

Information Technology Policy

Core Citizen Data Model and Data Elements

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Category Information	Supersedes None
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1. Purpose

The purpose of the citizen data model is to provide a guideline for Commonwealth agencies to identify and standardize logical citizen-related data elements. The identification of the data elements will define entities and attributes that constitute a 'Core citizen,' whereas standardization will attempt to promote a common business name for the data elements along with their associated attributes. A common understanding of data entities and elements across the enterprise is an essential first step in developing integrated processes and moving away from 'silo' systems. As agencies attempt to follow these guidelines, it will help to promote Communities of Practice (COPs) by identifying authoritative data sources for citizen data elements, thereby promoting data sharing and interoperability.

Defining a Core Citizen Data Model and Data Elements will:

- Assist in delivery of consistent and user-friendly experiences across all digital Services.
- Assist online destinations to have a consistent look and feel to ensure a single identity for Enterprise Services.
- Ensure all citizen information is concise, in plain language, and current.
- Facilitate and Govern the ongoing transition of traditional non-digital services to a digital service platform.
- Establish a Citizen-First framework that promotes the innovative spirit and skills of the Enterprise through its personnel and technologies.
- Identify and Improve programs managing data, privacy, risk, and accessibility associated with Citizen Data.

A Logical data name is a unique identifier of an entity or attribute as stored within a logical data model or data dictionary. Logical names, also known as the Business Name or Functional Name, are to consist of English words and are to be readily understandable by the end user.

2. Objective and Benefits of a common citizen model:

- **Common language:** The first and foremost aspect of creating common data elements is to define or assign a standard business name for the core elements. This process unites the enterprise in calling each defined entity and element by a consistent name and avoiding abbreviations or annotations of the same entity or element.
- **Communication & Sharing:** Once a consistent name is defined, it facilitates communication between agencies and facilitates sharing data and models between departments and agencies.
- **Data Quality:** Data quality is a pressing need for any enterprise. By creating common models, an enterprise increases its ability to compare and synchronize data, thus improving the overall consistency and quality of data.
- **Model Evolution:** This model, with its entities and elements, will be an extensible model. As new and changed entities and elements evolve, they will be identified through the domain team, and updated models will be published to help agencies and departments make best use of this citizen model.

3. Citizen Model Creation History and Approval process:

The creation of the core citizen data element list was initially proposed by the members of the Enterprise Architecture Review Committee (EARC) to identify universal elements across the enterprise. The EARC team initially put together a draft of the elements, along with a skeleton model. Through Office of Data and Digital Technology (ODDT), this model was evaluated using members from various state agencies. Based on ODDT inputs and evaluation, the element list was finalized. The EARC was presented with the list and given a two-week time frame to provide feedback on the model.

Several questions were asked about the usability of the model, which are addressed in the objectives section of this document. The members from the Justice Network (JNET) team evaluated this model with the dictionary of core elements in the Global Justice XML Data Model (GJXDM) model. A conceptual representation of the model is given in Fig 1.1 below.

4. Model Usage:

Each agency or department is encouraged to examine the model to determine if the entities and elements defined are adequate and to provide feedback to OA. The following are the steps to be performed to make best use of this model.

- Use the citizen model as a starting point in the agency's logical analysis.
- Retain/Use the same names from the citizen model in the agency's logical model.
- Leverage timeseries and hierarchy build in the models
- Create mapping/traceability from the citizen logical model to the physical model.
- Recommend/Promote additional changes to the model through EA Information domain team.
- Clarity on the built-in security in the model
- Recommend/Promote additional data security changes to the model through EA information domain team to ensure the data privacy and security compliance.

By observing this process, the Commonwealth will be able to move away from 'silo' systems into a more enterprise-oriented system in the future.

Additionally, COPs may further use the model by identifying authoritative data sources for individual data elements within their COP and initiating data exchange mechanisms which will directly reduce data management costs and increase reusability.

