
Part I — Business Architecture

Chapter 7 — Business Architecture Summary

Introduction

The Medicaid IT Architecture (MITA) Framework 2.0 contains three interrelated parts: Business Architecture (BA), Information Architecture (IA), and Technical Architecture (TA). The MITA Framework is the combination of the three architecture models described in this document. Part I Chapter 7 summarizes the components of the Business Architecture and links these components to the other architectural elements in the MITA Framework. In the MITA Framework, the business requirements, mission, and objectives of the Medicaid program are the primary drivers. Information is also a fundamental requirement, and technology is a primary enabler.

This chapter summarizes the purpose of the Business Architecture, methodologies and models, and the components of the Business Architecture. It also addresses the relationship between the Business Architecture and the Information and Technical Architectures, how the BA will be used, and the next steps in the evolution of the BA. As the BA summary, this chapter answers the following questions:

- What methodologies and models are used to construct the Business Architecture?
- What are the components of the Business Architecture?
- What is the relationship of the Business Architecture to the Information and Technical architectures?
- How is the Business Architecture to be used?
- What are the next steps in developing the Business Architecture?

Purpose

The purpose of the Business Architecture is to:

- Capture a common vision of the future for all State Medicaid agencies
- Establish a generic business framework for all States while recognizing their differences
- Describe how each State Medicaid program can mature over a 10+ year period with the help of stakeholders, leadership, and enabling legislation and technology
- Provide a baseline against which States can assess their current state of business capabilities and measure progress toward improved capabilities

Chapters 2 through 6 of Part I and the Appendices form the basis of the Business Architecture.

Scope

In the context of MITA Framework 2.0, the BA components are more developed than the IA and TA products. Since MITA is a business-driven architecture, Centers for Medicare & Medicaid Services (CMS) has focused its resources to construct a solid business architecture base. The BA components have been presented at conferences, reviewed by States and the National Medicaid Electronic Data Interchange (EDI) HIPAA (NMEH) MITA workgroup, and commented on by the Private Sector Technology Group (PS-TG). That being said, the BA is still a work in progress. MITA Framework 2.0 presents a baseline of products. CMS intends that the work continue to improve all components of the architecture with the help and collaboration of States, vendors, and other agencies.

What Methodologies and Models Are Used to Construct the Business Architecture?

The BA uses contemporary methodologies to construct models of business processes and capabilities that represent the Medicaid program today and how it can evolve and be transformed in the future. These methodologies are borrowed from government and private-sector solutions and have been adapted to the multi-State Medicaid environment. The use of methodologies and models creates the basic building blocks (or components) of the BA. These components are summarized below:

- **Concept of Operations (COO).** The MITA team adapted a methodology used by business and government organizations to describe a future target for business improvement based on an examination of the purpose and objectives of the organization, stakeholder input, improvements in information, and trends in policy and technology development. *The COO shows a vision of transformation in the future.*
- **MITA Maturity Model (MMM).** The COO lays the foundation for the vision but does not show how to get there. The MMM, also borrowed from industry, provides a structure to depict a progressive transformation through five levels of maturity over a 10+ year timeline. *The MMM shows how the business of Medicaid will evolve over time.*
- **Business Process Model (BPM).** The BPM describes generic State Medicaid enterprise operations. This model was adapted from several used by individual States, the multi-State Systems Technology Advisory Group (S-TAG) initiative, and the Medicaid Health Insurance Portability and Accountability Act (HIPAA)-Compliant Concept Model (MHCCM). *The BPM provides a common definition for current State Medicaid enterprise operations.*
- **Business Capability Matrix (BCM).** The business capability results from applying the MMM to the individual business processes. The BCM is the crux of the BA. It defines how a business process will change as it matures over a 10+ year period. The business capability is measurable and provides descriptions of the process as it matures from one level to the next. *The BCM allows States to determine the current level of maturity of a*

business process and to chart a course for improving or transforming the maturity level in the future.

