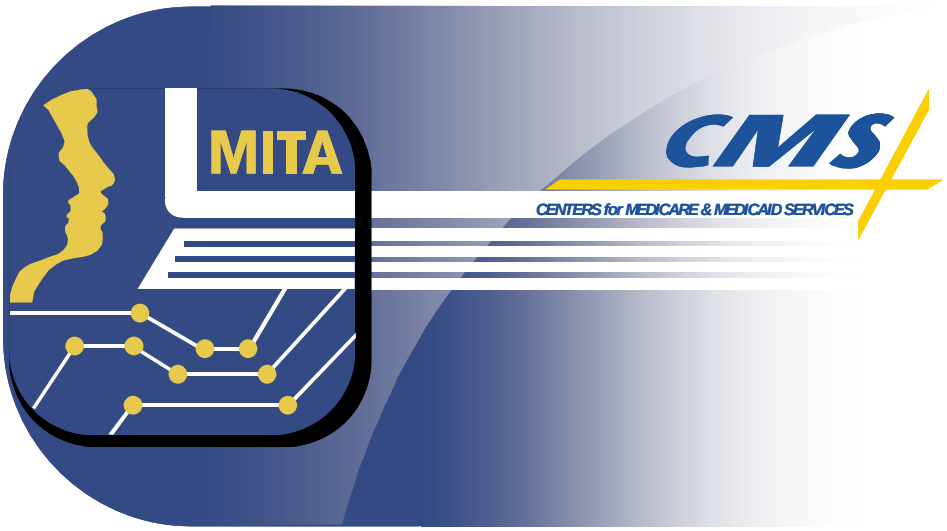

SAMHSA

Behavioral Health MITA

Maturity Model Document
Version 2.0

Developed for
Centers for Medicare & Medicaid Services

Behavioral Health MITA

Maturity Model Document

Version 2.0

Medicaid Information Technology Architecture

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Section 1 Introduction

This document introduces the Behavioral Health Medicaid Information Technology Architecture Maturity Model (BH-MITA MM) and explains its role in the BH-MITA Framework. The BH-MITA Framework provides a tool and potential guidance to State mental health (MH) and substance abuse (SA)–herein both referred to as behavioral health (BH)–agencies as they seek to improve their business operations and build systems that interoperate with each other and with Medicaid systems. This document draws extensively on previous work done by the Centers for Medicare & Medicaid Services (CMS) on the Medicaid Information Technology Architecture (MITA) Framework 2.0, March 2006.

The BH-MITA Framework model, in brief, presents a framework that describes business capabilities and technical enablers in the present (the As-Is), a vision of future business capabilities and technology enablers and integration in the future (the To-Be), and then creates a series of snapshots of how business improvements and enabling technology and integration might move an entity along the path from the current state to the potential To-Be state. This series of snapshots is called the Maturity Model, and provides BH agencies with both a target for further business transformation and technical improvements and a measure for how far along they are on the path to the ultimate vision of an integrated and interoperable business operation supported by enabling technology. The MITA Business Area/Business Process model provides the foundation for developing the vision, grounded in the business processes identified today.

The BH-MITA Maturity Model builds on the CMS MITA Framework 2.0, available at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp.

The MITA Framework 2.0 contains separate components covering Business Architecture, Information Architecture, and Technical Architecture. This BH-MITA project encompasses the documents and processes in the Business Architecture component. Based on the MITA Business Area/Business Process model, the BH-MITA model:

- Captures a current business capabilities (the As-Is state, in the Landscape document),
- Provides a broad vision of future business (the To-Be state, in the COO), and then
- Presents a series of snapshots in a high-level roadmap, called the Maturity Model (described in this document), that projects how business and technology will change along the way.

Figure 1-1 below shows the deliverables that comprise the Business Architecture component for the BH-MITA project, depicting the purpose of each document and relationships between them. The Maturity Model is in pink.

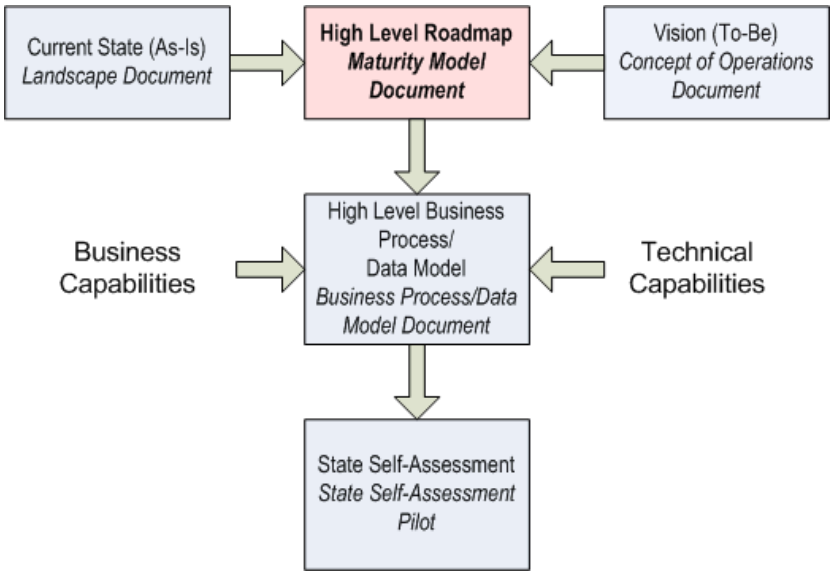

Figure 1-1 Document Relationships in the BH-MITA Project

The Maturity Model provides both a high-level roadmap for further transformation and a general measure for progress along the path to the ultimate vision. The MITA Business Area/Business Process model was the foundation for developing the vision, grounded in the BH business processes of today. Like the MITA model/framework, the BH-MITA framework is dynamic and must be updated as changes occur. Note: the BH-MITA project uses selected components of the MITA Framework 2.0 as shown in Figure 1-1 above.

Not all components of the MITA Framework have been used in the BH-MITA project.

1.1 Purpose of the Maturity Model Document

The Maturity Model document presents a high-level roadmap for measuring progress towards the vision over time.

The purpose of the MM document is to describe and plan for the steps needed to move the BH operations of the current As-Is state towards the BH operations envisioned in the future To-Be state. One of the core BH-MITA concepts is that business processes will mature along a predictable path. The MM helps lay out that pathway to achieve the target To-Be state. This MM document is also designed to introduce the MM and its concepts to State BH leaders to facilitate their understanding and assist their participation in future stages of this project to develop a comparable and compatible architectural model for BH agencies.

1.2 What Is the Maturity Model?

The Maturity Model serves as a guidebook for the process of developing business capabilities that build towards the vision. It documents the relationship and progression (traceability) from the BH and BH-MITA Mission and Vision statements to the business capabilities. The MM

provides consistency: all Maturity Level descriptions have a common base, look, and feel, and they show how each lower level is aligned with and relates to its next higher level.

The Maturity Model outlines the process for developing a roadmap and sets progress points in time and space along the way from the current state to the future vision.

A maturity model measures the improvement and transformation of a business across two dimensions — time[1] and space.
Figure 1-2 illustrates the time and space dimensions by depicting progressive improvements in the client intake process over a 10+ year period. The time dimension marks progress from the present to a realistic future time. The space dimension shows how the business looks at present and anticipates how its capabilities may change as it matures.

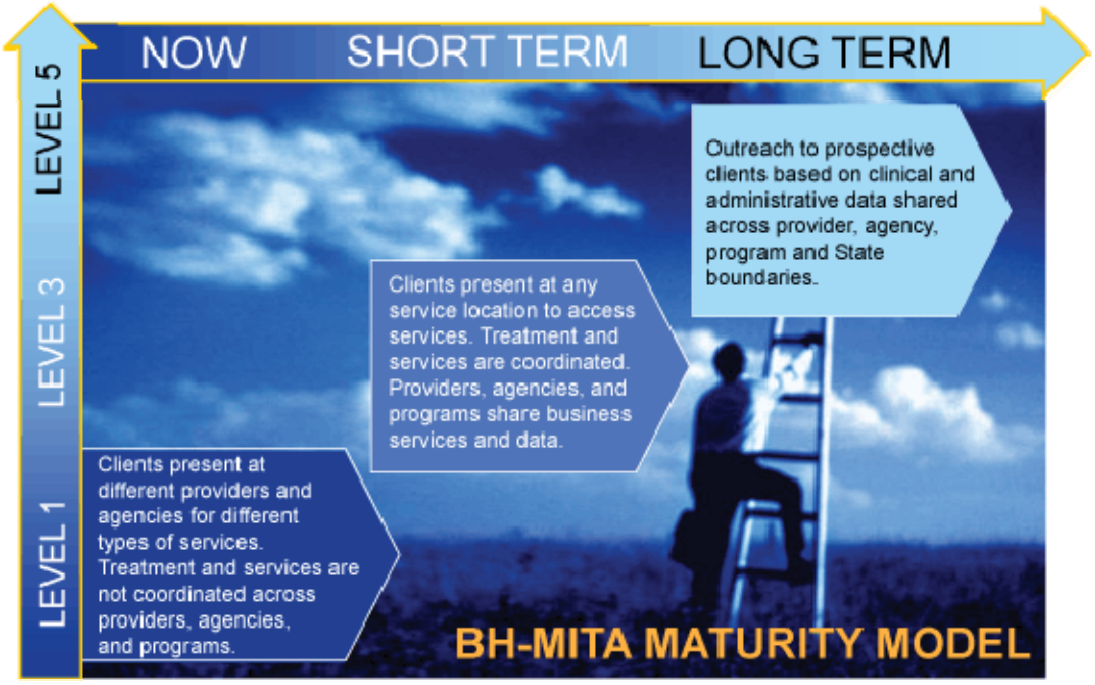

Figure 1-2 The BH-MITA MM Shows Changes Over Time and Space

The BH-MITA Framework requires a MM to define boundaries and provide guidelines for the transformation steps as the BH enterprise moves from its As-Is level of maturity to progressively higher levels of performance over the next 10+ years. The BH-MITA MM provides a narrative description of the business capabilities of a BH enterprise to describe expected progress, or levels of maturity, at defined points in time. Each level has a definition that distinguishes it from other levels. The BH-MITA MM establishes boundaries and measures to be used in determining

[1] In the BH-MITA MM, time is loosely associated with five periods, ranging from the present to 10+ years into the future. Although predictions are better informed in the short-term, they depend more on new accelerators in the future, which makes the time estimates for the long-term less certain.

whether a capability is correctly and sufficiently defined. A *maturity level* is generic and applies to any business process, while a *capability level* is specific to a single business process. Technical capabilities are defined by industry and are identified as enablers for different business processes at different levels of maturity.

The Maturity Model uses levels of maturity to describe the business capabilities of a BH enterprise at defined points in space and time. The Maturity Model is technology, organization, and location-neutral; BH agencies can choose any technologies that support the capabilities of a specific maturity level.

The purpose of a MM is to serve as a reference model for grounding the definitions of business capabilities and technical enablers at each maturity level. A *capability* is the competence of an individual, organization, or system to perform a function or process. Each capability is described in a way that establishes clear boundaries and measurable differences between maturity levels. Each higher level brings more operational effectiveness to the BH enterprise than the prior level.

There are two types of capabilities: business and technical. A *business capability* describes a business process at a specific level of maturity. Business capability statements include definitions of qualities that represent measurable differences between manual and automated steps in a business process. A *technical capability* describes a technical function for which industry identifies a distinctly different type and level of performance. Technical capabilities are enablers of business capabilities and are the principle drivers of technical systems and services development. Technical capabilities describe functionalities that drive technology choices to support one or more of the following: enabling one or more business capabilities; realizing one or more BH-MITA goals or objectives; or enabling the transition of legacy systems or processes to the BH-MITA framework. There is no one-on-one relationship between business and technical capabilities. The Maturity Model is primarily a framework for business transformation; technology is called upon to enable that transformation.

Each level of maturity has a distinct definition that differentiates it from other levels and builds on previous levels. Each level is *loosely* associated with a target time frame.

The BH-MITA MM uses five levels of maturity and an approximate 10+ year long-term timeline for the following reasons:

- The BH enterprise is a complex system with many moving parts. The BH-MITA Framework needs a maturity model that reflects the breadth and depth of the BH enterprise business processes.
- A timeline establishes a reasonable course of measurable progression. Ten steps over 10+ years creates too many checkpoints, and two steps in 10+ years produces too big a leap (i.e., the gap between Level 1 and Level 5 maturity would be too wide to achieve in a single leap). Five intervals, or levels, mark appropriate targets for progress that States can understand, plan for, implement, and measure.

- A long-term 10+ year maturity plan seems appropriate given current stakeholder needs, the vision, and the progress of development of the technical, policy, and regulatory accelerators necessary to complete the transformation.

The BH-MITA MM at present is oriented towards the State BH agency enterprise only. Typical maturity models used to plan business transformations in contemporary industry focus on a single enterprise (e.g., a single State BH agency). The BH-MITA Framework, however, must meet the needs of at least 51 individual State-level BH enterprises. The State BH agency enterprise encompasses all BH services for which SAMHSA or other entities supply funding, including interfaces with stakeholders. States can encourage their business and data exchange partners (e.g., providers, managed care organizations, benefit managers, other agencies, and other payers) to follow these guidelines as well. Some definitions associated with various maturity levels, particularly Levels 4 and 5, are dependent on regulations that do not currently exist or technology that is envisioned but not yet proven. It is a constant principle of the BH-MITA Framework that all contents are subject to change. BH-MITA will always be a work in progress.

In the future, SAMHSA will use the BH-MITA MM to adjust the BH maturity model and business capabilities and maintain alignment with the BH Mission and Goals.

Section 2 Maturity Model Characteristics

The following section defines characteristics of and drivers for the BH levels of maturity by providing baseline definitions, additional distinguishing qualities, and examples. These focus on health care technologies that are currently under development to build towards a more flexible and integrated data, system, and network architecture.

2.1 Key Drivers: Interoperability, Electronic Health Records (EHRs) and Personal Health Records (PHRs), and Health Information Exchanges (HIEs)

Several key factors are driving current industry health information technologies (HIT) and national HIT efforts. Three of these are interoperability, EHRs/PHRs, and health information exchanges (HIEs). There is at present no widely accepted industry consensus on the definition of most of these terms, as these technologies and efforts are still in the developmental stages and are constantly evolving. However, progress towards the full potential of each of these factors can provide markers that will help define the boundaries between the various levels of maturity. Therefore, it is necessary to establish some definitions for each of these factors to help unify expectations and create parameters that can be used to differentiate levels of maturity for each concept. This is essential to help focus future development efforts towards similar goals.

The BH-MITA MM augments the MITA MM by including interoperability, PHRs. EHRs, and HIEs as driving technologies that provide additional parameters to distinguish between levels of maturity.

