Message Quality Evaluation (MQE) Tool Launch and Transition to the Community

AIRA Discovery Session

September 18, 2018

3:30pm Eastern

Agenda

- Opening Welcome and Project Overview
- Timeline, Progress, and Current Status
- Demonstration of Current Release
- Transitioning to Community and Next Steps
- Discussion/Questions

Today's Speakers:

- Michelle Barber, Consultant, AIRA
- Josh Hull, Senior Developer, Michigan/MCIR
- Nathan Bunker, Senior Technical Project Manager
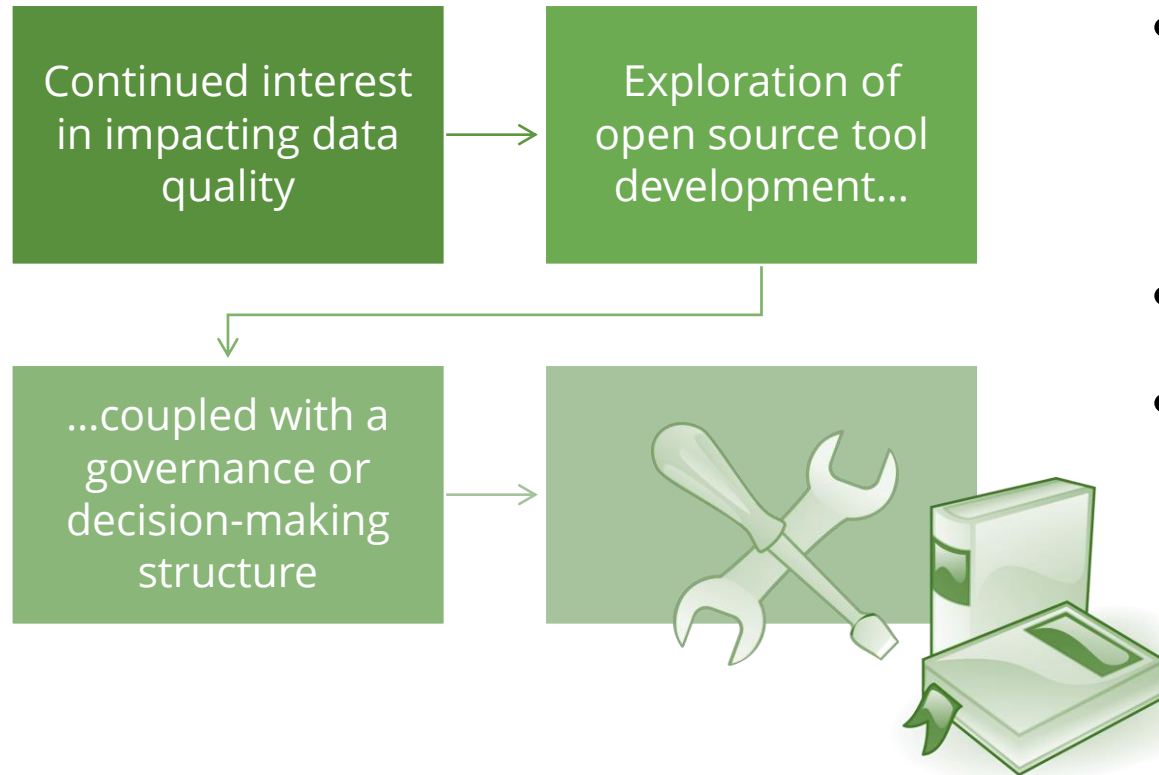- Others from the MQE Project Team

Joint Development and Implementation

- JDI is any collaborative development or implementation of standards, business requirements, functional or system requirements, design specifications, or production of actual software tools or applications by two or more IIS/Awardees.

  - Work under these initiatives extends to knowledge-sharing, joint decision-making, planning, and prioritization.
  - Potentially includes <u>shared products,</u> (respecting licensure and contracting issues), or <u>shared services</u>

The Message Quality Evaluation (MQE) Tool

Continued interest in impacting data quality

→

Exploration of open source tool development...