- **State Self-Assessment (SS-A).** CMS asks States to compare their individual mission and objectives and their current business capabilities to those shown in the MITA model in order to assess the level of maturity for each business process and chart a course for future improvements. CMS plans to develop a tool for the States to use in performing this self-assessment. *The SS-A is the process States will use to determine their As-Is maturity and target To-Be levels of maturity for each business process.*

The BA expresses a vision of the future, establishes a base and structure for determining current state of maturity, and shows how each business process can mature over time.

What Are the Components of the Business Architecture?

Table 7-1 summarizes the components of the BA. A chapter in the BA is devoted to each component. For more detail on the component, please consult the referenced chapter.

Table 7-1. Summary of the Components of the MITA Business Architecture

Component	Description	Role in the BA
Chapter 2 — Concept of Operations	<p>The COO presents a vision of transformation for State Medicaid agencies. It describes how stakeholder roles (State operations, CMS, providers, beneficiaries, and others) will change, how information will improve, and what enablers will assist in the transformation. The vision is based on surveys with States, CMS, and other agencies.</p> <p>The COO provides:</p> <ul style="list-style-type: none"> ■ A vision of the To-Be Medicaid enterprise operations ■ Identification of stakeholders and how their roles will change ■ Description of information exchanges and how they will evolve ■ Identification of enablers ■ Description of the Medicaid operations today and in the transformed future 	<p>The vision lays the foundation for the transformation of the Medicaid program. It sets the targets for the maturity model and business capability improvements. The COO is the “big picture” of the MITA Framework.</p>

Component	Description	Role in the BA
Chapter 3 — Maturity Model	The MMM defines the boundaries of measurable improvements in the Medicaid program. The MMM uses five levels of maturity evolving over a 10+ year period. The MMM shows how the Medicaid mission and objectives will evolve, how Medicaid operations will change, and how to measure the maturity level.	The MMM provides a framework for showing how the vision of Medicaid (i.e., the COO) will be realized over time.
Chapter 4 — Business Process Model	The BPM is a hierarchy of business processes covering the majority of operations found in most States today. The focus of MITA is on the end business process rather than the higher level groupings. The model is a synthesis of models developed by individual States, the CMS MHCCM, and the S-TAG paper on reengineering the Medicaid Management Information System (MMIS).	The BPM provides a generic description to bring States to a consensus regarding the basic business processes that they have in common.
Chapter 5 — Business Capability Matrix	The BCM is a grid that shows each generic Medicaid business process as it exists today and as it may be transformed over time. The business capabilities express measures of timeliness, efficiency, effectiveness, and other qualities.	Each business capability at each level is traceable to the MMM. It is the primary output of the BA.
Chapter 6 — State Self-Assessment	The SS-A is an activity performed by each State to determine (1) the current level of maturity of each business process and (2) a strategy for improving some or all processes over time.	The SS-A is a practical strategy used by States to compare their operations with the MITA BPM and BCM to assess current business capabilities and target future improvements.

Please consult the individual chapters referenced in Table 7-1 for more information on each component of the BA.

Figure 7-1 shows the interrelationships among the BA components.

