

# NHSIA Webinar Series

## Capability and Business Viewpoints

June 28, 2012

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### **Slide 1 – Capability and Business Viewpoints**

No notes.

### **Slide 2 - Webinars will be held Thursdays at 1 PM Eastern**

This is the third in series of 5 webinars to introduce the National Human Services Interoperability Architecture (NHSIA, pronounced niss'-e-a).

This series is intended as an overview of the several hundred pages of NHSIA information being made available on the ACF web site. The time in the webinars is limited. But we hope that the webinars will provide sufficient information to allow you to explore the detailed documentation and examine the topics of most interest to you in more detail.

The URL for ACF's new interoperability initiative site is <http://transition.acf.hhs.gov/about/interoperability> (This is a temporary Web site being used until a newly designed site is available. A link to the new site will be provided from this site.)

We will post the webinar files and additional architecture documents on that new ACF website over the coming weeks.

### **Slide 3 – Outline**

This webinar explains two NHSIA Viewpoints: the Capability Viewpoint and the Business Viewpoint.

### **Slide 4 - This webinar focuses on the Capability and Business Viewpoint artifacts.**

Recall that in the first webinar in this series we explained that NHSIA is being described from 7 different viewpoints. These are shown in the cube in the lower left corner. Each viewpoint explains a different aspect of the architecture. The two viewpoints we are focusing on today are circled in red: the Capability Viewpoint and Business Viewpoint.

The documents that describe these viewpoints are listed in the figure. Also, the two white papers included under the Overview Viewpoint provide additional details relevant to the Business viewpoint.

### **Slide 5 – Capability Viewpoint**

Let's start with the Capability Viewpoint ...

The Capability Viewpoint defines the new operational capabilities to be provided by NHSIA in high-level, user-oriented terms.

## **Slide 6 - The Capability Viewpoint Comprises 3 Primary Components**

The Capability Viewpoint has three primary components.

The capabilities list is the essence of the viewpoint. It is expressed as matrix (i.e., an Excel spreadsheet).

The scorecard starts with the capabilities list and adds several columns to allow assessment of the progress made in achieving each capability.

The Performance Reference Model (PRM) is a completely separate artifact. It is an organizing framework that supports the definition of performance measures which can be used to assess progress in implementing capabilities as well as to assess the ultimate outcome of using the new capabilities.

We will address the Capabilities List and Scorecard next. We don't have time to discuss the PRM in this webinar, but it is defined in documentation that will be available on the ACF website.

## **Slide 7 – Audience for the Capability Viewpoint**

So who is the intended audience for the Capability Viewpoint?

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 and implementation approaches.

The third audience is the federal program managers. They can use the capabilities list and performance measures to provide guidance to state and local stakeholders. They can use a scorecard to understand which capabilities are being planned and implemented.

## **Slide 8 – Capabilities List**

No notes.

## **Slide 9 - The Capability Viewpoint Describes the Envisioned Future (the “To-Be State”)**

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 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. This viewpoint defines the envisioned goal to be achieved some years in the future – it describes the “to-be” state.

The viewpoint defines ~ 50 detailed capabilities, grouped into the 8 high-level categories listed here. You can see that these are very broad categories: Access to Systems and Data, Electronic Workflow, and so on ...

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 the slide.

### **Slide 10 - ~50 Detailed Capabilities Have Been Defined**

Three examples of capabilities are shown in the slide. Each capability is stated in terms of a primary actor. A list of actors is shown in the box on the right.

The first example is related to an applicant for human services: An applicant can investigate or apply for multiple programs via a single electronic entry point.

The second example applies to a case worker: ( ... see example)

The third example applies to a human services provider: ( ... see example)

The detailed capabilities are intended to be:

- Stated in operational terms
- Specific enough to assess compliance
- Technology independent – not requiring a specific technology or product
- Limited in number, but sufficiently comprehensive to achieve the NHSIA goals

The detailed capabilities and 8 high level capabilities evolved incrementally. A set of detailed capabilities were defined, these were grouped into 8 categories, and then iterated.