...coupled with a governance or decision-making structure

→

- Broad and representative engagement across the IIS community

- Open source exploration

- Development of governance/decision making

Project Considerations and Adaptations
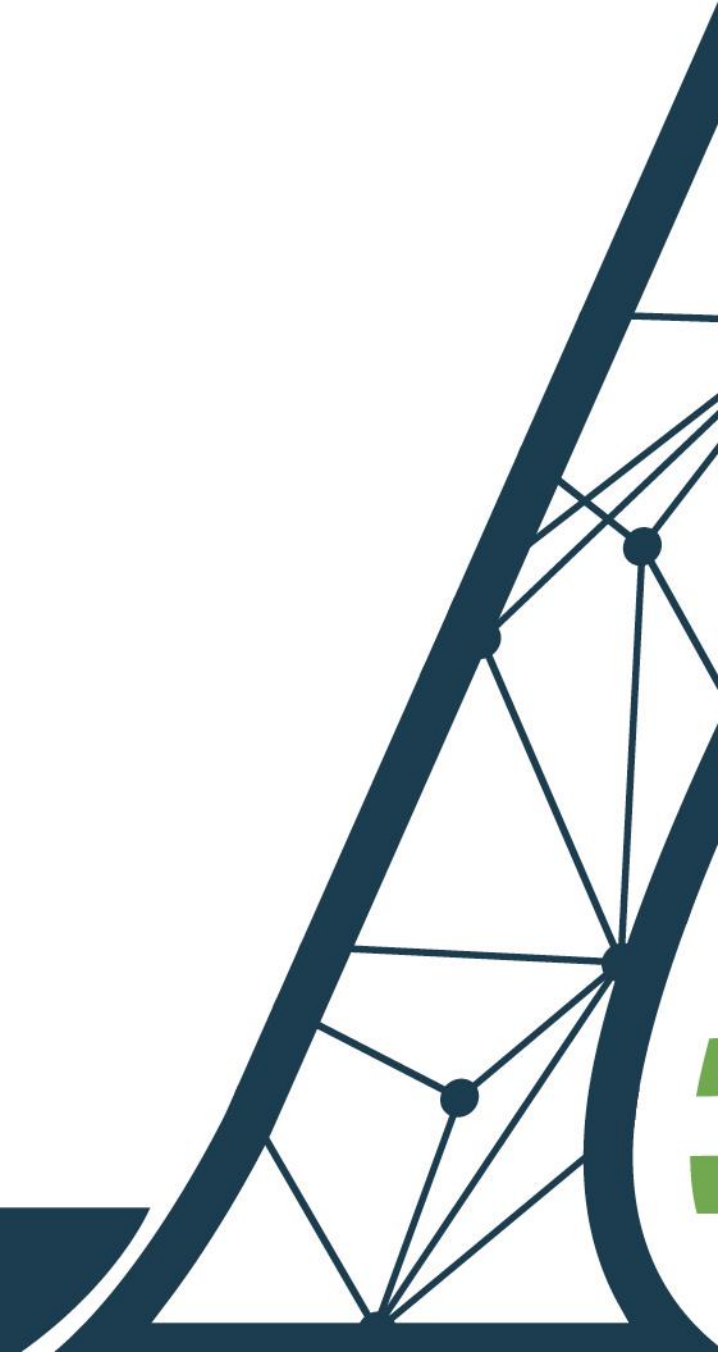
Considerations

- JDI involvement
- AIRA involvement
- Community involvement
- Community ownership of open source product
- Alternative tools on the market
- Ongoing funding and resources

