

National Human Services Interoperability Architecture (NHSIA)

NHSIA Overview

May 2012

NHSIA Webinar Series

Overview

Key Concepts

Capability & Business

Viewpoints

Information Viewpoint

Systems & Infrastructure

Viewpoints and Wrap-

Up

ADMINISTRATION FOR
CHILDREN & FAMILIES

JOHNS HOPKINS
UNIVERSITY

Webinars will be held Thursdays at 1 PM Eastern

#	Webinar Title	Date
 1	Overview	May 31
2	Key Concepts	June 14
3	Capability and Business Viewpoints	June 28
4	Information Viewpoint	July 12
5	Systems & Infrastructure Viewpoints and Wrap-Up	July 26

Outline

- **What is the problem being addressed?**
- **What is NHSIA?**
- **How does NHSIA address the problem?**
- **Summary**
- **Questions and next steps**

Learning Objective for this Webinar

To understand what NHSIA is and what it is intended to accomplish.

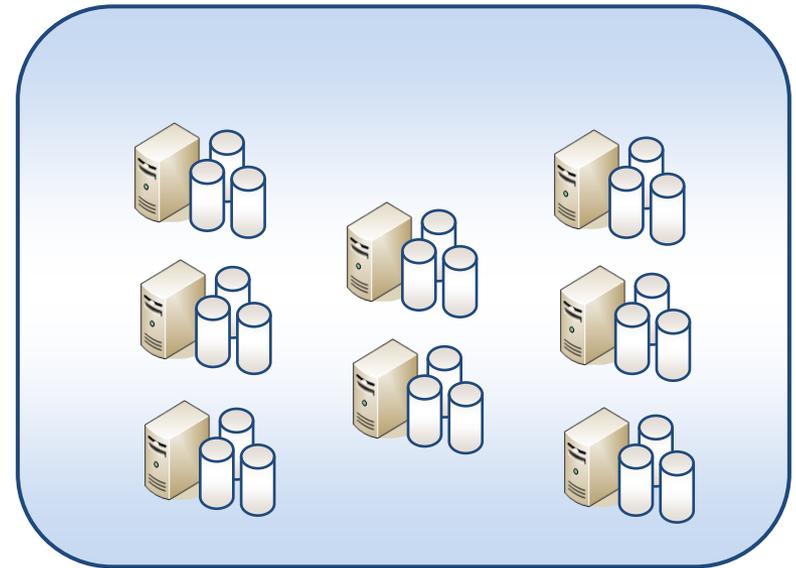
What is the problem being addressed?

The Fundamental Problem: Silos

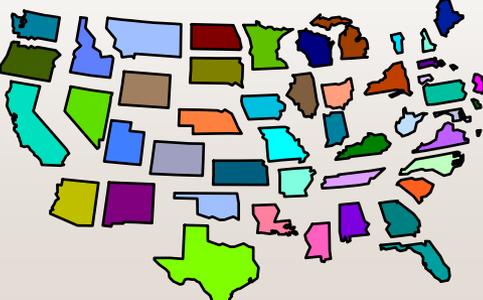
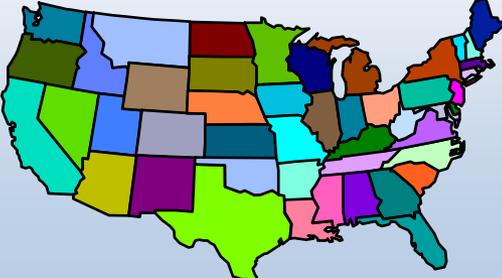
Separate Information + Processes + Systems =

Inefficiencies and no integrated view across clients, programs, or jurisdictions

The information necessary to support decision making at all levels can not be easily accessed, integrated, and used.

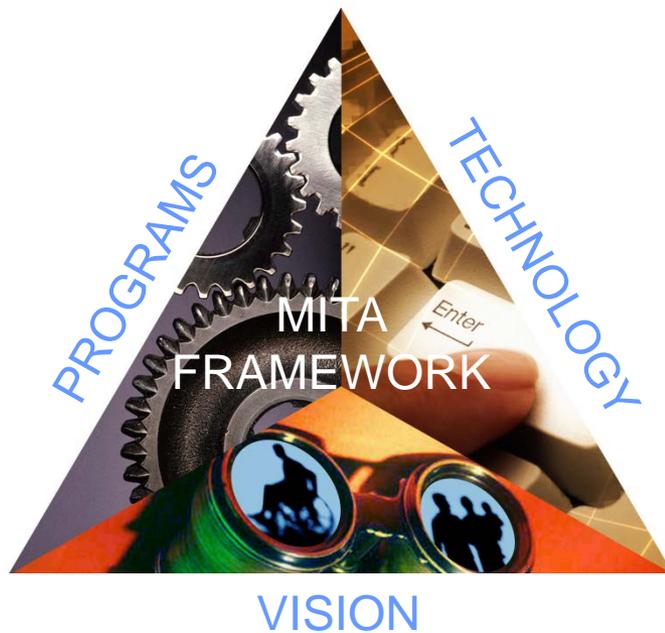


NHSIA Provides a *Framework* and *Roadmap* To Achieve Common Goals

As-Is	 NHSIA	To-Be  Results	NHSIA Goals
<ul style="list-style-type: none"> • Unique business processes 	<ul style="list-style-type: none"> • Common business processes 	<ul style="list-style-type: none"> • Improved processes 	
<ul style="list-style-type: none"> • Fragmented information 	<ul style="list-style-type: none"> • Standard information exchanges (NIEM) 	<ul style="list-style-type: none"> • Accessible information 	
<ul style="list-style-type: none"> • Duplicate systems, infrastructure, & development 	<ul style="list-style-type: none"> • Shared information technology (IT) services & infrastructure 	<ul style="list-style-type: none"> • Improved efficiency and effectiveness 	
<ul style="list-style-type: none"> • Limited performance information 	<ul style="list-style-type: none"> • Comprehensive performance management 	<ul style="list-style-type: none"> • Fraud detection and prevention • Improved decisions • Better outcomes 	
			

What is NHSIA?