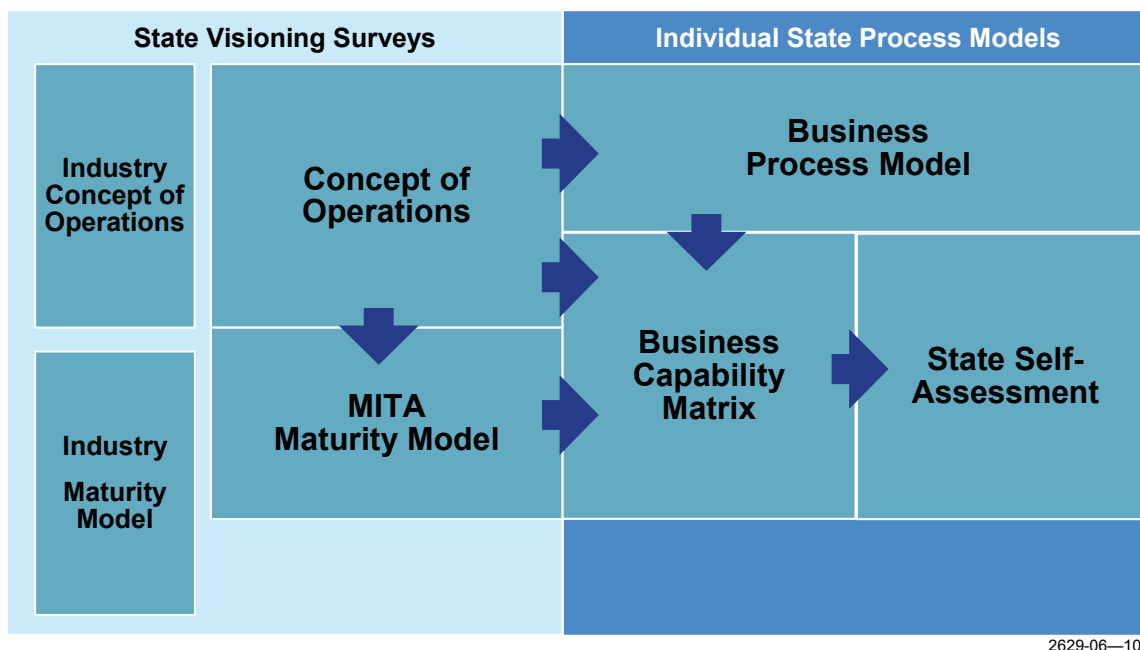


Figure 7-1. Business Architecture Components

Figure 7-1 depicts the relationships among the components of the BA. These relationships are briefly described below:

- The **COO** is derived from industry and government models. It is used to establish the vision for a transformation of the Medicaid program. The vision is based on interviews with State agencies and other stakeholders, and it supplies the target for the MMM. It also provides a model for the As-Is and To-Be Medicaid business operations that are reflected in the BPM and the To-Be business capabilities.
- The **MMM** is adapted from industry and government examples and defines the boundaries for the levels of transformation, translated into the Medicaid context. It provides a structure for the definition of business capabilities and measurements of conformance.
- The **BPM** is a generic representation of all State Medicaid programs. It is based on the MHCCM model, the S-TAG model, and several individual State models of Medicaid business processes. The business process definitions are the foundation for the business capabilities and the SS-A.
- The **BCM** draws upon the COO, the MMM, and the BPM and populates a grid (referred to as the Matrix) to demonstrate how each business process can evolve across five levels of maturity. In some cases, the business process will be replaced by a new activity.

- The **SS-A** is a process in which the State will map its business processes to those in the BPM and will then assign a level of maturity to each business process according to the BCM. This becomes a baseline for future improvements. The State will refer to its As-Is and To-Be capabilities in requesting enhanced funding.

What Is the Relationship of the Business Architecture to the Information and Technical Architectures?

As shown in **Figure 7-2**, the BA is linked to the IA and the TA. Business processes map to the Conceptual Data Model, and business capabilities map to the Logical Data Model. The TA describes the technology enablers that are associated with different levels of maturity. In addition, the TA describes strategies and solutions to implement business capabilities.



Figure 7-2. MITA Framework Architecture Relationship Diagram

Link to the Information Architecture

The BPM requires a companion data model. For example, the business process Enroll Provider identifies a set of input data extracted from an enrollment application (e.g., name, address, date of birth, college degrees, licenses, affiliations, and other required data). In the MITA BPM, each business process is defined along with the Trigger data input, Result data output, and Shared data required. (Business process descriptions are found in Part I Appendix A). The business capability for Enroll Provider at Level 1 states that this data adheres to State requirements and is nonstandard. At Level 3, provider enrollment data will meet national standards (as determined collectively by State Medicaid agencies in collaboration with other organizations that enroll providers, such as mental health, Indian Health Service, managed care organizations, and other payers). At Level 5, enrollment data may also contain clinical information and will be interoperable across all States. The business capability description for each business process also defines conceptually how data is transformed to achieve higher levels of maturity.