Adaptations

- JDI representatives on the Project Team
- AIRA provides administrative support
- Project Team/Users provide comments, feedback, testing
- Tech Team develops based on community requests/need
- Not advocating THE solution, but A solution – work done here can be integrated with other solutions
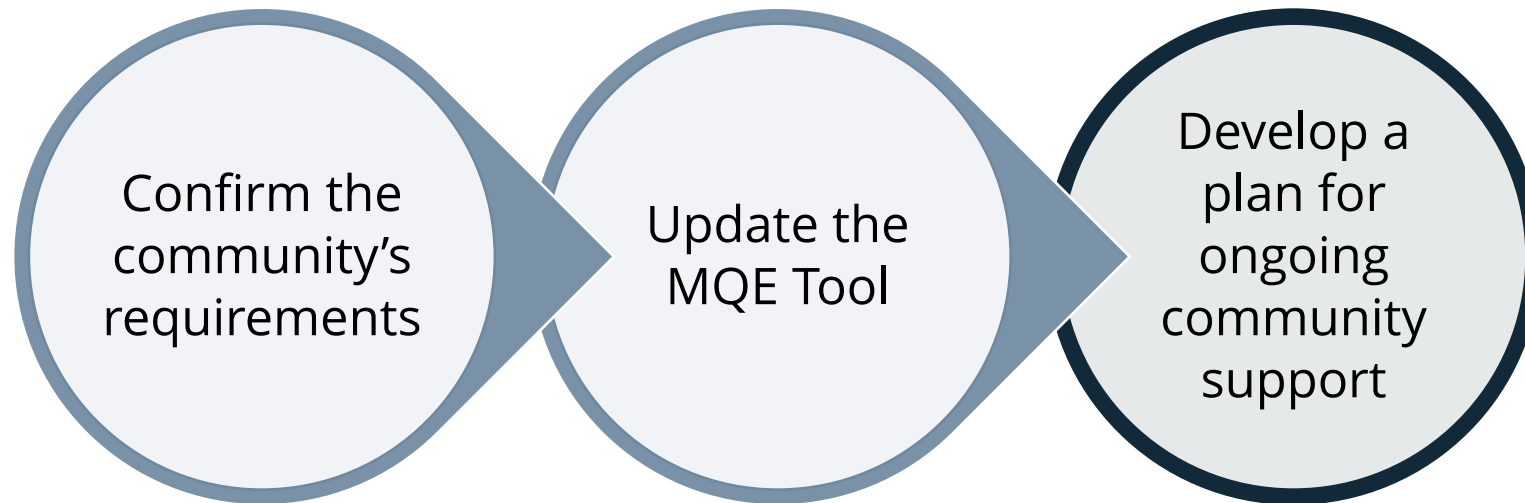- Tool has value for its ability to integrate (or be integrated) with other tools
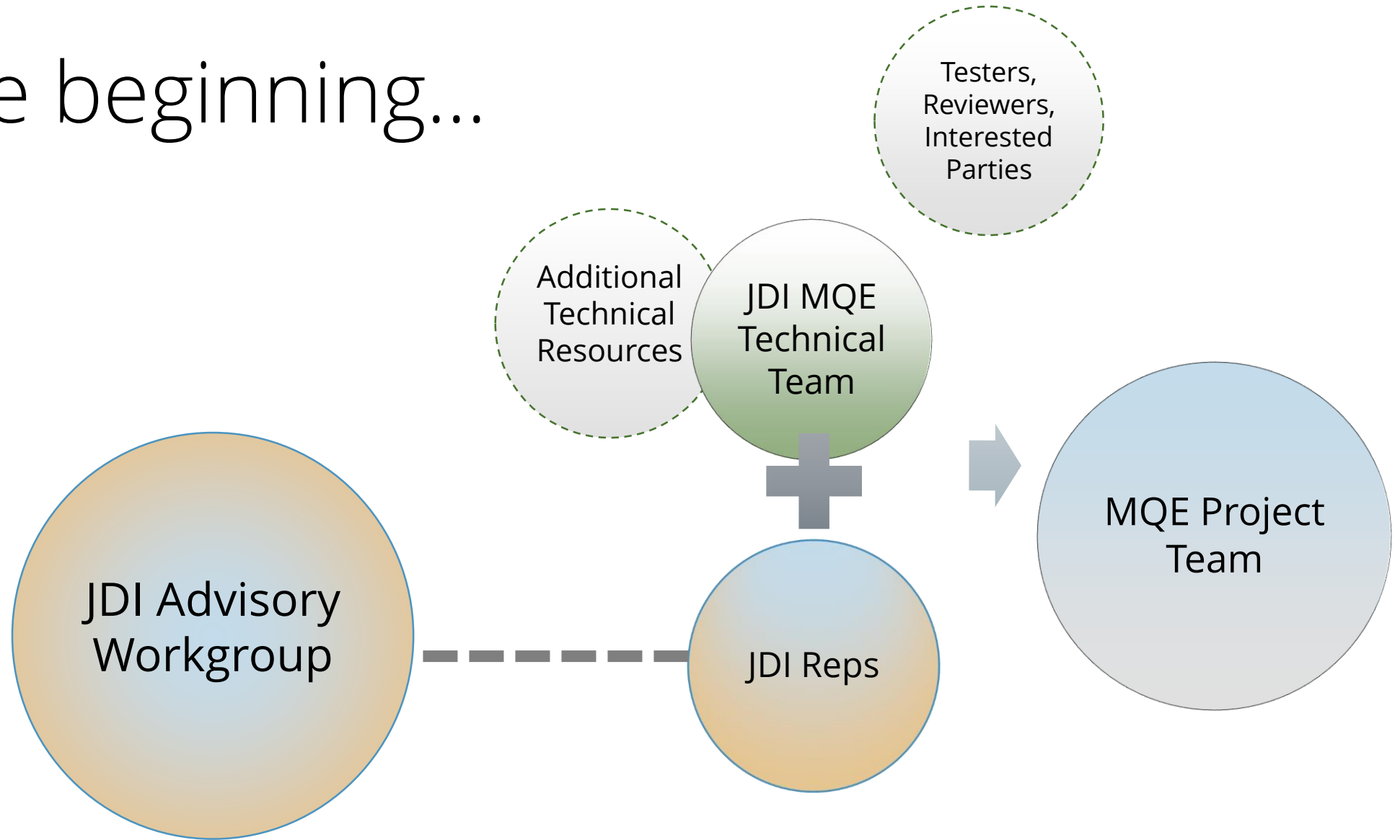
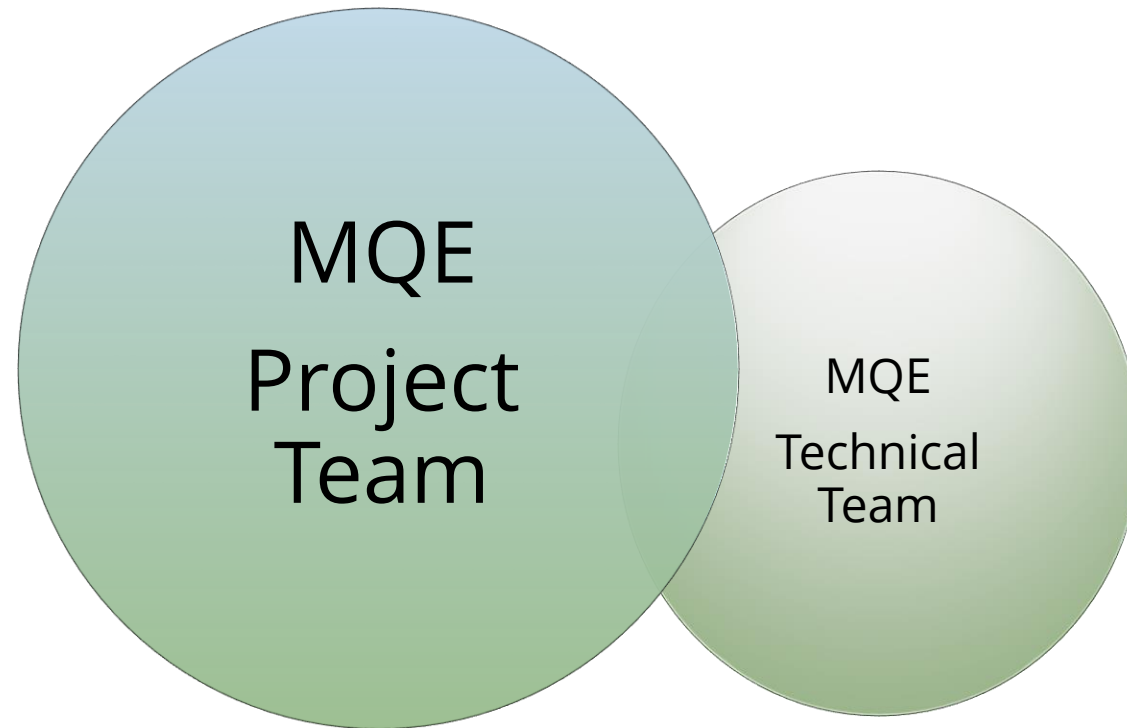# Project Organization