NHSIA Is the Human Services Equivalent of the MITA Architecture Framework



“MITA is intended to foster integrated business and IT transformation across the Medicaid enterprise... *The MITA architecture framework* is a consolidation of principles, business and technical models, and guidelines that combine to form a template for the states to use to develop their own enterprise architectures.”¹

¹ MITA Overview, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidInfoTechArch/Downloads/mitaoverview.pdf>

What is NHSIA?

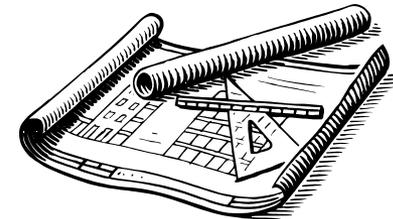
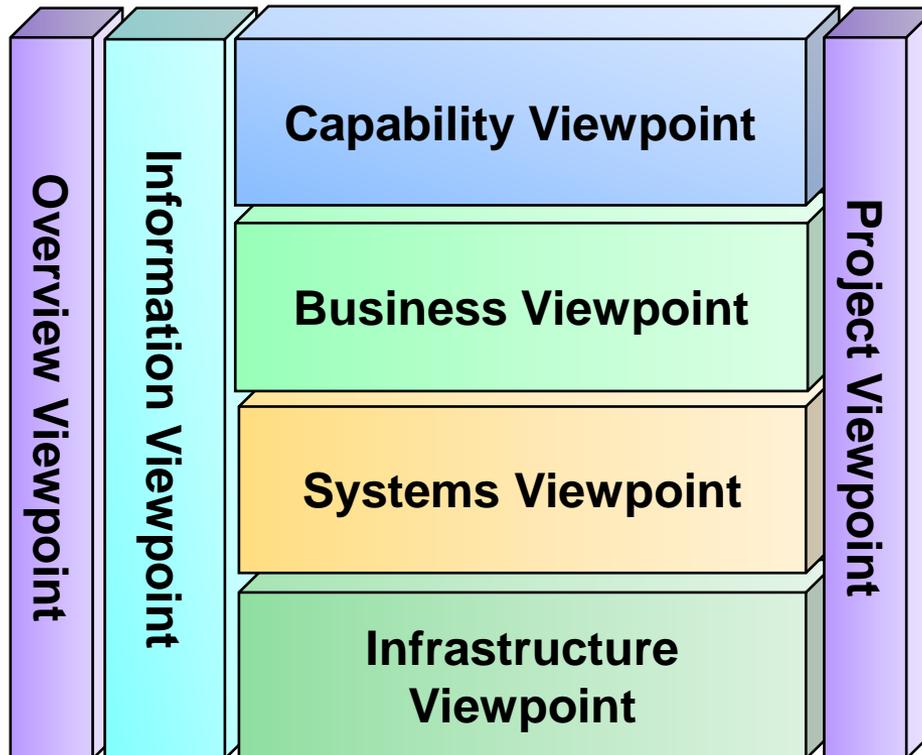
NHSIA: A national architecture to enable sharing information and IT services across currently siloed federal, state, local and private human service information systems.

Level	Scope	Detail	Impact	Audience
Community Architecture	Multiple Organizations	Very Low	Community Outcomes	Community Stakeholders
Enterprise Architecture	Agency/ Organization	Low	Strategic Outcomes	Enterprise Stakeholders
Segment Architecture	Line of Business	Medium	Business Outcomes	Business Owners
Solution Architecture	Function/ Process	High	Operational Outcomes	Users & Developers

NHSIA

Architecture: a description of the components, structure, and unifying characteristics of a system or system of systems.

