

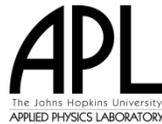
*Prepared for the:*  
Administration for Children and Families (ACF)

**National Human Services Interoperability Architecture  
Capability Viewpoint Description**

**DRAFT Version D0.2**

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## Draft Issue

It is important to note that this is a draft document. The document is incomplete and may contain sections that have not been completely reviewed internally. The material presented herein will undergo several iterations of review and comment before a baseline version is published.

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Note: This document and other NHSIA-related documentation are available for review from the NHSIA SharePoint site. Updates and any additional documents will be published on that site. The URL for the site is <https://partners.jhuapl.edu/sites/HSNIA>. The version D0.1 and D0.2 documents may be viewed or downloaded from the document library named [NHSIA Drafts](#).

Review and comments to this document are welcome. To comment, either post your feedback in the [NHSIA Drafts Comments](#) library or send comments to [NHSIAArchitectureTeam@jhuapl.edu](mailto:NHSIAArchitectureTeam@jhuapl.edu).

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## Table of Contents

List of Figures.....	ii
List of Tables.....	ii
1 Introduction .....	1
1.1 NHSIA Overview and Objectives .....	1
1.1 Architecture Framework and Viewpoints.....	1
1.2 Architecture Documentation.....	2
2 Capability Viewpoint Summary.....	3
2.1 Capability Viewpoint Description.....	3
2.2 Capability Viewpoint Artifacts.....	4
3 NHSIA Operational Capabilities List.....	5
3.1 High-Level Capabilities .....	5
3.2 Detailed Capabilities .....	7
3.3 Capability Maps .....	9
4 NHSIA Performance Reference Model .....	11
5 NHSIA Capability Scorecard .....	15

## List of Figures

Figure 1–1. Architecture Viewpoints.....	2
Figure 3–1. NHSIA High-Level Capabilities .....	6
Figure 3–2. Snapshot of the Detailed Capabilities List .....	8
Figure 3–3. Example of a Single Detailed Capability .....	8
Figure 4–1. NHSIA Performance Reference Model.....	12

## List of Tables

Table 2-1. Capability Viewpoint Major Artifacts.....	4
Table 3-1. NHSIA High-Level Capability Definitions.....	6
Table 4-1. Performance Reference Model Major Artifacts .....	13
Table 5-1. NHSIA Capability Achievement Levels .....	16
Table 5-2. Notional Example of a Capability Scorecard .....	17
Table 5-3. Notional Example of a Summary Capability Scorecard.....	18

# 1 Introduction

## 1.1 NHSIA Overview and Objectives

The National Human Services Interoperability Architecture is being developed for the Administration for Children and Families (ACF) as a framework to support integrated eligibility determination and information sharing across programs and agencies, improved delivery of services, prevention of fraud, and better outcomes for children and families. It consists of business, information, and technology models to guide programs and states in improving human service administration and delivery through improved interoperability of business processes and information technology (IT).

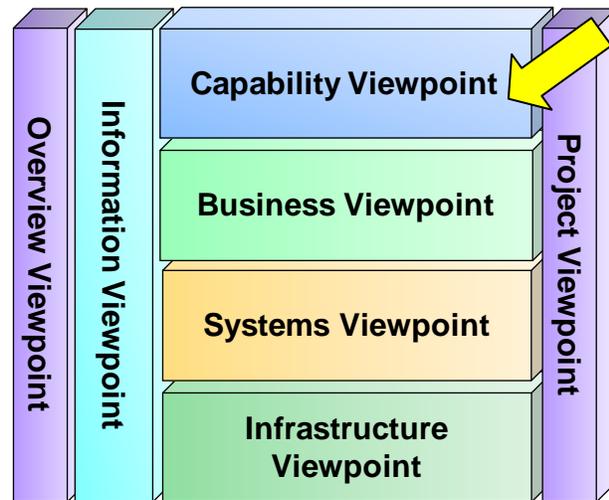
The primary goal of the NHSIA Project is to develop a national architecture to enable information exchange and sharing IT services across currently siloed federal, state, local, and private human service information systems. It is envisioned that the ultimate outcome for stakeholders following NHSIA guidance will be:

- Interoperability of IT elements and associated business processes
- Improved care provided to clients by holistically addressing their needs – e.g., “no wrong door”
- Comprehensive, integrated support for client-oriented case workers at point of service
- Incremental insertion of new services and technology
- More flexible, adaptive systems
- Reduced cost of operation and maintenance for all levels of government and the private sector through sharing and reuse of services, data, and IT resources
- Reduced fraud through automated and coordinated enrollment, verification and eligibility determination
- Greater availability of timely program data for evaluating program performance
- Better connections between human services and health and education services, and able to leverage advances made in those areas

## 1.1 Architecture Framework and Viewpoints

An **architecture** is a description of the components, structure, and unifying characteristics of a system. An enterprise architecture is a rigorous, comprehensive description of an enterprise, including mission and goals; organizational structures, functions, and processes; and information technology including software, hardware, networks, and external interfaces. NHSIA can be thought of as a multi-enterprise, or **community architecture**.

