

IIS Assessment, Planning and Prioritization

Bringing It All Together

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June 15, 2023



Learning Objectives

- Revisit and broaden knowledge of available data sources and resources to assess the capabilities of an IIS
- Consider the short- and long-term planning and prioritization needed to meet programmatic goals and make sustainable investments
- Explore the benefits and opportunity costs inherent in programmatic decisions and actions

Overview

- **Assessing** Your Program's Data and Direction
- **Planning** Your Desired Goals and Activities
- **Prioritizing** Based On Resources
- Activity: Action planning to address your jurisdiction's priorities
 - Inputs include your CoAg, DQ Report, Measure Results, etc.

Teasing Apart These Terms

Assessment

What information do you have about **YOUR IIS** that will help you make good decisions moving forward?

Planning

What tools and resources can help you chart your course, either through providing you with guidance or assistance?

Prioritization

What do you consider in weighing multiple competing priorities? What do you eventually choose to work on, and what do you decline to work on (either actively or by default)?

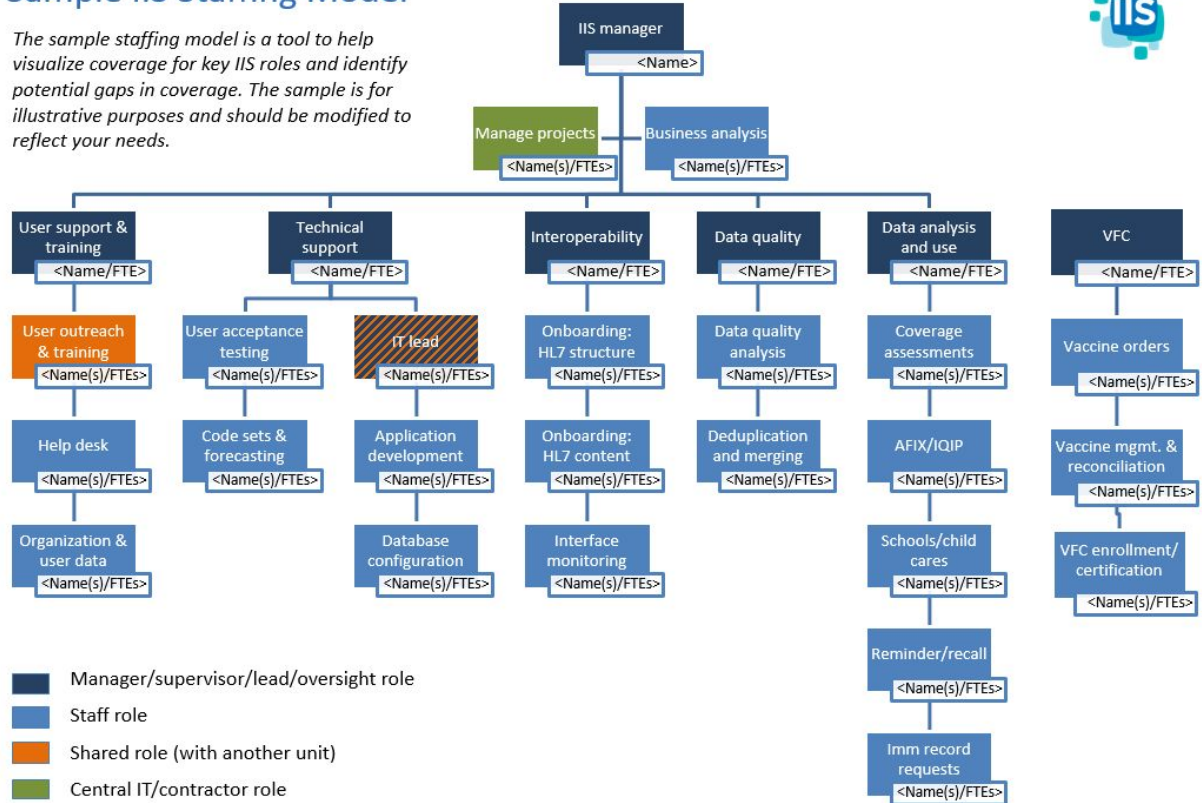


Assessment

Revisiting what you know about the status of your IIS to identify gaps for planning and prioritization

Sample IIS Staffing Model

The sample staffing model is a tool to help visualize coverage for key IIS roles and identify potential gaps in coverage. The sample is for illustrative purposes and should be modified to reflect your needs.



