National Human Services Interoperability Architecture (NHSIA)

Systems Viewpoint and Webinar Series Wrap-Up

July 2012
# Webinar Series Wrap-Up

Webinars held Thursdays at 1 PM Eastern

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<th>#</th>
<th>Webinar Title</th>
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<td>3</td>
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URL for new ACF Interoperability website: [http://transition.acf.hhs.gov/about/interoperability](http://transition.acf.hhs.gov/about/interoperability)
Webinar Plan

- Introduction and Welcome by ACF
- Systems viewpoint
  - To-be architecture reference model layers
  - Software applications
  - Shared IT services
  - Connections and relationships
- Webinar series wrap-up
- Questions and next steps

Learning Objective for this Webinar

- Understand the to-be system elements
- Wrap up the webinar series

Note: Feel free to enter comments or questions in the Chat window throughout the webinar. At the end we will open the phone lines to take questions.
This webinar focuses on the Systems Viewpoint artifacts.

- Overview Viewpoint D0.1
- As-Is Analysis Report D0.1
- White Papers D0.1, D0.2
  - How the Client and Case Management are Addressed in NHSIA
  - Rules
  - Security
  - Master Person Index Services

- S-01-SystemsViewpointDescription-D0.2.docx
- S-02-Services-D0.2.xlsx
- S-03-ApplicationsMappedToBusinessProcesses-D0.2.xlsx
The Systems Viewpoint describes new and legacy system components in the layers of the to-be architecture.
The Systems Viewpoint Comprises 3 Primary Components

- **Systems Reference Model**
  Provide a guide for structuring each jurisdiction’s architecture around interoperable and reusable elements.

- **Model Layer Descriptions**
  Explain what is in each layer. Identify several specific examples.

- **Connections & Relationships**
  Link the services to applications and business activities.
Developers of the other NHSIA Viewpoints

State, local, and private provider planners and system architects

Federal Program Managers

- Federal Government
- Regional Coalition
- State Government
- Regional Coalition
- Local and Tribal Government
- Private
To-be Architecture Reference Model Layers
NHSIA Reference Model To-Be Architecture Layers

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
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<tbody>
<tr>
<td>Access</td>
<td>Presentation layer. How people access human services information.</td>
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<tr>
<td>Applications</td>
<td>High-level software packages that support multiple human services programs.</td>
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<tr>
<td>Shared Services</td>
<td>Functionally-oriented reusable IT services that are unique to human services.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Services, systems, and data required for interoperability but <strong>not</strong> unique to human services.</td>
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</table>
Access Layer Provides Options for Entering the System

All doorways lead to the same systems
IT Services Support Actions and Stakeholders Use Software Applications

- **Capabilities Viewpoint**
  - Capabilities represent high level requirements for business areas

- **Business Areas**

- **Business Processes**

- **Business Activities**

- **Stakeholders**
  - Stakeholders use software applications

- **Inputs/Outputs**
  - Activity inputs/ output represent potential information exchanges

- **Actions**
  - IT services support actions

- **Systems Viewpoint: Applications**
  - Stakeholders use software applications

- **Information Viewpoint: Information Exchanges**

- **Systems Viewpoint: IT Services**

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**Systems Viewpoint and Webinar Series Wrap-Up**

**To-be Architecture Reference Model Layers**
Software Applications
Different applications may invoke some of the same shared application and data services. Applications should be interoperable so that users can easily accomplish all their tasks seamlessly.
Applications Layer Supports the Human Services Cycle for Stakeholders

- Eligibility Determination
- Enrollment/Disenrollment
- Needs Assessment
- Case Management
- Service Planning and Monitoring

Software Applications
Systems Viewpoint Describes Notional Interoperable Human Services Software Applications at a High Level

- **Description.** The **Enrollment/ Disenrollment** application would typically be triggered by either the Eligibility Determination or Needs Assessment applications. The Enrollment/ Disenrollment application checks for potential fraud before enrolling the client in a program. This application completes the enrollment or disenrollment process, notifies stakeholders, and updates program-related data for reporting purposes.

- **Domain Applicability.** Anywhere “enrollment” applies.

- **Stakeholder Applicability.** Used by workers to support enrollment programs

- **Major Functions**
  - Check the client against lists of already-enrolled clients
  - Check the client against lists of disqualified clients
  - Confirm eligibility status
  - If client is to be disqualified from future enrollment, update a “disqualified” list
  - Enroll or disenroll client and update the appropriate enrollment status
  - Update client records
  - Update program records
Shared IT Services
Reusable, Shared IT Services Will Support Interoperable Applications

Interoperable Applications
- Integrated Eligibility
- Case Management
- ...
- Document Management
- Warehouse/Analytics
- ...