Conceptual Citizen Model:

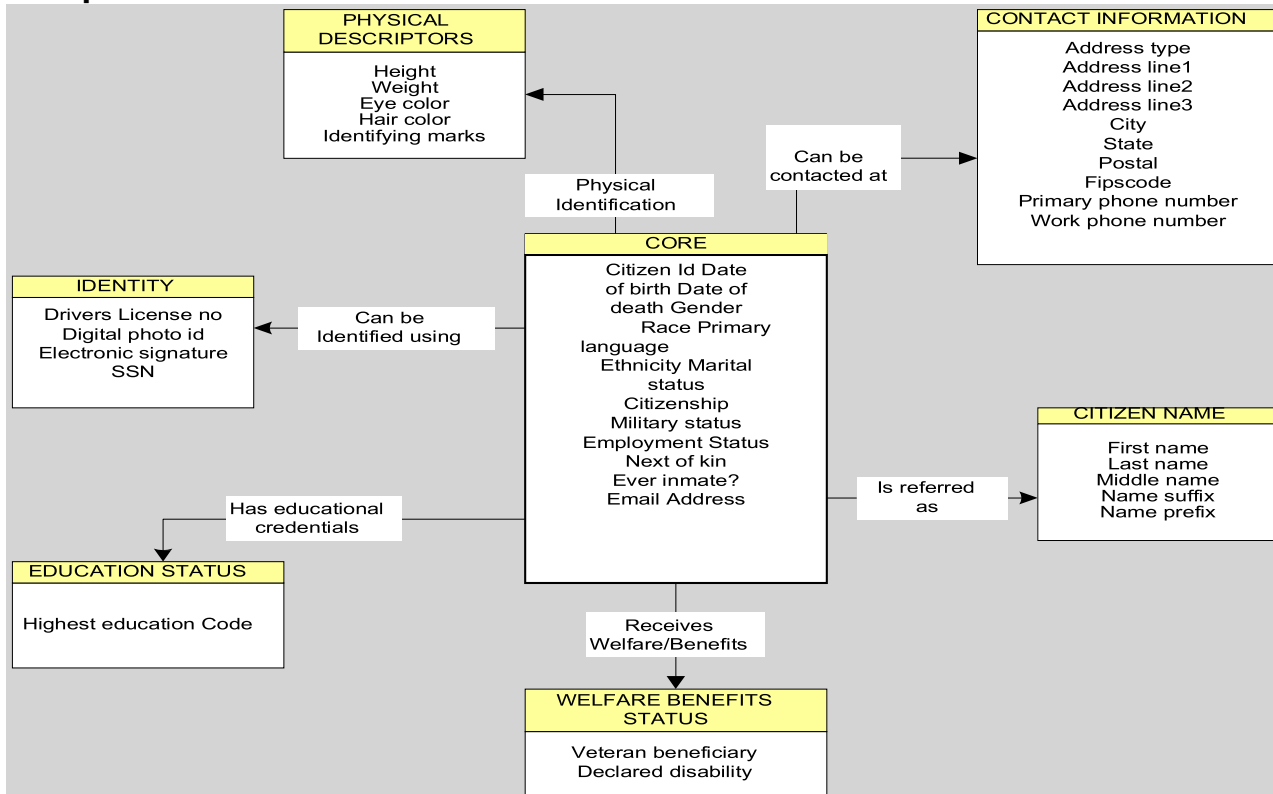


Fig 1.1

Core Citizen Data Entities and Attributes:

CORE: Represents the basic set of attributes pertaining to a citizen

Entity	Element	Description	History	Relevance /Source	Comments
CORE	Citizen Id	Citizen Identification	Y	Real_id	Unique distinct identification person
	Date of birth	Date of birth of the person	Y	Real_id/Gjxdm	Date of birth century. including
	Date of death	Date of death of the person			Date of death century including
	Gender	A code to identify the person's sex		Real_id/Gjxdm	Male/Female/etc.
	Race	A code to identify the person's race		Gjxdm	
	Primary language	A code to identify the person's primary language		Gjxdm	EN for English etc.
	Ethnicity	A code to identify the person's ethnicity		Gjxdm	Ethnicity under race
	Marital status	A code to specify the person's marital status	Y	Domain_team	Single/Married etc.
	Citizenship	A code to specify the person's residence status in the country	Y	Domain_team	Citizen/Alien etc.
	Military status	A code status indicating military	Y	Gjxdm	Active/discharged etc.
	Employment Status	A code to indicate the person's Employment status	Y	Domain_team	Employed/Unemployed etc.
	Next of kin	Name and Id of the person with contact details to contact in case of emergency		Domain_team	Next of kin for emergency contact, as well as fulfill financial obligation