Looking Back, Day 1

Looking Back, Day 1

Vaccination Record Timeliness

Blueprint Milestone: 95% of vaccination events are recorded in the IIS within 1 day

Indicator	Year: 2018	Year: 2019	Year: 2020	2020 Target Achieved	Target	% Awardees Meeting Target in 2020
Percentage of doses for vaccinations administered in the last calendar year that were reported for persons aged 0 through 18 years within 1 day of administration. {1.1.2}	89.3%	88.2%	90.0%	★	90%	17.2%
Percentage of doses for vaccinations administered in the last calendar year that were reported for persons of all ages within 1 day of administration. {1.1.5}	No Data	No Data	86.2%	⊗	95%	1.6%

Race

Administration records that contain valid values for race help answer health equity questions. This information is used to generate views on the [CDC COVID Data Tracker](#). Note: The field is counted as populated if there is at least one value in the *recip_race_1*, *recip_race_2*, *recip_race_3*, *recip_race_4*, *recip_race_5*, or *recip_race_6* field in the COVID-19 Vaccine Reporting Specification (CVRS v3) file for a record.

- Data sharing restrictions for Race/Ethnicity data: None
- Plan for improvement: To be determined






Data Element	All Time		Past 7 Days	Targets and Tips
	Records	Percent	Percent	
Unknown ³	2,349,725	14.21%	13.93% ⁴	Values over the past 7 days >50% could indicate: <ul style="list-style-type: none"> • A coding and/or data entry problem by one or more large providers • The need for systematic provider education • A technical issue
Policy ⁵	0	0.00%	0.00%	Values over the past 7 days >0 for a jurisdiction with no data sharing restrictions could indicate: <ul style="list-style-type: none"> • A coding problem for one or more providers • A technical issue
Other Race ⁵	3,599,559	21.76%	16.91%	Values should reflect the jurisdiction's expectations given



Looking Back, Day 1

Assessment

IIS Assessment involves more formal testing to measure individual IIS systems using IIS community-selected measures and tests.

Content Area	Assessment Results	Validation Results
Transport	3 of 3 	2022 ✔ Complete Validation
Submission & Acknowledgement	16 of 16 	2021 ✔ Complete Validation
Query & Response	7 of 8 	2021 ✔ Complete Validation
Data Quality Incoming/Ongoing	25 of 27 	Report not Available
Clinical Decision Support	5 of 12 	2021 ❗ Major Difference - Validation Not Met



IIS Measurement & Improvement Validation

PRIORITY ORDER RECOMMENDATIONS

This graphic suggests a prioritized path, supported by both CDC and AIRA, toward aligning with IIS Measurement and Improvement (M&I). The links for each step below will bring up Validation reports that display IIS results. None of these steps should represent stopping points in the process – if your IIS program cannot make progress on one step, simply move on to the next. More detailed information specific to your IIS can be found by logging into the Aggregate Analysis Reporting Tool (AART) at app.immregistries.org/aart/home.

Questions can be directed to IISinfo@cdc.gov or info@immregistries.org.





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AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

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Promoting and supporting the use of immunization information to ensure healthy communities

Who are we?

The American Immunization Registry Association (AIRA) exists to support and promote the use of immunization information to ensure healthy communities through the development and implementation of immunization information systems (IIS) as a crucial tool in preventing vaccine

Quick Links

What's New

National Meeting

Looking Back,
Day 1:

AIRA Website
and Repository

www.immregistries.org



Immunization Information System (IIS) Functional Model

The IIS Functional Model presents a framework and terminology for conveying and communicating the core functions, capabilities and attributes of IIS. These systems, whether as a single integrated IIS or as a set of interoperable modules, support public health immunization programs in achieving the **CDC IIS Functional Standards*** and in providing trusted data and information to improve clinical immunization practice, increase vaccination and reduce vaccine-preventable disease.

The model also serves as a companion and index to the **IIS Baseline Requirements Traceability Matrix (RTM)**, which provides detailed requirements across IIS functions, capabilities and attributes. The RTM and other requirements tools can be found at phii.org/iis-requirements.

Looking Back, Day 2

IIS Core Functions and Capabilities

These functions and capabilities represent core functionality of IIS. Refer to the **IIS Baseline RTM** for descriptions and functional requirements associated with each.

