MITA Information Architecture

May 8, 2006

Purpose of the MITA Information Architecture

- **Align information requirements with Medicaid enterprise vision and direction**

- **Lower overall life-cycle costs**
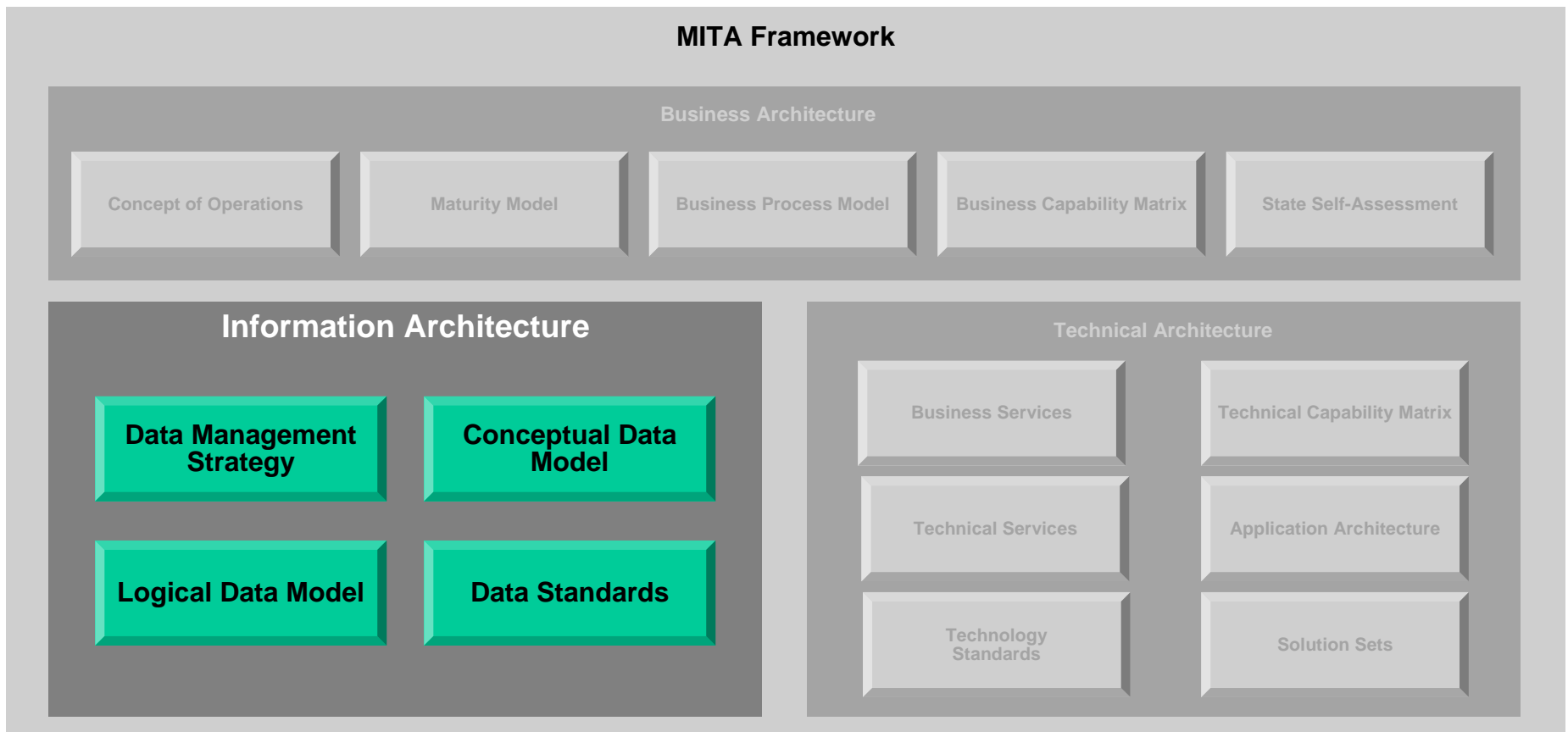
- **Enable interoperability and data sharing**

MITA Information Architecture Neutrality

- **Technology-, organization-, and location-neutral**

- **States have the flexibility for their specific implementation**

Information Architecture in the Context of the MITA Framework

MITA Framework

Business Architecture

| Concept of Operations | Maturity Model | Business Process Model | Business Capability Matrix | State Self-Assessment |

