



## **Diverse Perspectives to Improve Oregon School Immunization Reporting**

---

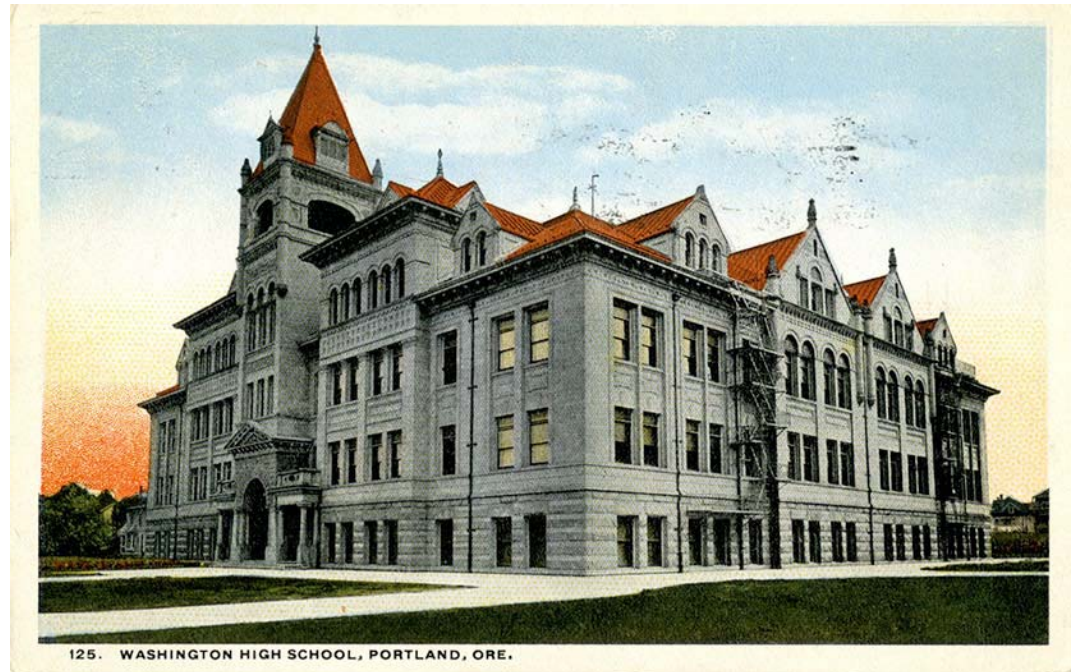
Jenne McKibben, Oregon ALERT IIS Director

Marcey Propp, Project Manager, HLN Consulting, LLC

August 16, 2018

# Discussion Topics

- Project Context
- Project Approach
- What We Heard
- Models and Options
- Evaluation Criteria
- Next Steps