MQE Project Team

This small working group of programmatic and technical experts will develop, update, and configure the open source MQE Tool, and inform a structure and framework for decision-making to sustain the project going forward.

Confirm the community's requirements

Update the MQE Tool

Develop a plan for ongoing community support

In the beginning…

...today

Who are they and what have they done?

Governance	Project Team	Tech Team

• JDI Advisory Workgroup
  • General Oversight
  • Document Approval
• AIRA-MQE
  • Administrative Support
  • Document creation
	• Document Input
	• Enhancement Request
	• Prioritization
	• Use and Direction
	  • JDI and AIRA
	  • IIS Programs
	  • Vendors
	  • Consultants
		• Build and Test
		• Propose new functionality
		  • AIRA
		  • IIS Programs
		  • Vendors
		  • NIST

MQE Project Overview and Update

What is the MQE Tool?

- Designed to assist sites in **consistently evaluating and improving the quality of data** coming into their IIS

- Allows users with varying levels of expertise to quickly and easily generate a series of reports that describe the quality of incoming immunization data

Technical Architecture Goals

- Open-source and freely available to the IIS community
  - Pre-configured to be ready to process data
  - Intuitive user interface
  - Quick installation on modern OS
  - Quickly create an easy to read/easy to navigate data quality report

- Identify data quality issues in a batch of HL7 messages
  - Based on business rules/needs of IIS
  - Not primarily focused on message conformance (NIST Integration)
  - Evaluate data quality in a batch messages by submitter
  - Allow data quality analyst to get above the weeds and see the big picture

National Standards and Local Variation

Pre-configured

- CDC Implementation Guide HL7 2.5.1 r1.5 and addendum
  - VXU will be used to accept data
- AIRA ACK Guidance document
  - ACK will indicate the results of the analysis of single message
- MIROW guidance on Data Quality
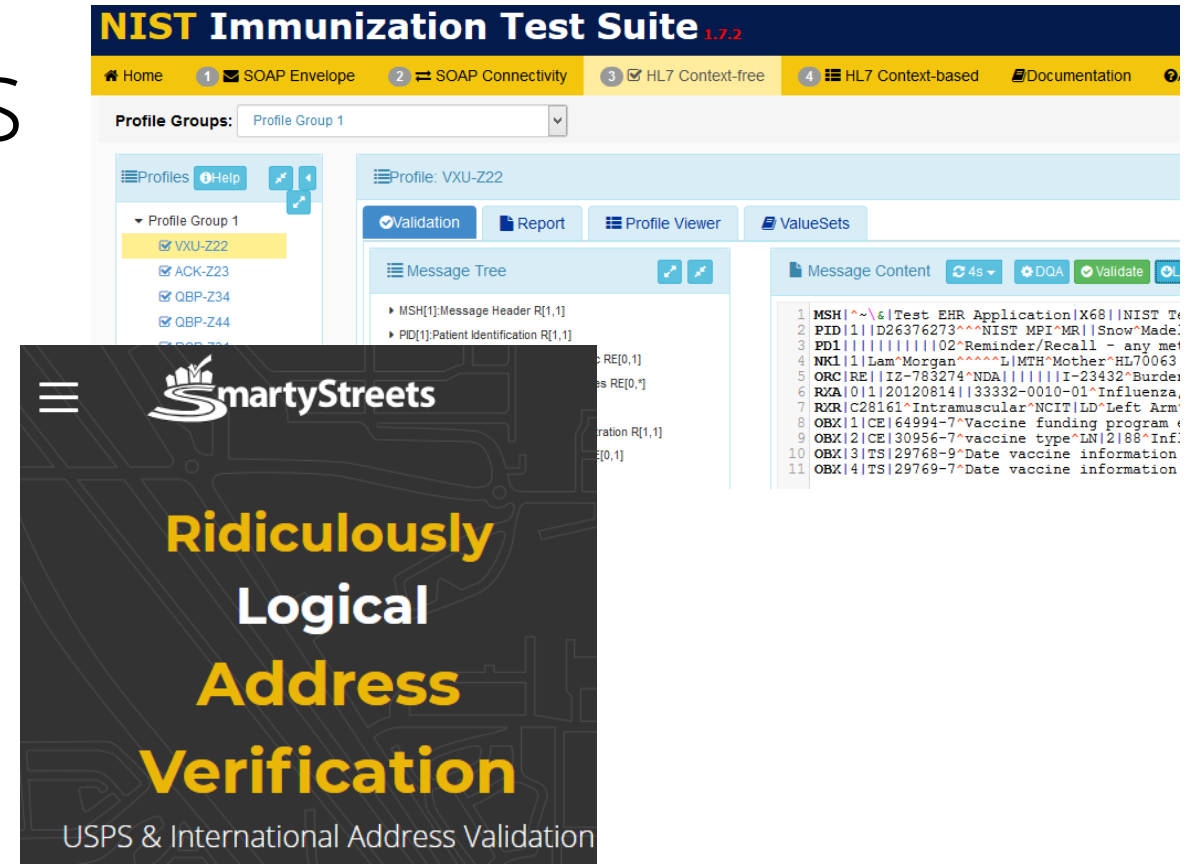- CDC Vaccine Code Sets