2.1.1 Interoperability

Interoperability is a recent but nearly universal expectation of new technologies, and it is almost always mentioned in connection with any industry and government HIT efforts. However, understanding and use of the term "interoperability" varies widely. Progress on the National Health Infrastructure led to national efforts to build a common definition of the term; Health Level 7 (HL7) evaluated many of the various definitions to try to develop a single workable definition of interoperability. The HL7 paper ***Coming to Terms***[2] proposed the following types of interoperability and their descriptions:

- Technical, or automated connectivity, interoperability (tight integration of tasks, workflows, and information/record flows)
- Semantic, or common and consistent terminology, interoperability
- Process interoperability (safe and robust record origination, retention, and interchange)

There are also layers, or levels of maturity, for interoperability that progress from the simple and inexpensive, such as a fax document, to a more expensive, fully automated, transparent, and

[2] Coming to Terms: Scoping Interoperability for Health Care, Health Level Seven 2007

semantically interoperable document system. Each level uses a mixture of technologies (hardware) and semantic tools (software). Table 2-1 below shows an expected maturity progression of the three types of interoperability from the HL7 document.

Table 2-1 Maturity Levels of Types of Interoperability

Level/Type → ↓	Technical	Semantic	Process
LOW (current, As-Is)	Reliable, secure connectivity, transmission	Shared message syntax (e.g., HL7 V2.0)	Varies by organization
MEDIUM (short term)	Specific shared standards for exchange of data and programs	Shared data model (e.g., HL7 V.3 RIM) plus domain-specific standards, cross referenced terminologies	Selected constraints on common model(s)
HIGH (long term, To-Be)	Dynamic shared services	Dynamic data models, ontologies; shared standards and vocabularies	Collaborative design; engineered processes

The different types and levels of interoperability may be most useful as a scoping tool, and as such, can be used to help differentiate between different BH-MITA maturity levels.

2.1.2 Electronic Health Records (EHRs) and Personal Health Records (PHRs)

EHRs and PHRs are also commonly mentioned as part of any new health information technologies, with the expectation that they will facilitate information exchange, process speed, and client control. These two terms are also interpreted in many different ways. The recent National Alliance for Health Information Technology (NAHIT) effort[3] to develop definitions for key heath IT terms under a contract with the Office of the National Coordinator for Health Information Technology (ONC) proposes the following simple definitions for EHRs and PHRs (expanded descriptions are available in the full report):

Electronic Health Record	Personal Health Record
An aggregate electronic record of health-related information on an individual that is created and gathered cumulatively across more than one health care organization and is managed and consulted by licensed clinicians and staff involved in the individual's health and care.	An electronic, cumulative record of health-related information on an individual, drawn from multiple sources, that is created, gathered, and managed by the individual. The integrity of the data in the PHR and control of access to it are the responsibility of the individual.

Another industry group, Healthcare Information and Management Systems Society (HIMSS) has also made efforts to develop consensus standards and has the following definitions for EHRs and PHRs.

[3] Defining Key Health Information Technology Terms, Draft Report Prepared for the Second Public Comment Period March 24-April 9, 2008.

Electronic Health Record	Personal Health Record
A longitudinal electronic record of patient health information generated by one or more encounters in any care delivery setting. Includes patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports. The EHR automates and streamlines the clinician's workflow. The EHR has the ability to generate a complete record of a clinical patient encounter - as well as supporting other care-related activities directly or indirectly via interface - including evidence-based decision support, quality management, and outcomes reporting.	A universally accessible, layperson comprehensible, lifelong tool for managing relevant health information, promoting health maintenance and assisting with chronic disease management via an interactive, common data set of electronic health information and e-health tools. The PHR is owned, managed, and shared by the individual or his or her legal proxy(s) and must be secure to protect the privacy and confidentiality of the health information it contains. It is not a legal record unless so defined and is subject to various legal limitations.

Common distinctions between the EHR and PHR definitions are in who controls each type of record, and how each type of record is used, particularly in regards to clinical care. At present, many see the EHR as the core clinical record that will be primarily used by providers for care purposes, and the PHR as the client's personal record of care and a vehicle for clients to track and make decisions about their own care, which may sometimes feed into or interface with the EHR. There is no formal consensus in the industry as to what purpose each record will serve, how they will relate operationally, and where the boundaries exist between the two. Definitions of these terms are not static and will evolve as technology, uses, and processes involving these different record types change over time.

EHRs and PHRs are mechanisms that are expected to support more client-centered care and more client participation in that care. Some BH agencies are currently implementing systems with these capabilities.

Nationwide use of EHRs and PHRs is predicated on the evolution and use of electronic records to a common baseline level across key stakeholders within a region that can support robust information exchange and essential business processes. Effective widespread use of EHRs and PHRs requires established clinical information transaction standards that can be easily adopted by the different applications now available and in use, as well as industry consensus on the use, access and control of each record type.

2.1.3 Health Information Exchanges (HIEs)

Health information exchange (HIE) is the currently accepted terminology for a concept that over time has been known as regional health information organization, local health information networks, community health information networks, as well as other terms. The NAHIT effort proposes this definition for health information exchange:

The electronic movement of health-related data and information among organizations according to agreed standards, protocols, and other criteria.

The current national movement towards electronic health information exchange is through various exchange networks, regardless of form or title, with the ultimate goal of achieving a national network, known as the National Health Information Network (NHIN). Many States are currently developing health information exchange networks, and recent statistics show that participation in such networks is increasing. However, these implementations are occurring in silos without collaboration across the various networks on the development of data sharing standards.

Facilitating health information exchange is the key driver for systems interoperability, integration, and coordination.

2.2 Maturity Model Levels

The BH-MITA MM provides a structure that shows the future (i.e., the To-Be) vision and the intermediary steps (or levels) the agency must reach to achieve its objectives. The BH-MITA MM shows a pathway of continuous business improvement toward a realistic future state. Each higher level of maturity incorporates the best practices of the level below and, more importantly, introduces new higher level capabilities.

The Maturity Model is a framework for agency technology planning that first defines five maturity levels at a general, broad, high level, and iteratively builds a series of levels in greater detail in more discrete areas such as individual business processes.

Table 2-2 below is a very high-level description of how a BH agency changes as it moves from one maturity level to another. These provide a general point of reference to differentiate each level of maturity from one another. Levels 1 and 2 are considered to be contemporary. Level 3 is the short-term target of 2 to 5 years. Levels 4 and 5 depend on the outcomes of current industry business and technical efforts and accelerators expected to mature within the next 6 to 10+ years.

Table 2-2 General Descriptors of Levels of Maturity

Maturity Model Definition of Levels — General Timeline[4]				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
As-Is	**Near Term**	**Approximately 5 Years**	**8 – 10+ Years**	**Long Term (10+ Years)**
Level 1 – As Is All technology, policy, and statutory enablers exist and are widely used. Agency complies with baseline requirements.	**Level 2 –** Now and next few years All technology, policy, and statutory enablers exist and are widely used. Agency improves important parts of its business.	**Level 3 –** 5 years Technology is available but not widely used. New policy required to promote collaboration, data sharing, consolidation of business processes.	**Level 4 –** To Be, 8-10+ years Technology, policy under development. Can not be certain of time frame. When available, will cause profound change and improvement in the business	**Level 5 –** To Be, 10+ years Technology, policy under development. Time of deployment is uncertain. When available, will allow agency to reach highest level of maturity envision at this time.

In Table 2-3, the sample level descriptions are slightly expanded to show how the BH agency strives to improve over time in response to specific imperatives. The general definition of the five levels of maturity establishes boundaries for and between each level. For example, Level 4 can be achieved only if the business process uses clinical data to improve health outcomes and operational efficiencies. In the maturity levels for interoperability, where progress depends on external stakeholders, Level 5 can only be achieved when industry-wide interoperability exists.

Table 2-3 BH Agency Sample General Descriptors of Levels of Maturity

Definition of BH Enterprise Levels of Maturity—General				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
A description of the common state of operations found in many States. It is neither the least automated/ sophisticated practices nor the best practices in use. Operations meet state and federal requirements, and include some type of automated collection of reporting data.	Business processes use national data standards, and automate quality edits and some simple business rules. There is internal system semantic and technical interoperability. Focus on identifying outcomes and providing effective services leads to program innovations.	Agency uses automated business rules and BH-MITA standard interfaces for interoperability with Medicaid and other state agencies. State agencies access and use clinical data in key processes. State or regional exchange networks or mechanisms are conducting basic exchanges. Transformation begins here.	Agency business processes are technically interoperable. State health agencies and common administrative functions (financial, contract, etc.) are also semantically interoperable. Client level clinical data is accessible to authorized users and is used in key business processes.	All cross State business processes are technically and semantically interoperable. Many administrative processes are fully automated using consistent business rules and requiring no human intervention. Nationwide exchange networks or mechanisms are the norm for sharing health information.

[4] A Maturity Model shows improvement and transformation over time. "Levels" are tightly aligned with definitions and characteristics and loosely associated with Time, e.g., the Present, 2 – 3 years, 5 years, 7 – 8 years, 10 years.

Table 2-4 below contains specific examples of maturity level descriptions related to key drivers for BH business processes, such as health information exchange and EHRs/PHRs.

The BH-MITA MM defines the various levels of maturity using descriptors that clearly differentiate one level from another.

Table 2-4 BH Agency Sample Descriptors of Levels of Maturity

Definition of BH Enterprise Levels of Maturity for Specific Factors					
Factor	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Information Exchange	Mostly manual and paper based; automated data collection is one-way. Exchange is directly between the parties involved.	Primarily manual and paper based; some limited two-way collection/ access applications. Early development of independent exchange mechanisms (health information exchanges, or HIEs).	Reduction in paper based exchange with expanded availability of automated data. Increases use of automated exchanges; data exchanges use standardized messaging.	Paper exchange greatly minimized as automated exchange becomes the norm. Regional HIEs are well established across the country, and begin to include other sectors.	Data and exchange is primarily automated. Real time, nationwide exchange occurs via the NHIN, using interconnected HIEs.
EHR/PHR	Medical record information is available on paper when requested; delivered by registered mail. No PHR exists.	Consolidation of data from different systems, but lacks standards and internal consistency. Components of EHR available in electronic claim Attachment, eRx. Clients can build a PHR through independent companies, but without standards and connectivity to most agencies and providers.	Data consolidation is internally consistent and conforms to national EHR standards. Complete EHR content is not consistently available. Agencies begin to develop PHR capabilities and pilot PHR use with different client populations. Very limited EHR/PHR connectivity.	The EHR/PHR becomes the key vehicle for data use and exchange for client care. Data conforms to national standards, and complete content is available. Agencies use PHRs in a variety of processes, programs, and services. EHR/PHR connectivity is more integrated and of proven value.	EHRs/PHRs are universal and integral to client care. Data fully conforms to national EHR standards in format, content, and connectivity. PHRs are integral to the care process in most programs and services. EHRs and PHRs are fully integrated.

Note that at any point in time, different BH agencies and different processes within a single BH agency may be at different levels of maturity. For example, many small BH agencies and providers still run primarily paper-based operations, with little or no automation of any kind. Yet at the same time and within the same State, other BH processes and providers, often large or institutional, may run highly automated operations and have a high level of integration both internal to the organization as well as external to their business partners. The most useful maturity model defines the baseline level of maturity at the lowest level (least automated and integrated, with the least amount of functionality) currently existing in state BH agencies. This results in a maturity model that captures the full range of existing state agency operations and allows each BH agency to see itself in the maturity model regardless of system capabilities and progress.

Probably no State BH agency is, as a whole, at a single level of maturity, but rather demonstrates a blend of levels. Some business areas and processes may be more mature than others.

2.3 Qualities of Maturity Model Levels

To further explain the differences between the levels of maturity, the BH-MITA MM includes a set of measurable *qualities* to help distinguish performance at one level from performance at another. Examples of these qualities are listed below.

- **Interoperability.** The ability of two or more systems, processes, and entities to exchange information and to use the information that has been exchanged[5]
- **Timeliness of Business Process.** Time lapse between the agency's initiation of a business or technical process and attaining the desired result (e.g., length of time to contract with a provider, intake a client, pay for a service, or report on outcomes)
- **Data Accuracy and Accessibility.** Ease of and appropriate access to data that the business process requires and the timeliness and accuracy of data used by the business process, in the context of appropriate privacy and security
- **Efficiency and Ease of Performance.** Level of effort necessary to perform the business process given current resources
- **Cost Effectiveness.** Ratio of the amount of effort and cost to process outcome
- **Quality of Process Results.** Demonstrable benefits from using the business process
- **Utility or Value to Stakeholders.** Impact of the business process on individual clients, providers, and BH agency staff

The BH-MITA MM adds interoperability to the list of qualities used to distinguish between levels of maturity.

Qualities defined for each level should differentiate clearly between the levels and show a realistic progression toward improvement. Table 2-5 illustrates more detailed descriptors specific to the quality of interoperability of the business process over the five levels of maturity.

[5] Institute of Electrical and Electronics Engineers. IEEE Standard Computer Dictionary: A Compilation of IEEE Standard Computer Glossaries. New York, NY: 1990

Table 2-5 The BH-MITA MM and the Interoperability of the Business Process

Quality: Interoperability				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Little to no technical[6]; minimal to no semantic[7] (based on data reporting; claims/payment requirements). Minimal to no process[8] (primarily claims/payment). All very limited to internal agency systems and/or agency provider networks.	Limited but greater technical than Level 1; limited semantic (beyond requirements in Level 1). Limited process (some internal administrative; beyond claims/payment externally), Still limited to internal agency systems and/or provider networks.	Moderate technical and semantic (greater than Level 2). Moderate process (internal administrative functions; beyond Level 2 externally). Expands beyond internal agency operations, agency provider networks, and programmatic boundaries; uses some national standards.	Maturing technical and semantic, share services, standards, and vocabulary across sectors. Maturing process, widespread automation of processes, services, and shared decision-making. Expands beyond State and sector boundaries; uses mostly national standards.	Full technical and semantic, maximum process nationwide; real time functionality across the board. All interoperability is based on national standards. Automation and integration of many processes, process decisions, and analysis.

In the BH-MITA MM interoperability is non-existent at Level 1 but operates cross agency, state, and nationwide by Level 5.

2.4 Maturity Levels Applied to the BH Mission, Goals and Objectives

To develop the BH-MITA MM, a general description of the levels and definition of the qualities is applied first to the BH enterprise and then to the BH-MITA mission, goals, and objectives and the general business processes, which describe the long-range vision of the BH enterprise. Table 2-6 illustrates the key improvements envisioned at each level for one BH goal, to improve health and life outcomes for individuals and communities.

Levels of maturity do not suggest "good" or "bad" values, though BH-MITA encourages States to achieve higher levels for some or all business processes. The maturity model defines the baseline level of maturity at the lowest currently existing level (least automated, integrated; least amount of functionality) in state BH agencies to create a comprehensive picture of the current range of operations.

[6] Technical, or automated connectivity, interoperability (information/record flows)
[7] Semantic, or common and consistent terminology, interoperability
[8] Process interoperability (record origination, retention, and interchange)

Table 2-6 The BH-MITA MM and the Improvement of Health and Life Outcomes

Improvement of Health Outcomes Seen at Different Levels of Maturity—High Level					
BH Goal	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Improve Health and Life Outcomes for Individuals and Communities	Agency focuses on provider recruitment and contracts to encourage provider participation and, in the process, to increase client access to care.	Agency achieves improved program management and client outcomes from managing treatment, services and costs through increased access to and use of greater amounts of client specific, standardized data.	Agency adopts national data standards, collaborates with other agencies, and shares business processes, which facilitates comparing outcomes.	Agency, clients, and other stakeholders can access more client level clinical data, which greatly improves decision support, cross program management, measurement, and analysis of outcomes.	Agency can access, analyze, and research data nationally to compare outcomes across a broad spectrum of programs, clients, services, other agencies and States.