An **architectural framework** is a structure for describing an architecture. The NHSIA project has adapted the frameworks defined by the Federal Enterprise Architecture (FEA)<sup>1</sup> and the DoD Architectural Framework (DoDAF)<sup>2</sup>, and has incorporated applicable features of the Medicaid IT Architecture (MITA) Framework<sup>3</sup>. DODAF has evolved over a decade to include multiple viewpoints. NHSIA has adapted DODAF to include the viewpoints shown in Figure 1–1. The adaptations include merging the DODAF Systems and Services viewpoints into a single Systems Viewpoint and pulling out an Infrastructure Viewpoint as a separate item from the systems viewpoint.



**Figure 1–1. Architecture Viewpoints**

## 1.2 Architecture Documentation

NHSIA is documented by a viewpoint description for each viewpoint. Each of these viewpoint descriptions is supported by more detailed documents including white papers, spreadsheets, diagrams, presentations, and products of specialized architectural tools. The viewpoint descriptions and associated products are referred to as architectural artifacts. This viewpoint description document addresses the Capability Viewpoint.

<sup>1</sup> <http://www.whitehouse.gov/omb/e-gov/fea/>

<sup>2</sup> DoD Architecture Framework, version 2.0, Volume 1: Introduction, Overview and Concepts, Manager’s Guide, 28 May 2009.

<sup>3</sup> <https://www.cms.gov/MedicaidInfoTechArch/>

## 2 Capability Viewpoint Summary

The Capability Viewpoint provides a high-level, yet specific description of what new or improved capabilities would result from the implementation of the NHSIA.

One audience for this viewpoint is the developers of the other NHSIA Viewpoints. This viewpoint provides the cornerstone for the development of the architecture. It sets the scope and provides criteria to determine what is inside and what is outside the boundaries of NHSIA. Any business process, system, service, or technology must tie back to some capability in order to be in the NHSIA scope.

A second audience for the Capability Viewpoint is those who are charged with developing strategies and plans for state, local, and private provider architectures and systems. The capabilities provide a basis for evaluating the impact and value of alternative solution architectures implementation approaches.

### 2.1 Capability Viewpoint Description

The Capability Viewpoint describes the capabilities provided by human services system of systems that implement the NHSIA. As we use the term, **a capability is the ability to achieve a desired objective in the human services domain under specified standards and conditions.** Capabilities are defined independently of specific technology implementation approaches to the extent possible. The Capability Viewpoint defines the new operational capabilities in high-level, user oriented terms. Capabilities have been grouped into these eight major categories:

- Nationwide Access to Systems and Data
- Electronic Workflow
- Multi-Program Eligibility Determination
- Integrated Service Management
- Convenient Access for Clients
- Proactive Client Communications
- Automated Monitoring and Reporting
- Information-Based Performance Management

It is not the intent of NHSIA to define a comprehensive set of all capabilities required to provide human services. NHSIA is focused on only those capabilities which require an interoperable environment where data and services are effectively shared. In the NHSIA Performance Reference Model (PRM), these capabilities are referred to as “technology-enabled capabilities”. This reflects the fact that they are all associated with using IT to improve information sharing. In a typical enterprise architecture, capabilities would be defined in more operational terms, rather than tied so directly to IT. The NHSIA project takes this approach since it is focused on achieving interoperability among information systems.

## 2.2 Capability Viewpoint Artifacts

The major artifacts currently included in the Capability Viewpoint are summarized in Table 2-1. In fact, each of these major artifacts has several other artifacts associated with it. These other related artifacts are defined and discussed in the sections for each major artifact below.

**Table 2-1. Capability Viewpoint Major Artifacts**

Artifact	Form & Description
Operational Capabilities List	Form: A list and associated narrative. Currently maintained in an Excel workbook.
	Description: For strategic planners at all levels of government setting the required capabilities for their organization or program. A list of each capability to be provided by the architecture along with a brief narrative description.
Capability Scorecard	Form: A narrative and tabular description. Maintained in an Excel workbook.
	Description: For implementation planners at all levels of government. It provides visibility into where progress is being made in implementing capabilities and where gaps remain. The scorecard uses a simple model defining six levels of achievement that an organization would go through in implementing each capability.
Performance Reference Model	Form: A Word document.
	Description: For strategic planners at all levels of government. An organizing framework and associated lists of performance metrics that are to be collected in the to-be architecture which can be used to evaluate program performance.

### 3 NHSIA Operational Capabilities List

The Capability Viewpoint provides a high-level, yet specific description of what new or improved capabilities would result from the implementation of NHSIA.