Configurable

- Status of coded values and additional local codes
- Issue level setting for validation detections (errors vs warnings)
- Report weight and section enabling configuration

Integrated Resources

- NIST
  - NIST uses MQE detections
  - MQE uses NIST for conformance errors
- SmartyStreets
  - Address validation access provided by separate JDI project
- CDC Vaccine Code Base
  - Referenced by MQE
  - Tables maintained by CDC, updates to metadata maintained by AIRA
- Data at Rest Project

Project Timeline

DQA Tool	JDI Project initiation Draft documentation	Outreach to Immunization Program Managers Prioritize requirements	Convene Project Team Documentation revision Monthly Sprints	In-person Sprint Public release	Transition to Community Official launch
Pre Oct 2017	Oct 2017 - Feb 2018	Feb 2018	Mar 2018 - Aug 2018	Aug 2018	Sep 2018

Major Tasks Completed

Organization

- Recruited and convened monthly Project Team
- Established meeting structure (updates, document review, next steps)
- Guidance on roles: meeting facilitator and scrum master
- Monthly sprints (changed over time)

Documentation

- Created initial version of documentation
- Available in AIRA repository
- GitHub for technical resources and minimal info for non-technical
- Technical processes

Application

- Rebranded
- Finished report display
- Integrated with NIST, SmartyStreets, and Vaccine Code Base
- Unit testing and documentation
- Built infrastructure for configurations

Documentation and Resources

Documentation

- Business Case (and the "pitch")
- Functional Requirements
- Resource Planning
- Implementation Guide
- User Guide
- Testing Guidance
- Decision Framework & Sustainability Plan

Other Technical Resources

- https://github.com/immregistries/mqe
  - Anyone can download the app or source code
  - Account needed to branch code or edit issues (with approval of Tech Team)
- Communication
  - Slack (https://slack.com) – developer communication
  - Uberconference.com (need Google Chrome to screen share)

Current Status

- MQE available for download and use

- Project documentation is complete

- Project Team meetings and Sprints will continue
  - New meeting facilitator (Erin Maurer, TN)
  - New Scrum Master (Michael Powell, CA)
  - AIRA will continue administrative support