A table with a general description of the levels for the BH mission and all BH goals is located in Table B-2 in the Appendices. The BH-MITA goals and objectives support the BH mission and align with Federal initiatives such as the Federal Health Architecture (FHA) and the NHII. The BH and BH-MITA goals and objectives are built into the BH-MITA Framework. The realization of these goals is also described for each level of maturity.

Table 2-7 shows how progressive levels of maturity improve a State agency's ability to meet the BH-MITA goal to "promote integration, interoperability, and coordination with Medicaid and other partners to improve overall health, data supported analysis, and decision making."

Table 2-7 The BH-MITA MM and Promoting Integration, Interoperability, and Coordination

Agencies Mature in their Ability to Adapt to Changes in Program and Technology				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Agency complies with mandatory changes, however, they are costly and time consuming to implement.	Agency introduces elements of flexibility in program design driven by efforts to manage costs and implement new programs quickly.	Agency increases flexibility and adaptability by implementing shared business services, adopting national standards, and increasing collaboration both among intrastate agencies and through State/regional information exchange.	Agency benefits from immediate access to clinical data, which speeds response time and improves accuracy of results in critical business processes.	Agency improves flexibility and adaptability capabilities through national interoperability, collaborates on responses to changes, and shares solutions intrastate and interstate.

Table 2-8 shows progressive improvement in meeting another BH-MITA goal to improve availability of and access to essential data.

Table 2-8 The BH-MITA MM and Agency Ability to Provide Data

Agencies Mature in Ability to Provide Timely, Accurate, and Accessible Data				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Source of data is primarily reporting data and some claims data. Data is accessible via a request/ response process. Data is nonstandard, uses local codes, and is used primarily to manage operations. Data timeliness may be subject to delays.	Reporting and other clinical and client data are accessible to Agency users. Decision support tools improve analysis, but local codes still exist. Data standards are mandated by HIPAA but are not widely used in internal processes. Data timeliness improves.	Data standards are adopted nationally, and national codes are used for all BH services. Shared data through health information exchange networks improve ease of access and accuracy of data used, which yields better business process results.	Access to standardized clinical data through regional data exchange improves the decision-making process. Flexible report writing and analytic tools are widely available, so decisions can be immediate, consistent, and better supported with access to clinical evidence.	Data exchange in real time and on a national scale optimizes agency's decision-making capabilities. Nationwide capacity exists to access, analyze, and research client specific clinical data and comprehensive provider data.

Together the levels of maturity for the BH and BH-MITA mission, goals, and objectives form the foundation for developing the more specific business and technical capabilities that will bring the mission, goals, and objectives to fruition. The realization of these goals, described for each level of maturity, is the ultimate outcome of using the BH-MITA MM.

In the future, SAMHSA will use the BH-MITA MM to adjust the business capabilities and maintain alignment with the BH mission and goals.

Section 3 Using the Maturity Model in the BH-MITA Framework

Figure 3-1 shows the relationship of the BH-MITA MM to the BH-MITA transformation path. Business capabilities are associated each level of maturity. Technical capabilities, as enablers of the business capabilities, are identified with the corresponding business capability levels.

Technology is an important accelerator. Other accelerators include advances in supportive legislation, policy, and funding streams. Additional drivers include changes in demographics, climatic disasters, and violent incidents associated with BH disorders.

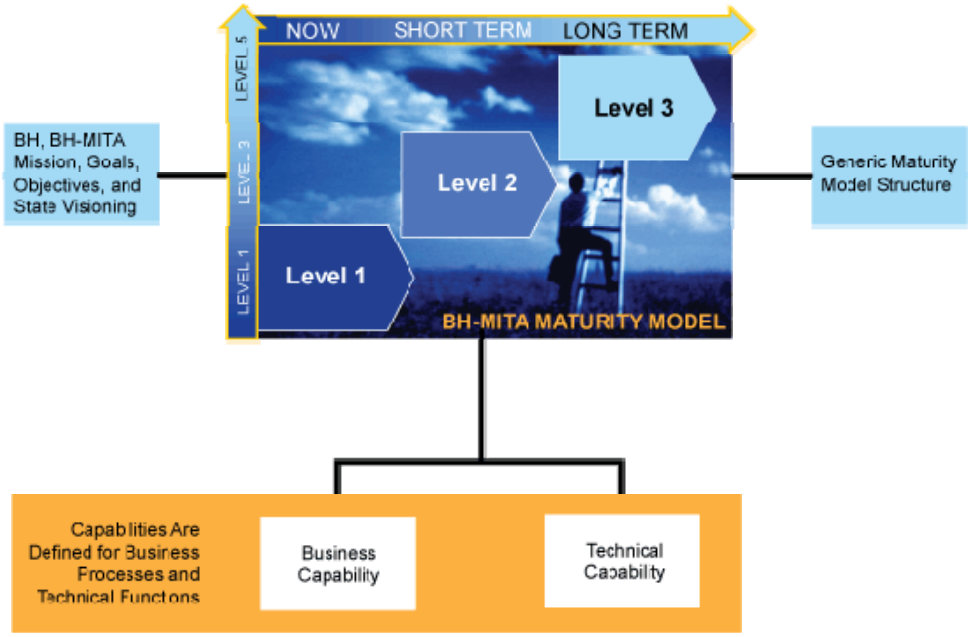

Figure 3-1 The BH-MITA MM: A Direction for the BH-MITA Transformation Path

The MM underlies all three parts of MITA: the Business, Information, and Technical Architectures. These are described in Parts I, II, and III of the MITA Framework 2.0**,** available at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp. The Business Architecture describes the business capability levels for each business process. Certain business capabilities correspond to each of the levels in the BH-MITA MM, e.g., a Level 3 business capability aligns with the general description of BH-MITA MM Level 3 and exhibits the same qualities. The BH-MITA MM is the keystone for the BH-MITA business and technical capabilities.

The MITA Maturity Model Storyboard in Appendix C provides a step-by-step description of the Maturity Model process. The Storyboard shows the relationship of the Maturity Model to other components of the Business Architecture.

3.1 Putting it Together: Concept of Operations + Maturity Model

Figure 3-2 shows the traceability of the State BH agency transformation from the beginning of the vision in the Concept of Operations (COO) to the creation of business capabilities (see Appendix D, Business Capability Model). The BH-MITA MM describes the stages along the way in the levels of maturity. The levels of maturity are applied to each business process to determine its unique capabilities. States can use the business capabilities to perform a State Self-Assessment (SS-A) and plan their moves to higher levels of capability. The migration path must also include the information and technical transformations as discussed in Parts II and III of the MITA Framework 2.0.

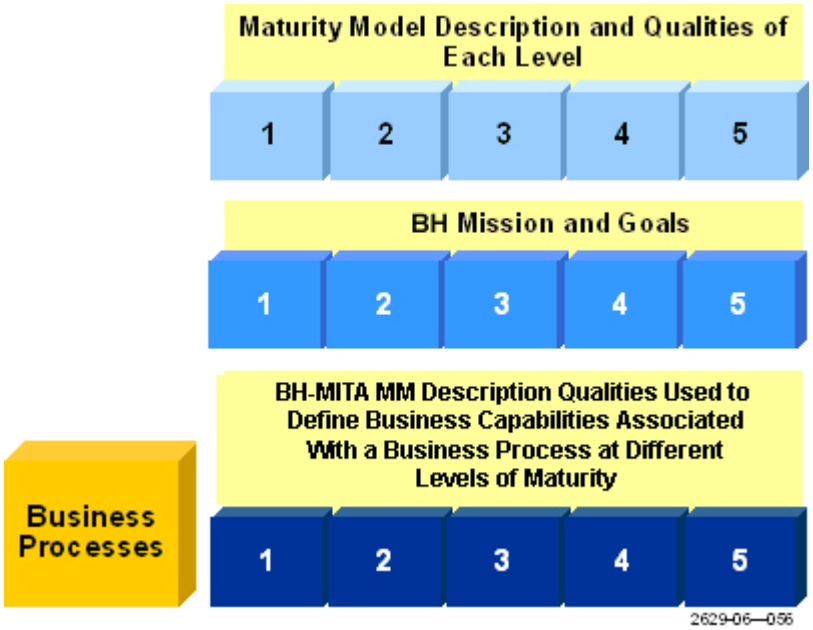

Figure 3-2 The BH-MITA MM: Translating BH Vision into Business Capabilities

The Traceability Model shown above outlines the process described below. Each tier feeds into and sets the parameters for the tier below, and at each successive tier the levels become more and more detailed.

- The BH-MITA MM sets the process framework that consists of a timeline (approximately 10+ years) and five levels of maturity to be achieved as the business matures.
- The BH-MITA MM first generally describes the BH enterprise at each of the five levels of maturity, using a set of qualities to clarify the boundaries, improvements, and intent of each level.
- The BH-MITA MM then applies the levels of maturity to the BH and BH-MITA mission statements and sample goals, adding additional descriptors.
- The BH-MITA MM provides a guide for defining business capability statements for each business process. Business capability statements support the BH-MITA MM general

description and detailed qualities at each level. States are asked to use the Business Capability Matrix (Appendix D) to perform a SS-A.

The Maturity Model is an iterative process that drills down from the broad vision through a series of levels in greater and greater detail to understand the nature of the agency's operations and document detailed characteristics that will inform solutions.

SAMHSA anticipates that over time, States will collaborate with SAMHSA and one another to define and refine their business capabilities. SAMHSA envisions that a BH-MITA repository will retain these products for reuse by other States.

3.2 Using the BH-MITA Maturity Model: Defining Business Capabilities

The BH-MITA MM is a reference model used to define business capabilities and serves as a basis for States to clarify their understanding of business capabilities. The Maturity Model establishes a process and framework to help states define their direction and to drill down to greater and greater process and capability specificity to assist in IT planning and development. The following summarizes the principal uses of the BH-MITA MM:

- The BH-MITA MM provides the framework for a common definition of each level, development of model qualities in detail, and a baseline for levels of maturity. This sets the general targets for improvements at each level.
- The BH-MITA MM traces the progression from the mission and goals of BH and BH-MITA to the business capabilities that will support them. This provides greater specificity for the improvements to be achieved.
- The BH-MITA MM provides consistency (e.g., a common look and feel). This provides connectivity between the maturity levels and to the ultimate vision.
- The BH-MITA MM provides a common measure and serves as a basis for SAMHSA to measure State agencies' performance.

The BH-MITA MM transforms the BH mission and goals and BH-MITA objectives into a structure that States can use to define business capabilities associated with business processes. It shows how each capability level leads into the next higher capability level.

Business processes are often a consolidation of several similar or related processes. For example, *Intake Client* is presented as a single process accommodating any kind of client. This is because the processing steps are similar for all clients even though the specific data requirements and business rules may differ depending on the client's situation and needs. This consolidation maintains a manageable number of business processes.

Conversely, what may look like a single business process when in operation may instead be a collection of several processes, related more by proximity of occurrence rather than similarity of function. For example, at the point of client intake, several different processes may occur: Intake

Client, which captures initial client information; manage wait list, which enters client information on to a wait list if the necessary programs and services are not immediately available; and pursue funding sources, which explores options for securing payment for the client's service needs. Since these all have different purposes and require different actions, these are considered separate business processes.

The business process Intake Client (capturing initial client information) is used in the examples in this document to illustrate the use of the BH-MITA MM in defining distinct business capabilities.

The single business process Intake Client (capturing initial client information) is used in the examples below to illustrate the use of the BH-MITA MM in defining distinct business capabilities for each level of maturity for that particular business process. These examples illustrate both definitions of the level of maturity and specific qualities for each level.

Table 3-1 below demonstrates the increasing specificity of the maturity levels using the Intake Client business process. The first row repeats the general high level BH-MITA description of the maturity level. The second row contains the specific translation of the maturity level to the more detailed business capability for Intake Client.

Table 3-1 The BH-MITA MM and the Intake Client Business Process

Definition of BH Enterprise Levels of Maturity—Intake Client Sample					
Intake Client	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Maturity Model General Description Brief description that captures essence of the Maturity Level; description is high level and covers all Business Areas	Agency focuses on meeting compliance thresholds required by State and Federal regulations and funding requirements.	Agency focuses on managing costs, which leads to program innovations.	Agency focuses on adopting national standards, collaborating with other States in developing business services, and promoting one-stop-shop solutions for providers and clients.	Agency improves healthcare outcomes with widespread and secure access to clinical data.	Agency focuses on optimizing program management, planning, and evaluation, using national interoperability.
***Intake Client* business process receives forms/data, verifies data, captures demographics, and associates client with needs, programs, and services.**	Agency client intake process meets State and Federal requirements. Agency receives and processes paper intake forms, and manually applies program and business rules to determine appropriate client needs and provide access to services as quickly as possible.	Agency intake forms and data are automated and some business rules are applied automatically. This creates the foundation for a client record and helps provide care and services in a more timely fashion; meets clients' clinical, cultural, and linguistic needs faster and more accurately; supports the needs of different programs; and improves quality of care overall.	Agency collaborates with other agencies to share standardized, electronic intake data; apply standardized, automated business rules; access shared client data; and perform some tasks electronically. This helps develop and support a coordinated care network that meets quality and effectiveness objectives, supports integrated monitoring of provider performance, and allows direct client interaction with providers.	Agency refines the intake process via automated access to clinical records, which creates and helps maintain a robust, coordinated, clinically sound care network that exceeds Level 3 goals of quality, cultural appropriateness, and adequacy in meeting the needs of the population.	Agency has fully automated the intake process and can access individual client data nationally via interoperable systems and data sharing agreements, which optimizes the care network and allow clients to direct their own needs and choices. Agency essentially performs a professional oversight and client satisfaction function.

States will use the business capabilities in their self-assessment with the BH-MITA MM serving as a reference model where necessary to explain the level. States are encouraged to participate in developing and refining the business capabilities.

Table B-3 expands the description of maturity levels to each specific quality applicable to the Intake Client business process to further detail the targeted capacities at each level.

The BH-MITA MM defines specific boundaries for each level of maturity and provides an approach to develop consistent definitions and targets for each level. Business capabilities defined for each business process point back to the levels of maturity in the BH-MITA MM. The

next deliverable, the Business Process Model, and Appendix D, Business Capability Matrix, explain how these pieces fit together. Refer to Appendix C, MITA Maturity Model Storyboard, for a step-by-step process for how to use the BH-MITA MM.

Together, the General Description and the Characteristics are used to specify Business Capabilities for each Business Process at each Maturity Level.

3.3 Summary

The BH and BH-MITA Mission, Goals, and Vision provide the foundation for developing the BH-MITA MM to plan the stages of transformation from the operations of today to the vision of the future. This document describes the framework for and the development of the Maturity Model, a projected transformation pathway that establishes the boundaries for five levels of maturity and provides the context for the development of more detailed specifications: the business and technical capabilities required to reach the targets at each level. This BH-MITA MM document sets the planning framework and the direction for future BH-MITA documents. The Maturity Model informs the development of a BH-MITA Business Process/Data Model as a framework for the development of BH IT architectures that will help achieve the capabilities documented in the vision. Key to progress for BH processes will be evolving health technologies such as EHRs/PHRs and electronic health information exchange.