Information Architecture

- Data Management Strategy
- Conceptual Data Model
- Logical Data Model
- Data Standards

Technical Architecture

Business Services	Technical Capability Matrix
Technical Services	Application Architecture
Technology Standards	Solution Sets

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Purpose of the Data Management Strategy

- **Document the processes, techniques, and products needed by a Medicaid enterprise to achieve optimal sharing of Medicaid enterprise information both within and with other entities**
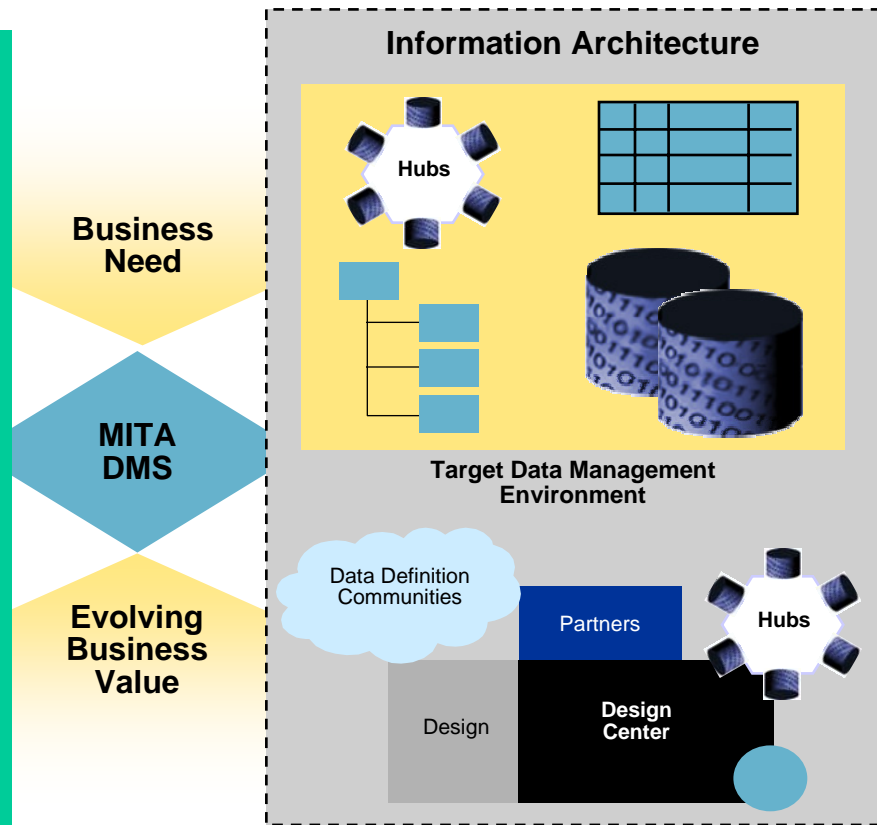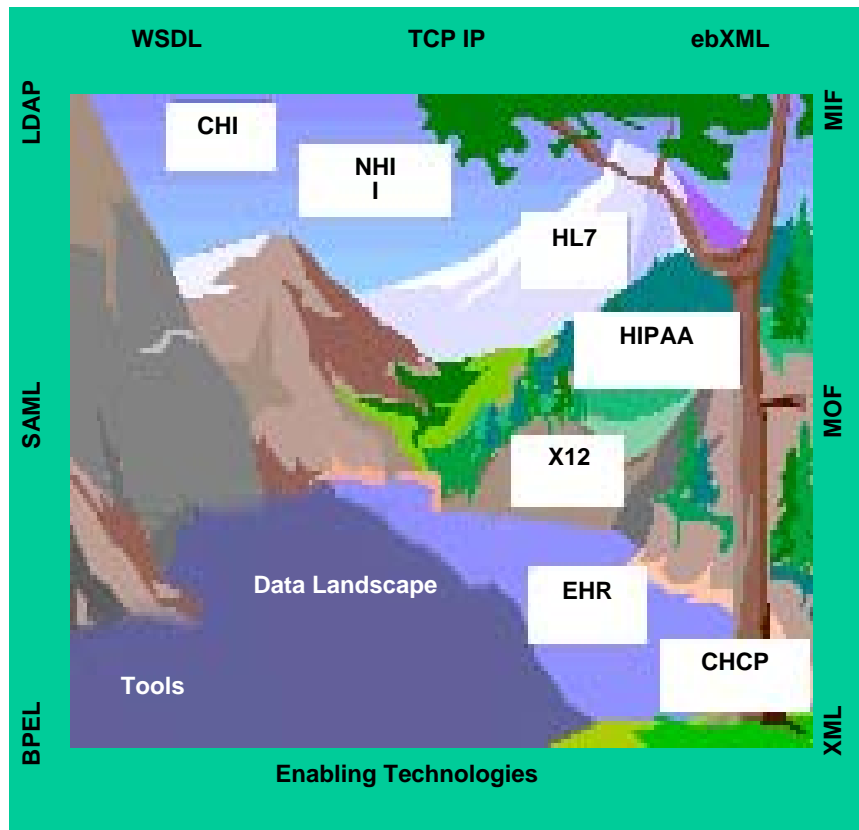
Scope of the MITA Data Management Strategy