	Ever inmate?	Ever inmate indicator	Y	Domain_team	Indicated if citizen was ever a convicted inmate in prison
	Email Address	Person's Email address	Y		Primary Email address for contact/communication

NAME: Describes the official full name of a citizen

Entity	Element	Description	History	Relevance /Source	Comments
NAME	First name	First name of the person	Y	Real_id/Gjxdm	First name of the person
	Last name	Last name of the person	Y	Real_id/Gjxdm	Last name of the person
	Middle name	Middle name of the person	Y	Real_id/Gjxdm	Middle name of the person
	Name suffix	Name prefix of the person	Y	Real_id/Gjxdm	Name prefix of the person
	Name prefix	Name suffix of the person	Y	Real_id/Gjxdm	Name suffix of the person
	Person full name	Full name of the person	Y	Gjxdm	This is to accommodate situations where a person may have more than three names

CONTACT INFORMATION: Describes all information necessary to identify a location and/or communicate with a citizen

Entity	Element	Description	History	Relevance /Source	Comments	
CONTACT INFORMATION	Address type	Indicates type of address	Y	Domain_team	Mailing/Primary/Secondary	
	Address line1	Address line1	Y	Domain_team	Street name and number/po box	
	Address line2	Address line2	Y	Domain_team	Street name and number/po box	
	Address line3	Address line3	Y	Domain_team	Street name and number/po box	
	City	City of residence	Y	Domain_team	City of residence	
	State	State of residence	Y	Domain_team	State	
	Postal	Postal code	Y	Domain_team	Postal code	
	Fipscode	Fipscode	Y	Domain_team	County code	
	Primary phone number	Person's primary contact phone number			Domain_team	Primary Contact phone no
	Work phone number	Person's work contact number	Y		Domain_team	Work phone number

IDENTITY: Describes credentials unique to the citizen

Entity	Element	Description	History	Relevance /Source	Comments
IDENTITY	Driver's License no	Person's driver's license id	Y	Real_id/Gjxdm	Unique identifier assigned by the state to a driver's license
	Digital photo id	A digital photograph of the person		Real_id/Gjxdm	Digital photograph of the person
	Electronic signature	Person's signature		Real_id/Gjxdm	Digital representation of the person's signature
	SSN	Social security no	Y	Gjxdm	Person's social security number

PHYSICAL DESCRIPTORS: Characteristics that describe the citizen

Entity	Element	Description	History	Relevance /Source	Comments
PHYSICAL DESCRIPTORS	Height	Person's height		Gjxdm	Physical height of the person
	Weight	Person's weight		Gjxdm	Physical weight of the person
	Eye color	Person's eye color		Gjxdm	Color of the eyes
	Hair color	Person's hair color		Gjxdm	Color of the hair
	Identifying marks	Identifying marks such as mole, scar		Gjxdm	Physical identification marks on the person to avoid fraud, counterfeiting, duplication etc.

EDUCATIONAL STATUS: Description of the educational status of the citizen

Entity	Element	Description	History	Relevance /Source	Comments
EDUCATION STATUS	Highest education	A code specifying the person's highest education		Domain_team	Highest education the person has attained

WELFARE BENEFITS STATUS: Description of the public welfare benefits status of the Citizen

Entity	Element	Description	History	Relevance /Source	Comments
WELFARE BENEFITS STATUS	Veteran beneficiary	A code to indicate if person received veteran benefits		Domain_team	Identifies if the person receives veteran benefits
	Declared disability	A code to indicate if person is disabled		Domain_team	Identifies if the person is disabled

5. Related ITPs/Other References

- Executive Order 2019-04 *Establishing a "Citizen-First" Government and Promoting Customer Service Transformation*
- Management Directive 205.34 Amended *Commonwealth of Pennsylvania Information Technology Acceptable Use Policy*
- ITP-INF003 *Data Modeling Standards*
- STD-INF003A *Data Modeling Products and Standards*
- STD-INF003B *Data Modeling Basics*
- BPD-INF003C *Data Modeling Best Practices*

This chart contains a history of this publication's revisions:

Version	Date	Purpose of Revision
Original	08/7/2006	Base Document
Revision	11/18/2010	ITP Refresh
Revision	05/13/2021	ITP Refresh