The BH-MITA MM is designed to gradually build a more and more detailed description of the levels of maturity to set targets for distinct and continually advancing stages of progress towards the long-term vision. This process starts with high-level general descriptors that differentiate each stage, and augments those descriptors by tying them to BH and BH-MITA statements of mission, goals, and objectives. The descriptions are further fleshed out by describing each stage for each business process according to a number of qualities, such as interoperability, timeliness of business process, data accuracy and accessibility, efficiency and ease of performance, cost effectiveness, quality of business process results, and utility or value to stakeholders. The levels are then further detailed by assigning and describing various business and technical capabilities that support the achievement of the business process targets for each stage. Descriptions at this point should provide sufficient detail to create plans for specific systems, technologies, and approaches to reach the process improvements set for that target stage.

The BH-MITA project serves to drive greater coordination and integration with Medicaid data and systems in particular, with an eye on a larger long-term vision of a comprehensive public sector health IT system enterprise that brings all public-sector health, wellness, and support programs under a single umbrella. Therefore, the levels of maturity for both MITA and BH-MITA must be coordinated, dynamic, and continue to evolve as technology, care models, and business processes change and are reengineered.

The BH-MITA MM is a reference model defining parameters for the BH agency as it matures from one Level to the next. The General Description along with the Characteristics of each Maturity level are used to specify Business Capabilities for each Business Process for that Maturity Level.

Appendix A BH-MITA Maturity Model Tables

The BH-MITA MM transforms the BH Mission and Goals and BH-MITA Objectives into a structure that can be used to define Business Capabilities associated with Business Processes.

Table A-1 The BH-MITA MM and BH Mission and Goals

BH-MITA Maturity Model Vision Layer — BH Mission and Goals					
Component	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
BH Mission					
To foster individual and community health, safety and wellness through a coordinated, effective, culturally responsive continuum of prevention, intervention, treatment, recovery, and support services.	The BH agency demonstrates adherence to federal and state legislative mandates to comply with threshold guidelines for intake of clients, provider participation, access to care, assessment of appropriateness of care, and oversight of outcomes. Use of Web-based and electronic communications is limited.	The agency focuses on improvements in quality and access to care primarily through special programs and increased coordination of care. Greater use of Web-based and electronic communications increases response time and a wide array of technical tools improves the ability to manage appropriateness and cost of service delivery. Use of national standards and interoperable systems is limited.	The agency commits to adoption and use of national standards, increased sharing of data across agencies and programs, improved access to health care information for stakeholders, collaboration and coordination of health care service delivery among all state agencies, statewide data sharing, and adoption of reusable business services. Some interoperability between programs, providers, and other agencies exists.	The agency benefits from direct and immediate access to standardized clinical data, empowerment of the client (as well as the provider) in health care decisions, and performance/ outcome measurements based on observable, clinical evidence. National standards are in widespread use, and interoperable systems within states are commonplace.	The agency benefits from real time availability of clinical and administrative data intra-state and inter-state through nationally interoperable systems and networks. The agency is able to focus entirely on its Mission because most operational and administrative business processes have been automated and streamlined. The agency's primary function is to maintain the Mission.
BH Goals					
Improve health and life outcomes for individuals and communities.	The agency focuses on compliance with regulatory requirements for treatment and services, and providing contracts and funding within a specified timeframe to encourage the participation of providers and thereby promote access to care.	Improved health outcomes are a by-product of new, creative programs and services primarily focused on managing costs, e.g., managed care and waiver programs, supported by greater automation and communication.	There is widespread adoption and use of national standards for clinical and administrative data, and sharing of business services, which provides a better base for comparing outcomes. Coordination and collaboration across intra-state health care programs, assisted by	All State stakeholders have electronic access to clinical data, which produces a major leap forward in analysis of treatment, services, and health outcomes. Also, improved client and provider access to data empowers decision making affecting outcomes.	Goal is met in the most comprehensive way envisioned at this time through joining the gains of previous Levels with national interoperability. Agencies now have access to necessary data to compare outcomes across a broad spectrum of other agencies and states.

BH-MITA Maturity Model Vision Layer — BH Mission and Goals					
Component	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
			standards and early system interoperability, contributes to improved outcomes.		
Ensure efficient and effective management of BH programs	Measurement of outcomes is limited to observations based on administrative (claims) data, reporting data and surveys. Improved health outcomes are a by-product of provider contracts and the agency's ability to perform oversight.	Evaluations of cost effective initiatives are conducted by expert independent research contractors and include statistically sound reports on health care outcomes resulting from improvements in data availability.	Use of national standards and shared business services improves data quality and comparability. Multi-program/agency collaboration and use of state/regional information exchange provides access to more and better health outcome data.	Broad access to a wide range of clinical data transforms the measurement of outcomes. Now, outcome measurement is based on clinical evidence, and treatment and services on evidence-based practices.	The agency's administrative burden is significantly lightened, and there is time to focus on strategic goals including improved health outcomes in-state and comparison with national standards.
Ensure individuals have access to quality, timely and affordable services	Automated application of rules meets statutory requirements for provider contracts, service provision, grant funding, and reporting data.	Program evaluations show savings resulting from coordinated care and services and program initiatives, use of Web portal, and better decision-making and program analysis using clinical data and decision support tools.	The agency is able to consolidate programs and processes and experiences economies of shared and reusable business services and standard clinical data.	Access to and use of clinical data increases the efficiency and effectiveness of decision-making. Decisions are rapid, consistent, appropriate, and rules-based.	The agency's administrative burden is lightened, and there is time to focus on strategic goals such as effective management.

The Maturity Level Characteristics are used as guidelines for defining Business Capabilities, which describe a Business Process at a specific Maturity Level. Maturity Level Characteristics are measurable and can be used to verify that a Business Capability has been achieved.

The table below shows the application of the BH-MITA MM to a specific business process. The first row states the general description of the maturity level, while the following rows expand the maturity level definition to include the qualities applicable to each maturity level for the process Intake Client.

Table A-2 The BH-MITA MM and the Intake Client Business Process Detail

Qualities Associated with the Five Levels for Intake Client					
Quality of the Level	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Interoperability	Agency intake process has little to no interoperability on any dimension. Intake data and formats are non-standard and non-comparable. Agency and provider systems are siloed, use different platforms and software. Sharing and communicating data is a lengthy and time-consuming process.	Agency has some technical interoperability that allows easier communication of data. Semantic interoperability where data from different systems has the same meaning (beyond required data collection and claims/payment requirements) is limited. Some process interoperability exists across a few internal administrative functions.	Agency has moderate technical interoperability (greater than Level 2), facilitating data exchange. Semantic interoperability moves beyond imposed requirements in Level 2. Process interoperability exists across most internal administrative functions. External process interoperability improves across provider networks and programmatic boundaries.	Agency has maturing technical interoperability and is beginning to share services across agency and organizational boundaries. Semantic interoperability now encompasses shared standards and vocabulary across sectors. Process interoperability expands with widespread adoption of automated processes, services, and decision-making, and extends beyond State and sector boundaries.	Agencies nationwide have reached full technical and semantic Interoperability, enabling real time communications and process completion. Many processes are automated across a wide range of stakeholders, supporting immediate process decisions and analysis.
Timeliness of Business Process	Agency turnaround for intake determinations can take from 1-7 days but complies with regulations.	Agency turnaround for intake determinations takes a day or less.	Agency turnaround for intake determinations can be immediate.	Agency turnaround for intake determinations is immediate.	Agency turnaround for intake determinations is immediate on a national scale.
Data Accuracy and Accessibility	Intake data and format are nonstandard. Some intake data is stored electronically. Client data, including ID and demographics, is not comparable across provider	Intake data and format are standardized within the agency. Client data for different programs is stored separately. Clients have different IDs per program	Intake data and format are standardized nationally. Client data either is stored in a single system or is accessible via health information exchange networks.	All client data is accessible via regional health information exchange networks. Authorized, authenticated parties have instant access to	All client data is accessible via exchange networks across the country and, if desired, internationally. Authorized, authenticated parties have instant access to client data nationally.

Qualities Associated with the Five Levels for Intake Client					
Quality of the Level	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	types and programs, which hampers agency's ability to coordinate care and services or monitor performance and outcomes.	and cannot be cross-matched without difficulty. Performance and outcome data is measured periodically but requires sampling and statistical calculation. Data comparability improves.	Clients have a single identifier of record regardless of program or agency. Providers, clients, and select agency staff have secure access to appropriate data on demand.	client data locally. Access to clinical data helps agency select providers and services that meet quality and outcomes standards and map to client needs.	
Efficiency; Ease of Performance	Agency collects intake data on forms and may enter into a data system at another time, which requires a large staff to file, organize, and input forms and data.	Agency uses "siloed" programs in accordance with program-specific rules. Providers can submit intake data on paper or electronically via a portal, which improves turnaround. Verifications are a mix of manual and automated steps.	Agency uses a single set of intake forms and criteria as BH agencies, Medicaid, and other programs come to centralize client intake processes. Agency may continue to use manual steps for exceptions.	Agency uses data from any regional data-exchange partner regarding client demographics for intake. Electronic health records (EHRs)/personal health records (PHRs) automatically send notice of changes in client information and status, which eliminates the need to reverify and helps the agency complete the intake process in real time.	Agency uses client intake data from any data-exchange partner from any program in the U.S. Nationally interoperable EHRs/PHRs automatically send notice of changes in client data and status, which eliminates the need to reverify and helps the agency complete the intake process in real time using information from anywhere in the U.S.
Cost Effectiveness	Process requires substantial staff time.	Process requires less staff time and produces better results than Level 1.	Process requires less staff time and produces better results than Level 2. Shared services and interagency collaboration contribute to streamline the process.	Process (fully automated and with access to clinical data) allows staff to become a core team of professionals who monitor care coordination, client outcomes, and provider and service performance.	Same as Level 4.
Quality of Process Results	Much intake information is manually or not validated. Decisions may be inconsistent. Client services rendered elsewhere may not be coordinated because of limited ability to monitor	Automation improves accuracy of intake and data verification. Emphasis on coordinated care and outcomes encourages more scrutiny of and reporting to national databases.	Use of standardized interfaces automates conduct of all data verifications. Consistent intake rules and standardized data support continuous performance and outcome measures that the	Near real-time monitoring of client status across networks improves communication and care coordination, which allows prompt adjustment of care and services as needed.	Same as Level 4 but on a national scale. Agency can share outcomes and performance measures nationally via a national exchange network.

Qualities Associated with the Five Levels for Intake Client					
Quality of the Level	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	client status across participating providers and other agencies.		agency can use to adjust treatment plans in real time. Agency sends verification inquiries to any other agency regarding client status via regional exchange networks. Care quality and coordination improves.	Agency can access and monitor clinical data to measure outcomes and performance. Agency can share outcomes and performance measures via regional exchange networks.	
Utility or Value to Stakeholders	Agency focus is on an intake process that meets clients' needs. Staff does not always have the time or capacity to focus on cultural and linguistic compatibility, client satisfaction, care coordination, outcomes, or provider performance.	Agency assigns clients to care managers to coordinate their care; uses care guidelines and evidence based practices to ensure adequacy of treatment plans and services; and makes cultural and linguistic matches.	Agency clients can view personal information and provider profiles, interact directly with providers and care managers, and make informed choices. Cultural and linguistic indicators improve selection of appropriate providers. Speed and accuracy of intake process improves provider and client outcomes.	Agency providers, clients, and care managers can access standardized client data and view clinical and provider performance indicators to make informed decisions regarding care and services coordination.	Same as Level 4 but on a national scale, where appropriate.

Appendix B Business Capability Matrix

The Business Capability Matrix (BCM) describes the boundaries and behavior of each BH-MITA business process in the context of the five levels of the BH-MITA Maturity Model (BH-MITA MM). The BCM is one of the principal building blocks of the BH-MITA Framework. Business capabilities link to enabling technical capabilities and are the principal drivers of business services (see Part III Chapter 4, Business Services, in the MITA Framework 2.0). The BCM is the main link between the Business Architecture (BA) and the Information and Technical Architectures (IA and TA, respectively). It is a BH-MITA principle that "business drives technology," and it is the BCM that fills the role of the "driver."

The Business, Information, and Technical Architectures are the three components of the MITA Framework 2.0, available at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp.

This appendix describes the BCM. Samples of business capability statements are in Part I Appendix D in the MITA Framework 2.0. The MITA BCM Appendix D can be found at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp. A subset of the business capability statements has been developed with significant detail, and others are represented by summary statements. Complete business capability statements include definition of *qualities* (defined in the text below). BH business capability statements require further development through a collaborative effort involving the States and SAMHSA. Conformance criteria should be added in the future to support independent verification that a business process has been implemented at a specific level of maturity.

The following Appendix E discusses *technical* capabilities. Technical capabilities are enablers of business capabilities. Technical capabilities are associated with the shared timeframe (0 to 10+ years) established in the BH-MITA MM. This appendix focuses exclusively on *business* capabilities.

The BCM refers to (1) the composite of all capabilities for all business processes arrayed in a single table and (2) the subset of 1 to 5 capabilities associated with a single business process (e.g., each business process has a capability matrix).

What Is a Business Capability?

A business capability describes a business process at a specific level of maturity. The BH-MITA MM defines five levels of maturity that show how the BH enterprise can and may evolve over the next 10+ years. The business capabilities result from applying the BH-MITA MM's definitions of the five levels of maturity to each business process to derive specific capabilities for each process, as shown in Figure B-1.

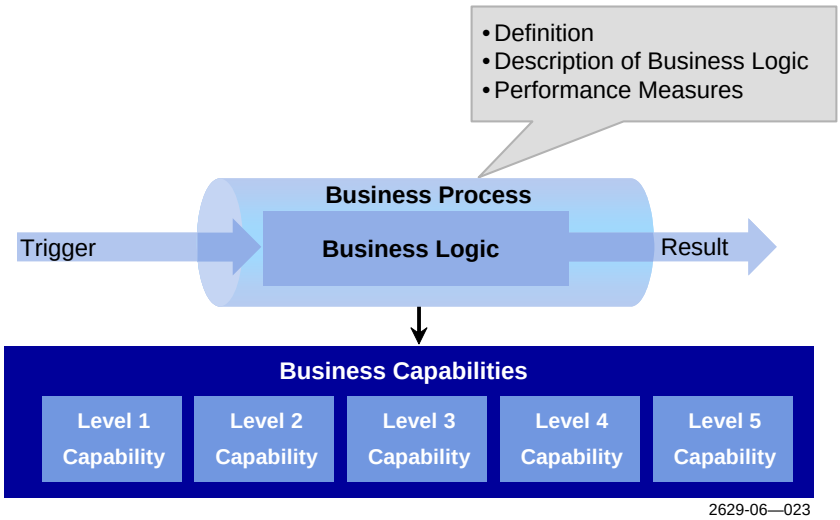

Figure B-1 Each Business Process has up to Five Capabilities

The description of a business process is neutral regarding level of maturity. That is, it merely describes a trigger event, a series of actions, and an outcome without reference to time, efficiency, impact, or other qualities of the process. The BCM, by contrast, describes how the process will change at different points in time. For example, the business process description is neutral regarding how the steps are performed (e.g., they could be all automated or all manual/paper), while the business capability statements and the qualities differentiate between manual/paper and automated steps (e.g., Intake Client at Level 1 allows for manual receipt and processing of intake forms and information, but Level 3 business capabilities and qualities require extensive automation).