The Conceptual and Logical Data Models are under development and are not yet populated. **Figure 7-3** shows how the business process description links to data.

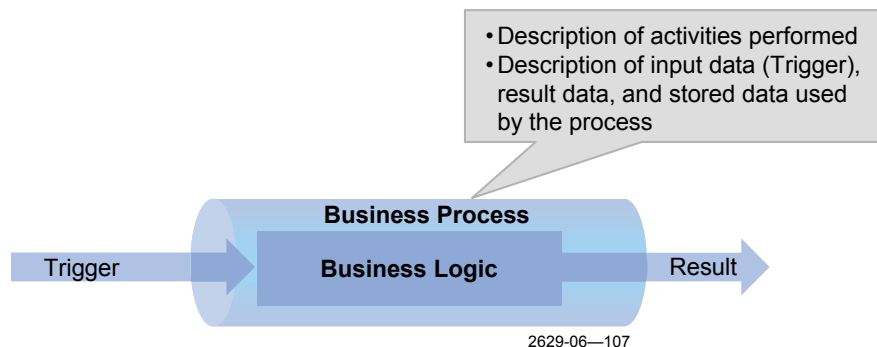


Figure 7-3. MITA Business Process and Data Links

The MITA Framework presents a BPM and BCM that call for the specifications of data groupings, data objects, and attributes. This is a next step in the evolution of the MITA Framework. It is possible to begin with the design of the Conceptual Data Model and the Logical Data Model (i.e., before creating the BCM). In this case, the data models become the drivers of the business models. No matter where one starts, the business model needs data and the data model needs to support business processes. The MITA initiative chose to start with a business model because many consolidated versions were available (e.g., from many States, the MHCCM, and the S-TAG models).

Link to the Technical Architecture

The BA has remained “technology neutral” to focus attention on the business process and how it evolves over time. Occasionally, hints regarding technology enablers are mentioned. All concrete references to technology are found in Part III, Technical Architecture. Part III contains a table of technical capabilities that map to the equivalent levels of maturity in the BCM. This table shows what enablers are expected to be available to help the business process move from one level to another. For example, Level 3 in the BCM, in general, calls for collaboration among agencies, use of national data standards, and sharing of information. At Level 3 in the Technical Capability Matrix (TCM), there are references to hub architecture and service-oriented architecture. In the BCM, Level 4 predicts a paradigm shift in the business capability based on direct use of clinical data. The corresponding Level 4 in the TCM includes electronic health records systems, personal health record systems, and middleware applications. The technology available at Level 4 may be an electronic health record interface or some other mechanism as yet undetermined.

At the higher levels of maturity (i.e., Levels 4 and 5), we identify in the TCM the technical capabilities that are predicted to be available. This can easily change. New products will appear; others will become obsolete. Both the BCM and TCM need to be updated as new capabilities are defined and new tools are developed.

How Is the Business Architecture To Be Used?

CMS wants States, vendors, legislators, and others to use the BA components to plan for improvements in the State Medicaid program — both in the delivery of services to providers and beneficiaries, and in its internal operations and exchanges of information with the other external stakeholders. The COO and the MMM are background material. States and vendors will primarily use the BPM and the BCM. **Table 7-2** summarizes how stakeholders will use the BA.