A good place to start the review of NHSIA after getting an introductory understanding from these webinars is to review the detailed capabilities list and see if each capability makes sense to you and if anything critical is missing.

### **Slide 11 – The Capabilities List Artifact is an Excel Spreadsheet**

The Capabilities List is kept in an Excel spreadsheet. A section of this is shown in the background of this slide. The spreadsheet can be sorted and filtered to support analysis. Capabilities can also be mapped to elements of other viewpoints. Sorting, filtering, and mapping the capabilities to other architectural artifacts is useful analysis in several ways:

- It validates that the capabilities are being reflected in the other viewpoints
- It may show that some capabilities were missed
- It can help to prioritize which components should be implemented first to achieve high priority capabilities

### **Slide 12 – NHSIA Scorecard**

Next let's look at the NHSIA Scorecard concept ...

### **Slide 13 - Each Program & Jurisdiction Uses a Scorecard to Summarize Implementation Status**

The NHSIA Scorecard is based on the Capabilities List. It is a means of summarizing progress towards implementation of each capability. At this point the Scorecard is just notional – an example of what could be done.

It is anticipated that these scorecards would be maintained at the local level (e.g., by a county). Summary scorecards would be prepared by aggregating and averaging over the state, regional, and national levels.

Look at the row of the scorecard in the figure as an example. This row describes the capability which allows clients to: *“Investigate or apply for multiple programs at a single electronic entry point.”* Colors are used to indicate a range of implementation with dark green being complete on one end of the scale and red meaning no progress on the other end.

In this notional example, the Medicaid program (dark green) has fully deployed this capability in the jurisdiction, TANF and SNAP (light green) are at the 80% deployment level, and child care has an initial operational capability. The child protection program has plans and funding to deploy. Child support (orange) has a strategy and plans for implementation. There are currently no plans to deploy the capability for “Program Z” (red). A blank cell indicates that no rating was done or no information was available at the time the scorecard was completed.

Note: We considered developing a maturity model along the lines of MITA. But the MITA processes are defined at a much more detailed level than NHSIA processes. And we thought that maturity models were best done for individual programs (like Medicaid, TANF, etc.). However, the scorecard provided a higher level, more generic assessment of maturity with respect to NHSIA goals.

### **Slide 14 - Notional Scorecard – Achievement Level Definitions**

In the notional Scorecard, a level of achievement is defined for each detailed capability in the list for each jurisdiction using the scorecard.

The intermediate levels are admittedly somewhat subjective. Initially the scale purposely avoids rigid definitions and allows jurisdictions to accommodate their individual situations. 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 served. This still represents a good step in the right direction.

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.

### **Slide 15 - Business Viewpoint**

Let’s move on now from the Capability Viewpoint to the Business Viewpoint.

The Business Viewpoint describes the “who, what, and why” that motivates the “how” examined in the System, Information and Infrastructure Viewpoints which will be covered in subsequent Webinars. The business model describes business processes and their associated activities. The other viewpoints explore the services, applications, information exchanges, and infrastructure components associated with these business processes.

The NHSIA Business Viewpoint focuses on processes which share common elements across human services programs. It highlights opportunities for information sharing and re-use of components across programs.

Finally, the NHSIA Business Viewpoint is generic in the sense that it is intended to apply across human services programs. Federal programs would apply the NHSIA model to the business operations of their specific program to develop their own business model (e.g., MITA is a business model for Medicaid).

### **Slide 16 - The Business Viewpoint: 3 Primary Components**

The Business Viewpoint is comprised of 3 main components:

- a high-level business model based on MITA 3.0,
- a spreadsheet that maps processes to human services programs, and
- a set of scenarios and vignettes that provide a context for exploring how NHSIA can enable improved human services operations.