Find person
Register person data
Verify person residency
Provide person contact
Services are grouped according to the action terms from the business model. For example:

- **Business action:** Enter
- **Term definition:** Insert client, provider, case information into physical or electronic record.
- The “Enter” services allow people to update information in existing records. The assumption is that a record was created via one of the “Initiate” services. The “Enter” services should be used in concert with the “Verify” services to ensure data quality.
  - Update Person Information
  - Register Person Data
  - Update Person Identifying Information
  - Update Provider Information
  - Update Case
  - …
Services Classified as Common, Core, or Custom

- **Common IT services** support cross-jurisdiction information sharing and/or cross-program or agency information-sharing.

- **Core IT services** are a foundational subset of the common IT services that enable a basic level of interoperability.

- **Custom IT services** are the other services that jurisdictions will implement to support their own human services operations.
Core Capabilities Support All the Business Areas
Establishing the NHSIA core enables subsequent incremental improvements in human services systems.
NHSIA Core IT Services Provide a Solid Foundation for Better Programs and Integrated Human Services

The Core IT services can be used to …
• Find and access basic information about key entities
• Verify information against authoritative sources
• Collect performance information

- Person
- Provider
- Case
- Program

Core IT Services

Hubs
Repositories

Service-Oriented Infrastructure
Connections and Relationships
Software Applications Are Mapped To Business Processes (partial)

<table>
<thead>
<tr>
<th>ID</th>
<th>Process Name</th>
<th>Eligibility Determination</th>
<th>Enrollment/Disenrollment</th>
<th>Needs Assessment</th>
<th>Case Management</th>
<th>Service Planning and Coordination</th>
<th>Document Management</th>
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**Client Management (CM)**

**Client Information Management**

- CM1 Establish Shared Client Information
- CM2 Manage Shared Client Information
- CM3 Establish Agency Client Information
- CM4 Manage Agency Client Information
- CM5 Find Client Information

**Client Support**

- CM6 Manage Client Communications
- CM7 Perform Population and Client Outreach
Service Matrix

- Names the service
- Identifies the core information exchange that supports the service
- Maps each service to one or more business activities
- Maps each service to one or more software applications
- Describes the service
- Classifies the service (common, core, custom)
Summary
4-layer Systems Reference Model

- Access layer provides a variety of options to enter the systems.
- Interoperable software applications support multiple human services programs
- Reusable shared IT services can support multiple interoperable applications within a jurisdiction. (~100 candidate services proposed)
  - Core services lay the foundation for sharing information among to authorized users.

Connections & Relationships

- Software applications are mapped to business processes.
- The Service Matrix provides additional details about candidate IT services and links each one to the business model’s activities and to notional software applications.
NHSIA Documents Related To This Webinar

- Systems Viewpoint Description
- Spreadsheets:
  - Services Matrix
  - Applications Mapped to Business Processes
- White Papers:
  - Client Management and Case Management
  - Rules
  - Security
  - Master Person Index Services

These documents will be available on the ACF Interoperability website:
http://transition.acf.hhs.gov/about/interoperability
Webinar Series Wrap-up
People and systems

Use interoperable technologies and standards

To collect and share information and take action

NHSIA Concept
### NHSIA Provides a Framework and Roadmap To Achieve Common Goals

<table>
<thead>
<tr>
<th>As-Is</th>
<th>NHSIA</th>
<th>To-Be</th>
<th>Results</th>
<th>NHSIA Goals</th>
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<tbody>
<tr>
<td>Unique business processes</td>
<td>Common business processes</td>
<td>Standard information exchanges (NIEM)</td>
<td>Improved processes</td>
<td></td>
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<tr>
<td>Fragmented information</td>
<td></td>
<td>Shared information technology (IT) services &amp; infrastructure</td>
<td>Accessible information</td>
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<td>Duplicate systems, infrastructure, &amp; development</td>
<td></td>
<td>Comprehensive performance management</td>
<td>Improved efficiency and effectiveness</td>
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<tr>
<td>Limited performance information</td>
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<td>Fraud detection and prevention</td>
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<td>Improved decisions</td>
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<td>Better outcomes</td>
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**Improved Human Services Delivery**

**NHSIA Goals**
- Common business processes
- Standard information exchanges (NIEM)
- Shared information technology (IT) services & infrastructure
- Comprehensive performance management
- Improved processes
- Accessible information
- Improved efficiency and effectiveness
- Fraud detection and prevention
- Improved decisions
- Better outcomes
Summary of NHSIA Features