Table 7-2. Stakeholder Use of the Business Architecture

Stakeholder	How BA Is Used
State Medicaid Agency	State Medicaid agencies map their operations to the BPM and then assess the level of maturity using the BCM. When information technology upgrades are required to support program improvement, the State will use the SS-A to show how the enhanced funding will be used to achieve a specific result (e.g., moving from Level 1 or 2 to Level 3).
CMS	CMS provides leadership in establishing the MITA guidelines and promoting them among States. Through the release of the MITA Framework documents, special workshops with States, Medicaid conference material, and working with early adopter States, CMS is creating the standards that Medicaid programs will have to meet in the future.
Vendors	The vendor community can use the MITA Framework as a reference in planning their research and development activities. They will use the BA, in particular, to determine the maturity level of functions supported by their systems. They will have a common understanding of direction envisioned by CMS, and they can show how their products support MITA business capabilities.
Providers	Providers play an active role in the exchange of information with States in the future. They can look at tailored excerpts from the BA to understand what direction the Medicaid payer agency is taking and to keep this in mind as they invest in IT upgrades and reengineer their practices. In some cases, States will involve providers directly in planning a Medicaid program transformation.
Beneficiaries	The BA promotes a patient-centric program in the future. Beneficiaries and consumer groups will be able to look at excerpts from the BA and see what benefits lay in store. At Level 3, beneficiaries become participants in self-directed healthcare decisions.
Legislators, Governors	States develop presentations based on the BA to show the governor and legislators what goals CMS is establishing for States that request enhanced funding.
Other Payers and Other Agencies	Other payers and other agencies are invited to review the MITA Framework, especially the BA, to learn about the Medicaid plans for transformation. CMS envisions that other agencies and payers will collaborate increasingly with Medicaid to come up with a “one-stop shop” for basic functions such as enrollment and coordination of benefits.

In general, MITA predicts that stakeholder roles and access to information will improve over time; that technology will eliminate most manual activities; and that the State Medicaid agency, CMS, providers, and beneficiaries will witness a transformation of the Medicaid business over

the next decade. In the future, providers have instant access to patient records no matter where they are located, patients can view their personal health information and make informed decisions regarding treatment, and payers can view clinical records nationally to expedite decisions on prior authorization and payment.

What Are the Next Steps in Developing the Business Architecture?

MITA Framework 2.0 delivers the starter kit for a controlled State Medicaid transformation. MITA will always be a work in progress. In the years ahead, CMS envisions significant collaboration between Federal and State authorities to refine and improve the business processes and business capabilities contained in MITA Framework 2.0. State participation is critical to the success of MITA.

CMS envisions that teams of States will select various business areas, refine the activities, and standardize the information exchanges. From this activity will come model business services (see Part III Chapter 4) that States and vendors can develop. The business service defines the input and output but not the inner workings of the process. However, the business community must still decide the requirements for standardized Triggers and Results. The CMS MITA team will continue to support State efforts by serving as a conduit for improvements to MITA models that all States and vendors can access.

CMS envisions that State workgroups will continue the work of the NMEH MITA workgroup, which has been reviewing and suggesting changes to Member Management business processes. Workgroups are needed to improve all business processes and then tackle the business capabilities. Business capabilities require detail in terms of measurable qualities, such as timeliness, efficiency, efficacy, and satisfaction. Later, conformance criteria will be added to the business capability.

In the end, MITA Framework 2.0 and the BA are about *change* so that State Medicaid agencies can continuously improve the way they deliver services to beneficiaries and providers, account for outcomes, reward participants based on performance, and respond dynamically to requests for information.

The remainder of this document is devoted to the Information Architecture (Part II) and the Technical Architecture (Part III). See the appendices to Part I for more detail on the BA:

- Appendix A — Concept of Operations Details
- Appendix B — Maturity Model Details



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- Appendix C — Business Process Model Details (a catalog of primary business processes presented in a template format covering data requirements, activities, constraints, indications of failure, and other elements)
- Appendix D — Business Capability Matrix Details (a matrix containing up to five levels of business capabilities for each business process. Some contain more detail than others.)