The NHSIA business model describes the high level functionality embodied in human services operations; it does not prescribe process flow for programs and jurisdictions.

The process to program mapping highlights processes that are common to multiple human services programs.

Scenarios are real-world situations that serve to illustrate how the NHSIA architecture would enable human services operations; vignettes are operational threads that can span several business processes. Scenarios and vignettes together provide the context for understanding how NHSIA would be employed.

### **Slide 17 - Audience for the Business Viewpoint**

One audience for this viewpoint is the developers of the other NHSIA Viewpoints. This viewpoint describes the operations of the business in non-technical terms. The systems, information, and infrastructure viewpoints are all based on the need to support these business operations.

A second audience for the Business Viewpoint is those who are charged with defining business models for state, local, and private providers as part of their more detailed enterprise and solution architectures. NHSIA provides a starting point for their work.

The third audience is the federal program managers. They can use the Business Viewpoint to provide guidance to state and local stakeholders that can lead to improved interoperability and sharing of IT services.

### **Slide 18 - Business Model**

Let's look at the main component of the Business Viewpoint, the Business Model.

### **Slide 19 - NHSIA Business Model: Components**

In developing an architecture, it is important to start with an understanding of the business. The business should drive the use of information technology, not the other way around. Defining a business model is a good way to analyze a business. This graphic shows the structure of the business model that we used to describe human services operations.

In this structure, business areas are decomposed into business processes; processes are decomposed into activities. Each activity is defined in terms of:

- Stakeholders who are involved in the activity or are the object of the activity,
- information inputs and outputs, and
- different actions performed as part of the activity

In the next 6 slides, we will walk through each of these components.

### **Slide 20 - NHSIA Business Model: Business Areas**

The top level of the NHSIA Business Model comprises 10 business areas. A business area includes a set of business processes that support a major function (e.g., finance) or stakeholder group (e.g., client).

Five business areas are detailed in the current NHSIA documentation – these are highlighted in the red outline in the figure. These business areas appear to be the most common to a wide range of human services programs.

Those of you familiar with MITA will recognize that the NHSIA Business Model is based on MITA 3.0. In the NHSIA Business model, 7 of the MITA business areas were adopted directly and 3 business areas are renamed and adapted to better fit human services:

- MITA Member Management is renamed as NHSIA Client Management
- MITA Care Management is NHSIA Service Management
- MITA Plan Management is NHSIA Program Management

The NHSIA model includes additional processes to support programs other than Medicaid and to support integration and coordination across programs. For example, the Service Management Business Area includes processes associated with case management and outlines opportunities for coordination across services.

### **Slide 21 - Business Processes Examples: Eligibility and Enrollment Processes**

The slide depicts the processes defined for the Eligibility and Enrollment business area as an example. This excerpt from the NHSIA model highlights that in developing the model, the MITA 3.0 structure was adopted as appropriate and additional processes were defined when needed.

For example, MITA 3.0 includes provider processes in the Eligibility and Enrollment business area. This makes sense since comparable information-related activities are involved in determining eligibility for both clients and providers. So these processes were also included in NHSIA.

Extensions to the MITA model to accommodate human services include the new Eligibility Intake process. This addresses the intake of information during the application process, where some information is collected directly from the client while other information is retrieved from available sources.

Another process added by NHSIA in this business area is the Monitor License/Credentials Change process.

### **Slide 22 - Example Activity: Interview Client**

Moving on down the business model structure ... this slide shows an example of a Business Activity Description. The objective of the activity descriptions provided in the NHSIA model is to motivate the development of services and information exchanges. The “Interview Client” activity is shown in the figure as an example of a typical description. It includes:

- A short text description of the process, and
- A description of each activity involved in the process. This description includes:
  - Activity name and identifier
  - The stakeholders involved in the activity or the object of the activity (e.g., a client is the object of the interview activity)
  - The actions performed, such as record, request, retrieve
  - Other processes that are triggered by the activity
  - Inputs and outputs (high-level descriptions of information)
  - And any potential structures that may be required by the activity (e.g., virtual or physical records such as Master Person Index)

Spreadsheets provide these details for each of the business activities in the model.