- **Captures common Medicaid enterprise information at the logical level**

- **Location and organization neutral**

- **Flexibility to allow State-specific data and messages**

- **Physical data model, databases, and data files are not be part of MITA**

MITA Data Management Approach

Environment in Which Medicaid Operates
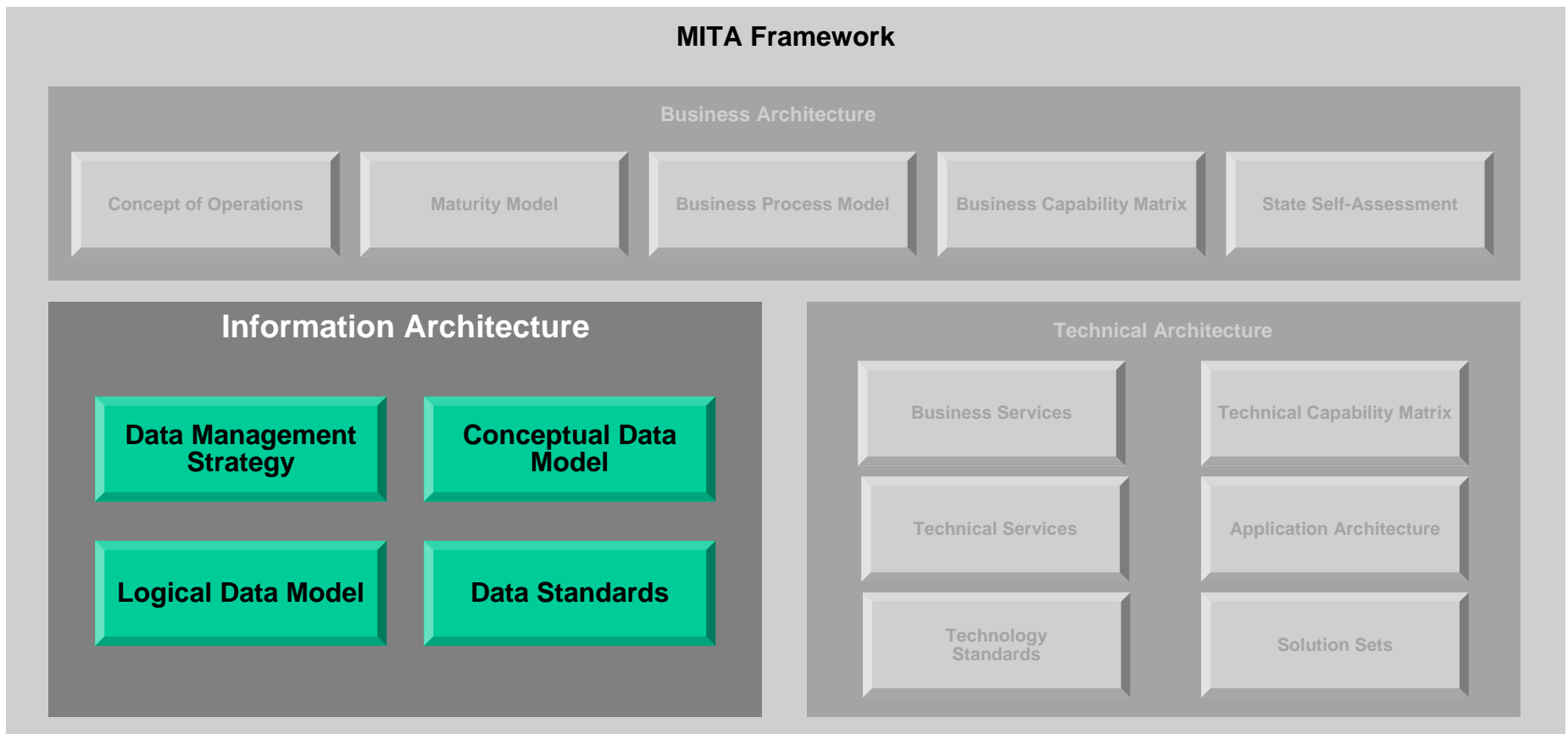
Benefits of Using the MITA DMS