#### Intended Audience

One audience for this viewpoint is the developers of the other NHSIA Viewpoints. This viewpoint provides the cornerstone for the development of the architecture. It sets the scope and provides criteria to determine what is inside and what is outside the boundaries of NHSIA. Any business process, system, service, or technology must tie back to some capability in order to be in the NHSIA scope.

A second audience for the Capability Viewpoint is those who are charged with developing strategies and plans for state, local, and private provider architectures and systems. The capabilities provide a definition of high level objectives or requirements for evaluating the impact and value of alternative solution architectures.

#### 3.1 High-Level Capabilities

As we use the term, a capability is the ability to achieve a desired objective in the human services domain under specified standards and conditions. The Capability Viewpoint describes the capabilities provided by the human services system of systems at all levels of government and in private organizations that implement the NHSIA. Capabilities are defined independently of technology to the extent possible. The Capability Viewpoint defines the new operational capabilities in high-level, user oriented terms.

It is not the intent of NHSIA to define a comprehensive set of all capabilities required to provide human services. NHSIA is focused on only those capabilities which require an interoperable environment where data and services are effectively shared. The NHSIA Capabilities List is defined as a two-level hierarchy. The top level is purposely kept very concise, including only eight items as shown in Figure 3–1.

**A capability is the ability to achieve a desired objective in the human services domain under specified standards and conditions.**

<b>1</b>	<b>Nationwide Access to Systems and Data</b>
<b>2</b>	<b>Electronic Workflow</b>
<b>3</b>	<b>Multi-Program Eligibility Determination</b>
<b>4</b>	<b>Integrated Service Management</b>
<b>5</b>	<b>Convenient Access for Clients</b>
<b>6</b>	<b>Proactive Client Communications</b>
<b>7</b>	<b>Automated Monitoring and Reporting</b>
<b>8</b>	<b>Information-Based Performance Management</b>

**Figure 3–1. NHSIA High-Level Capabilities**

A definition of each high-level capability is provided in Table 3-1.

**Table 3-1. NHSIA High-Level Capability Definitions**

<b>High-Level Capability</b>	<b>Description</b>
<b>Nationwide Access to Systems and Data</b>	The capability for an authorized stakeholder to access nationwide government and private systems, services, and data necessary for conducting business processes via computer networks and associated data exchange services.
<b>Electronic Workflow</b>	The capability for stakeholders to execute business processes using electronic workflow tools which minimize or eliminate the need for paper documents; connect across program and jurisdictional boundaries; make status information easily available; provide prompts, alerts and status messages; verify entries and detect errors; and support worker coordination and collaboration.
<b>Multi-Program Eligibility Determination</b>	The capability to determine the eligibility of a client to participate in all programs which address their needs via integrated processes and, if eligible, to initiate the enrollment process.

High-Level Capability	Description
Integrated Service Management	The capability for workers to perform integrated service management across all relevant programs, having convenient access to information concerning client situation and needs and services available to provide comprehensive assistance to clients.
Convenient Access for Clients	The capability for clients (or designated agents) to access information and services using a variety of convenient mechanisms, minimizing redundant data entry and administrative barriers, and protecting privacy.
Proactive Client Communications	The capability for a worker to conduct proactive, integrated communications with clients, to include collaborative e-conferencing, coordinating appointment schedules across programs, status reporting, notifications for renewal and other required actions, and alerts.
Automated Monitoring and Reporting	The capability for stakeholders to generate reports and alerts for specified purposes based on a predefined event criteria including periodic, detection of a triggering event, or detection of a condition in the data.
Information-Based Performance Management	The capability for stakeholders at all levels of management to access decision support or business analytic tools to enable performance assessment and decision making based on comprehensive and accurate information.

### 3.2 Detailed Capabilities

Several detailed capabilities are defined for each high-level capability. These are currently being maintained in an Excel spreadsheet and will eventually be incorporated into a COTS enterprise architecture repository (a product named TROUX Repository). A portion of the detailed capabilities list is shown in Figure 3–2. This figure is for illustration purposes only. To see the most current capabilities list, please look at the Capabilities List artifact in Excel.