- NHSIA is a community architecture to enable sharing:
  - Business processes
  - Information
  - Applications & IT services
  - Infrastructure
- NHSIA builds on prior efforts
  - MITA, NIEM, GRA, GFIPM
  - Thought-leading implementations
- Comprehensive approach to performance management
- Service-oriented architecture
- Identity management and attribute-based access control
- Core services for finding and accessing information about clients, cases, providers, and programs
- Function-oriented applications vs. program-oriented (e.g., integrated eligibility)
- Shared supporting applications (e.g., document management)
- Can be implemented incrementally

Improved information supports improved decision making at all levels.
Establishing the NHSIA core enables subsequent incremental improvements in human services systems.
Security Aspects Are Addressed Across the Viewpoints

- Control Access (applicant or client)
- Access Control Mechanisms (human service application)

Manage user provisioning / user access privileges process

- Release Confirmation
- Access Authorization
- Memoranda of Understanding

- Leverage GRA and GFIPM
- Implement policies, practices, procedures, and system controls
- Common client information release authorization

- Services to authorize access to different kinds of information
- Applications must enforce access controls

- Building a trusted environment
- Identity and access management
- Single sign-on
- Network security
- Data security and privacy
- Common client information release authorization
Viewpoint Relationships

- **Overview Viewpoint**
- **Information Viewpoint**
- **Infrastructure Viewpoint**
- **Systems Viewpoint**
- **Business Viewpoint**
- **Capability Viewpoint**
- **Project Viewpoint**

**As-Is Analysis**
- Starting point
- Lessons learned
- Implementation guidance, Critical success factors
- IT applications, IT services
- Technical environment
- Requirements for standards

**Direction and guidance**
- Cross-stakeholder interfaces, Critical shared data structures
- Business processes, Scenarios
- High-level requirements

**Overview Viewpoint**
- Systems Viewpoint and Webinar Series Wrap-Up

**Webinar Series Wrap-up**
Questions and Next Steps
Questions?

- **Chat window**
  - If we don’t have time to answer all the questions during the webinar time window, we will post answers on the ACF Interoperability site

- **Email:** joseph.bodmer@acf.hhs.gov

- **Telephone:** Joe Bodmer 202-690-1234

- **Note:** If you are not speaking, please mute your phones by pressing *6. To speak, press *6 again.
ACF Interoperability Initiative

Too many barriers stand in the way of clients getting the services they need. "Interoperability"—a national effort of technological and programmatic coordination—is poised to eliminate many of those barriers. Today, the emergence of interoperable technology offers an unprecedented opportunity to connect systems across traditional boundaries in exciting and rewarding ways. This interconnectivity represents the cutting edge for development of new service models and approaches to maximize positive outcomes for children, families and communities.

What is Interoperability?

Interoperability is the ability of two or more systems or components to exchange information and to use the information to make better decisions. The term is often used in a technical engineering sense and also in a broader sense, taking into account social, political, and organizational factors that impact performance.

ACF Announces the publication of a Funding Opportunity Announcement, “State Systems Interoperability and Integration Projects”

The Office of Management and Budget (OMB) Partnership Fund for Program Integrity Innovation provided the Department of Health and Human Services/Administration for Children and Families (HHS/ACF) funding for the State Systems Interoperability and Integration Projects. HHS/ACF, through the Office of Child Support Enforcement (OCSE), will award and monitor the grants. The State Systems Interoperability and Integration Projects opportunity will fund 12-month grants to explore and plan improved interoperability and integration in eligibility and enrollment, case management, and other related functions across health and human services information technology systems.

Grantees will plan to achieve one or more of the following OMB Partnership Fund goals:
Thank you for participating

Review NHSIA documents on the new ACF interoperability website:
http://transition.acf.hhs.gov/about/interoperability

National Human Services Interoperability Architecture

- **Overview Viewpoint**
  The Overview Viewpoint provides an introduction and a high-level summary of the National Human Services Interoperability Architecture (NHSIA).

- **Information Viewpoint**
  The Information Viewpoint describes the business information requirements for the NHSIA architecture. The Information Viewpoint leverages existing data standards and ongoing standardization efforts in the area of health and human services. The National Information Exchange Model (NIEM), as defined and governed by the Department of Homeland Security, is one example of the standards used in building this architecture.

- **Systems Viewpoint**
  The Systems Viewpoint describes new and legacy system components in the layers of the to-be architecture. The focus is on the desired end-state functionality of human services systems to improve the outcomes for clients and streamline operations for staff.

- **Business Viewpoint**
  The NHSIA Business Viewpoint provides a high-level, yet specific description of the processes that characterize human services operations. A typical process description includes stakeholders involved, activities and actions, information flow and interactions between processes.

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