- **Reduce custom solutions and promote interoperability and data sharing**

- **Provide a common set of processes, tools, and solutions for the information needs of Medicaid**

- **Allow individual States to benefit from the information assets of others**

Parts of the MITA DMS

- **Data Governance**

- **Data Architecture**

- **Data Sharing Architecture**

For data access mechanisms and services see MITA Technical Architecture. Physical characteristics of the mechanisms used for data sharing are the responsibility of the States and are not addressed by MITA.

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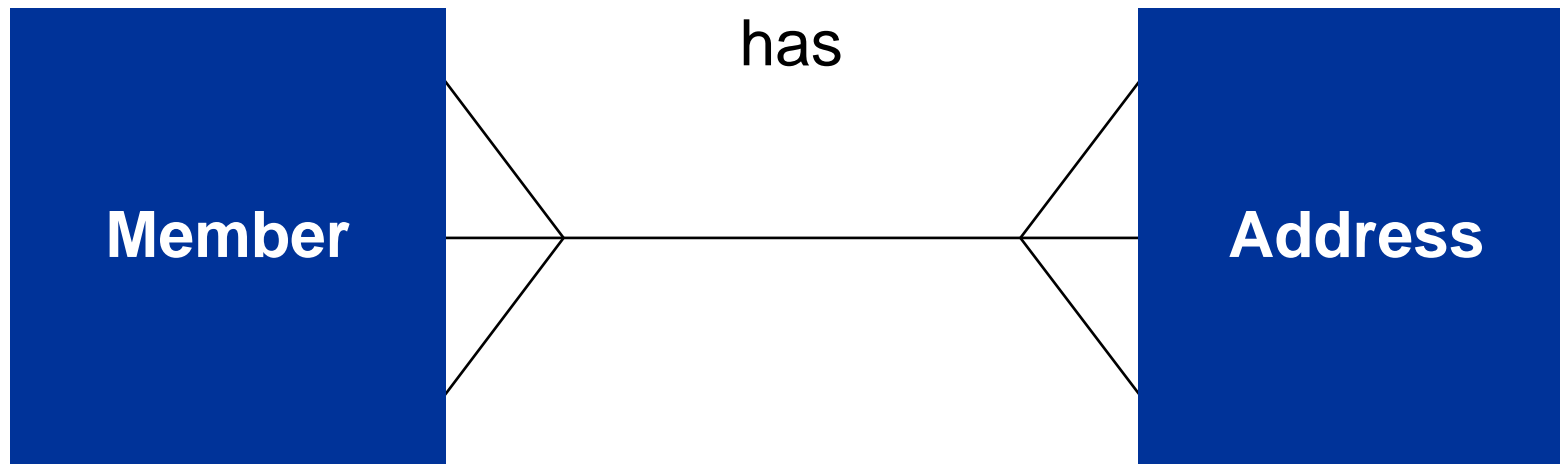- Solution Sets

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MITA Conceptual Data Model

- **Depicts the major business information objects (subjects/entities) in their relationships to each other using business terminology.**

- **Basis for development of a Logical Data Model (LDM).**

Scope of the MITA CDM

- **Evolves in step with the maturing of business processes, e.g., adds clinical data for Maturity Level 4**