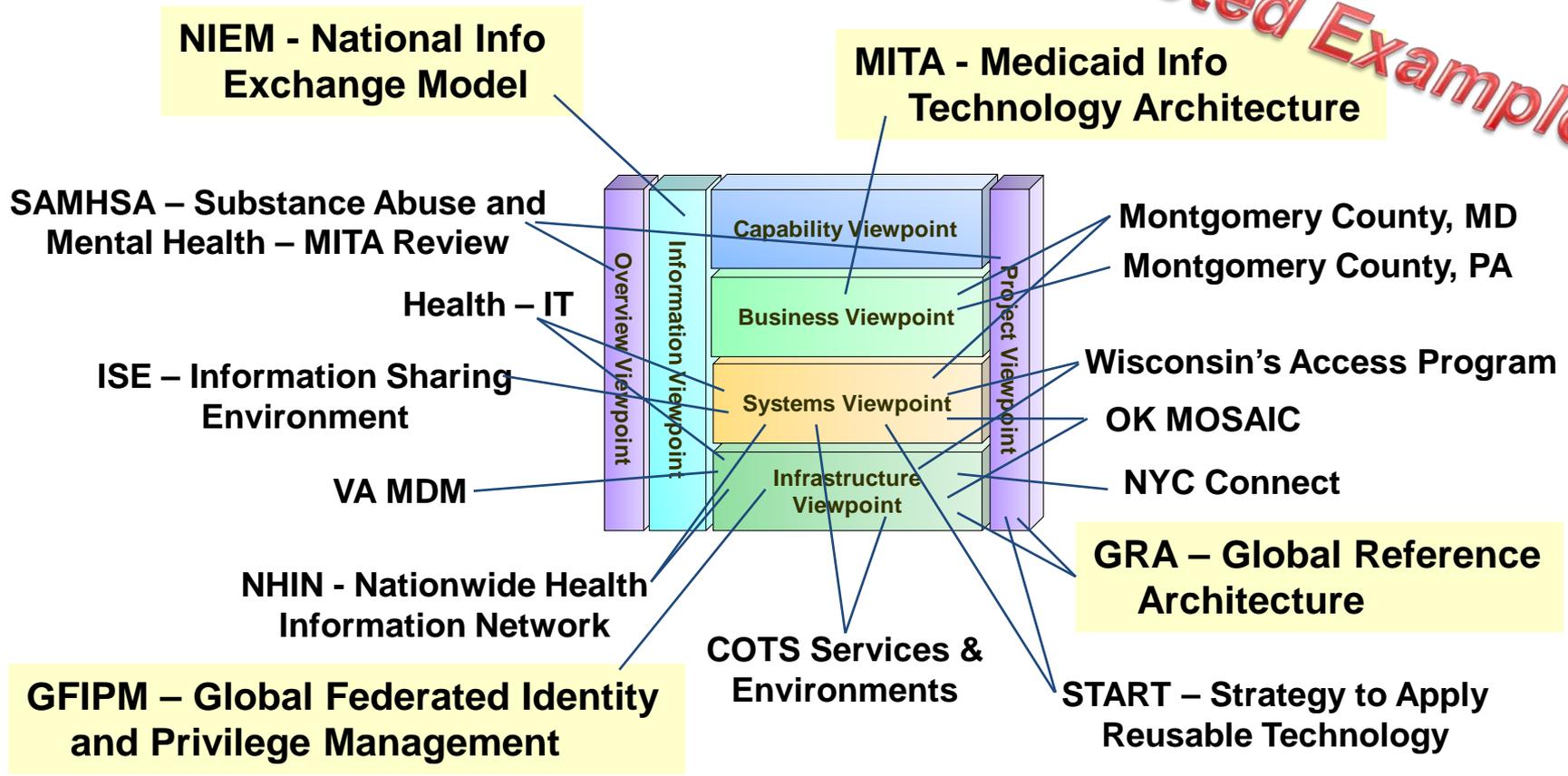
The NHSIA Architecture Framework



NHSIA has been described from multiple viewpoints. Each viewpoint serves a different purpose and is useful to different stakeholders.

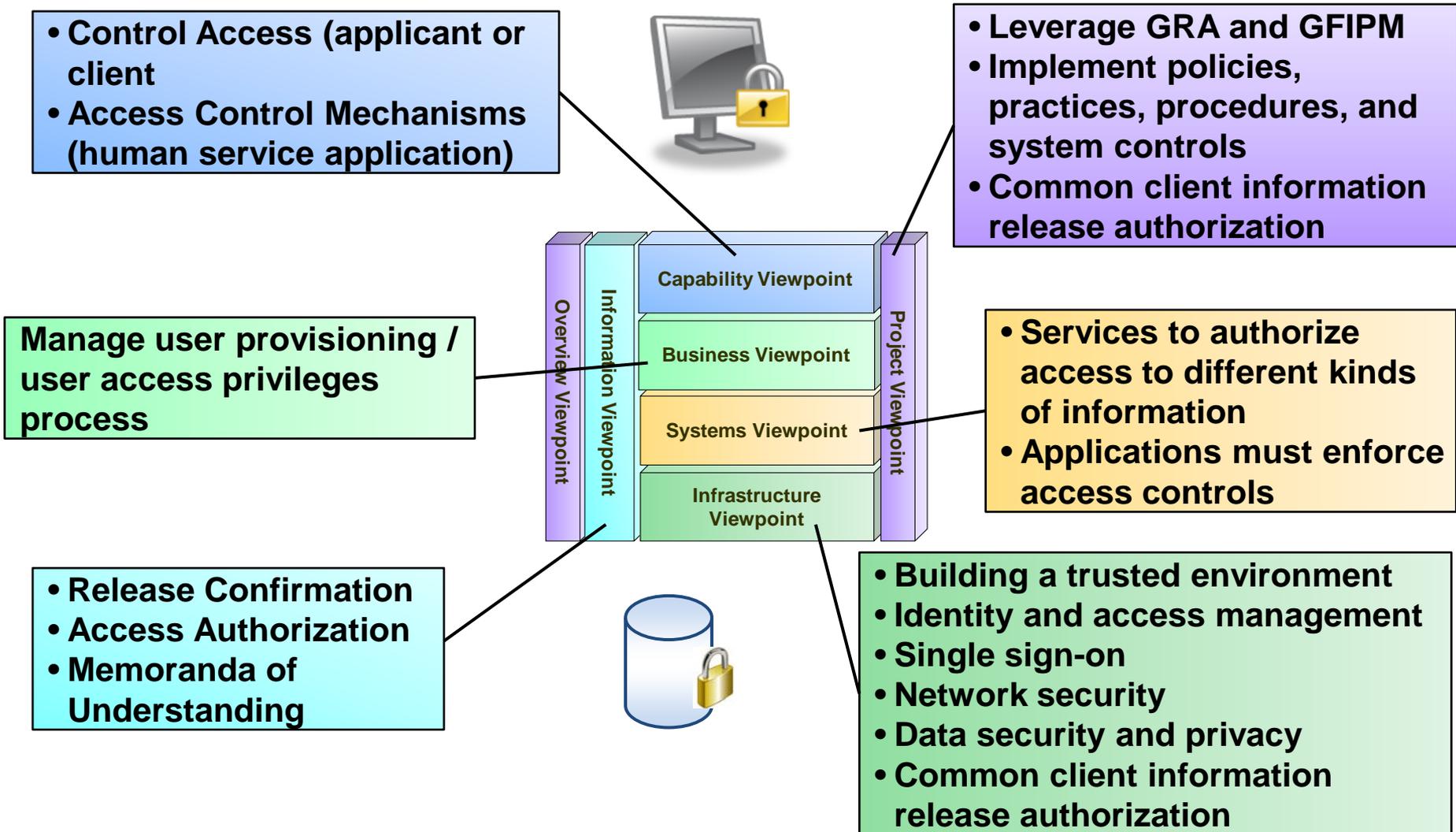
NHSIA Incorporates Best Features and Lessons Learned from a Range of Activities