A capability is the competence of an individual, organization, or system to perform a function or process. There are two types of capabilities: business and technical. The levels of maturity show progress from the current (As-Is) business capabilities (Levels 1 and 2) to future (To-Be) business capabilities (Levels 3 through 5) that reflects the vision for the BH enterprise. Each higher level brings more operational effectiveness to the BH enterprise than the prior level. Technical capabilities are enablers of business capabilities.

The Business Architecture discusses the business capabilities associated with a business process. The Technical Architecture discusses technical capabilities that enable business capabilities. There is no one-to-one match between business and technical capabilities. Rather, technical capabilities are associated with a maturity level through the time axis (i.e., some capabilities exist now and others likely will become available in the future). This appendix focuses exclusively on business capabilities.

The BH-MITA MM contains the guidelines for defining capabilities at the five levels of maturity, offering a general statement about the nature of each level and a set of qualities[1] that further explain the level. The qualities can be used to further differentiate between the levels

[1] "Qualities" are synonymous with characteristics or attributes.

(e.g., what it means to be at Level 2 or Level 4). The general definition of the levels of maturity is shown in Table B-1.

Table B-1 Each Business Capability Level Aligns with the General Description of the Same Level in the BH-MITA MM

Business Capability Levels Align with the BH MITA Maturity Model				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Agency focuses on meeting compliance thresholds for State and Federal regulations, primarily targeting provider participation and access to a range of services, plus timely and accurate data reporting.	Agency focuses on cost effectiveness and improving outcomes, quality of and access to care within structures designed to coordinate care (e.g., shared care management and outcomes driven care). Focus on outcomes and providing effective services leads to program innovations.	Agency focuses on adopting national standards, collaborating with other agencies in developing reusable business processes, and promoting one-stop-shop solutions for providers and consumers. Agency encourages intrastate data exchange.	Agency benefits from widespread and secure access to clinical data and focuses on improvement of outcomes, empowering clients and provider stakeholders, measuring performance and quality quantitatively, and ensuring overall program and service improvement.	Agency focuses on fine tuning and optimizing program management, planning and evaluation since it has benefited from national (and international) interoperability and previously noted improvements that maximize automation of routine operations.

Each general description of a level is supplemented by more specific definitions in a set of qualities. Qualities represent aspects of capabilities that are measurable, such as the following:

- Timeliness of business process
  - Data accuracy and accessibility
  - Ease of performance/efficiency
  - Cost effectiveness
- Quality of process results
  - Value to stakeholders

Table B-2 gives examples of two definitions of qualities that help to differentiate the five levels of maturity.

Table B-2 Each Business Capability Level Differs in Detailed, Measurable Ways

Qualities Help to Define the Different Levels of Capability				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Quality: Timeliness of Process				
Business process meets threshold or mandated requirements for timeliness (e.g., the process achieves results within the time specified by law, regulation, or regulation).	Business process timeliness improves through use of Web portal, EDI, or other forms of automation. Business processes that reduce costs are given priority. Timeliness exceeds legal requirements.	Timeliness improves via interagency collaboration, use of data sharing, standards, and State/regional information exchange networks.	Clinical data is available in real time. Processes that use clinical data result in immediate action, response, and results. State and/or regional stakeholders are interoperable, which further improves timeliness.	Processes improve further through connectivity with other States and with Federal agencies. Most business processes are executed at the point of service. Results are as close to immediate as can be currently envisioned.
Quality: Effort to Perform; Efficiency				
Most business processes are labor-intensive and siloed.	Business processes that reduce costs are given priority.	Business processes require less agency effort, and agency increases efficiency with State and regional data exchange, collaboration, and adoption of data standards.	Business processes are transformed and efficiency is optimized through access to clinical data. Agency transforms operations from labor-intensive to strategic planning.	Agency, with national interoperability, extends gains achieved at Level 4 to the maximum that can be currently envisioned.

The general description of the business capability and the additional information provided in the qualities combine to establish clear boundaries between levels. In addition, the quality statements can be reshaped into conformance criteria in the future. Conformance criteria would enable States, SAMHSA, and vendors to verify that a business process is functioning at a specified level. SAMHSA envisions a community effort to gradually evolve the BCM by refining the quality statements and adding conformance criteria.

Table B-3 illustrates the relationships among maturity level, business capability, capability quality, and conformance criteria. All business capability statements, qualities, and conformance criteria are traceable to the BH-MITA MM definition of five levels.

Table B-3 Traceability from Maturity Model to Business Capability Matrix

Maturity Level: Generic description of boundaries of the different levels; base for all capability statements	1	2	3	4	5
Maturity Level Quality: Generic description of 6 qualities used to further differentiate Levels 1 through 5					
Capability Description: Specific definition of the capability of a business process at a designated level of maturity (there is one-to-one alignment between the maturity level and the capability statement)					
Quality Definition: One to six quality statements to further refine the meaning of each capability (there is one-to-one alignment between a maturity level quality and a business capability quality); the business capability quality is tailored to a specific business process					
Conformance Criteria: Each capability description and/or quality definition can be restated as conformance criteria used to determine if a business process is performing at a stated level of maturity (conformance criteria have not been defined)					

Table B-4 gives an example of the business process Intake Client and its associated business capabilities for maturity Levels 1 through 5. The Intake Client business process is a series of activities (e.g., verify information or assign ID) triggered by an event (Receive Intake Form/Information) that results in a notification concerning the status of the application. The business capability describes the business process at a specific level of maturity. In the Intake Client example below, each higher level of maturity introduces new and enhanced functionality, information, and results.

Table B-4 The Intake Client Business Process Has Five Levels of Maturity

Intake Client Business Capabilities (Sample)				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Agency reviews (nonstandard) intake forms and data and validates and coordinates most services manually. Agency requires a large staff. Agency decisions may be inconsistent, and may take several days.	Agency receives standardized and automated intake forms and data that clients and providers can submit via a portal. Agency conducts verification and coordination by a mix of manual and automated steps. Agency requires fewer staff. Agency decisions improve in consistency and take less time.	Agency reviews intake data that is standardized nationally ("one-stop shop" within a State or region). Almost all verifications and initial service coordination can be automated, though agency may continue to take some manual steps. Agency decisions are consistent and can be immediate.	Agency receives internal and external validation sources, coordinates services, and receives notices of changes in client information and status automatically. Agency can access clinical data directly and use it to process intake requests. Agency takes manual steps only to handle exceptions. Agency decisions can be immediate.	Agency can send or receive intake data to or from any other State or Federal agency or other entity. Data exchange partners can coordinate services directly and send notifications regarding clients participating with BH, Medicaid, or other programs in any State.

The Maturity Model (MM) and the BCM share the same five levels. A maturity level and a capability level are, therefore, one and the same. The difference is that the MM provides a generic definition of each level, while the BCM provides a definition for a specific business process at one through five levels of maturity. A *maturity level* is generic and applies to any business process, while a *capability level* is specific to a single business process.

Qualities are added to the basic description of capabilities to further explain the difference between the levels. The intention is to refine the qualities until they become measurable. Table B-5 shows the application of two qualities to Intake Client: "Effort to perform; efficiency" and "Cost effectiveness."

Table B-5 Qualities Differentiate the Different Levels of Intake Client

Intake Client: Examples of Business Capability Qualities				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Quality: Effort to perform; efficiency				
Agency contacts internal and external verification sources and conducts provider and service coordination via phone or fax. Agency needs a large staff to meet targets for manual intake of clients.	Agency continues to intake by siloed programs according to program-specific rules. Providers can enter submit intake data on paper and electronically via a portal, which improves turnaround time. Verifications and coordination are a mix of manual and automated steps.	Agency receives most intake data electronically, in conformance with BH-MITA standard interface requirements. Agency collaborates with other agencies on client intake and coordination processes (one-stop shop). Manual steps continue only for exceptions.	Any data exchange partner can send or receive a notification or coordinate services regarding a client participating with the State BH or Medicaid agencies. Internal and external validation sources and coordination happens automatically, sending notices of changes in client status.	Any data exchange partner can send or receive a notification or coordinate services regarding a client with any program in the U.S. Nationally interoperable validation sources and service coordination automatically sends notices of changes in client status, and helps agencies connect with clients in real time anywhere in the U.S.
Quality: Cost effectiveness				
Agency requires a large staff for this process.	Process requires fewer staff and produces better results than Level 1.	Process requires fewer staff and produces better results than Level 2. Shared processes and interagency collaboration combine to streamline the process.	Process fully automated and access to clinical data allows staff to become a core team of professionals who monitor client care and service coordination and outcomes.	Same as Level 4, with additional benefit of access to sources of information nationally.

The following business capability statements map to the five levels of maturity. (The Authorize Service business process is used to show a different example from Intake Client.)

Level 1

A State agency receives Authorize Service requests manually in nonstandard formats (e.g., on paper or by telephone or fax). Professional staff reviews these requests individually against printed guidelines and respond to them via mail or fax. The business process complies with

State and Federal statutes, regulations, and policies on timeliness. However, time lags, inconsistent decisions, and delays in processing inhibit the delivery of care and services. Clinical information that could help decision-making is difficult to access, and accessing this information causes further delays.

Level 1 reflects the capabilities seen in many of today's Authorize Service operations.

Level 2

A State agency receives requests electronically. Professional staff reviews these requests individually against guidelines and responds to them electronically. The agency responds faster when delivering care and services, though inconsistency in decisions continues. A number of States demonstrate Level 2 capabilities for the Authorize Service business process.

Level 3

A State agency incorporates automated business rules to streamline its responses to requests. Agency decision-making becomes more consistent, and the agency reduces manual interventions. Electronic prescribing and treatment referrals and data-sharing protocols let providers share service authorization information. Collaboration across programs supports a "one-stop-shop" for service authorizations.

Level 4

A State Agency adds direct access to clinical data, which increases the reliability and consistency of its authorization decisions and frees staff to focus on exceptions. The agency empowers clients to make personal treatment decisions, increasing both provider and client satisfaction and efficiency in program operations.

Level 5

A State agency is fully interoperable with other State, local, and Federal agencies, providing complete, virtual client-level clinical data and national clinical guidelines. The agency can authorize or deny most services instantly at the point of service, leading to increased client safety, more positive health outcomes, and minimal operational costs.

What is the Business Capability Matrix?

The Business Capability Matrix refers to the collection of all business capabilities for all business processes contained in the BH-MITA Framework. In this context, *matrix* refers to (1) the composite of all business processes and their associated capabilities arrayed in a single large table or (2) the capabilities and qualities associated with a single business process.

The BH-MITA Framework presents business capabilities for each business process within each business area. For example, if a business area contains eight business processes and each process has five business capabilities, then the business area has 40 business capabilities in total (i.e., the maximum number for this business area). Some business processes will have fewer

than five capabilities because they are predicted to become obsolete. The BCM will always be a work in progress to reflect the reality of rapid policy changes and emerging technology. Part I Appendix D in the MITA Framework 2.0, Business Capability Matrix Details, contains the BCM. Business capabilities in that Appendix have been developed in detail for Medicaid Provider, Member, and Operations Management business processes. Many of these have completed Quality definitions. These business capabilities provide examples for State BH agencies and other BH stakeholders to use as part of a BH-specific business capability development process.

The methodology for creating the BCM uses the following steps:

1. Select a business process.
2. Consult the BH-MITA MM description and qualities for each level.
3. Apply the BH-MITA MM description and qualities to the business process and envision what the individual process looks like as it improves over the next 10+ years.
4. Document the business capabilities and their qualities for each business process.

Figure B-2 shows the relationship between the BH-MITA MM, the business process, and the BCM.

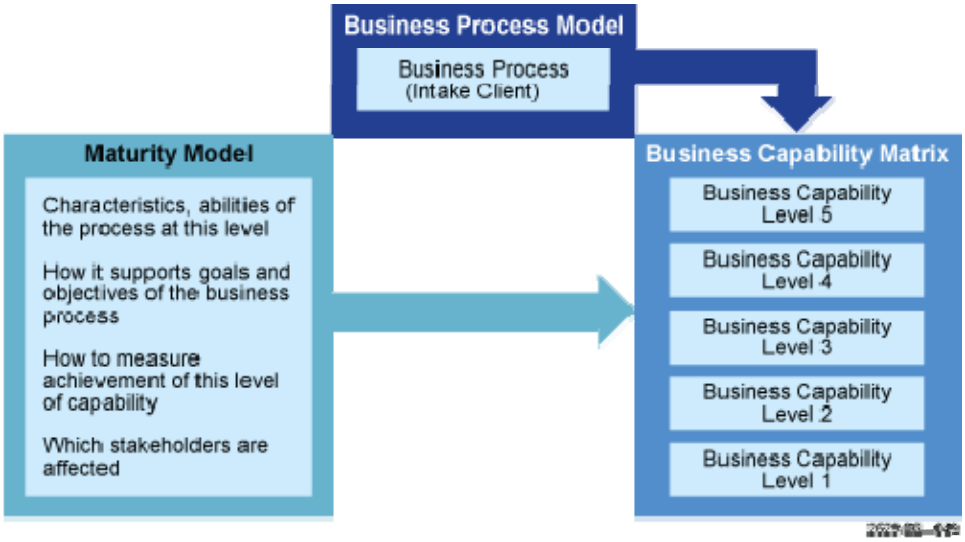

Figure B-2 Maturity Model Definitions Are Applied to the Business Process to Derive Its Business Capabilities

Figure B-3 is a sample of a fully populated BCM for a series of identified Medicaid capabilities. Each cell would contain the full description of the capability and its qualities. (In the future, conformance criteria would be added).

Business Process	Maturity Level 1	Maturity Level 2	Maturity Level 3	Maturity Level 4	Maturity Level 5
Enroll Provider	Level 1 Capability	Level 2 Capability	Level 3 Capability	Level 4 Capability	Level 5 Capability
Authorize Service	Level 1 Capability	Level 2 Capability	Level 3 Capability	Level 4 Capability	Level 5 Capability
Adjudicate Claim	Level 1 Capability	Level 2 Capability	Level 3 Capability	Level 4 Capability	Level 5 Capability
Verify Eligibility	Level 1 Capability	Level 2 Capability	Level 3 Capability	Level 4 Capability	Level 5 Capability

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Figure B-3 A Fully Populated Business Capability Matrix Sample

Appendix D in the MITA Framework 2.0 lists the business capabilities developed to date for State Medicaid agencies (approximately 400 capability statements, i.e., up to five per business process). Those capabilities are unevenly distributed across the business areas because some business areas have more (sometimes many more) processes than others.