- **Contains all the data needed by the defined process and services.**

- **Includes all of the data and data relationships common to States**

- **Does not contain information regarding a State's unique processes and data**

Simple Conceptual Data Model
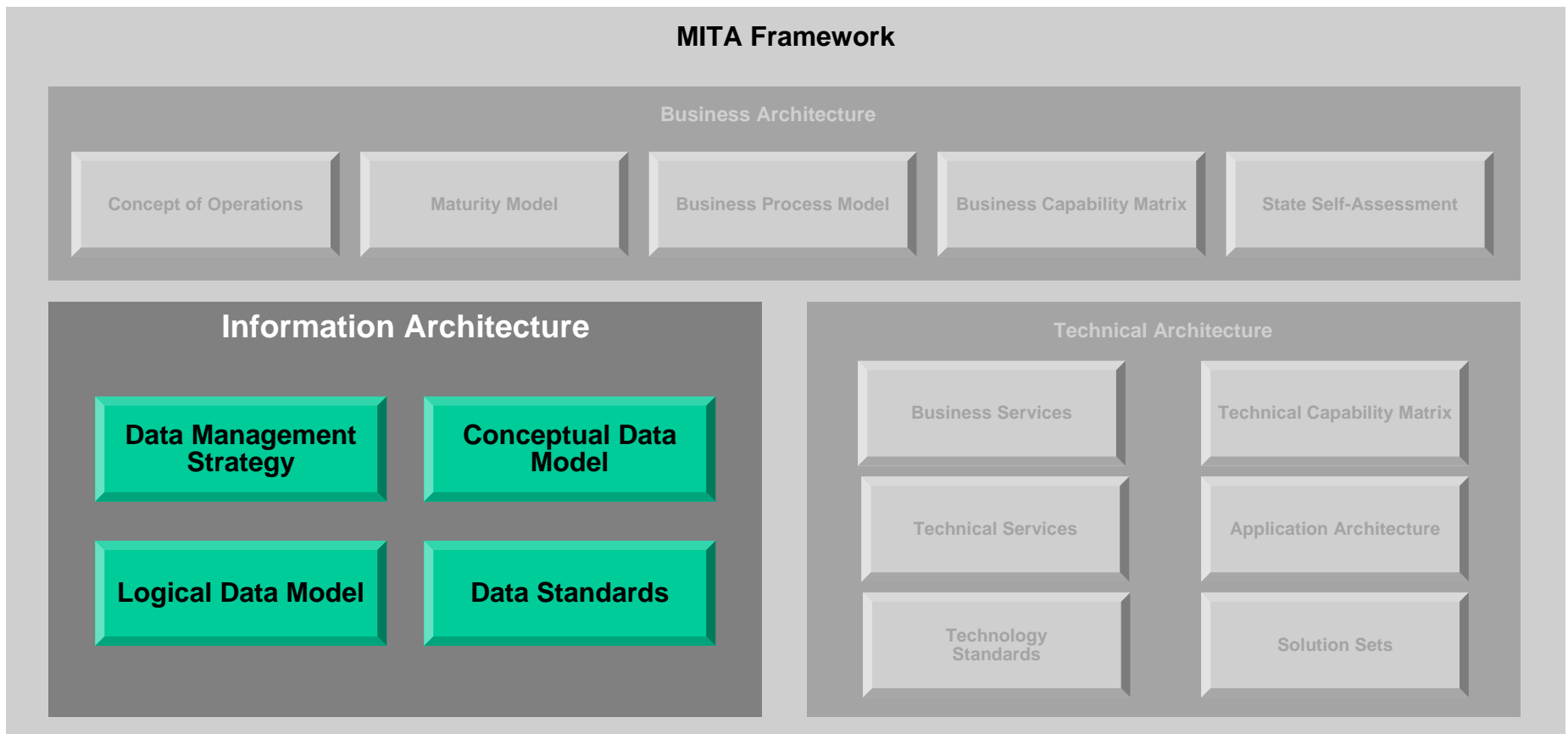

has

| Member | | Address |

Parts of the MITA CDM

- **Entities**
- **Relationships**
- **Definitions**
- **Domains**
- **Related Standards**
- **Entity-Relationship (E/R) Diagram**

CDM Development Process

- Develop a CDM based on the HL7 Reference Information Model (RIM) and a subset of early-adopter State Medicaid enterprise data models.