Selected Examples



The NHSIA team analyzed existing initiatives and adapted key features to fit in the NHSIA framework.

Security Aspects Are Addressed Across the Viewpoints



How Does NHSIA Address the Problem?

How Does NHSIA Address the Problem?

Key architectural features:

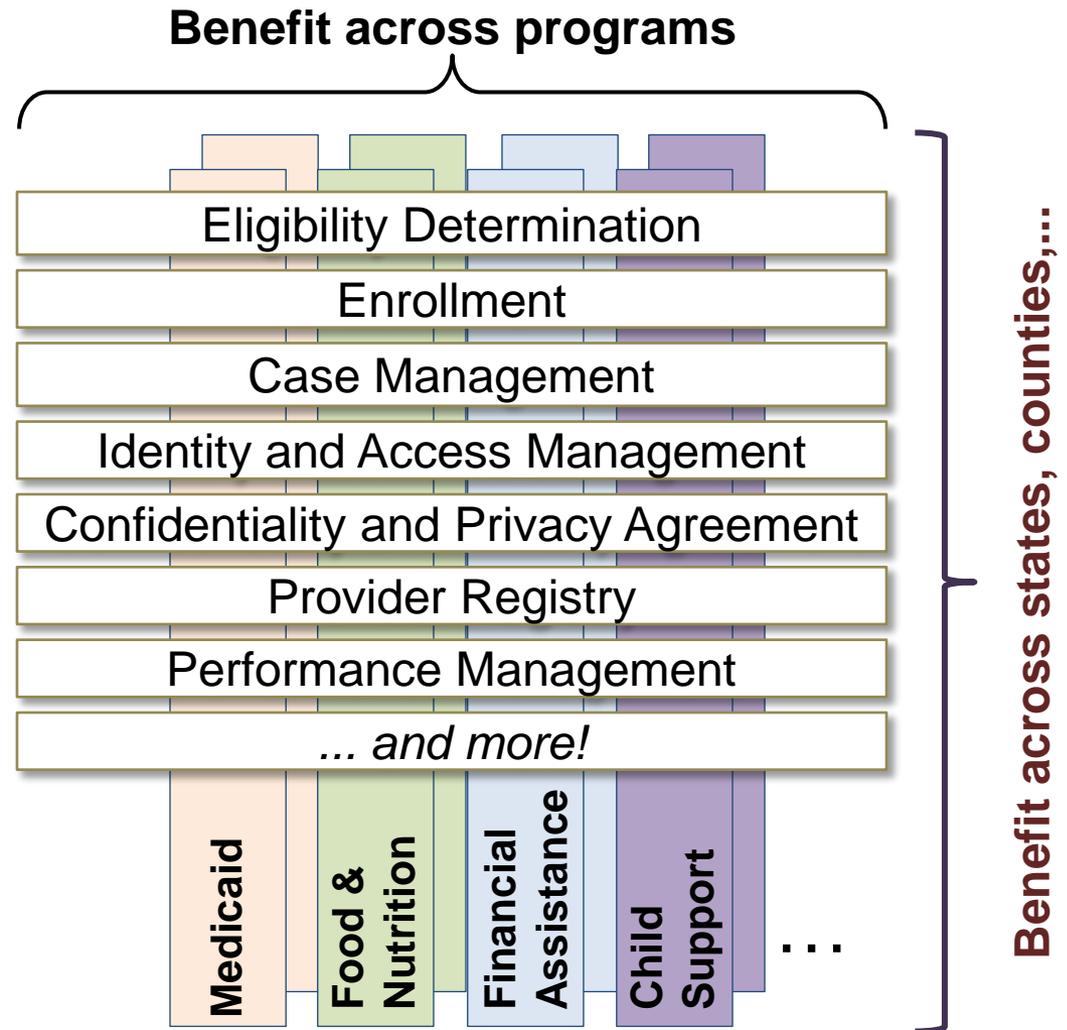
- **Shared business processes**
- **Shared information**
- **Shared IT services and applications**
- **Shared IT infrastructure**
- **Built-in performance metrics and assessment**
- **Identity management and access control**

NHSIA is intended to foster integrated business and IT transformation across the human services enterprise.

The NHSIA architecture framework is a consolidation of principles, business and technical models, and guidelines that combine to form a reference for programs and jurisdictions to use to develop their own enterprise architectures.