High Level Capability	Capability ID	Capability Name	Primary Actor	Capability Description	Notes	Rationale/Source
Convenient Access to Services for Clients	10	Apply for Multiple Programs - Electronically	An applicant or client can ...	Investigate or apply for multiple programs via a single electronic entry point.		Derived from <i>Assessment of One-e-App</i> , p 85-86
Convenient Access to Services for Clients	11	Apply for Multiple Programs - Physically	An applicant or client can ...	Investigate or apply for multiple programs at a single office or location.	An assumption that is outside the scope of NHSIA is that these sites will be located convenient to the populations they serve. For example in or near hospitals, community centers, schools, and malls.	Derived from <i>Assessment of One-e-App</i> , p 85-86
Convenient Access to Services for Clients	12	Access via Internet	An applicant or client can ...	Access application and other client services provided by human service systems from anywhere with Internet access.		Improve information sharing.
Electronic Workflow	5	Enter Information Once	An applicant or client can ...	Enter information once and have it available to all programs.		Improve information sharing.
Electronic Workflow	6	Store Permanent Documents	An applicant or client can ...	Store permanent documents (e.g., birth certificates) electronically once and have them available to all programs.	This includes scanning in paper documents.	Derived from <i>Assessment of One-e-App</i> , p 36
Electronic Workflow	7	Interview-Based Applications	An applicant or client can ...	Complete an application by answering questions in a simple interview-based format.		Derived from <i>Assessment of One-e-App</i> , p 85-86
Multi-Program Eligibility Determination	8	Real-Time Eligibility Check	An applicant or client can ...	Obtain a real-time, preliminary, eligibility determination for multiple programs via a single application process.		Derived from <i>Assessment of One-e-App</i> , p 35
Multi-Program Eligibility Determination	9	Save Partial Applications	An applicant or client can ...	Save partial applications for completion at a later date.		Derived from <i>Assessment of One-e-App</i> , p 36
Convenient Access to Services for Clients	13	Apply for Family or Household	An applicant or client can ...	Apply for services for a whole family or household as a unit.		Derived from <i>Assessment of One-e-App</i> , p 85-86
Convenient Access to Services for Clients	14	Access Administrative Status	An applicant or client can ...	Electronically access and comment on the status of administrative activities, including contacts, applications, appointments, alerts, notifications, invoices, payments, and other information associated with service administration.		Improve information sharing.
Convenient Access to Services for Clients	15	Access Care Information	An applicant or client can ...	Electronically access and comment on care information (such as treatment plans and provider results) maintained by human service agencies and providers (except for specific information restricted by law or policy in the best interests of the client.)	Clients should be able to review the information held about them for accuracy. Certain information, such as prognosis or service provider private notes, may be exempted.	Improve information sharing.
Convenient Access to Services for Clients	16	Single Confidentiality Agreement	An applicant or client can ...	Establish a single confidentiality agreement that applies to all their personally identifiable information.		Provide client with control over their personal information.
Nationwide Access to Systems and Data	4	Control Access	An applicant or client can ...	Control who has the authority to access and change their personally identifiable information based on various roles and data types.	Client control of their records is critical.	Derived from Electronic Health Record Bank concepts.
Nationwide Access to Systems and Data	3	Change Jurisdictions	An applicant or client can ...	Move from one jurisdiction to another and conveniently transfer information and maintain benefits or move to the equivalent benefits in the new jurisdiction.	Including large scale movements of people in disaster recovery operations.	Derived from discussion at 8/3/11 meeting with ACF Interoperability Innovation Team.

**Figure 3–2. Snapshot of the Detailed Capabilities List**

Figure 3–3 shows an example of a single detailed capability statement, i.e., part of one row of the Capabilities List. The left cell is the name of the high-level capability under which the detailed capability falls. The Capability ID is a serial number with no inherent meaning. The Capability Name is a short, unique phrase used to identify the capability. The Primary Actor is the primary user of the capability; this may be a person, agency, or application. The Detailed Capability is the actual capability statement. It is useful to read the primary user followed by the capability statement. There is also a “Notes” cell for each row for any clarifying information and a Reference/Rationale cell which includes a reference to the source or justification for the capability statement.

High Level Capability	ID	Capability Name	Primary Actor	Detailed Capability	Notes	Rationale/ Source
Nationwide Access to Systems and Data	3	Change Jurisdictions	An applicant or client can ...	Move from one jurisdiction to another and conveniently transfer information and maintain benefits or move to the equivalent benefits in the new jurisdiction.	Including large scale movements of people in disaster recovery operations.	Derived from discussion at 8/3/11 meeting with ACF Interoperability Innovation Team.

**Figure 3–3. Example of a Single Detailed Capability**

## Sorting the Capabilities List

The Capabilities List can be sorted in two ways using the first two columns and the Excel sort feature:

- Sorted by high-level capability groupings – useful to see functionally related capabilities
- Sorted by the primary stakeholder who uses the capability – useful to see the capabilities of use to each primary user

## 3.3 Capability Maps

Once capabilities have been defined, it is useful to understand the relationships of capabilities to other elements of the architecture. This is done through mapping. Each of these mappings is another artifact of the Capabilities Viewpoint of the architecture. The capabilities maps currently planned to be included in NHSIA are:

- Capabilities mapped to user categories
- Capabilities mapped to business activities
- Capabilities mapped to applications
- Capabilities mapped to services
- Others may be added

The maps are being developed at the time of this release of the Capability Viewpoint and are not yet available. They are being developed initially as Excel worksheets. Eventually they may be loaded into an architecture tool for ease of maintenance and additional visualization, analysis, and reporting capabilities.