- Work with States to improve and validate the CDM

- Through a MITA governance process TBD, obtain all-State consensus

- Maintain and update in repository (TBD)

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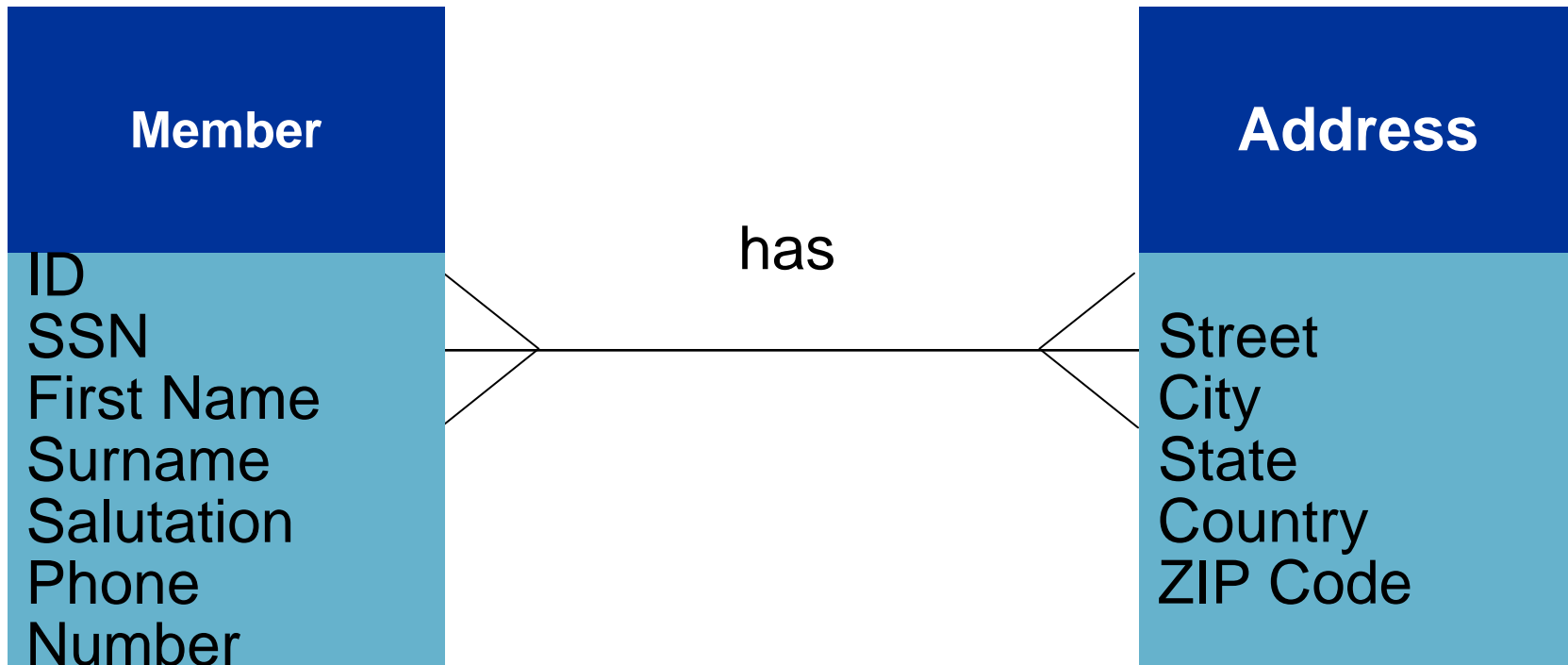- Solution Sets

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MITA Logical Data Model

- **Provides guidance on design of enterprise service interfaces**

- **Used to develop State's physical data model**

- **Basis for true plug-and-play capabilities of services and interoperability among States**

Scope of the MITA LDM

- **Evolves as the processes and services are defined in detail**
- **Includes all data needed for the entire Medicaid enterprise regardless of the location or systems**
- **Compatible with the electronic health records**
- **Does not include State's unique processes and data**
- **No physical data model**