NHSIA Provides A Framework for Shared Business Processes

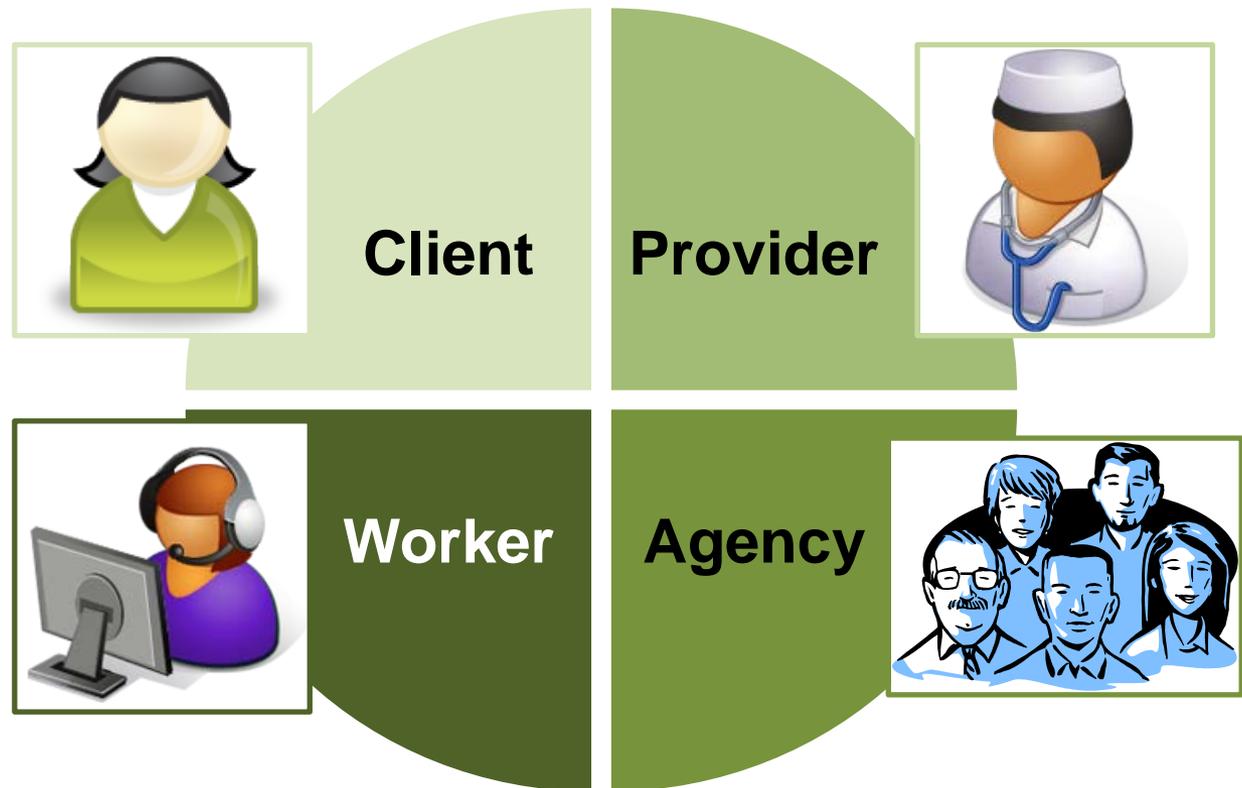
Common business processes support multiple human services programs.



Key Stakeholders Will Share Information

About

- Cases
- People
- Services
- Programs
- ...



Reusable, Shared IT Services and Applications Will Support Multiple Programs, Jurisdictions, and Functions