Some Caveats Regarding the BCM

- The 10+ year BH-MITA MM and business capability timeline is divided into five levels of maturity, based on maturity models used in other industries and limits on the ability to predict the future. Changes in enabling technology and legislation (discussed in the Concept of Operations) will affect BH-MITA models. The BH-MITA Framework has the flexibility to adapt as changes occur.
- By documenting the vision of the different levels in the BH-MITA MM, one can trace through the Framework from BH and BH-MITA goals and objectives through the BH-MITA MM and into the individual business capabilities.
- Business capabilities are clearly understood at Levels 1 through 3. Levels 1 and 2, for example, describe what is found in many BH operations today. Level 3 is a target that seems achievable over the next 3 years. Levels 4 and 5 depend more on future developments in technology, enabling legislation, and funding. Therefore, Levels 4 and 5 will require more updating as changes occur.
- Some business processes will be replaced by new processes in time. If a paradigm shift occurs in the way BH agencies do business, a current process can become obsolete and a new one will take its place. The BH-MITA MM envisions the possibility of paradigm shifts happening primarily at Levels 4 and 5. For example, prior authorization under the current business model, in which a provider sends a request and receives approval, can be replaced by direct communication between the provider's system and the BH or Medicaid enterprise system. This is possible at Level 4 based on notifications triggered by new clinical information entered into a client's health record. At this point, the Trigger, Result, and Action steps differ qualitatively from those at Levels 1 through 3, and a new business process and new capabilities need to be defined.
- Each new business process has an initial capability. The level of the capability indicates in general when the process is available. Both the old and the new processes remain in

the model because some BH agencies may have implemented the new capabilities even as other BH agencies continue to use the older versions.

- SAMHSA asks States to use the BCM to assess their current levels of maturity for each business process. However, the BCM is not a report card. There is no "score" for being at Level 1 or 2 versus being at a higher level. At the same time, SAMHSA encourages States to apply increased funding to improve their processes and move to a higher level of capability.
- We do not expect States or other BH agencies to be called "Level 1 States/Agencies" or "Level 2 States/Agencies," nor do we expect them to move all of their business processes from a single lower level to a single higher level at one time. We see the process as an evolution or transformation over time — a journey that each State/Agency will chart for itself.

Using the Business Capability Matrix

Over the next 10+ years, SAMHSA foresees that maturing business capabilities can transform the BH enterprise and that transformation will be a constant. Even as State BH enterprises evolve, there are always increased functionality and better performance outcomes just around the corner. States are not expected to achieve the higher levels of capability all at once for all business processes. The BH-MITA Framework encourages growth and transformation by showing the benefits of improving State operations and provides tools to help States achieve that transformation.

Part I Appendix D in the MITA Framework 2.0 contains some sample business capabilities. SAMHSA is asking States to collaborate with them and each other to develop and refine the capability statements and qualities and reach a consensus regarding the fairness, applicability, reasonability, and measurability of the capabilities. The BCM is to be used as a leveling tool to measure State performance in achieving higher levels of maturity.

States can use the BCM to perform a self-assessment to establish their current maturity level for each business process and select higher levels for future improvements. This assessment can provide a foundation for States to develop a strategic plan for continuous improvement, targeting Level 3 now and Levels 4 and 5 later. See Part I Chapter 6, State Self-Assessment in the MITA Framework 2.0, for more detail on this process.

Appendix C Technical Capability Matrix

The Technical Capability Matrix (TCM) describes the boundaries and behavior of each BH-MITA technical function in the context of the five levels of the BH-MITA MM and in the BH-MITA principles, goals, and objectives in the COO document. The TCM is one of the principal building blocks of the BH-MITA Framework. Technical capabilities enable business capabilities and are the principal drivers of Technical Services (see Part III Chapter 6, Technical Services). The Technical Services Chapter in the MITA Framework 2.0 can be found at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp. It is a BH-MITA principle that "business drives technology," and it is the TCM that fills the role of the "enabler."

This appendix describes the TCM and provides samples of technical capability statements. All technical capability statements require review and consensus building in a collaborative effort involving the States and SAMHSA.

The technical capability definitions need further development and should be expanded in future to include conformance criteria. Conformance criteria are used to independently verify that a Technical Service has been implemented at a specific level.

This appendix only contains an initial draft of the TCM. It discusses the TCM and principles associated with the TCM. An incomplete TCM is provided. Specific technical capabilities and their associated Technical Services will need to be developed. New technical areas and functions may also be identified as part of this process.

What Is a Technical Capability?

A technical capability describes a technical function at a specific level of maturity. (The technical functions are described in more detail in Part III Chapter 6, Technical Services, in the MITA Framework 2.0.) Technical capabilities are assigned to a maturity level based on the maturity level of the business process that they are enabling and on the BH-MITA principles, goals, and objectives. Technical capabilities can affect multiple business processes but also provide benefits to stakeholders. While business capabilities are mapped to Business Services, technical capabilities are mapped to Technical Services. Technical capabilities are associated with IT solutions or enablers.

The TCM consists of technical capabilities allocated to five maturity levels for all technical functions. Each technical capability corresponds to technical functionality that provides the technologies for one or more of the following:

- Enabling one or more business capabilities (e.g., forms management and workflow for automating client intake)
    - Realizing one or more BH-MITA goals or objectives (e.g., the goal "promote reusable components — modularity" is enabled by the technical capabilities that are part of a service-oriented architecture (SOA) such as the use of an enterprise service bus (ESB))

- Enabling the transition of a legacy system or process to BH-MITA

BH-MITA technical capabilities fall into categories and subcategories. The top-level categories are as follows:

- Business-enabling services
  - Access channels
  - Interoperability channels
  - Data management and data sharing
  - Performance measurement
- Security and privacy (S&P)
  - Adaptability and extensibility

The BH-MITA TCM is presented in Table C-1. Each row in the table is traced to its sources, which include the following:

- BH mission
  - BH goals
  - BH goals
- BH objectives
  - Business capability or capabilities that the TCM enables

These sources are listed below with their abbreviations for reference:

- BH Mission
  - BHM — To foster individual and community health, safety and wellness through a coordinated, effective, culturally responsive continuum of prevention, intervention, treatment, recovery, and support services.
- BH Goals
  - BHG1 — To improve health and life outcomes for individuals and communities.
  - BHG2 — To ensure efficient and effective management of BH programs.
  - BHG3 — To ensure individuals have access to quality, timely and affordable services.

BH-MITA Goals

- G1 — Promote an enterprise view that supports enabling technologies that align with State business processes and technologies
- G2 — Make performance measurable for accountability and planning
- G3 — Develop systems that can communicate effectively to achieve common program goals through interoperability and common standards
- G4 — Promote an environment that supports flexibility, adaptability, and rapid response to changes in programs and technology

- G5 — Provide data that is timely, accurate, usable, and easily accessible to support program and service analysis and decision making
- G6 — Reduce unnecessary costs for collection of data that is available elsewhere and that can be used to administer the program and services more effectively

BH-MITA Objectives

- O1 — Adopt data and industry standards
- O2 — Promote modularity and component reuse
- O3 — Promote efficient and effective data sharing
- O4 — Provide a client-centered focus
- O5 — Support interoperability and integration using open architecture
- O6 — Promote secure data exchange (e.g., single entry point)
- O7 — Promote the use of good practices (e.g., data warehouses)
- O8 — Support integration of clinical and administrative data
- O9 — Break down artificial boundaries between systems, geography, and funding

The methodology for creating the BH-MITA TCM uses the following steps:

1. Define technical functions based on the needs of the BH-MITA business process and business capabilities
2. Refer to BH-MITA technical principles, goals, and objectives
3. Apply technical availability and adjust the level as required (this may also require adjusting the maturity level of a business process if the technology needed to implement it will not be available within the given timeframe)
4. Document the technical capabilities and their attributes for each technical function

Table C-1 MITA Technical Capabilities Sample Matrix

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
B.0 Business Enabling Services						
B.1 Forms Management	MM Level 2, O4, G6	Manual data entry on hardcopy forms	Online data entry on electronic forms			
B.2 Workflow Management	O4, G4, G6	Manual routing of hardcopy files to individuals involved in processing	Electronic routing of files to business processes and individuals involved in processing Responsible for processing completion and other individual and business processes			
B.3 Business Process Management (BPM)	G4	Manual, by user		Specification and management of business processes in conformance with MITA BPM standards (e.g., Business Process Execution Language [BPEL])		
B.4 Business Relationship Management (BRM)	O4	Manual (e.g., by attaching annotations to case files)		Basic BRM, including tracking relationships between Medicaid system users (e.g., beneficiaries and providers) and the services they have requested and received	Advanced BRM, which includes basic BRM plus analytics support and personalization capabilities	
B.5 Foreign Language Support	1. Manage Applicant and Member Communication, Level 3 2. O4	Manual translation of messages into supported foreign languages		Foreign language translation support for real-time and offline interaction with beneficiaries in designated languages		

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
B.6 Decision Support						
B.6.1 Data Warehouse	G5, O7			Extracting, transforming, and loading data from multiple databases into a data warehouse that conforms with the MITA Logical Data Model		
B.6.2 Data Marts	G5, O7			Importing data into data marts that conform with the MITA Logical Data Model		
B.6.3 Ad hoc Reporting	MG2 Level 2	Ad hoc reporting, typically using coded procedures	Ad hoc reporting against databases using COTS tools			
B.6.4 Data Mining	MG2 Level 2	Data mining to detect patterns in large volumes of data, typically using coded procedures	Data mining to detect patterns in large volumes of data using COTS tools			
B.6.5 Statistical Analysis	MG2 Level 2	Statistical analyses (e.g., regression analysis), typically using coded procedures	Statistical analyses of designated data (e.g., regression analysis) using COTS tools			
B.6.6 Neural Network Tools	MG2 Level 2	None	Analyses using neural network (e.g., learning) tools			
A.0 Access Channels						
A.1 Portal Access	1. O4 2. MM Level 2 3. Enroll Provider, Level 2 4.Manage Applicant and Member Communica-tions, Level 2	Beneficiary and provider access to appropriate Medicaid business functions via manual or alphanumeric devices	Beneficiary and provider access to appropriate Medicaid business functions via portal with single online access point	Beneficiary and provider access to appropriate Medicaid business functions via portal with single online access point		

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
A.2 Support for Access Devices	1. O4 2. MM Level 2 3. Enroll Provider, Level 2 4. Manage Applicant and Member Communica-tions, Level 2	Beneficiary and provider access to services via manual submission, alphanumeric ("green screen") devices, or EDI	Beneficiary and provider access to services via browser, kiosk, voice response system, or mobile phone	Beneficiary and provider access to services online via PDA		
I.0 Interoperability						
I.1 Service-Oriented Architecture						
I.1.1 Service Structuring and Invocation	G4, O2, O5	Nonstandardized definition and invocation of services	Service support using architecture that does not comply with published MITA service interfaces and interface standards	Services support using architecture that complies with published MITA interfaces and interface standards	Services support using a cross-enterprise services registry (to be verified)	
I.1.2 Enterprise Service Bus	G4, O2, O5	None or nonstandardized application integration	Reliable messaging, including guaranteed message delivery (without duplicates) and support for nondeliverable messages	MITA-compliant ESB	MITA-compliant ESB interoperable outside of a State Medicaid agency	
I.1.3 Orchestration and Composition	G4, O2, O5	Nonstandardized approaches to orchestration and composition of functions within and across the Medicaid Management Information System (MMIS)		MITA-standard approach to orchestrating and composing services		

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
I.2 Standards-Based Data Exchange	G3	Ad hoc formats for data exchange		Data exchange (internally and externally) using MITA standards		Data exchange (internally and externally) in conformance with MITA-defined semantic data standards (ontology-based)
1.3 Integration of Legacy Systems		Ad hoc, point-to-point approaches to systems integration		Service-enabling legacy systems using MITA-standard service interfaces		
D.0 Data Management and Sharing						
D.1 Data Exchange Across Multiple Organizations	G5, G6	Manual data exchange between multiple organizations, sending data requests via telephone or e-mail to data processing organizations and receiving requested data in nonstandard formats and in various media (e.g., paper)	Electronic data exchange with multiple organizations via a MITA information hub using secure data, in which the location and format are transparent to the user and the results are delivered in a defined style that meets the user's needs	Electronic data exchange with multiple organizations via a MITA information hub that can perform advanced information monitoring and route alerts/alarms to communities of interest if the system detects unusual conditions		
D.2 Adoption of Data Standards	G3, O3	No use of enterprise-wide data standards	Data model that conforms to the MITA model and maps data exchanged with external organizations to this model	Data model that conforms all shared data used by a State Medicaid agency's business processes to the MITA model	Data model that conforms all shared data used by a State Medicaid agency's business processes to the MITA model and includes standards for clinical data and electronic health records	Data model that conforms all shared data used by a State Medicaid agency's business processes to the MITA model and that includes national standards for clinical data and electronic health records and other public health and national standards

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
P.0 Performance Measurement						
P.1 Performance Data Collection and Reporting	G2		Collect and report using predefined and ad hoc reporting methods and currently defined performance metrics	Define, implement, collect, and report using a set of business process–related performance metrics that conform to MITA-defined performance metrics	Generate alerts and alarms when the value of a metric falls outside limits	
P.2 Dashboard Generation	G2		Generate and display summary-level performance information (i.e., performance dashboards)	Generate and display summary-level performance information (i.e., performance dashboards) within a State Medicaid agency for all MITA-defined metrics		Generate and display summary-level performance information (i.e., performance dashboards) from external sources (e.g., other States and agencies) within a State Medicaid agency for all MITA-defined metrics
S.0 Security and Privacy						
S.1 Authentication	MM	Access to MMIS system capabilities via logon ID and password		User authentication using public key infrastructure in conformance with MITA-identified standards		
S.2 Authentication Devices				Support for user authentication via kiosks based on fingerprints and delivery of results to authentication and authorization functions	Support for user authentication via SecureID tokens and delivery of results to authentication and authorization functions	Support for user authentication via kiosks based on retinal scans and delivery of results to authentication and authorization functions
S.3 Authorization and Access Control			User access to system resources depending on their role at sign-on			
S.4 Intrusion Detection		TBD	TBD	TBD	TBD	TBD

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
S.5 Logging and Auditing		Manual logging and analysis	Access to the history of a user's activities and other management functions, including logon approvals and disapprovals and log search and playback			
S.6 Privacy		Procedural controls to ensure privacy of information		Access restriction to data elements based on defined access roles		
F.0 Flexibility – Adaptability and Extensibility						
F.1 Rules-Driven Processing	1. Determine Eligibility, Level 3 2. G4	Manual application of rules (and consequent inconsistent decision making)		Linking a defined set of rules into business processes or using applications executed with a Basic Rules Management System (often called a Rules Engine)		
F.2 Extensibility	G4	Extensions to system functionality that require pervasive coding changes		Services with points at which to add extensions to existing functionality (changes highly localized)		
F.3 Automate Configuration and Reconfiguration Services	G4	Configuration and reconfiguration of distributed application that typically requires extensive hard-coded changes across many software components and/or applications across the enterprise (and with significant disruption)			Consistent distributed applications using common business change processes that coordinate between active components and ensure minimal disruption	Consistent distributed applications using common business change processes that coordinate between active components and ensure minimal disruption

Technical Area/Technical Function	Applicable Sources	Level 1 Capabilities	Level 2 Capabilities	Level 3 Capabilities	Level 4 Capabilities	Level 5 Capabilities
F.4 Introduction of New Technology	O2, O5	Technology-dependent interfaces to applications that can be significantly affected by the introduction of new technology		Technology-neutral interfaces that localize and minimize the impact of the introduction of new technology (e.g., data abstraction in data management services to provide product-neutral access to data based on metadata definitions)		

Using the Technical Capability Matrix

The BH-MITA Technical Capability Matrix is used to provide requirements for the definition of the BH-MITA Technical Services based on BH-MITA technical areas, goals, principles, and objectives. It also assigns a capability level for each service. The relationship between technical areas (TCM – Technical Services) is equivalent to the relationship between business processes (BCM – Business Services).

