outside of the VITA/PMD review will not be subject to the VITA scope review for the NIEM Core Person Data Exchange Standard.

Agencies maintaining legacy systems, as defined above, will not be in scope for compliance with the NIEM Core Person Data Exchange Standard. However, agencies with legacy systems may voluntarily elect to implement a NIEM IEPD for the purpose of exchanging Person data with other agencies or external partners. VITA shall provide guidance and support, including the sharing of adopted NIEM-conformant IEPDs, with any agency implementing a NIEM exchange of Person data for legacy systems.

6 Governance

The NIEM Core Person Data Exchange Standard was developed by VITA staff based on information from the NIEM Program Management Office (PMO) and the Integrated Justice Information Systems (IJIS) Institute, the certified vendor for NIEM training and technical assistance.

The NIEM Core Person Data Exchange Standard was reviewed by the Health Information Technology Standards Advisory Committee (HITSAC) during its February 2013 meeting. HITSAC advises the Information Technology Advisory Council (ITAC) on the adoption of nationally recognized technical and data standards for health information technology systems or software pursuant to § 2.2-2699.7 of the *Code of Virginia*.

The NIEM Core Person Data Exchange Standard shall be owned by VITA and maintained by VITA in a searchable Enterprise Architecture Data Standards Repository available at <http://www.vita.virginia.gov/oversight/dm/default.aspx?id=10344>.

VITA shall be responsible for determining whether a system is in scope for the NIEM Core Person Data Exchange Standard.

To inform VITA's scope determination, agencies shall complete and submit to VITA the Data System and Exchange Classification Survey, provided in **Appendix A**, for any system owned by the agency that supports the collection, maintenance, management or exchange of "citizen-centric" (Person) data.

Agencies must complete the Data System and Exchange Classification Survey and submit the completed survey to VITA by September 30, 2013.

7 Components

The NIEM Core Person Data Exchange Standard shall consist of the following:

1. Business Narrative describing the standard (this document)
2. NIEM Normative Specifications as published and maintained by the NIEM Program Management Office at <https://www.niem.gov/technical/Pages/references-specs.aspx>
3. NIEM Core Person Data Elements, Definitions and Specifications as published and maintained by the NIEM Program Management Office in the NIEM Reference Schemas at <http://release.niem.gov> and as available in the NIEM Subset Schema Generation Tool (SSGT) at <http://tools.niem.gov/niemtools/ssgt/index.iepd>

8 Authority

The following section references the statutory authority granted by the *Code of Virginia* to the Secretary of Technology to establish the NIEM Core Person Data Exchange Standard. The section also cites provisions in the *Code of Virginia* relating to the role of the Chief Information Officer (CIO) of the Commonwealth, the Information Technology Advisory Council (ITAC) and HITSAC in the development, review and adoption of Commonwealth ITRM Standards.

The Secretary of Technology

§ 2.2-225. Position established; agencies for which responsible; additional powers
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+2.2-225>

The Chief Information Officer (CIO) of the Commonwealth

§ 2.2-2007. Powers of the CIO
<http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+2.2-2007>

The Virginia Information Technologies Agency

§ 2.2-2010. Additional powers of VITA
<http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+2.2-2010>

The Information Technology Advisory Council (ITAC)

§ 2.2-2699.6. Powers and duties of the ITAC
<http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+2.2-2699.6>

The Health Information Technology Standards Advisory Committee (HITSAC)

§ 2.2-2699.7. Health Information Technology Standards Advisory Committee
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+2.2-2699.7>

9 Overview

The NIEM Core Person Data Exchange Standard establishes as a Commonwealth ITRM Standard the NIEM Core Person data elements, as published and maintained by the NIEM PMO. A sample of the NIEM Core Person data elements has been provided as **Appendix B**, and a sample data exchange in **Appendix C**. The NIEM Core Person Data Exchange Standard shall be applicable to all “citizen-centric” (Person) data exchanged by Commonwealth agencies, including personnel data, recipient information, and other common sources of information for Persons gathered by the Commonwealth and exchanged by systems, pursuant to Item 427 of the 2012 and 2013 Appropriation Acts (“Item 427”).

As the NIEM PMO continues to refine NIEM and the model’s exchange schemas, VITA staff shall work with Commonwealth agency data stewards to maintain the NIEM Core Person Data Exchange Standard based on the current version of the NIEM Core Person data elements published by the NIEM PMO. The NIEM Core Person Data Exchange Standard shall be reviewed on an as-needed basis and amendments to the standard submitted for adoption to ensure consistency with NIEM implementation.

