

AIRA 2025 NATIONAL MEETING

**WELCOME**



# Modernization Roundtable

Wednesday April 30, 2025

10:45am - 11:45am PT

Mary Beth Kurilo, Eric Larson, AIRA  
Noam Arzt, HLN  
Mary Woinarowicz, North Dakota  
Zach Kempf, Missouri

# Welcome and Overview

- Introductions, goals of the roundtable (recognizing shifting landscape)
- Panel socializing concepts related to modernization, modern IIS architecture
- Table discussions based on concepts
- Sharing out from select tables
- Close and next steps



# Disclaimer

Budget challenges may shift our priorities, but not our mission



# Panel Introductions

- Mary Beth Kurilo, AIRA – Facilitator
- Eric Larson, AIRA - Panelist
- Noam Arzt, HLN - Panelist
- Mary Woinarowicz, North Dakota – Panelist
- Zach Kempf, Missouri - Panelist

# Goals of the Roundtable

- Move toward a shared understanding of modernization and modern IIS architecture
- Nurture seeds for a shared vocabulary and set of terms across the IIS and immunization community



# What Problem Is Modernization Trying To Solve?

“Just as we improve roads and bridges to meet changing demands, we must also **enhance our data systems to keep pace** with the evolving needs of public health and the technological advances at our fingertips.”

- CDC Public Health Data Modernization

“Public health data and surveillance systems are core components of our nation’s public health infrastructure. The COVID-19 pandemic has emphasized how critical these data systems are for the public as well as the need to transform and upgrade them **to better meet current and future demands**. Public health data modernization is a collective effort executed by federal, state, local, and tribal organizations to strengthen these systems.”

- ASTHO Data Modernization and Informatics

# Within The IIS Community...

- We have excelled at **collectively defining and adopting standards**, troubleshooting as a community, working collaboratively with our EHR, HIE and clinical partners
- We have over **150,000 current standardized HL7 V2 interfaces** in place across the nation
  - Most of which are bidirectional
- Many of our systems **continue to work towards modernization** that will support scalability, flexibility, rapid development and deployment, cloud-native architecture, and cost-effective maintainability
- We also have mature systems that were architected when user interfaces were the primary data entry method

# Modernization Helps IIS To Stay Competitive

From the CDC FAQs page, Strategy A3 of the Public Health Infrastructure Grant Notice of Funding Opportunity (PHIG NOFO) says ***“Investments in stand-alone, monolithic systems with limited operability are not allowed”***

- *Investments in stand-alone, monolithic systems implemented with limited operability lead to redundancy, wasted effort, and higher costs. Recipients should avoid building siloed systems that replicate functionality, cause the same data to be stored multiple times, and inhibit the smooth exchange and integration of information*
- *To be consistent with the North Star Architecture\* vision for public health data architecture, recipients should implement systems and functionality as coordinated and interoperable components that are supported by shared services*

# Proposed Pillars of Modern Architectures

- **Reliability/Scalability** – modern technologies such as cloud computing promote reliability and scalability, critical for keeping current with potential changes in volume (e.g., COVID-19)
- **Flexibility (pluggable/swapable/substitutable)** – modular development promotes flexibility with IIS components and sub-systems, facilitating rapid deployment of improvements that may be available piece by piece rather than all at once
- **Cost effectiveness** – To be sustainable, solutions need to be financially viable over time; this includes building a solution that doesn't unreasonably increase staff workload
  - Note: Costs may increase in some areas (e.g., cloud hosting) and decrease in others (e.g., enhancements)
- **Ease of acquisition** – Given the length of most procurements, sustainable products, services, and licenses should be able to be easily acquired
- **Standards-based** – IIS should be developed to support both current and emerging standards for software and interoperability

# Proposed Definitions/Assumptions

- **Modernization**, in the IIS world, is reflected in modern architecture - inclusive of both the architecture itself and the methodology for development and maintenance
- **Modern architecture** may include:
  - **Modules or Modular Components** – defined as one or more services to perform a business function
  - **Microservices** – defined as an architectural approach to software development where software is composed of small independent services
    - Note: This may be beyond what IIS need and can afford

# Common Architectures

	01 Monolith	02 Modular Monolith	03 Self-Contained Systems	04 Microservices
Scalable			✓	✓
Flexible			✓	✓
Cost Effective		✓	✓	
Ease of Acquisition	✓			
Standards-based	✓		✓	✓

# North Dakota's Modernization Journey

Mary Woinarowicz



# North Dakota IIS Modernization

- Goal: To build a cohesive system that meets both immunization program and IIS user needs.
  - Increase system reliability
    - Improve long-term sustainability
      - Improve system efficiency
        - Improve user experience
          - Increase overall confidence in system
- Took holistic, bottom-up approach
  - New system infrastructure
    - New system database
      - New user interface
- Cost savings – faster, easier, less expensive to make changes
- Cost increase – cloud hosting

# Missouri's Modernization Journey

Zach Kempf



# Missouri's Approach to Modernization

- Investing in staff development
  - Upskilling current workforce
- Collaborating within your agency
  - Integrate IIS data into other public health programs
- Reaching out to external agencies
  - Incorporate system needs into state-level IT initiatives

# Broadening the Discussion: Table Talks

We'd like each tables to chat about some questions, but first...

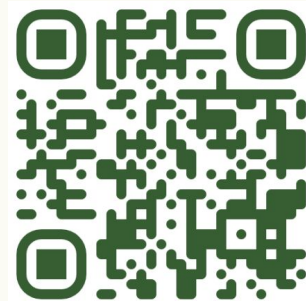
1) What supplies are at your table?

- 1) List of Questions
- 2) Key Handouts
- 3) Back-Up Notes Page

2) Ideally, notes can be added to our online form:

Access on your laptop: <https://redcap.link/modernIIS>

Access on your phone:



Is there someone at each table who has a laptop (or phone) and can take notes?  
Please raise your hand!

# Questions for Table Discussions

1. What jurisdictions/orgs are represented at your table?
2. Are there any areas that resonate with you about this framework/terminology for modernization?
3. Were there any areas where this framework overlooked key or missing components?
4. What modernization projects are you planning to move forward within your jurisdictions/organizations right now, given the current budget climate?

# Sharing Thoughts, Key Takeaways?



# Next Steps

- Keep the conversation going for the rest of this week
- Share your notes with our panel
- Continue to update the community on your modernization progress
  - We will share back what we heard via the notes on the May Discovery Session on May 19<sup>th</sup> – as time allows