Administer System	Manage Organizations & Facilities	Manage Users
<ul style="list-style-type: none"> Hierarchy configuration System configuration User roles & permissions System alerts 	<ul style="list-style-type: none"> Organization/facility search Add, edit, inactivate organization/facility VFC/vaccine program enrollment Organization/facility outreach 	<ul style="list-style-type: none"> User search Add, edit, inactivate user Authentication & authorization Password management
Support Interoperability	Ensure Data Quality	Evaluate & Forecast
<ul style="list-style-type: none"> Onboarding Interfaces Data exchange 	<ul style="list-style-type: none"> Patient matching & deduplication Vaccination event matching & deduplication 	<ul style="list-style-type: none"> Clinical decision support Reminder/recall Coverage reports
Manage Patient & Immunization Records	Manage Vaccine Inventory	Provide Data Access
<ul style="list-style-type: none"> Patient search Add, edit patient demographics Patient status Patient consent Add, edit patient immunization Print/export record Mass vaccination 	<ul style="list-style-type: none"> Vaccine inventory search Add, edit vaccine inventory Vaccine ordering Review/approve order Vaccine decrementing Vaccine inventory reconciliation Vaccine transfer Vaccine wastage Vaccine expiration 	<ul style="list-style-type: none"> Standard reports Print/export reports Ad hoc queries & reports Consumer access

IIS Attributes

These attributes represent the technical characteristics of an IIS necessary to support immunization programs and stakeholders. Refer to the **IIS Baseline RTM** for descriptions and non-functional requirements associated with each.

Performance Efficiency	Usability	Reliability	Security	Maintainability	Portability
<ul style="list-style-type: none"> Time behavior Resource utilization Capacity 	<ul style="list-style-type: none"> Operability User error protection Accessibility 	<ul style="list-style-type: none"> Availability Fault tolerance Recoverability 	<ul style="list-style-type: none"> Confidentiality Non-repudiation Accountability Authenticity 	<ul style="list-style-type: none"> Analyzability 	<ul style="list-style-type: none"> Adaptability Installability

* <https://www.cdc.gov/vaccines/programs/iis/func-stds.html>

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Day 2: Assess Yourself!! 🎵

1	Assessment of IIS Core Functions, Capabilities and Attributes											
2	Worksheet to assess and identify areas of opportunity across functions, capabilities, and technical attributes as depicted in the IIS Functional Model.											
3												
4	Function	Description	Capability	Description	Current System Status/ Assessment (fully meets, partially meets, does not meet)	Comments						
5	Administer System	Management of global system settings and alerts, including set up of user roles and permissions.	Hierarchy Configuration	-- ability to create hierarchy that informs the association between geographical levels within the jurisdiction and among organizations, facilities, providers and users								
6			System Configuration	-- ability to define system-wide settings, such as management of code tables								
7			User Roles and Permissions	-- ability to define and manage user roles and use role permissions to perform a function, activity or task								
8			System Alerts	-- ability to broadcast communication to IIS users viewable upon logging into the system								
9	Manage Organizations and Facilities	Management of organizations and facility accounts.	Organization/Facility Search	-- ability to look up and retrieve an organization or facility account								
10			Add, Edit, Inactivate Organization/Facility	-- ability to add, edit or inactivate an organization or facility; ability for an organization to initiate enrollment and re-enrollment in the IIS								
11			VFC/Vaccine Program Enrollment	-- ability to enroll and re-enroll a provider organization in VFC and/or other vaccine program(s)								
			Organization/Facility	ability to communicate with								



Planning



What tools can I use to chart our program's course?

Familiar Planning Tools, Inputs, Resources

**Immunization Pgm
Cooperative
Agreement (w/IIS
Line Item)**
Based on the IPOM

Supplemental Funds

Have their own
requirements

+

**Data Modernization
Initiative Priorities**
Single or multi-year
projects focused on
a specific area

**Your Jurisdiction's
and Your Program's
Strategic Plan**
Local Priorities

In-House Documents

Policies, Standard
Operating Procedures,
Professional
Development Goals, etc.

Day 2: Tools for Data Use, Data Quality



Looking Back, Day 2



PROJECT MANAGEMENT

Deliver project objectives on
time and on budget



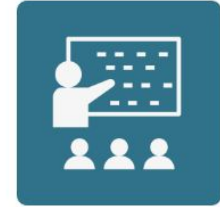
CHANGE MANAGEMENT & COMMUNICATION

Prepare stakeholders for
change



STAFFING

Plan for balancing tasks
among staff



TRAINING

Ensure users are trained in
using technology



BUSINESS PROCESS ANALYSIS

Document standard
operating procedures



REQUIREMENTS

Document and validate
requirements



TESTING

Coordinate user testing of
technology solutions

Example: Identifying Governance for Projects

Project Roles and Responsibilities Worksheet



Note to author: The table below includes sample project roles and responsibilities that can be used to form a core team and extended team, as well as inform a governance structure for decision-making authority. Core team members will be engaged in daily project activities and tasks, while extended team members may be needed to provide subject matter expertise periodically throughout the project duration. System development life cycle roles and responsibilities are included in the matrix below should

your project require these specific skill sets.