### **Slide 23 - NHSIA Business Model: Stakeholders**

As indicated in the little green icon in the upper right corner, a stakeholder list is one element of each activity description.

Four major categories of stakeholders are addressed in the NHSIA business model: client, provider, worker and agency. The graphic show more details about the entities considered in each category.

As shown on the previous slide, process activity descriptions reference these categories. This simplified view of stakeholders facilitated the discussion of who was involved in an activity, who was impacted by an activity, etc.

This is a good example of how NHSIA intends to provide high-level guidance using a high level of abstraction. By grouping stakeholders into categories, we were able to look across programs and see commonalities. We rely on other, lower-level enterprise, program, and solution architectures to deal with the detailed differences in stakeholders in each of these categories.

### **Slide 24 - NHSIA Business Model: Activity Inputs and Outputs**

The second element of each Business Activity description is a list of inputs and outputs.

One of the benefits of having an architecture is that it provides a common vocabulary for stakeholders to discuss problems, plans, alternative designs and other matters. The vocabulary is done to a level of detail that is specific enough to clearly communicate concepts.

Part of the vocabulary that NHSIA developed is a list of 75 phrases that describe types of information that is exchanged among the activities and processes. A few examples are shown here along with a brief definition: Access Authorization Information, Alert information, and Case information.

This is a useful first step towards building the information viewpoint. And ultimately, it is useful in identifying where services and standards should be implemented for sharing information.

### **Slide 25 - NHSIA Business Model: Actions**

The third element of each Business Activity description is a list of actions.

This is another aspect of the common vocabulary provided by NHSIA.

NHSIA includes a list of ~25 action verbs that describe specific steps that can be taken as part of an activity. A few examples are shown here along with a brief definition: Approve, Authorize, and Evaluate.

This action vocabulary is a useful step towards defining IT services in the systems viewpoint.

Again, the intent is to have a good vocabulary to use in describing the business and then using this to drive the technology that is described in the systems, infrastructure, and information viewpoints.

### **Slide 26 - Business Processes Mapped to Human Services Domains (partial)**

One of the initial efforts in developing the NHSIA Business Model was to examine the degree to which the MITA model could be applied to human services programs in general. Historically, each program has been viewed as being different with unique processes. The challenge was to understand what was common to the different programs. A “process to program” mapping was developed to document commonality. An excerpt of the spreadsheet is shown in the slide.

The rows are the processes specified for the 10 business areas; the columns are human services programs. The programs included in the columns are: TANF, Adoption and Foster Care, Child Care, Child Support Enforcement, Child Protection, Home Energy Assistance, and SNAP.

The markings in individual cells denote whether a given process applies to a program or whether additional study is required to make this determination. A given process may also be deemed to not apply.

Previous studies from MITA, SAMHSA, and SACWIS were used to develop the mapping. This initial mapping should be revised as human services programs adapt and extend the NHSIA model to their operations.

The conclusion reached is that in fact there are many common processes across a wide range of human services. The NHSIA business model provides a mechanism to identify these areas of commonalities and provides a basis for developing shared processes, applications, IT services, and information exchanges.

### **Slide 27 - How NHSIA Business Model Relates to the Other Architecture Viewpoints**

That completes our discussion of the NHSIA business model structure. Let's take another look at this structure (shown in green on the slide) and see how it relates to the other viewpoints.

The Capability Viewpoint (the purple box in the upper left) defines high-level requirements for business operations. Examples are paperless operations and "no wrong door".

The System Viewpoint (in the peach-colored boxes) identifies software applications and IT services required to support the business activities specified in the business model.