Demo

Next Steps

Stay Involved

Develop

- Join the tech team and shape the tool

Test

- Make sure the tool works the way it's supposed to

Use

- Identify what you like and what you think can make it better

Govern

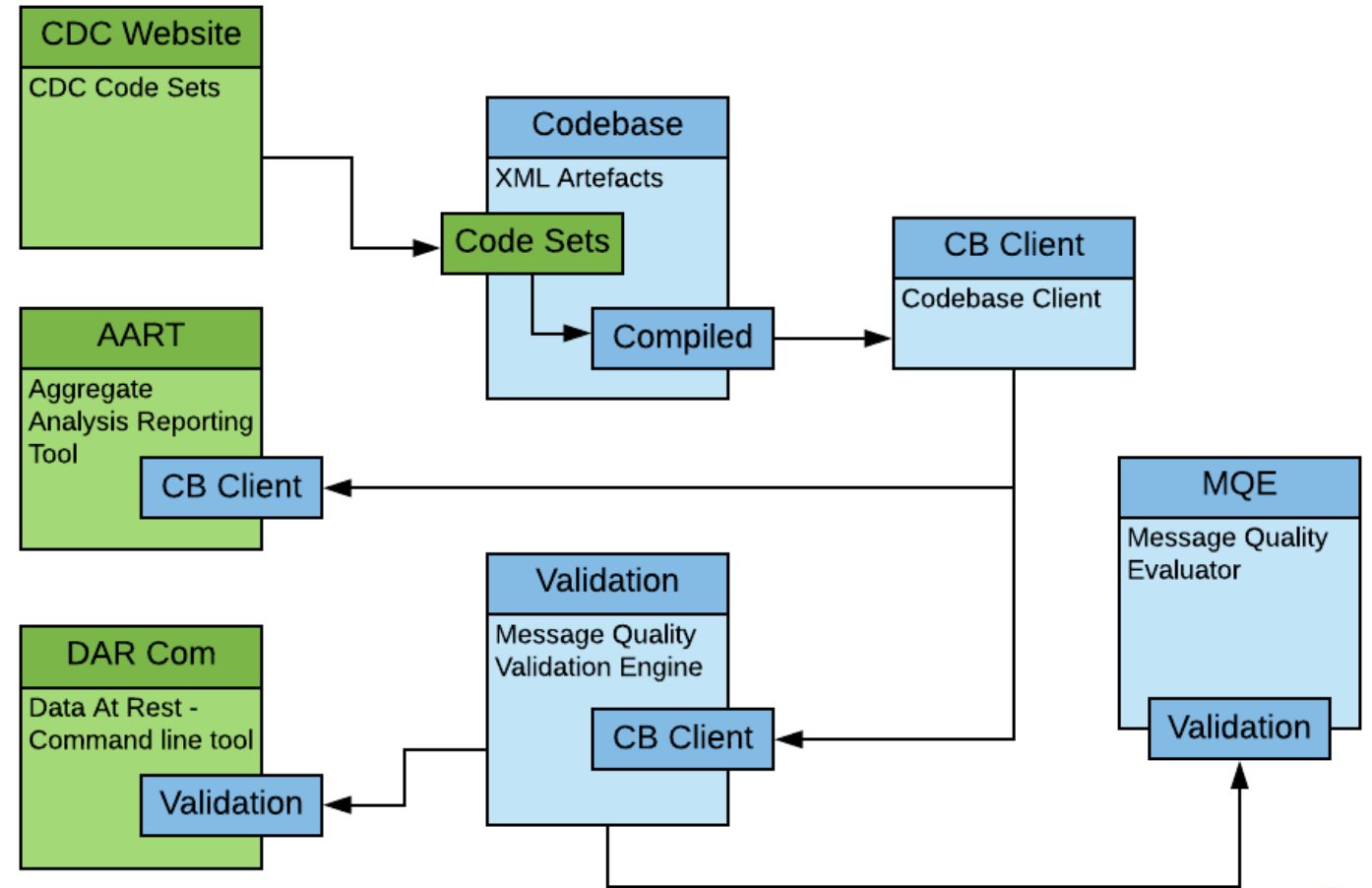- Lead the project and prioritize enhancements ongoing