The maps have several purposes. They provide a means to analyze each capability to see its impact on other architectural elements. They are helpful in discovering areas where capabilities are missing. For example, if an element exists that doesn't support any capability, it is likely that a capability is missing. The maps provide guidance to the developers of the architectural elements that are the targets of the mappings.

### Filtering the Capabilities Maps

Each of the maps will be set up to use the Excel filtering capability to allow selecting only the capabilities that are mapped to a particular target. For example, a filter could be applied to the Capabilities vs. Business Activities Map which results in all capabilities that are related to a specified business activity. The future use of an enterprise architectural tool and associated repository would allow further sorting, filtering, visualization, and reporting options.

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## 4 NHSIA Performance Reference Model

A Performance Reference Model (PRM) is a framework designed to articulate the cause and effect relationships among inputs, outputs and outcomes. The framework is based on a value chain—also called a program logic model. The objective is to create a “line of sight” so that project and program managers, as well as key decision-makers, can understand how and to what extent key inputs—and changes in inputs—enable progress in program outputs and outcomes. For a human services agency, the PRM displays the underlying logic for how value is created as inputs such as technological changes facilitate improvements in performance measurement, work processes and activities, and ultimately improved mission, business and customer results. Ideally a PRM can help decision-makers identify performance improvement opportunities that span traditional organizational structures and boundaries that will facilitate more efficient and effective attainment of strategic outcomes.

### Basis of the NHSIA Performance Reference Model

The NHSIA Performance Reference Model (PRM) is based on the Federal Enterprise Architecture (FEA) Performance Reference Model.<sup>4</sup> Also included are selected elements of the 2011-2012 Criteria for Performance Excellence developed by the Baldrige Performance Excellence Program in the National Institute of Standards and Technology.<sup>5</sup>

The NHSIA PRM is summarized in Figure 4–1. The underlying logic is that under the guidance and support of its leaders, an agency through its strategic planning process establishes specific objectives and programs to meet the needs of its citizen stakeholders. These programs are designed and implemented by a trained and engaged workforce in order to deliver services to citizens and achieve desired agency performance objectives. The technology-enabled capabilities of NHSIA will facilitate more timely and accurate performance measurement as well as more efficient and effective work processes and activities. Over time, these improvements are expected to facilitate better mission, business and customer results, thus helping an agency achieve its strategic outcomes.

Key to both achieving and demonstrating these improved outcomes is the timely and accurate collection of data that will facilitate performance measurement, analysis and improvement. Following the FEA Performance Reference Model, we can refer to each of the boxes in Figure 4–1 as an important measurement area, and the bulleted items within each box as measurement categories (as illustrated for the Technology-Enabled Capabilities box). Within each output and outcome measurement category are specific measurement indicators through which an agency’s performance is assessed. It is also helpful to measure the various input

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<sup>4</sup> Federal Enterprise Architecture (FEA) Consolidated Reference Model Document, Version 2.3. Washington, D.C.: Executive Office of the President of the United States, October 2007.

<sup>5</sup> Baldrige Performance Excellence Program. 2011-2012 Criteria for Performance Excellence. Gaithersburg, MD: National Institute of Standards and Technology, United States Department of Commerce, 2011.

categories so that the effects of changes over time in these inputs can be linked to changes in the output and outcome performance measurement indicators.