Simple Logical Data Model

Member
ID
SSN
First Name
Surname
Salutation
Phone
Number

has

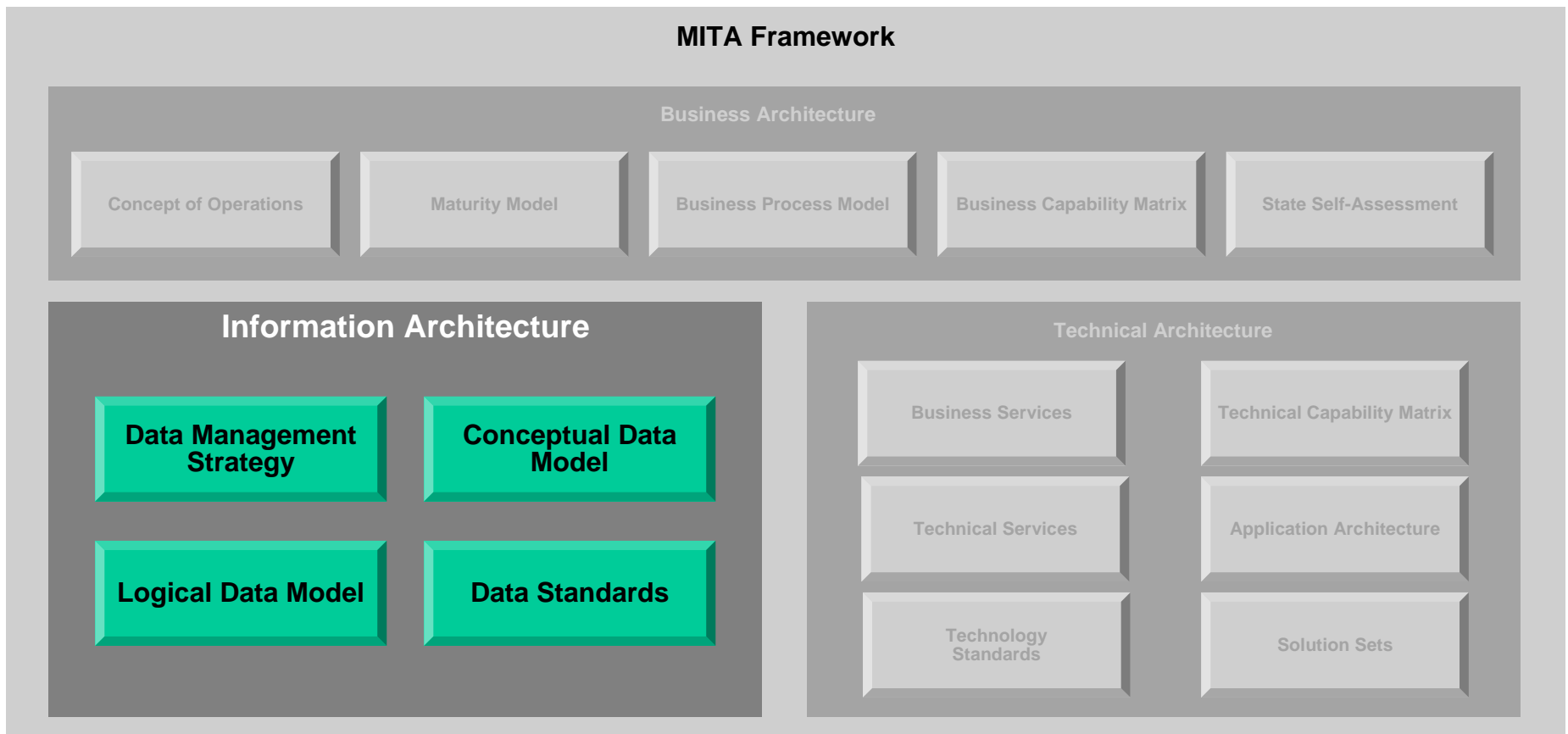| Address |
| --- |
| Street |
| City |
| State |
| Country |
| ZIP Code |

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Parts of the MITA LDM

- Entities
- Attributes
- Relationships
- Definitions
- Domains
- Related Standards
- Entity-Relationship (E/R) Diagram

Uses for the MITA LDM

- As a reference document
- As a requirements document
- As a tool

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Purpose of MITA Data Standards

- **Enable data sharing and interoperability of Medicaid enterprise information.**