NIEM Data Model

The NIEM data model contains a broad array of data elements, types, subtypes and schemas. The data model provides a mature and stable data dictionary of agreed-upon terms, definitions, and formats, independent of how information may be stored in individual agency systems. It contains two sets of closely related vocabularies: NIEM Core and NIEM Domains. NIEM Core consists of data elements commonly understood across all NIEM Domains, such as person, activity, location, and item. NIEM Domains contain mission-specific data components applicable to the discipline, which build upon NIEM Core concepts. Examples of current NIEM Domains include Emergency Management, Health, Human Services, Infrastructure Protection, Intelligence, Justice and others.

In the NIEM data model, data elements universally shared and understood across domains are identified as core (or universal) data elements or components. To become a core data element, consensus by all NIEM Domains is needed on the semantics and structure of the element. The set of NIEM universal data elements is stable, once established, and relatively small. The NIEM Core Person data elements represent a composite of attributes describing a Person. The core elements may include attributes such as the person’s name, date of birth, sex, race, ethnicity, height, weight, or citizenship status. The Person data elements may be used in nearly all relevant agency or domain information systems.

NIEM Data Exchanges

The basis of NIEM involves a “data exchange” between participating agencies. In NIEM terminology, a “data exchange” refers to an Information Exchange Package (IEP), a description of specific information exchanged between a sender and a receiver. The IEP can be coupled with additional documentation, sample Extensible Markup Language (XML) instances, business rules, and other elements to compose an Information Exchange Package Documentation (IEPD). An IEPD represents the final product of the NIEM exchange development process, also known as the IEPD Lifecycle.

The NIEM IEPD Lifecycle has six steps:

- Scenario Planning: Enables the identification of scenarios requiring the exchange of information, business requirements, and business context.
- Analyze Requirements: Defines the business and data requirements associated with a NIEM information exchange.
- Map and Model: Comprises activities focused on creating the exchange model, then mapping it to the NIEM model.
- Build and Validate: Focuses on the creation of a set of NIEM-conformant XML schemas that implement the document structure identified in the previous steps.
- Assemble and Document: Concentrates on assembling all artifacts of the IEPD, and completing any remaining documentation.
- Publish and Implement: Focuses on publishing the IEPD and using it in a production mode.

NIEM users build IEPDs from business requirements in order for the IEPDs to contain business and technical artifacts that define the cross-boundary information exchange. NIEM-conformant IEPDs follow the Model Package Description (MPD) Specification, which requires that XML schemas and instance documents contained within the IEPD are NIEM-conformant, and describes additional requirements for a collection of artifacts to comprise an IEPD. NIEM uses XML for schema definitions and element representation, which allows the structure and meaning of data to be defined through simple, but carefully defined XML syntax rules. This provides a common framework for NIEM information exchanges.

NIEM Core Person Data Elements

Implementation of the NIEM Core Person Data Exchange Standard shall be through NIEM-conformant IEPs/IEPDs for in-scope systems. For the purpose of the NIEM Core Person Data Exchange Standard, the term "systems" shall be defined as information systems, database solutions, Web services, message handlers and other platforms, applications, solutions and services that support the exchange of "citizen-centric" (Person) data with other systems external to the in-scope agency. Agencies implementing the NIEM Core Person Data Exchange Standard shall design their compliant IEPs/IEPDs to map data elements selected for their in-scope systems to the applicable types, subtypes and schemas in the NIEM Core Person component.

Given the extensive universe of Person-related data elements in the NIEM data model, agencies will not be required to implement the NIEM Core Person Data Exchange Standard for all NIEM Person data elements – that is, the entire array of Person-related data elements. Agencies need only implement those NIEM Person data elements applicable for the agency's in-scope systems and as necessary to meet each system's business and technical requirements.

For example, to develop a NIEM-conformant IEP/IEPD for the Enterprise Data Management (EDM) solution, the enterprise data management service being implemented for the Commonwealth's Electronic Health and Human Resources (eHHR) Program, VITA staff mapped the EDM Person Data Exchange Standard (EDS-R-126) using the NIEM Core Person data elements. Only those elements from the NIEM Core Person type were applicable for the EDM mapping. However, to meet all of the business and technical requirements for the EDM solution, the NIEM Core Person elements had to be extended to cover attributes needed for EDM but not part of the NIEM Core Person component. The final version of the EDM Person IEP/IEPD will be published to support agency reuse in implementing the NIEM Core Person Data Exchange Standard.