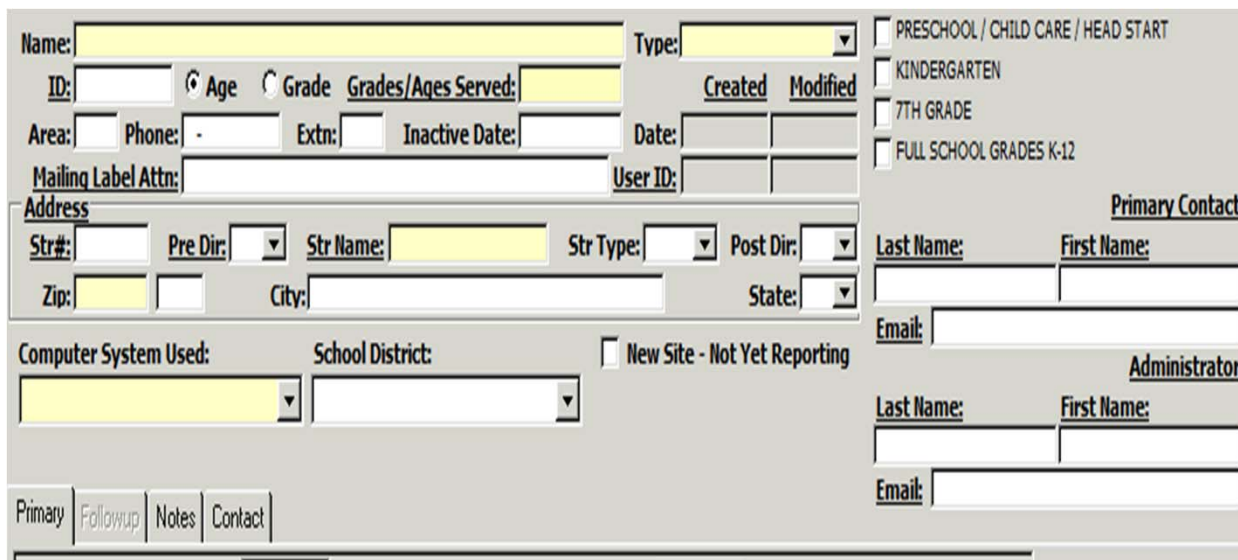


\* Additional detail is provided in the appendix to these slides

# Project Context

## Problem Statement

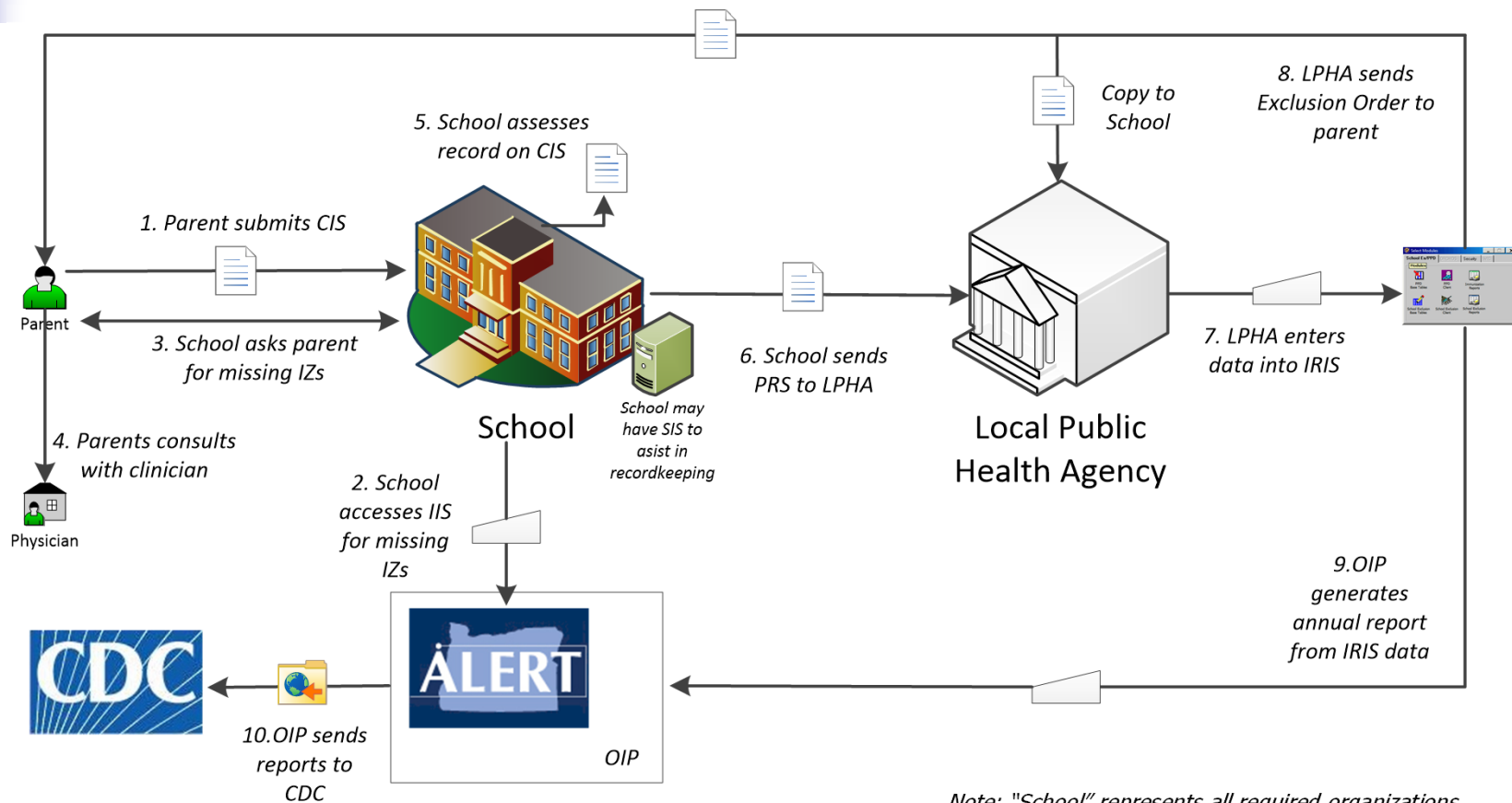
- While the current school immunization reporting process has been able to minimize the spread of disease, it is not sustainable.