- **Support both a syntactic and semantic understanding of this information.**
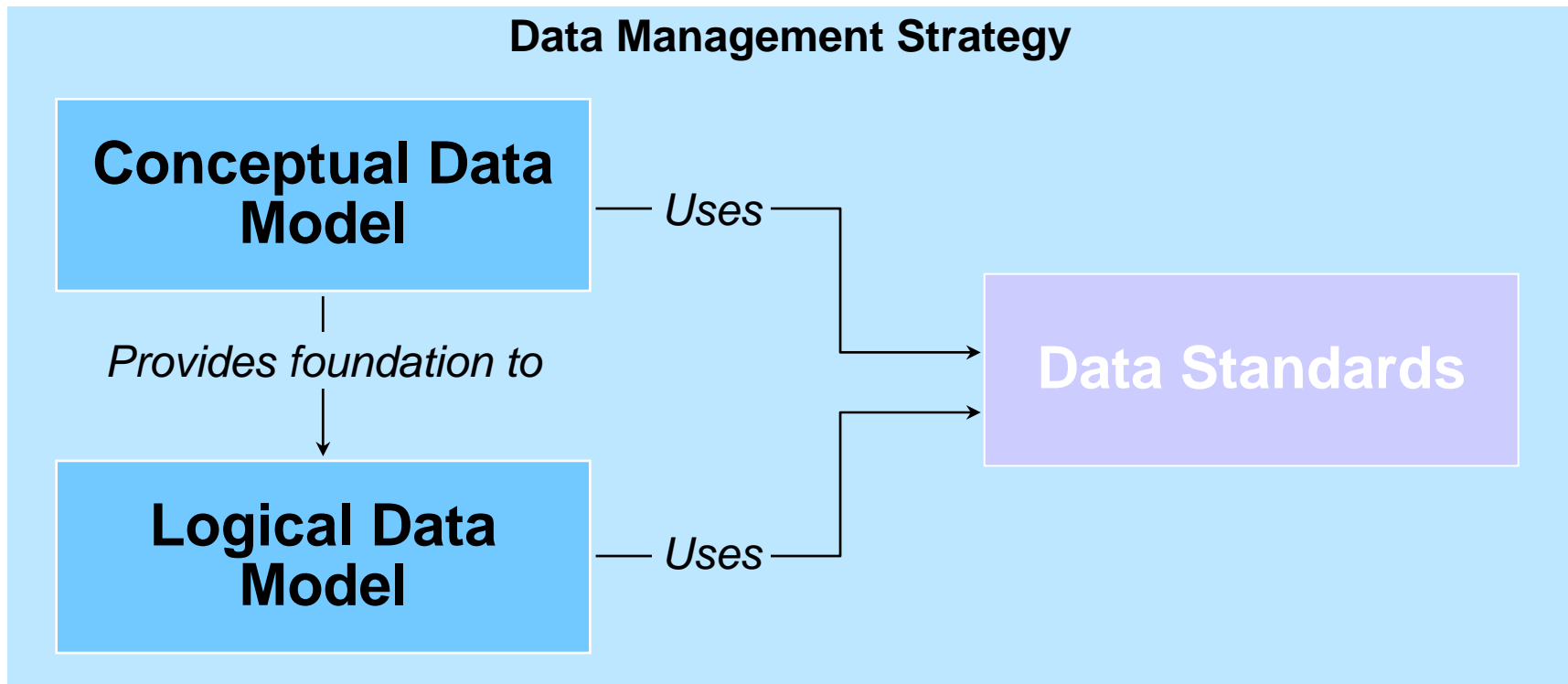
Scope of the MITA Data Standards

- **MITA adopts DSMO data standards**

- **MITA facilitates development of Medicaid-unique data standards and submits them to a DSMO for adoption**

- **Maintain data standards current**

What Is a MITA Data Standard

- **Represent agreements on the format and description of the shared data used by the Medicaid enterprise.**

- **Two major categories —**
  - structure data standards
  - vocabulary data standards

- **Key parts**
  - data element names
  - definitions
  - data types
  - formatting rules

Information Architecture Components

Data Management Strategy

Conceptual Data Model

Provides foundation to

Logical Data Model

— *Uses* —

— *Uses* —

Data Standards

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MITA Business Process and Data Links

- Description of activities performed
- Description of input data (Trigger), result data, and stored data used by the process

Business Process

Trigger

Business Logic

Result

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State Medicaid Agency Use of the IA

- **Participate in workgroups defining and maintaining the MITA IA.**
- **Extend the MITA data models to include their State-unique information and data requirements.**
- **IA is used to determine what information is required by the new processes.**
- **Provides detailed data specifications for defining the MITA services to implement the business process.**
- **IA details appear as requirements in State RFPs.**

CMS Use of the IA

- **Provides leadership in establishing the MITA guidelines and promoting them among States.**

- **The MITA Framework CMS designates the standards that Medicaid programs will have to meet in the future.**

Vendor Use of the IA

- **As a reference in planning research and development activities**
- **As a source for the syntax, semantics, definitions, and relationships of all Medicaid data**
- **As specifications to align their solution with the MITA Framework and interoperability with other States**