To understand the basics of NIEM, the NIEM IEPD Lifecycle and the NIEM Domains, and to utilize the tools needed for implementing the NIEM Core Person Data Exchange Standard, visit the following sites:

Background on NIEM:

<https://www.niem.gov/aboutniem/Pages/niem.aspx>

Use Cases and Examples of NIEM Implementations (Federal, State, Local and Tribal)

<https://www.niem.gov/documentsdb/Pages/documents.aspx>

Technical Overview:

<https://www.niem.gov/technical/Pages/niem.aspx>

Getting Started:

<https://www.niem.gov/technical/Pages/getting-started.aspx>

Introduction to the IEPD Lifecycle:

<https://www.niem.gov/technical/model-package-description/Pages/iepd-lifecycle.aspx>

Normative Specifications, References and Specifications:

<https://www.niem.gov/technical/Pages/references-specs.aspx>

NIEM Domains:

<https://www.niem.gov/communities/Pages/communities.aspx>

NIEM Schema Subset Generation Tool:

<http://tools.niem.gov/niemtools/ssgt/index.iepd>

NIEM Tools Catalog:

<https://www.niem.gov/tools-catalog/Pages/tools.aspx>

NIEM Wayfarer 2.1, developed by the National Center for State Courts:

<http://apps.ncsc.org/niem/>

IJIS Institute NIEM Help Desk:

http://ijis.org/services/knowledge_ctr.html

NIEM Training (Online and Classroom):

<https://www.niem.gov/training/Pages/train.aspx>

10 Compliance

The NIEM Core Person Data Exchange Standard establishes as a Commonwealth ITRM Standard the NIEM Core Person data elements. The NIEM Core Person Data Exchange Standard shall be applicable to all “citizen-centric” data exchanged by Commonwealth agencies, including personnel data, recipient information, and other common sources of information for Persons gathered by the Commonwealth and exchanged by agency systems, pursuant to Item 427 of the 2012 and 2013 Appropriation Acts (“Item 427”).

For the purpose of the NIEM Core Person Data Exchange Standard, the term “systems” shall be defined as information systems, database solutions, Web services, message handlers and other platforms, applications, solutions and services that support the exchange of “citizen-centric” (Person) data with other systems external to the in-scope agency, as defined under the Scope section and below in this document. Systems that do not exchange data (“stand-alone”) or exchange only within the agency shall not be in scope for the standard. VITA shall be responsible for determining whether a system is in scope for the NIEM Core Person Data Exchange Standard.

For the purpose of the NIEM Core Person Data Exchange Standard, the term “legacy” shall be defined as systems that went into production prior to, and remain in operation at the time of, adoption of the standard.

Due to the complexity of implementing the NIEM Core Person Data Exchange Standard, implementation of the standard shall be completed in a phased process. The phasing schedule shall feature staggered milestones in order to accommodate new systems and systems under development as projects cited in Item 427 of the 2012 Appropriation Act (“Item 427 systems”).

Compliance milestones for the NIEM Core Person Data Exchange Standard shall be based on the following schedule:

Deadline	Compliance Milestone
September 30, 2013	Completed Data System and Exchange Classification Surveys due to VITA.
July 1, 2013	Agencies proposing new systems, including replacement of existing (“legacy”) systems, on or after this date must comply with the standard by the time the system goes into production or have an approved Enterprise Architecture exception. Agencies shall demonstrate in the project documentation their plan for implementing a NIEM-conformant IEPD. Compliance with the standard or documentation of the approved Enterprise Architecture exception shall be a requirement for project approval.
July 1, 2014	Agencies with Item 427 systems shall prepare for compliance with the standard. Agencies responsible for the Item 427 systems shall submit to VITA by this date a plan for compliance or have an approved Commonwealth Enterprise Architecture exception. The compliance plan shall include a cost estimate and project schedule.

VITA shall be responsible for determining whether a system will be considered in-scope for the NIEM Core Person Data Exchange Standard. VITA will base its scope determination on whether the system will exchange Person data with systems outside of the agency implementing the system. The scope review will be applicable to only major IT projects subject to VITA/Project Management Division (PMD) review. Non-major projects or modifications to existing systems outside of the VITA/PMD review will not be subject to the VITA scope review for the NIEM Core Person Data Exchange Standard.

To inform VITA's scope determination, agencies proposing new systems or Item 427 systems, as defined above, which are subject to VITA/PMD review, shall complete and submit to VITA by September 30, 2013, the Data System and Exchange Classification Survey, provided in **Appendix A**, for any system owned by the agency that supports the exchange of "citizen-centric" (Person) data.

Commonwealth agencies unable to comply with the standard by the compliance deadlines established above must request an extension or exception using the VITA Exception Form available on the Web at

http://www.vita.virginia.gov/uploadedFiles/Oversight/EA/Data_Management_Group/EA%20Change-Exception%20Request%20Form.doc

The exception request must include a fiscal impact statement and demonstrate a valid and sufficient business case for the extension or exception.

The completed form should be emailed to ea@vita.virginia.gov.