The roles in the matrix below are intended as a starting point that can be modified or adapted to suit your project needs and resource availability.

Project role	Description/notes	Purpose/roles	Key project activities/deliverables	Person(s) responsible
Executive sponsor	An executive or senior-level individual with overall accountability for the project	<ul style="list-style-type: none">• Champions the project business case.• Ensures appropriate financial, human and other resources are available and committed to the project.• Resolves project issues and provides direction.• Provides insight.• Owns engagement between IT and the program.• Serves as the ultimate decision-maker.• Participates in project meetings, as available.	<ul style="list-style-type: none">• Approves the charter.• Secures project resources (funding and staffing).	



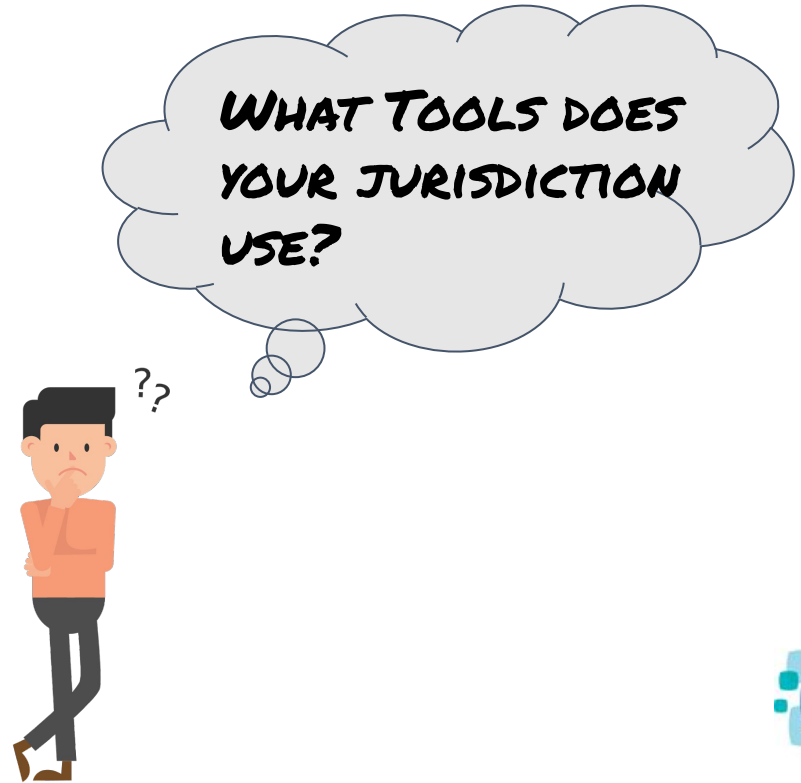
Example: IIS Staffing Roles Matrix

4	Role	Name	Job title/working title	Unit/organization	Current IIS FTE	Estimated future FTE
5	Management					
6	Lead and manage IIS operations					
7	Manage projects					
8	Analyze business requirements and processes					
9						
10	<i>Management total</i>				0	0
11	User support and training					
12	Oversee and coordinate outreach, training, and help desk					
13	Conduct user outreach and training					
14	Respond to help desk inquiries					
15	Input and manage organization and user data					
16						
17	<i>User support and training total</i>				0	0
18	Technical support					
19	Perform user acceptance testing					
20	Maintain system code sets and forecasting algorithms					
21	Oversee and coordinate IIS IT operations					
22	Develop and test software code					
23	Manage database configurations					
24						
25	<i>Technical support total</i>				0	0
26	Interoperability					
27	Oversee and coordinate interoperability efforts					



Possible Additional Tools to Help You Plan

- Smartsheet
- MS Project
- Asana
- Confluence
- ProofHub
- Jira
- The list can go on and on...



Prioritization

*Distinguish the **critical** from the **casual***

“We can do anything, but we can’t do everything.”