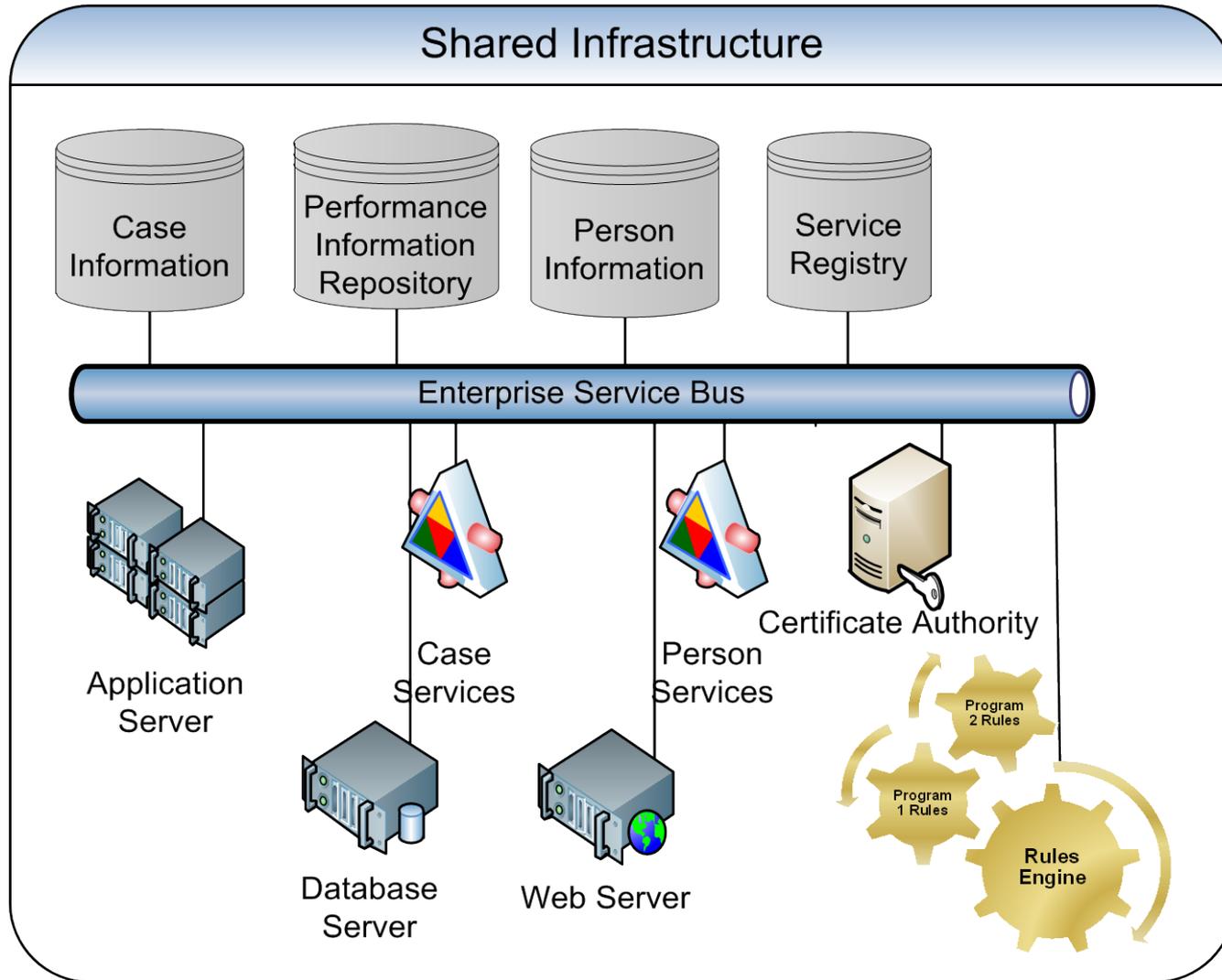


Shared Applications

- Integrated Eligibility
- Case Management
- ...
- Document Management
- Rules Engine
- Warehouse/Analytics
- ...

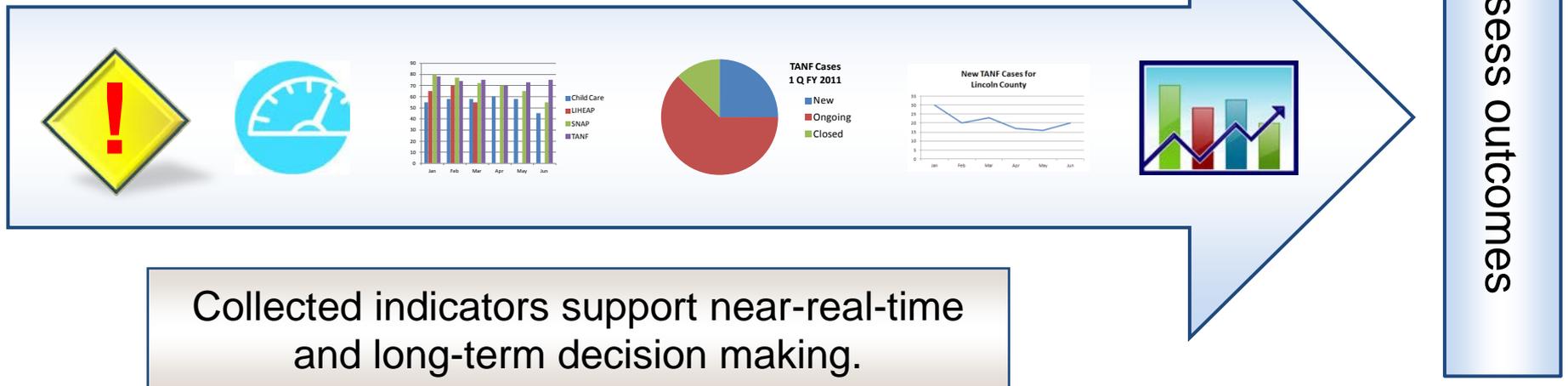


Shared IT Infrastructure Will Support Multiple Users, Systems, and Datasets



Metrics Will Be Collected During Routine Operations for Fraud Detection and Performance Assessment

- Capture key indicators in performance information repositories
- Detect fraud
- Monitor population/program status
- Enhance awareness across programs
- Generate standard reports
- Assess performance through longitudinal studies



Identity Management and Access Control Will Ensure Privacy and Confidentiality

- **Trusted partners**
- **Single sign-on**
- **Attributes for access and privileges**
- **Client information release authorization**



Summary

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.

NHSIA and MITA Are Closely Aligned

MITA Seven Conditions and Standards		Representative NHSIA Features
Modular systems development		SOA; reusable components; business rules separate from systems
Align with MITA		NHSIA business viewpoint adapted from MITA; SOA
Use industry standards		MITA; NIEM; GRA; GFIPM
Share and reuse technology		Shared services, hubs, & HIX/Medicaid components; integrated eligibility
Deliver business results		NHSIA PRM; Business viewpoint drives technology; automated processes
Performance reporting		NHSIA PRM; cross-program performance information repositories (PIRs)
Interoperable across health & human services community		NIEM info exchanges; verification services; shared enrollment data

Questions and Next Steps

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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 site**

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

NHSIA Documents Related To This Webinar

- **README**
- **Overview Viewpoint Description**
- **As-Is Report**

Next webinar: Key Concepts

- **Introduction and welcome by ACF**
- **NHSIA goals**
- **Key features of NHSIA**
- **Example improvements**
- **Questions and next steps**

Learning Objective for this Webinar

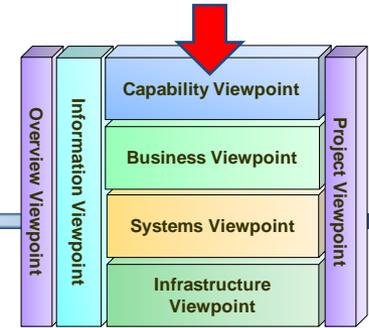
Understand what is at the heart of NHSIA.