Over the next 10 years, SAMHSA foresees that maturing business capabilities and the advancement of associated technology will transform the BH agency and that this transformation will be a constant. Even as State BH enterprises evolve, increased functionality and better performance outcomes will always be "just around the corner." States are not expected to achieve the higher levels of capability all at once for all Technical Services. The BH-MITA Framework encourages growth and transformation by illustrating the benefits of improving State operations and provides tools to help States achieve that transformation. States will be active participants in developing and refining the definition of capabilities for each level. States will identify capabilities that meet their business needs: Some capabilities will be selected from the BH-MITA TCM, and others will be new capabilities created by the State. These new capabilities will be added to the BH-MITA TCM (in accordance with BH-MITA procedures) and will be available for other States to use.

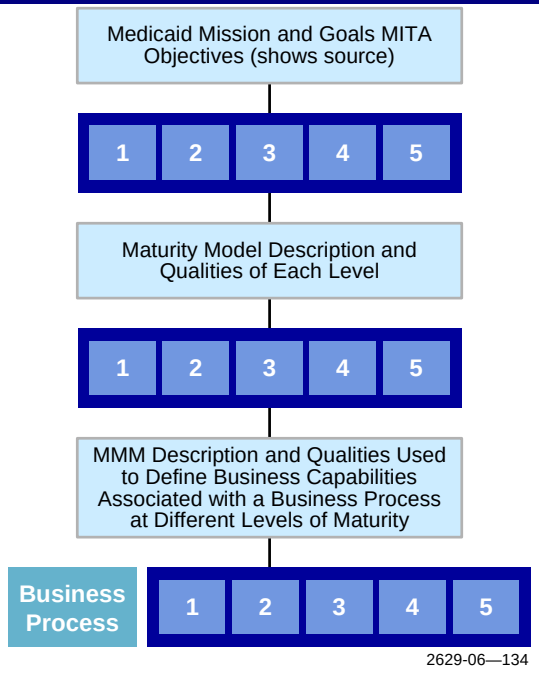
The BH-MITA TCM will help States assess their levels of technical maturity. This assessment, coupled with State self-assessments (SS-As) of business capabilities, will help States plan their transition to the BH-MITA Business Architecture (BA) and Technical Architecture (TA). States will use the TCM to develop Technical Services in the same way they use the Business Capability Matrix (BCM) to define MITA Business Services.

The Business, Information, and Technical Architectures are the three components of the MITA Framework 2.0, available at http://www.cms.hhs.gov/MedicaidInfoTechArch/04_MITAFramework.asp.

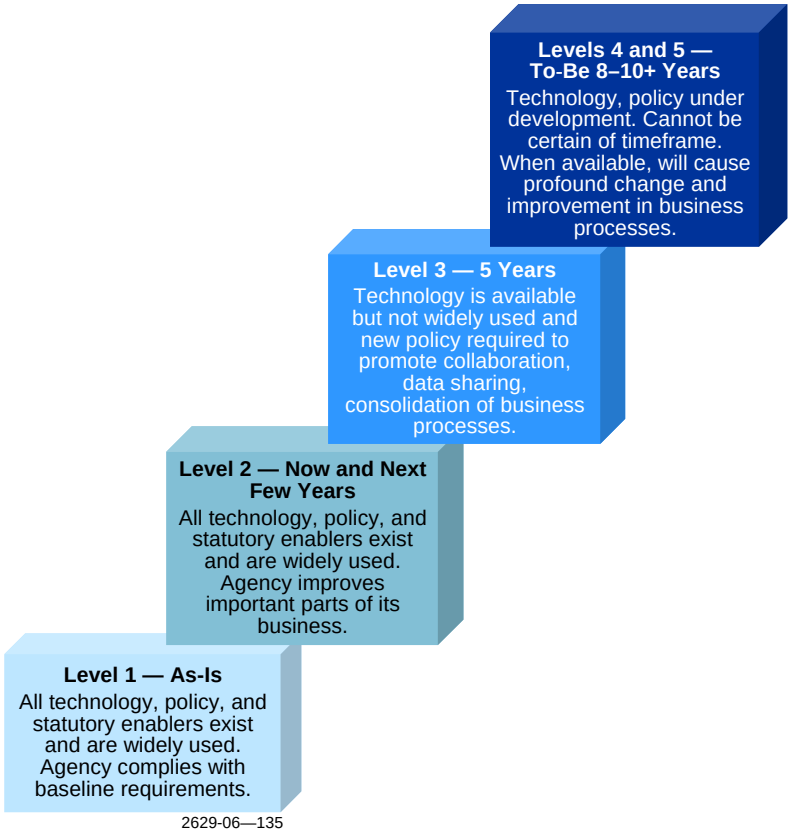
Appendix D MITA Maturity Model Storyboard

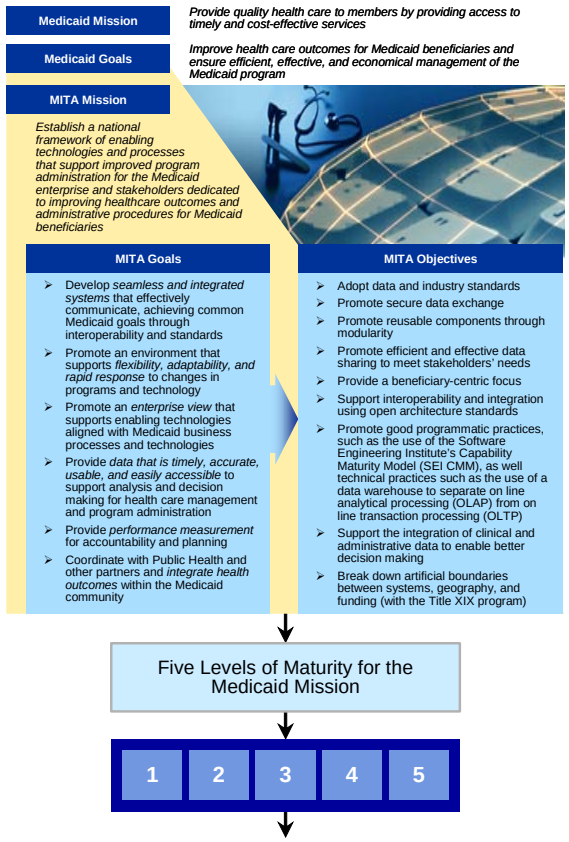
The MITA Maturity Model Storyboard is a tool for States to use as part of their planning and development process to assist in identifying and documenting business capabilities and capability levels. These capabilities and capability levels are then used to develop technical capabilities, data models, and transformation plans.

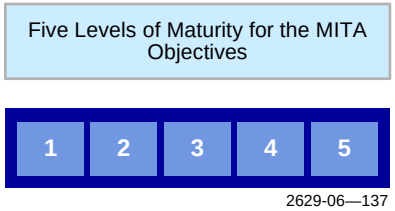
The Storyboard is a guidebook that outlines a step by step process for iteratively developing a series of maturity level documents at increasing levels of specificity for different aspects of the business operations: from the highest level and least specific level as related to the BH mission and goals to a more detailed level for business and technical capabilities.

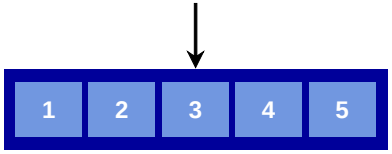
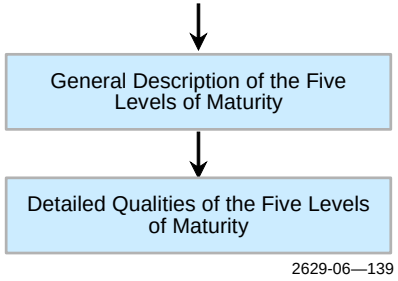
Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
1. *Introduction to the MITA Maturity Model* – The MMM takes the Medicaid Mission and Goals and places them in a structure designed to show the future (To-Be) Vision and the intermediary steps (Levels) that the agency must achieve in order to reach the To-Be objectives. The MMM shows a pathway of continuous business improvement. Each higher Level incorporates the best practices of the Level below and more importantly introduces higher-level capabilities. The MMM is a *Reference Model* that the MITA team can use to define Business Capabilities associated with Business Processes. The MMM is a *Business-driven* model. The MMM defines the parameters of each Level. a. The MMM serves as a Guidebook for the MITA team in the development of the Business Capabilities. b. The MMM shows traceability from the Mission to the Business Capabilities. It shows how each lower level is aligned with its higher level.		See examples in the detailed sections below.

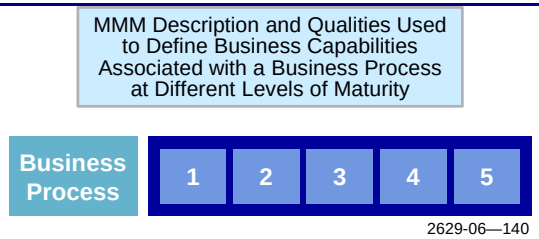
Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
c. The MMM provides details and examples to back up its definitions. It provides a baseline and grounding for the Levels of Maturity. d. It provides consistency, e.g., all Level 3 descriptions have a common base. e. In the future, CMS will use the MMM to adjust the Business Capabilities and maintain alignment with the Mission and Goals. f. In the future, CMS could use the Business Capabilities to measure performance of Medicaid agencies; in this case, the MMM serves as a reference establishing the basis of the measurement. g. States and vendors can refer to the MMM to clarify their understanding of Business Capabilities. [Note: States will use the *Business Capabilities* to do their *Self-Assessment*; the MMM is only a Reference model.]		

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
2. *A Maturity Model shows improvement and transformation over time*. The MMM shows how the Medicaid program will evolve and be transformed over time. a. Why five Levels? (1) Could have only two: As Is, To Be; want to envision a future about 10 years out. (2) Medicaid Enterprise is complex; there are many moving parts. (3) Want to show a reasonable progression; ten steps too many; two is too few; five works in step with evolving enablers. (4) Technology is available now to enable Levels 1-3 (5) New technology, policy needed for Levels 4-5 (harder to fix in time) b. Each Level has a distinct definition that differentiates it from other levels. c. Each Level is *loosely* associated with a target time.	Five Levels of Maturity	

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
3. The MITA Maturity Model begins with the definition of the Medicaid Mission and Goals. This is a statement in business terms that establishes the long-range vision of the Medicaid program. a. The Medicaid Mission expresses a vision of the future. b. The future is achievable as the agency matures aided by technology, policy-making, and legislation.		**Medicaid Mission** — To provide quality health care to members by providing access to the right services to the right people at the right time for the right cost.
c. Medicaid Mission and Goals are described for each Level of Maturity. These will illustrate what improvements are expected to be found at each higher level.		Example of Medicaid Mission as demonstrated at Level 2 – The agency focuses on improvements in quality and access to care primarily through managed care and waiver programs. Use of Web-based and electronic communications increases response time and a wide array of technical tools, e.g., decision support, improves the ability to manage appropriateness and cost of service delivery.

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
4. MITA Mission, Goals, and Objectives support the Medicaid Mission and Goals. a. *MITA* Mission, et al, aligns with the Medicaid Mission. b. The MITA Framework is a primary guidebook and tool kit used to help the agency achieve the Medicaid Mission over time. c. MITA Objectives are also described for each Level of Maturity. d. MITA Mission and Goals that focus on technology are described in the companion Technical Capabilities Document. e. Once the Medicaid Mission and MITA Objectives are described in the context of the five Levels of Maturity, the groundwork is laid on which to build the MITA Maturity Model.		Example of an Objective described at each Level, e.g., *Provide a beneficiary-centric focus:* *Level 1* – Service to the beneficiary is a by-product of maintaining an adequate provider network. Level 1 has a provider focus. *Level 2* – Because of a focus on cost management, managed care and waiver programs are introduced and produce results that secondarily benefit the member. Combined provider/beneficiary focus. *Level 3* – Applicants and members have direct access to information about program benefits, enrollment procedures, and personal health information. Beginning of a beneficiary focus. *Level 4* – With the additional access to clinical information and statewide and regional data exchange, the member is empowered to participate in benefit and treatment choices. *Level 5* – With interoperability and national data exchange, beneficiary health information can be accessed no matter where the individual resides. Providers anywhere can access vital clinical information to coordinate care and respond quickly to emergencies. There is a beneficiary focus on a national scale.

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
5. The MITA Maturity Model (introduction) a. As stated in the introduction, the MMM is a reference model defining parameters for the Medicaid agency as it matures from one Level to the next. b. In this section, we describe the core MMM at each level. We begin by offering a general description of each Level. c. Then, we take several categories of Qualities used to give more detail to the General Description. d. Together, the General Description and the Qualities are used by the MITA team to specify Business Capabilities for each Business Process at each Maturity Level. e. This section contains THE MMM; sections above show how it was developed using the Medicaid and MITA mission statements.	 2629-06—138	
6. MMM General Descriptions of each Level a. Brief description that captures essence of the Maturity Level b. Description is high level and covers all Business Areas	 2629-06—139	Examples of the General Descriptions of Levels: *At Level 3*, the agency focuses on coordination with other agencies and collaboration in adopting national standards and developing shared business services as a means to improving cost effectiveness of health care service delivery. The agency promotes usage of intra-state data exchange. *At Level 5*, national (and international) interoperability allows the Medicaid enterprise to focus on fine-tuning and optimizing program management, planning, and evaluation.

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
7. MMM Qualities of each Level a. Qualities further detail the look and feel of a Maturity Level. b. The MITA team uses the Qualities as Guidelines for defining Business Capabilities. (Business Capabilities describe a Business Process at a specific Maturity Level. Maturity Level Qualities are measurable and can be used to verify that a Business Capability has been achieved.)		Example of Quality at Different Levels: *Timeliness of process* *At Level 2,* timeliness of business processes is enhanced through use of Web portal, EDI. Business processes that result in cost savings are prioritized. Timeliness exceeds legal requirements. *At Level 4,* clinical data is available in real time. Processes using clinical data provide immediate action, response, and result. State or regional stakeholders are interoperable, optimizing timeliness.
8. Summary of the MMM and Next Steps a. Sections 2 – 4 above provide the source material for the MMM. b. Section 5 contains the core MMM consisting of a General Description and detailed Qualities for each Level.		See Business Capability Matrix Document.