Finally, the information flows associated with the business activities are the basis for the information exchanges identified in the Information Viewpoint (in the blue box). Ultimately these will lead to the identification of existing standards or the development of new standards for information exchange.

### **Slide 28 - Scenarios and Vignettes**

The third major component of the Business Viewpoint is scenarios and the associated vignettes.

### **Slide 29 - Scenarios Define a Real-World Situation to Use as Context for Analysis**

Scenarios and vignettes were two tools used to develop the architecture. Scenarios are real-world situations that serve to illustrate how the NHSIA architecture will enable human service operations; vignettes are operational threads. A scenario is the overarching context while a vignette is a specific operational thread with steps and associated processes.

The 2 major scenarios examined for NHSIA so far are illustrated in the figure: "Client in Need" and "Effective Human Services Programs". Client in Need focuses on client interaction with workers and IT resources and the management of services. The Effective Human Services Operations scenario highlights performance management considerations (including fraud detection).

Scenarios and vignettes have a number of uses, such as:

- To communicate NHSIA concepts to state and local stakeholders and explain the architecture viewpoints.
- To provide a common context for further refinement of the NHSIA business model and NHSIA information exchanges and data services.
- To examine potential interactions between business processes in different business areas.

### **Slide 30 - Vignettes Analyze a Specific Operational Thread Based on a Scenario**

This is an example of a vignette associated with the Client in Need Scenario. It describes an operational thread for "Eligibility Determination" for multiple human services. It reflects a human services business strategy where eligibility determination is provided to the client as a coordinated, on-line capability.

The arrows and blue labels on the right illustrate the steps for developing a vignette like this. The first step is to develop a sequence of activities as illustrated by the example on the left of this slide. A narrative is also developed to explain the context and describe what happens in each step. This gives a

good picture for how things would operate in the future. In this example, the client makes an initial contact with an agency, information about the client is collected, the client's current enrollment in any human services programs is checked, and so forth.

Developing this thread is best done collaboratively with several folks bringing different perspectives to the discussion. Usually several iterations are required to develop a good first draft.

Next, the scenario is examined from the perspective of each of the NHSIA viewpoints. An analysis determines which capabilities this vignette implements, which business processes and applications are involved, what information is used and exchanged, and which infrastructure patterns may be applicable.

This analysis helps to do two things: first, it either validates that the architecture is sufficient or it reveals gaps and problems in the architecture, and second, it helps clarify exactly how this operational thread will work. In either case, it helps to validate and refine the architecture.

### **Slide 31 - Summary**

No notes.

### **Slide 32 - Capability and Business Viewpoint Summary**

In summary ...

The Capability Viewpoint includes a

- Capability List
  - Defines high-level requirements
  - Focused on interoperability
  - ~50 capabilities grouped into 8 categories
- NHSIA Scorecard
  - Based on the Capabilities List
  - A mechanism for tracking progress in implementing capabilities
  - Includes a 6-level scale for evaluating progress
- Performance Reference Model (PRM)
  - A framework for defining metrics

The Business Viewpoint provides a

- Business Model
  - A hierarchical model of business areas, processes, and activities
  - Describes stakeholders, inputs and outputs, and actions of each activity
  - Provides a vocabulary and basis for developing other viewpoints

- Map of Business Processes to Human Services Domains
  - Validates common processes exist across human service programs
  - Identifies potential areas for sharing processes and IT
- Scenarios and Vignettes
  - Describe real-world situations
  - Allow detailed analysis of the architecture

**Slide 33 - Questions and Next Steps**

No notes.

**Slide 34 - Questions?**

No notes.

**Slide 35 - NHSIA Documents Related To This Webinar**

No notes.

**Slide 36 - Webinars will be held Thursdays at 1 PM Eastern**

The next webinar in this series is scheduled for two weeks from today.

**Slide 37 - Next Webinar: Information & Infrastructure Viewpoints**

Here is the draft outline for next time.

**Slide 38 - Thank you for participating and see you next time!**

No notes