APPENDIX A. DATA SYSTEM AND EXCHANGE CLASSIFICATION SURVEY

Data System	Data Exchange	Applicable Laws/Regulations/Statutes: Security, Privacy & Consent
System Point of Contact Name: Title: Phone: Email:	Who creates the data or how are the data acquired?	Applicable Federal Security, Privacy, Consent and Data-Sharing Constraints (Provide Citations):
System Information System Title: Agency: Date Implemented: Governing Data Standard(s):	Who may access the data?	Applicable Commonwealth Security, Privacy, Consent and Data-Sharing Constraints (Provide Citations):
System Architecture Front-end Application/UI: Database Solution: Server Configuration:	Describe the data lifecycle including the creation, storage, updates, disposal.	Does the applicable law, regulation or statute govern Data Access? Data Usage? Data Retention/Management? Data Sharing?
Data Management Data Model (Include LDM): Number of Variables/Attributes: Number of Records:	How are the data exchanged? How many participants in the exchange?	May the data be shared based on the Person's informed consent?
Security & Access Security Protocols: Access Options (Bulk Download, APIs, REST, SOAP):	Where are the data stored (at rest) and exchanged (in motion)?	Is there an informed-consent protocol in place for the source data system? Describe.
Data Sharing Agreement Memorandum of Agreement (MOA) or Understanding (MOU) Other Type of Agreement: Informed Consent Provision:	What applications/business processes use the data?	Other information:

APPENDIX B. SAMPLE NIEM CORE PERSON (UNIVERSAL) DATA ELEMENTS

**NATIONAL INFORMATION EXCHANGE MODEL (NIEM)
CORE PERSON – UNIVERSAL DATA ELEMENTS**

Data Element	Definition
PersonType	A data type for a human being.
PersonAgeMeasure	A measurement of the age of a person.
PersonAlternateName	An alternate name used by a person.
PersonBirthDate	A date a person was born.
PersonBirthLocation	A location where a person was born.
PersonCitizenship	A country that assigns rights, duties, and privileges to a person because of the birth or naturalization of the person in that country.
PersonDeathDate	A date a person died or was declared legally dead.
PersonDescriptionText	A description of a person.
PersonHeightMeasure	A measurement of the height of a person.
PersonLicenseIdentification	An identification that references a license certification or registration of a person for some purpose.
PersonName	A combination of names and/or titles by which a person is known.
	nc:PersonFullName universal (nc : PersonNameTextType) nc:PersonGivenName universal (nc : PersonNameTextType) nc:PersonMaidenName universal (nc : PersonNameTextType) nc:PersonMiddleName universal (nc : PersonNameTextType) nc:PersonNamePrefixText universal (nc : TextType) nc:PersonNameSuffixText universal (nc : TextType) nc:PersonSurName universal (nc : PersonNameTextType) nc:personNameCommentText universal (xsd : string)
PersonSex	A gender or sex of a person.
PersonSSNIdentification	A unique reference to a living person; assigned by the United States Social Security Administration.
PersonWeightMeasure	A measurement of the weight of a person.

nc = NIEM Core Namespace

APPENDIX C. NIEM CORE PERSON SAMPLE DATA EXCHANGE

NIEM CORE PERSON SAMPLE DATA EXCHANGE -- Name				
Source Type	Source Element	Description	NIEM Element/Type	NIEM Definition
<i>Person</i>		A Person is a human being.	nc:Person	A human being
	firstName	Contains the first name of a Person.	nc:PersonGivenName	A first name of a person
	middleName	A Middle Name is one or more middle names of a Person.	nc:PersonMiddleName	A middle name of a person
	lastName	Contains the last name is the last or family name of a Person OR the sole name by which a Person is known.	nc:PersonSurName	A last name or family name of a person
	suffix	A Name Suffix is a term appended after the family name that qualifies the Person's legal name.	nc:PersonNameSuffixText	A term appended after the family name that qualifies the name.
	gender	A Gender Code denotes the gender or sex of a Person.	nc:PersonSexText	A gender or sex of a person.
	birthDate	A Birth Date is the date a Person was born.	nc:PersonBirthDate	A date a person was born
<i>PersonAlias</i>		An alternate name used by a Person.	nc:PersonAlternateName	An alternate name used by a person.
	aliasFirstName	Contains the first name of a Person.	nc:PersonGivenName	A first name of a person.
	aliasMiddleName	Contains one or more middle names of a Person.	nc:PersonMiddleName	A middle name of a person.
	aliaslastName	Contains the Last Name is the last or family name of a Person OR the sole name by which a Person is known.	nc:PersonSurName	A last name or family name of a person.
	aliasSuffix	Contains the name Suffix appended after the family name that qualifies the Person's legal name.	nc:PersonNameSuffixText	A term appended after the family name that qualifies the name.