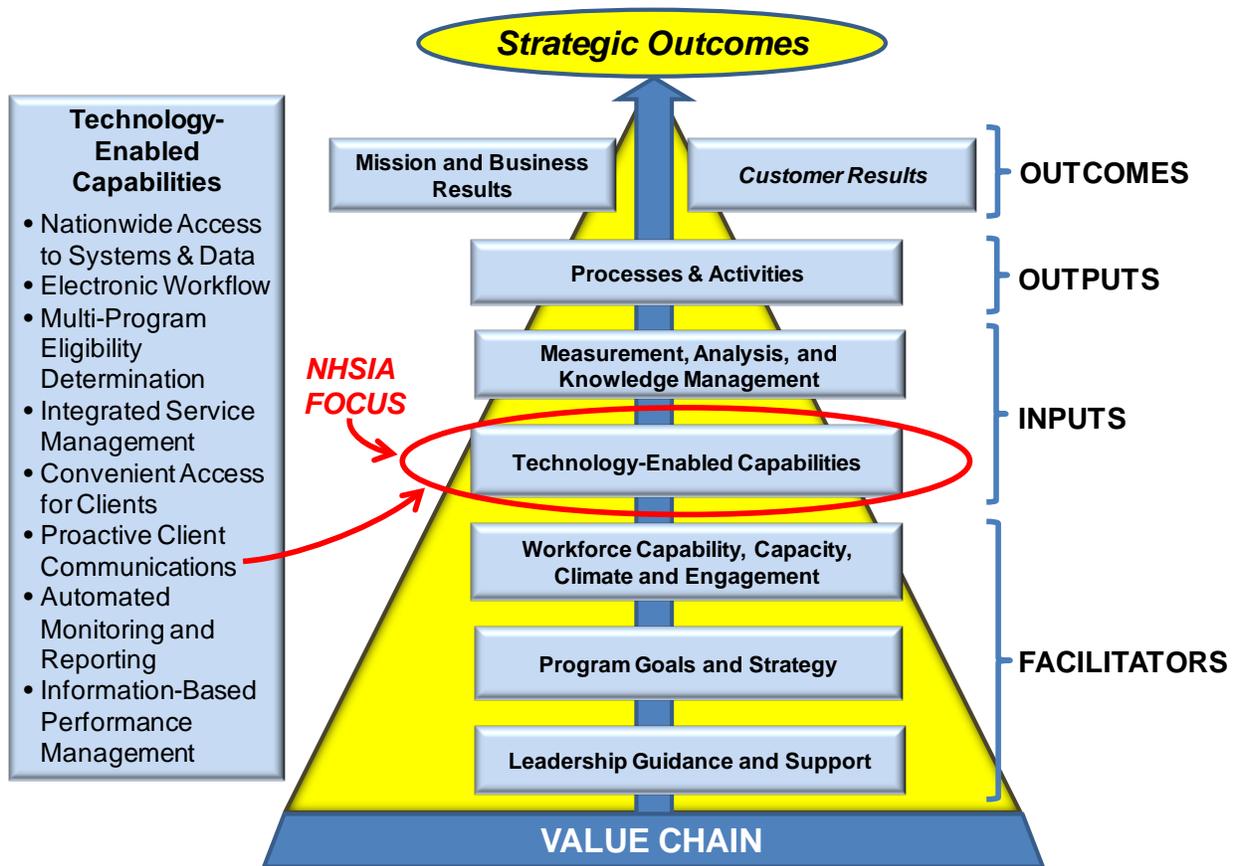


Figure 4–1. NHSIA Performance Reference Model

### Applying the NHSIA Performance Reference Model

During the first year of the NHSIA project we have utilized the NHSIA PRM to examine the measurement indicators utilized by selected programs in the Administration for Children and Families (ACF). We have also examined the information systems and data bases that are currently utilized to collect information for these performance indicators. In addition, we have examined the measurement indicators used by ACF sponsored programs in states that have developed dashboards at the state level for these programs. A white paper and other artifacts have been prepared as a first step in analyzing the “as-is” for these performance measurement and monitoring systems. The artifacts are summarized in Table 4-1.

**Table 4-1. Performance Reference Model Major Artifacts**

<b>Artifact</b>	<b>Form &amp; Description</b>
<p><b>NHSIA Performance Reference Model White Paper</b></p>	<p>Form: A word document and associated appendices.</p>
	<p>Description: For strategic planners at all levels of government. Includes a framework designed to articulate the impact of NHSIA on key work processes, program results and agency strategic outcomes.</p>
<p><b>Information Systems and Data Bases Utilized by Selected ACF Programs</b></p>	<p>Form: Tabular description of 10 information systems and data bases.</p>
	<p>Description: A table displaying the characteristics of 10 information systems and data bases used to construct performance indicators for selected ACF programs.</p>
<p><b>Performance Indicators Used by Selected ACF Programs</b></p>	<p>Form: Tabular description of performance indicators.</p>
	<p>Description: A table describing the performance indicators used by 8 ACF programs, including the data elements utilized, how the measures are defined, and the source(s) of each data element.</p>
<p><b>Performance Indicators Used in Selected State, County and City Dashboards</b></p>	<p>Form: Tabular description of performance measures.</p>
	<p>Description: A table describing the performance measurement indicators and data sources utilized for ACF sponsored programs in dashboards by 17 state, county and city programs.</p>

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## 5 NHSIA Capability Scorecard

Maturity models are defined to allow for planning and measuring progress towards a goal that typically requires some years to achieve and requires an organization to evolve its culture and processes over time, learning as it goes. The Carnegie Mellon Software Engineering Institute pioneered the use of maturity models with its work leading to the Capability Maturity Model Integration (CMMI)<sup>6</sup>. The Medicaid Information Technology Architecture (MITA) Maturity Model used a similar construct. Both of these models are based on defining an organization's processes required to perform certain types of tasks, e.g., software development or Medicaid administration. A level of maturity is defined for each process using a six-level scale ranging from 0 to 5. Each higher level has a criteria associated with it and represents an advance in maturity or effectiveness in the organization's ability to carry out the subject process.

NHSIA has defined a model to describe the level of maturity which a human service organization has achieved in implementing NHSIA capabilities. We avoided the use of the term "maturity model" to avoid confusion with the process-based models such as CMMI and MITA. The purpose of measuring maturity of a capability is the same, but the approach taken is different. The difference results primarily from defining NHSIA capabilities at a higher level than the detailed processes that are the basis for many maturity models. We refer to the NHSIA mechanism for defining maturity levels as the "NHSIA Capability Scorecard".