Considerations for Open Source Approach

- We are continuing to evaluate how best to support Open Source development and Open Source products
  - What kind of additional documentation is needed?
  - What support models can best be leveraged?
  - How can peer support be maximized?
  - What bridges can be built with IIS vendors and implementers to foster greater collaboration?
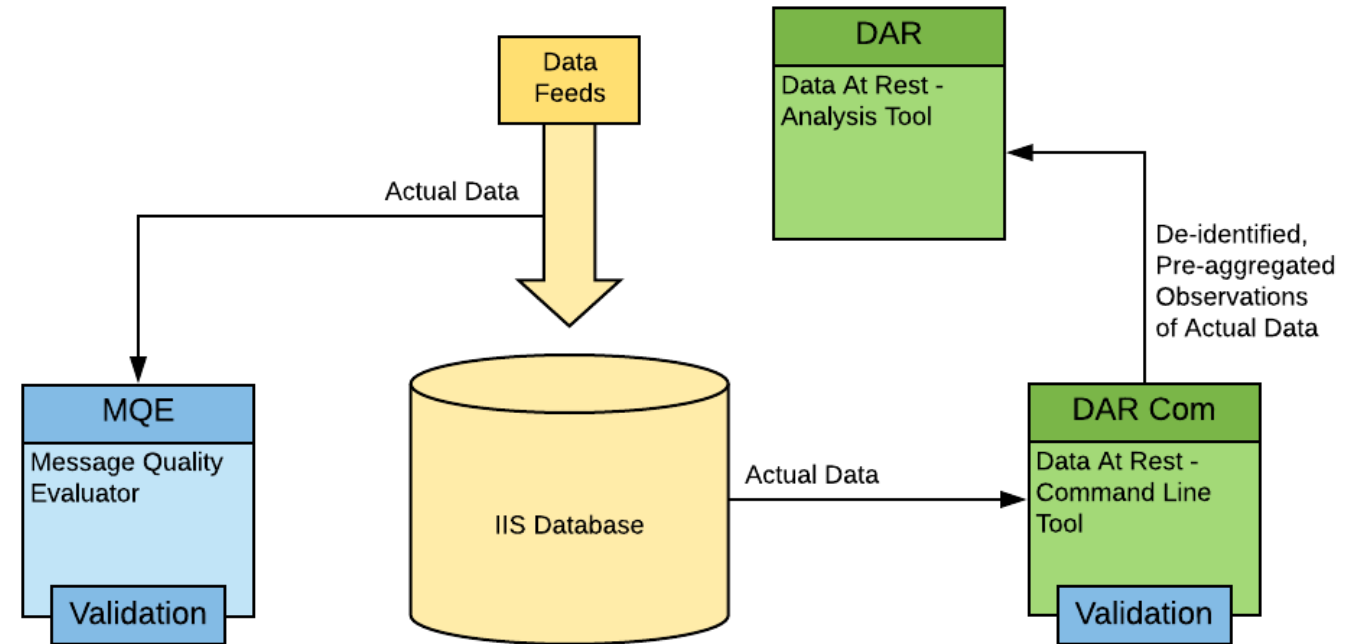 - Is Open Source one more strategy to support IIS sustainability?

MQE Modular Architecture

- MQE depends on CDC Code Sets
- Codebase holds all vaccine knowledge
- AART uses Codebase
- Validation evaluates vaccination record
- DAR evaluates data already in the IIS
- MQE evaluates data as it moves into the IIS

MQE Modular Architecture

- Data at Rest (DAR)
  - NIST is developing
  - Available for pilot sites in 2019
- DAR as 2-step process
  - Extract actual data and validate
  - Aggregate and report on validation
- Validation
  - Will use same validation engine

Remarks from the Team

- Tech Team
  - Josh
  - Hossam
  - Katelyn
  - Jason
- Michael – Scrum Master
- Erin – Facilitating Project Team
- Nathan – Integration with other tools (AART & DAR)
- Mary Beth/Maureen – Project administration going forward

Questions, Comments, Discussion?

Thank you for attending!

- For more information, visit the AIRA website at http://www.immregistries.org/initiatives/joint-development/mqe-tool for draft Functional Requirements and a draft Business Case document

- All documents will be available on the AIRA repository by the end of September, 2018

- Questions? Contact Maureen Neary, AIRA Project Manager, at mneary@immregistries.org