Storyboard for the MITA Maturity Model		
Definition, Uses of the MMM	**Traceability**	**Example**
Next steps: 1. The MITA team will apply the MMM to the Business Processes belonging to eight Business Areas. Using the MMM as a guide, the team will create Business Capability statements for each Business Process at 1 – 5 Levels. Business Capabilities at each level can be traced back to the corresponding MMM Maturity Level. Business Capability statements mirror the MMM General Description and detailed Qualities. 2. States will collaborate with the MITA Team to refine the capability statements and convert the qualities associated with each business process/capability into a measurable statement. For example: Timeliness for Business Process X at Level 1 = a specific number of days from trigger to result. 3. States will use the Business Capability Matrix (a table of Business Capabilities for each Business Process at each Level where they apply) to perform a Self-Assessment to establish their maturity level for each business process. CMS encourages states to develop a strategic plan for continuous improvement, targeting Level 3, later 4 and 5.		

Appendix E Acronyms and Definitions

Listed below is an all-inclusive list of acronyms and definitions used for the BH-MITA project for this document. This list will be added to with each project deliverable and finalized in one version at the end of the project.

Acronym	Definition
42 CFR pt. 2	Federal Substance Abuse Facility Confidentiality Law
AA	Application Architecture; Attribute Authority
Accelerator	Factors that facilitate or enable specific outcomes
ACL	Access Control List
ADA	American Dental Association
AHA	American Hospital Association
AHIC	American Health Information Community
AMA	American Medical Association
ANSI	American National Standards Institute
APC	Ambulatory Patient Classification
APD	Advance Planning Document
As-Is	Current state; business as it operates today
ASC	Accredited Standards Committee
ASN	Abstract Syntax Notation
ASP	Application Service Provider
ASTM	American Society for Testing and Materials
ATR	Access to Recovery services
AVR	Automated Voice Response
B2B	Business-to-Business
BA	Business Architecture; Business Areas; Business Associate Agreement
BAFO	Best and Final Offer
BC	Business Capability
BCM	Business Capability Matrix
BENDEX	Beneficiary Data Exchange
BH	Behavioral Health
BH-MITA	Behavioral Health-Medicaid Information Technology Architecture
BHO	Behavioral Health Organization
BHR	Behavioral Health Record
BHS	Behavioral Health Standards
BP	Business Process
BPDM	Business Process Definition Metamodel
BPEL	Business Process Execution Language
BPM	Business Process Model
BPMN	Business Process Management Notation

Acronym	Definition
BPPC	Basic Patient Privacy Consents
BPSS	Business Process Specification Schema
BRM	Business Relationship Management
BS	Business Services
BTOM	Brief Treatment Outcomes Measure
BSDP	Business Service Definition Package
Business capability	A business process at a specific level of maturity
CA	Certificate Authority
CCHIT	Certification Commission for Healthcare Information Technology
CCOW	Clinical Context Object Workgroup
CCR	Continuity of Care Record
CDA	Clinical Document Architecture
CDC	Centers for Disease Control and Prevention
CDM	Conceptual Data Model
CDT	Code on Dental Procedures and Nomenclature
CE	Client Executive
CEFACT	Centre for the Facilitation of the Administration, Commerce, and Transport
CFR	Code of Federal Regulations
CHI	Consumer Health Informatics
CIM	Common Information Model
CIO	Chief Information Officer
CM	Configuration Management
CMHS	Center for Mental Health Service
CMIA	Cash Management Improvement Act
CMM	Capability Maturity Model
CMS	Centers for Medicare & Medicaid Services
CMSO	Center for Medicaid and State Operations
COB	Coordination of Benefits
Conformance	Adherence to a set of regulatory, industry, or technology rules and standards
Constraints	Factors that hinder or block specific outcomes
COO	Concept of Operations
COTS	Commercial off-the-shelf
CPA	Collaboration Protocol Agreement
CPP	Collaboration Protocol Profile
CPT	Current Procedural Terminology
CRM	Customer Relationship Management
CSAP	Center for Substance Abuse Prevention
CSAT	Center for Substance Abuse Treatment
DAIS	Data Access and Integration Service

Acronym	Definition
DAML	DARPA Agent Markup Language
DARPA	Directory Access Resolution Protocol Allocation
Dashboard	A user interface, often interactive, that organizes and presents information in a way that is easy to read
DASIS	Drug and Alcohol Services Information System
Data model	A blueprint for building and reengineering information systems
DBMS	Database Management System
DBOR	Database of Record
DDI	Design, Development, and Implementation
DeCC	Dental Content Committee (of the ADA)
DHHS	Department of Health and Human Services
DHS	Department of Homeland Security
DICOM	Digital Imaging and Communications in Medicine
DISA	Data Interchange Standards Association
DLM	Decentralized Label Model
DM	Disease Management
DME	Durable Medical Equipment
DMS	Data Management Strategy
DMTF	Distributed Management Task Force
DMZ	Demilitarized Zone
DoD	Department of Defense
DOJ	Department of Justice
Domain	A business or subject area
DRG	Diagnosis Related Group
Driver	Factors that push towards specific outcomes
DRM	Digital Rights Management
DS	Data Standards
DSMO	Designated Standard Maintenance Organization
DSS	Decision Support System; Division of State System
DST	Data Standards Table
DSTU	Draft Standard for Trial Use
DVA	Department of Veterans Affairs
E/R	Entity-relationship
E2E	End to End
EA	Enterprise Architecture
EBHR	Electronic Behavioral Health Record
ebMS	ebXML Message Service
ebXML	Electronic Business Extensible Markup Language
eCTD	Electronic Common Technical Document

Acronym	Definition
EDI	Electronic Data Interchange
EDOC	Enterprise Distributed Object Computing
EEC	End Entity Certificate
EFT	Electronic Funds Transfer
EHR	Electronic Health Record
EHRS	Electronic Health Record System
EMC	Electronic Media Claim
EMR	Electronic Medical Record
EOB	Explanation of Benefits
EOMB	Explanation of Medicare Benefits
EPA	Environmental Protection Agency
E-PAL	Enterprise Privacy Authorization Language
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment
ESB	Enterprise Service Bus
eSCM-CL	eSourcing Capability Model for Client Organization
eSCM-SP	eSourcing Capabilities Model for Service Provider
Extensibility	Ability of a software system to allow and accept significant extension of its capabilities, without major rewriting of code or changes in its basic architecture
FA	Fiscal Agent
FDA	Food and Drug Administration
FEA	Federal Enterprise Architecture
FEAF	Federal Enterprise Architecture Framework
FFP	Federal Financial Participation
FFS	Fee-for-Service
FHA	Federal Health Architecture
FI	Fiscal Intermediary
FIPA	Foundations of Intelligent Physical Agents
FIPS	Federal Information Processing Standards
FISMA	Federal Information Security Management Act
GGF	Global Grid Forum
GOTS	Government off-the-shelf
GPRA	Government Performance and Results Act
GSA	General Services Administration
HCBS	Home and Community-based Services
HCPCS	Healthcare Common Procedure Coding System
HEDIS	Health Plan Employer Data and Information Set
HIE	Health Information Exchange
HIMSS	Healthcare Information and Management Systems Society
HIPAA	Health Insurance Portability and Accountability Act of 1996

Acronym	Definition
HIS	Healthcare Information System
HISB	Healthcare Informatics Standards Board
HISPC	Health Information Security and Privacy Collaborative
HIT	Health Information Technology
HITSP	Healthcare Information Technology Standards Panel
HL7	Health Level 7
HMD	Hierarchical Message Description
IA	Information Architecture
IAPD	Implementation Advance Planning Document
ICD	International Classification of Diseases
ID-FF	Identify Federation Framework
IDMS	Integrated Data Management System
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IHE	Integrating the Healthcare Enterprise
IHS	Indian Health Service
IM	Interaction Model
IMPI	Intelligent Platform Management Interfaces
INPC	Indiana Network for Patient Care
Interoperability	The ability of two or more systems, processes, and entities to exchange information and to use the information that has been exchanged
IPSEC	Internet Protocol Security
ISO	International Organization for Standardization
IT	Information Technology
ITIL IT	Infrastructure Library
ITU	International Telecommunications Union
IVR	Interactive Voice Response
LDM	Logical Data Model
LOB	Line of Business
LOINC	Logical Observation Identifiers, Names and Codes
Manual	A process that is not automated, normally requiring intensive use of staff time and the use of paper documents
MARS	Marketing Accounting Reporting System
MCHO	Managed Care Health Organization
MCO	Managed Care Organization
MET	Message Type
MH	Mental Health
MH/SA	Mental Health/Substance Abuse
MHCCM	Medicaid HIPAA-compliant Concept Model

Acronym	Definition
MITA	Medicaid IT Architecture
ML	Markup Language
MMIS	Medicaid Management Information System
MMM	MITA Maturity Model
MOF	MetaObject Facility
MOU	Memoranda of Understanding
MSIS	Medicaid Statistical Information System
MSMQ	Microsoft Message Queuing Server
MSX	Message Exchange
MTG	MITA Technical Group
NAHIT	National Alliance for Health Information Technology
NASADAD	National Association of State Alcohol and Drug Abuse Directors, Inc.
NASCIO	National Association of State Chief Information Officers
NASMD	National Association of State Medicaid Directors
NASMHPD	National Association of State Mental Health Program Directors
NCPDP	National Council for Prescription Drug Programs
NCVHS	National Committee on Vital and Health Statistics
NDC	National Drug Code
NEMA	National Electrical Manufacturers Association
NET	Non-emergency Transportation
NHII	National Health Information Infrastructure
NHIN	National Health Information Network
NIH	National Institutes of Health
NIST	National Institute of Standards and Technology
NMEH	National Medicaid EDI HIPAA (workgroup)
NOMS	National Outcome Measures
NPI	National Provider Identifier
NPPES	National Plan and Provider Enumeration System
NUBC	National Uniform Billing Committee
NUCC	National Uniform Claim Committee
OAS	Office of Applied Studies, SAMHSA
OASIS	Organization for the Advancement of Structured Information Standards
OCL	Object Constraint Language
OLAP	Online Analytical Processing
OLTP	Online Transaction Processing
OM-AM	Objective, Model, Architecture, and Mechanism
OMG	Object Management Group
ONC	Office of the National Coordinator for Health IT
ONDCP	Office of National Drug Control Policy

Acronym	Definition
Ontology	A formal representation of a set of concepts within an IT subject/business area and the relationships between those concepts
OWL	Ontology Web Language
P3P	Platform for Privacy Preference Project
PBM	Pharmacy Benefit Manager
PC	Personal Computer; Proxy Certificate
PCCM	Primary Care Case Manager
PCP	Primary Care Physician
PDA	Personal Digital Assistant
PHDSC	Public Health Data Standards Consortium
PHIN	Public Health Information Network
PHR	Personal Health Record
PI	Proxy Issuer
PITAC	President's Information Technology Advisory Committee
PKC	Public Key Certificate
PKI	Public Key Infrastructure
Point-to-Point	A direct connection from one location to another (point A to point B).
POS	Point-of-sale: Point-of-service
PPTP	Point-to-point Tunneling Protocol
Process interoperability	Automated integration of process activities through safe and robust record origination, retention and interchange
PS-TG	Private Sector Technology Group
QoS	Quality of Service
QRO	Quality Review Organization
QSO	Qualified Service Organization
RBAC	Role-based Access Control
RDBMS	Relational Database Management System
RDF	Reference Description Framework
RFP	Request for Proposals
RHIN	Regional Health Information Network
RHIO	Regional Health Information Organization
RIM	Reference Information Model
RMP	Remote Management Portlet
RO	Regional Office
ROI	Return on Investment
ROSC	Recovery Oriented Systems of Care
RSS	Recovery Support Services
S&P	Security and Privacy
SA	Subject Area; Substance Abuse
SAMHDA	Substance Abuse and Mental Health Data Archive

Acronym	Definition
SAMHSA	Substance Abuse and Mental Health Services Administration
SAML	Security Assertion Markup Language
SBVR	Semantics of Business Vocabulary and Rules
SCA	Service Component Architecture
SCHIP	State Children's Health Insurance Program
SDO	Standards Development Organization
SDX	State Data Exchange
Seamless	Operates smoothly across various systems and processes so that users see no differences when utilizing functions across those systems and processes
SEI	Software Engineering Institute
Semantic interoperability	Common and consistent terminology
SI	Service Infrastructure
SLA	Service Level Agreement
SLAlang	Service Level Agreement Language
SLM	Service Level Management
SME	Service Management Engine
SMHA	State Mental Health Agency
SNMP	Simple Network Management Protocol
SNOMED	Systematized Nomenclature of Medicine
SOA	Service-oriented Architecture
SOAP	Simple Object Access Protocol
SPP	Security and Privacy Profile
SQL	Structured Query Language
SRM	Standards Reference Model
SSA	Social Security Administration
SS-A	State Self-Assessment
SSC	Services Support Center
SSD	Service Structure Diagram
SSH	SecureShell
SSI	Supplemental Security Income
SSN	Social Security number
SSO	Single Sign-on
S-TAG	Systems Technical Advisory Group
SUR	Surveillance and Utilization Review
SURS	Surveillance Utilization Review System
Syntax	The grammar, structure, or order of the elements in a computer message
TA	Technical Architecture
TAL	Trust Anchor List
TANF	Temporary Assistance for Needy Families

Acronym	Definition
TC	Technical Capability
TCM	Technical Capability Matrix
Technical capability	A technical function at a specific level of maturity
Technical interoperability	Automated connectivity with tight integration of tasks, workflows, and information/record flows
TEDS	Treatment Episode Data Set
To-Be	Future state; the vision of how the business could operate in the future
TPL	Third-party Liability
TPR	Third-party Recovery
Transparent (IT)	Computer programs, procedures, and changes of which the user is not aware.
TRM	Technical Reference Model
TS	Technical Services
TSDP	Technical Service Definition Package
TSRG	Technology Standards Reference Guide
UBL	Universal Business Language
UCM	Use Case Model
UDDI	Universal Description, Discovery and Integration
UML	Unified Modeling Language
UMLS	Unified Medical Language System
UN	United Nations
URA	Unit Rebate Amount
URI	Uniform Resource Identifier
USHIK	United States Health Information Knowledgebase
VHA	Veterans Health Administration
VPN	Virtual Private Network
VRS	Voice Response System
W3C	World Wide Web Consortium
WEDI	Workgroup for Electronic Data Interchange
WFMC	Workflow Management Coalition
WFML	Workflow Management Language
WITS	Web Infrastructure for Treatment Services
WMX	Web Services for Management Extensions
WS	Web Services
WS-BPEL	Web Services for Business Process Execution Language
WS-CAF	Web Services Composite Application Framework
WSDL	Web Services Description Language
WSDM	Web Services Distribution Management
WSN	Web Services Notification
WSRF	Web Services Resource Framework

Acronym	Definition
WSRM	Web Services Reliable Messaging
WSRP	Web Services Remote Portlets
XACML	Extensible Access Control Markup Language
XAML	Extensible Application Markup Language
XDS	Cross-Enterprise Clinical Documents Sharing
XKMS	XML Key Management
XML	Extensible Markup Language
XrML	Extensible Rights Markup Language
XSL	Extensible Stylesheet Language
XSLT	XSL Transformations