The NHSIA approach to defining progress towards achieving the desired capabilities is designed to achieve several objectives:

- Avoid rigidity – allow the scorecard to evolve
- Allow incremental definition – it is not necessary to have all the elements defined at the start
- Allow incorporating inputs from each program
- Provide a way to compare progress across programs
- Provide a way to compare progress across state and local jurisdictions
- Accommodate variation among states
- Allow showing progress in early stages – for example, just getting a strategy and funding in place may take a year or more – acknowledge this
- Allow summarization at multiple levels of detail

### NHSIA Capability Achievement Levels

The NHSIA Capability Scorecard is based on the NHSIA Capabilities List. A level of achievement is defined for each detailed capability in the list for each jurisdiction using the scorecard. The definitions of each level are shown in Table 5-1.

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<sup>6</sup> Chrissis, Mary Beth; Konrad, Mike; Shrum, Sandy, Carnegie Mellon Software Engineering institute, "CMMI, Guidelines for Process Integration and Product Improvement", Addison Wesley, 2004.

**Table 5-1. NHSIA Capability Achievement Levels**

Level	Description
0	No capability
1	A strategy and implementation plan is documented
2	Funding is in place for at least the initial operational capability
3	Initial operational capability achieved – plans exist for full capability
4	~ 80% of the value of the capability has been attained
5	Full capability (~95% of the value attained)

The intermediate levels are admittedly somewhat subjective. Initially the scale purposely avoids rigid definitions and allows jurisdictions to accommodate their needs. No attempt is made to strictly specify what is meant by “initial operational capability”. Jurisdictions can interpret this to meet their need. For example, maybe a capability is available to only half the case workers initially, or only to half the population. This still represents a good step in the right direction. Similarly the definition of “~80% of the value” is open to definition by jurisdictions. In some cases, the cost to get the last ~20% of full capability is not worth the investment. As the scorecard evolves, ACF may choose to provide more specific definitions for some capabilities of high interest and value to achieving NHSIA goals.

The envisioned use of the scorecard is to provide a high-level summary of where progress is being made and where capability gaps exist in order to support strategic planning and investment. It is not intended to be used as a basis for certification as is the case with CMMI and other maturity models.

### **Notional Snapshot of the Capability Scorecard**

Table 5-2 shows a scorecard filled in with fictitious data as an example of how a jurisdiction might use this tool to track their progress. The scorecard starts with the NHSIA detailed capability list. Columns are added for each human service program offered by the jurisdiction. A number indicating the level of implementation for each capability in each program is entered. A color scale (red, orange, yellow, light green, dark green) is added to clearly indicate the levels ranging from 0 to 5. An average is calculated that is a straight average over the all the programs, weighing each equally. A funding-weighted average is also included which weights the

contribution of each program to the total by the amount of funding it receives. Other weighted averages could be added, such as weighted by the number of clients served.

**Table 5-2. Notional Example of a Capability Scorecard**

High Level Capability	Capability ID	Capability Name	Primary Actor	Capability Description	Medicaid	TANF	SNAP	Child Care	Child Protection	Child Support	...	Program Z	Average Level	\$-Weighted Avg
Convenient Access to Services for Clients	10	Apply for Multiple Programs - Electronically	An applicant or client can ...	Investigate or apply for multiple programs via a single electronic entry point.	5	4	4	3	2	1		0	2.7	3.9
Convenient Access to Services for Clients	11	Apply for Multiple Programs - Physically	An applicant or client can ...	Investigate or apply for multiple programs at a single office or location.	5	4	4	3	2	1		0	2.7	3.9
Convenient Access to Services for Clients	12	Access via Internet	An applicant or client can ...	Access application and other client services provided by human service systems from anywhere with Internet access.	5	4	4	3	2	1		0	2.7	3.9
Electronic Workflow	5	Enter Information Once	An applicant or client can ...	Enter information once and have it available to all programs.	5	4	4	3	2	1		0	2.7	3.9
Electronic Workflow	6	Store Permanent Documents	An applicant or client can ...	Store permanent documents (e.g., birth certificates) electronically once and have them available to all programs.	5	4	4	3	3	2		0	3.0	4.0
Electronic Workflow	7	Interview-Based Applications	An applicant or client can ...	Complete an application by answering questions in a simple interview-based format.	5	4	4	3	3	2		0	3.0	4.0
Multi-Program Eligibility Determination	8	Real-Time Eligibility Check	An applicant or client can ...	Obtain a real-time, preliminary, eligibility determination for multiple programs via a single application process.	5	4	4	3	3	2		0	3.0	4.0
Multi-Program Eligibility Determination	9	Save Partial Applications	An applicant or client can ...	Save partial applications for completion at a later date.	4	4	4	3	3	2		0	2.9	3.7
Convenient Access to Services for Clients	13	Apply for Family or Household	An applicant or client can ...	Apply for services for a whole family or household as a unit.	4	4	4	3	3	2		0	2.9	3.7
Convenient Access to Services for Clients	14	Access Administrative Status	An applicant or client can ...	Electronically access and comment on the status of administrative activities, including contacts, applications, appointments, alerts, notifications, invoices, payments, and other information associated with service administration.	4	4	4	3	3	2		0	2.9	3.7
Convenient Access to Services for Clients	15	Access Care Information	An applicant or client can ...	Electronically access and comment on care information (such as treatment plans and and provider results) maintained by human service agencies and providers (except for specific information restricted by law or policy in the best interests of the client.)	0	0	0	0	0	0		0	0	0
Convenient Access to Services for Clients	16	Single Confidentiality Agreement	An applicant or client can ...	Establish a single confidentiality agreement that applies to all their personally identifiable information.	2	2	2	2	2	2		0	1.7	1.9
Nationwide Access to Systems and Data	4	Control Access	An applicant or client can ...	Control who has the authority to access and change their personally identifiable information based on various roles and data types.	3	3	3	3	3	3		0	2.6	2.9
Nationwide Access to Systems and Data	3	Change Jurisdictions	An applicant or client can ...	Move from one jurisdiction to another and conveniently transfer information and maintain benefits or move to the equivalent benefits in the new jurisdiction.	4	4	4	4	4	4		0	3.4	3.9