Thank you for participating and see you next time!

- **Key Concepts**
- **Thursday, June 14 at 1 PM Eastern**

Reference Material: Summary of Each Viewpoint

The Capability Viewpoint Describes the Envisioned Future (the “To-Be State”)

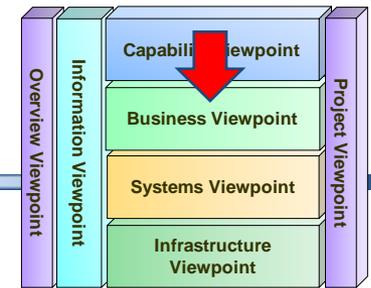


- **Access to Systems and Data**
- **Electronic Workflow**
- **Multi-Program Eligibility Determination**
- **Integrated Service Management**
- **Convenient Access for Clients**
- **Proactive Client Communications**
- **Automated Monitoring and Reporting**
- **Info-Based Performance Management**

Example Detailed Capability:
An applicant can move from one jurisdiction to another and conveniently transfer information and maintain benefits or move to the equivalent benefits in the new jurisdiction.

The Capability Viewpoint defines ~ 50 detailed capabilities, grouped into 8 high-level categories.

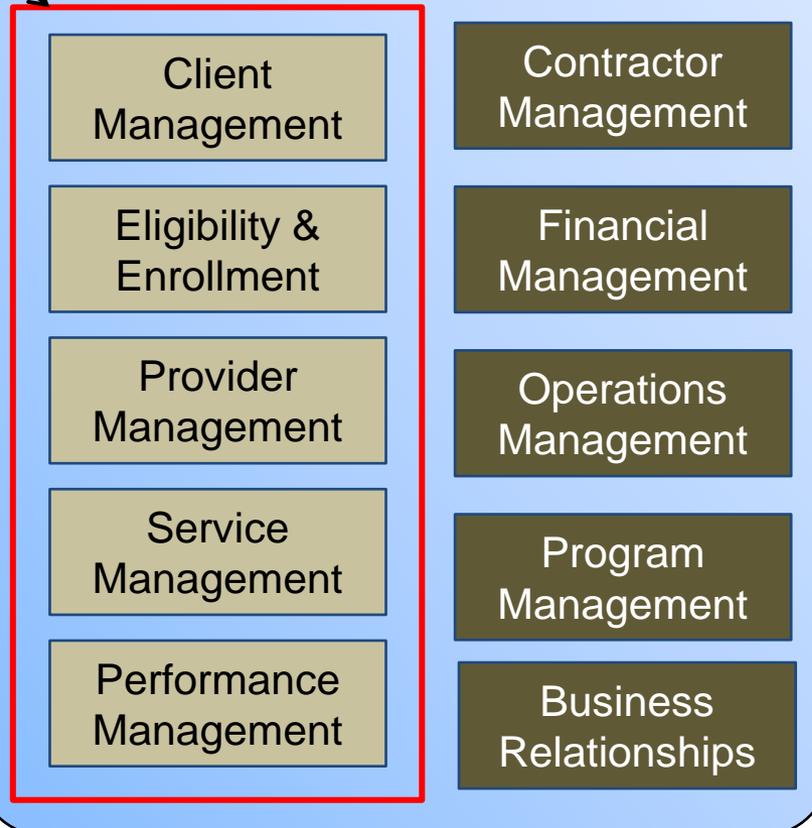
The Business Viewpoint Describes the Processes to Be Supported



Initial focus
of NHSIA

NHSIA Business Areas

NHSIA has ~
100
business
processes
organized
into **10**
business
areas.



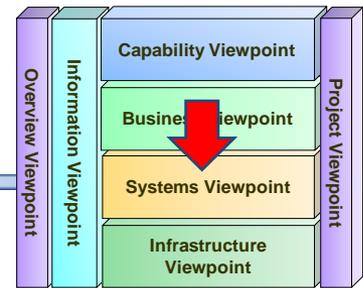
Example processes:

- Determine Client Eligibility
- Enroll Client
- Disenroll Client

NHSIA based its definition of Business Areas and their Processes on MITA definitions.

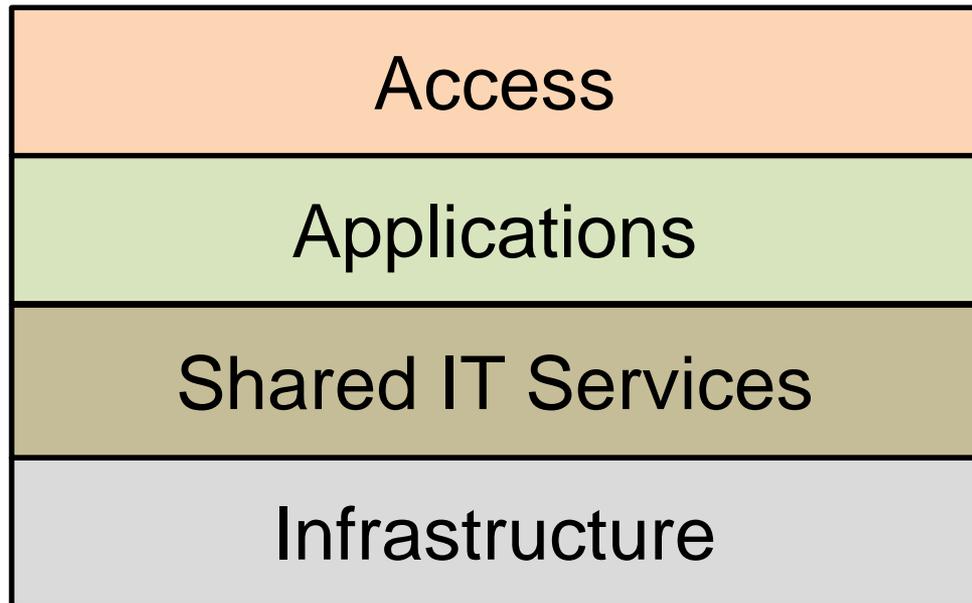
The MITA model was adapted and extended to show common processes across multiple human services.