- Dr. Anne Zink, Chief Medical Officer for Alaska Department of Health

Important Questions to Help You Prioritize

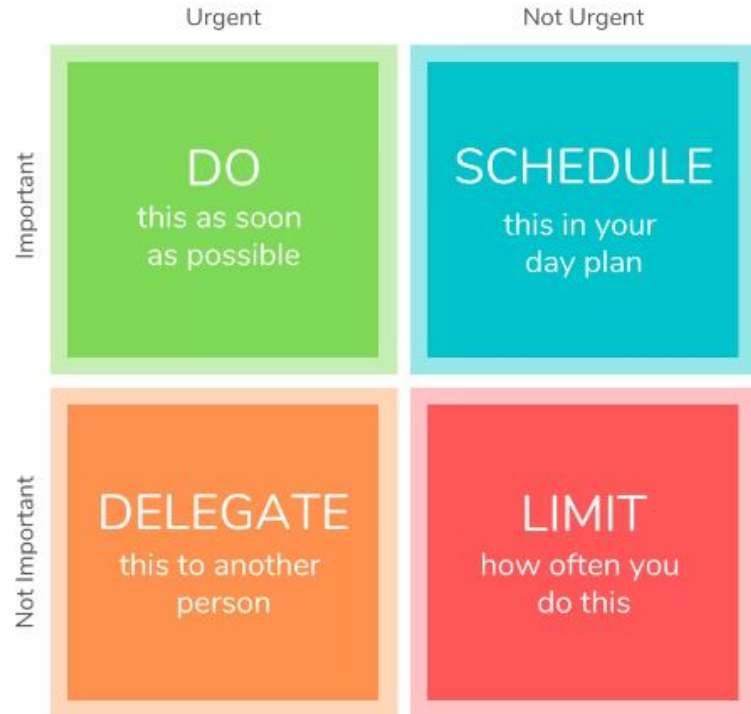
Question	Gets At...
HOW DOES THIS ALIGN WITH OUR PROGRAM'S GOALS AND OBJECTIVES?	Strategic Importance - how does this line up with broader long-term targets?
IF WE DIDN'T DO THIS, WHAT WOULD HAPPEN?	Big picture impact - what's the domino effect of completing/not completing this task?
HOW DOES THIS RELATE TO OUR OTHER PROJECTS?	Interaction - how is this linked to other tasks?
HOW IMPORTANT IS IT THAT WE DO THIS SOON?	Urgency - it may be important, but can it wait?
IF WE ACCOMPLISHED THIS TASK, WOULD IT MAKE EVERYTHING ELSE EASIER?	Efficiency - would completing this task make future work easier?

Prioritization Tools

There are a multitude of tools available to help you prioritize

The Eisenhower Matrix might be one that can help

The Eisenhower Matrix



Opportunity Costs

Opportunity costs are defined as: “the loss of potential gain from **other** alternatives when one alternative is chosen”

- *Example: An onboarding team spent 90 hours over 3 months working with a small provider to get their bidirectional interface set-up. But what did they NOT do (and reap the benefits from) because they were busy responding to a single provider?*

Can you think of examples of opportunity costs in your program?



Communication and Transparency



Once you set your priorities, how do you communicate about them?
During the Change Management session, we talked about Change Readiness:

- Past changes have been implemented successfully?
- Leadership is visible and active?
- Organization encourages new ideas?
- Management team is receptive to new ideas and encourages open communication?



Activity: Your Prioritization Strategy

Break up into assigned teams

Given everything you've heard over the last three days, discuss your approach to setting priorities, and make notes in your workbook:

- Who will you collaborate with in this priority-setting process?
- What supports do you have in defining and operationalizing priorities?
- What challenges stand in your way and need to be mitigated?
- What immediate priorities bubble up coming out of this meeting?





Activity: Your Prioritization Strategy

Share your group's input with the larger group!



Summary Take Home Points



IIS leaders have more data and tools available than ever before to guide their decisions



All this information can be overwhelming, so it is important to be able to discern what's most critical for your program



Competing priorities and limited resources continue to challenge leaders, and require thoughtful strategies and a transparent process for success

Questions/Comments/Discussion?



Assessment, Planning, and Prioritization

Resources

- [CDC Data Quality Reports](#) - identifies jurisdiction-specific data quality strengths and challenges
- [AIRA Aggregate Analysis Reporting Tool \(AART\)](#) - an application developed to visualize and compile results and information on community-driven measures and tests related to IIS Functional Standards
- [IIS Functional Model](#) - a framework and terminology for conveying and communicating the core functions, capabilities and attributes of an Immunization Information System (IIS)
- [IIS Learning Hub](#) - one-stop shop for all PHII IIS resources
- [IIS Project Governance Worksheet](#) - defines roles among the project team to help identify who is ultimately responsible for managing specific project tasks and establishes a common set of expectations around project accountabilities
- [IIS Staff Roles Matrix](#) - helps identify staffing responsibilities for key IIS roles and responsibilities