Examine the last row of the scorecard as an example. This row describes the capability which allows clients to: *“Move from one jurisdiction to another and conveniently transfer information and maintain benefits or move to the equivalent benefits in the new jurisdiction.”* In this notional example, the Medicaid program has fully deployed this capability in the jurisdiction, TANF and SNAP are at the 80% deployment level, and child care and child support have an initial operational capability. The child support program has plans and funding to deploy. There are currently no plans to deploy the capability for “Program Z”. A blank cell indicates that no rating was done or no information was available at the time the scorecard was completed.

**Variations of the NHSIA Capability Scorecard**

The scorecard can be sorted and summarized in various ways to meet specific purposes. The example above illustrated the use of averages and weighted averages over multiple programs.

Another variation that may be useful is to summarize and average over all the capabilities under a high level capability. A notional example of this is shown in Table 5-3. A weighted average

could be applied here also if it was desired to give more emphasis to certain critical capabilities in an overall score.

**Table 5-3. Notional Example of a Summary Capability Scorecard**

Hi Level Capability Order	High Level Capability	Description	Medicaid	TANF	SNAP	Child Care	Child Protection	Child Support	...	Program Z	Average Level	\$-Weighted Avg
1	<b>Nationwide Access to Systems and Data</b>	The capability for an authorized stakeholder to access nationwide government and private systems, services, and data necessary for conducting business processes via computer networks and associated data exchange services.	5	4	4	3	2	1		0	2.7	3.9
2	<b>Electronic Workflow</b>	The capability for stakeholders to execute business processes using electronic workflow tools which minimize or eliminate the need for paper documents; connect across program and jurisdictional boundaries; make status information easily available; provide prompts, alerts and status messages; verify entries and detect errors; and support worker coordination and collaboration.	4	4	3	3	2	2		0	2.6	3.4
3	<b>Multi-Program Eligibility Determination</b>	The capability to determine the eligibility of a client to participate in all programs which address their needs via integrated processes and, if eligible, to initiate the enrollment process.	3	4	4	3	3	2		0	2.7	3.3
4	<b>Integrated Service Management</b>	The capability for workers to perform integrated service management across all relevant programs, having convenient access to information concerning client situation and needs and services available to provide comprehensive assistance to clients.	5	4	4	4	3	2		0	3.1	4.1
5	<b>Convenient Access for Clients</b>	The capability for clients (or designated agents) to access information and services using a variety of convenient mechanisms, minimizing redundant data entry and administrative barriers, and protecting privacy.	5	3	4	3	1	2		0	2.6	3.7
6	<b>Proactive Client Communications</b>	The capability for a worker to conduct proactive, integrated communications with clients, to include collaborative e-conferencing, coordinating appointment schedules across programs, status reporting, notifications for renewal and other required actions, and alerts.	5	4	4	5	3	2		0	3.3	4.2
7	<b>Automated Monitoring and Reporting</b>	The capability for stakeholders to generate reports and alerts for specified purposes based on a predefined event criteria including periodic, detection of a triggering event, or detection of a condition in the data.	5	4	4	3	3	2		0	3.0	4.0
8	<b>Information-Based Performance Management</b>	The capability for stakeholders at all levels of management to access decision support or business analytic tools to enable performance assessment and decision making based on comprehensive and accurate information.	5	4	4	3	2	1		0	2.7	3.9

It is anticipated that these scorecards would be maintained at the local level. Summary scorecards would be prepared by averaging over the state, regional, and national levels.