The Systems Viewpoint Describes the “To-Be” IT Systems



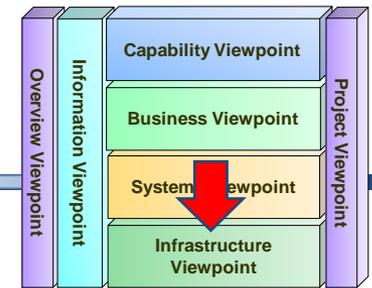
User portals or other access methods utilize the same

- Interoperable applications
- Reusable IT services
- Data
- Infrastructure components

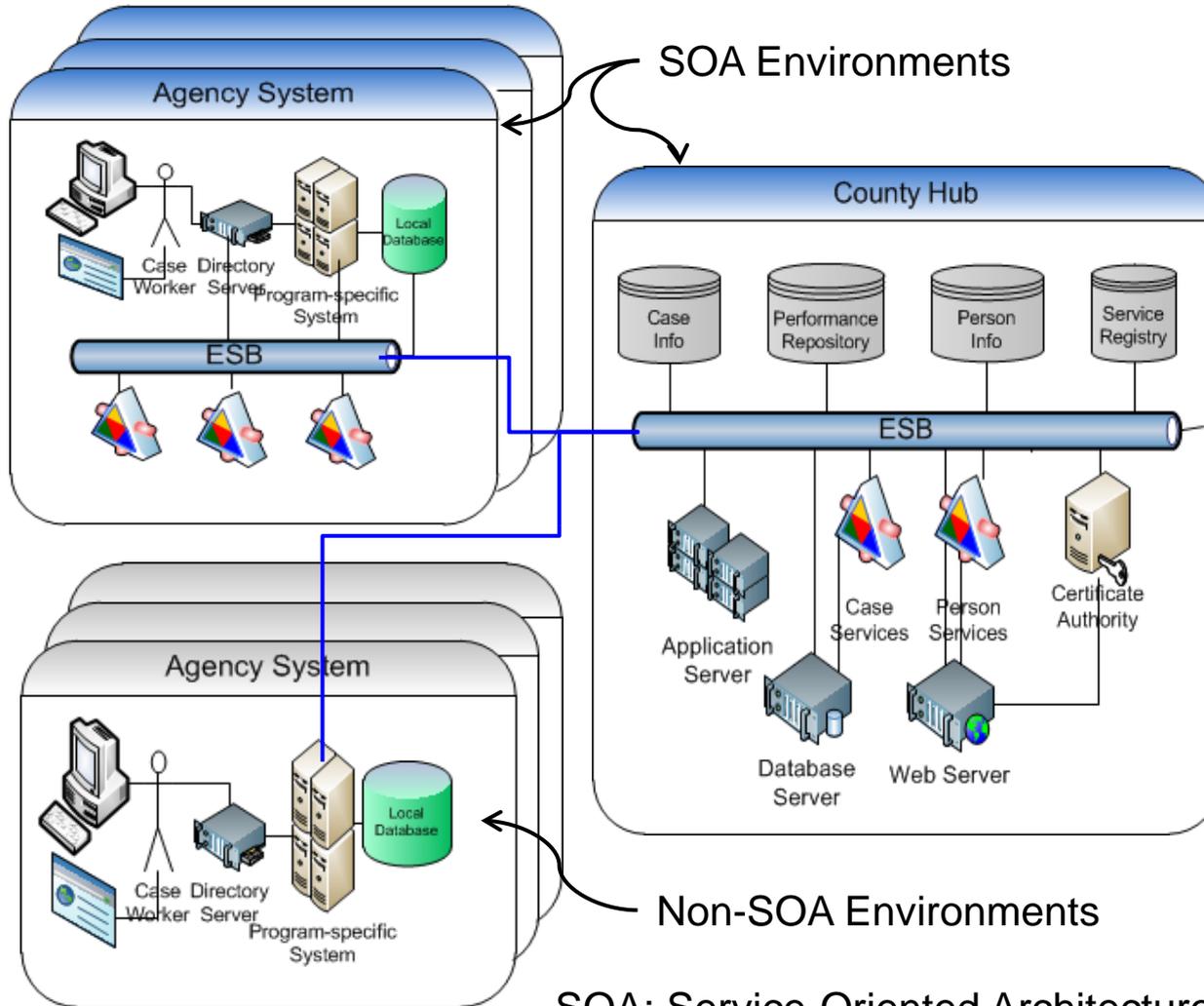


Capabilities are built by using components in a layered architecture (vice monolithic systems that do not share components.)

The Infrastructure Viewpoint Describes a Recommended Technical Foundation



A Notional County Infrastructure



SOA Environments

Non-SOA Environments

SOA: Service-Oriented Architecture

The Infrastructure Viewpoint describes the general-purpose, underlying computing and networking that supports the human services-specific business processes and systems.

It uses patterns to describe recommended implementation approaches.