The image shows a screenshot of a web-based form titled "Sample Demographic Screen in IRIS". The form is divided into several sections for data entry. At the top, there are fields for "Name:", "ID:", "Type:", "Age", "Grade", "Grades/Ages Served:", "Created", and "Modified". Below these are fields for "Area:", "Phone:", "Extn:", "Inactive Date:", "Date:", "Mailing Label Attn:", and "User ID:". The "Address" section includes fields for "Str#:", "Pre Dir:", "Str Name:", "Str Type:", "Post Dir:", "Zip:", "City:", and "State:". There are also dropdown menus for "Computer System Used:" and "School District:", along with a checkbox for "New Site - Not Yet Reporting". On the right side, there are checkboxes for "PRESCHOOL / CHILD CARE / HEAD START", "KINDERGARTEN", "7TH GRADE", and "FULL SCHOOL GRADES K-12". Below these are sections for "Primary Contact" and "Administrator", each with fields for "Last Name:", "First Name:", and "Email:". At the bottom left, there are tabs for "Primary", "Followup", "Notes", and "Contact".

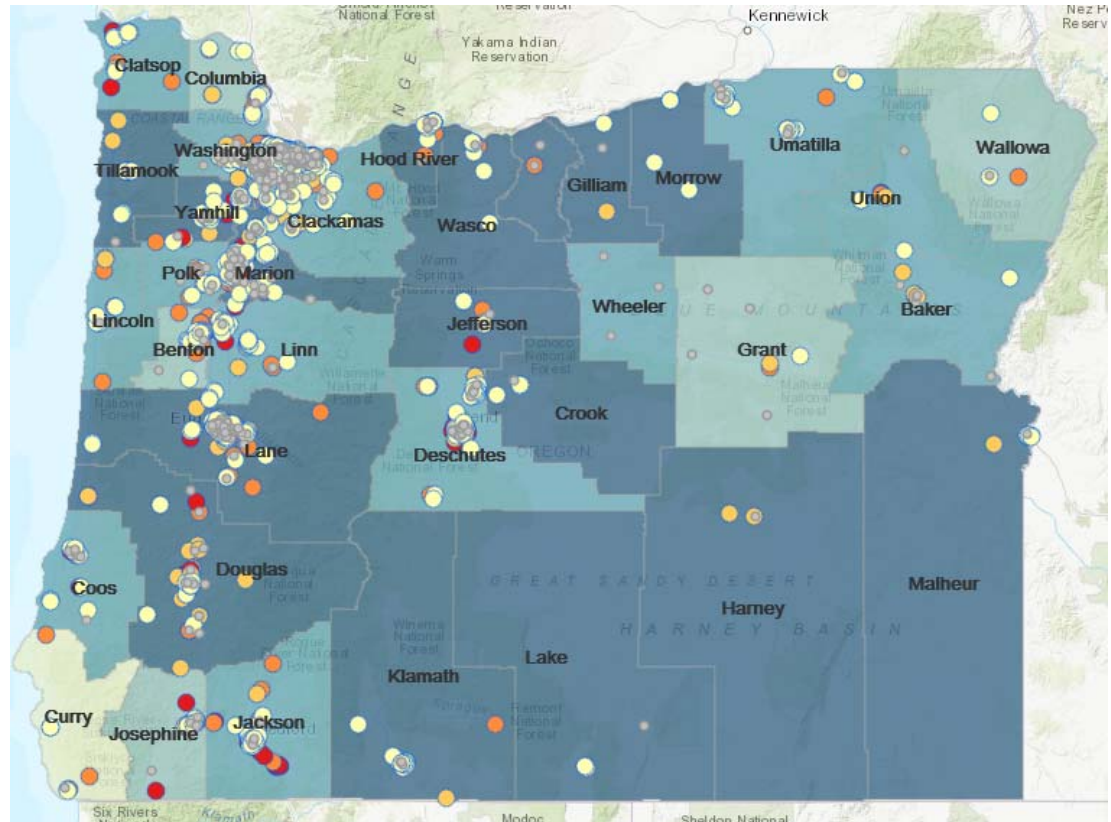
Sample Demographic  
Screen in IRIS

# Current Process



# Impacted Stakeholders

- 34 local public health authorities (LPHAs)
- 3,300+ schools and children's facilities
- Protecting 650,000+ children
- State department staff





# Project Scope

---

- The Oregon Immunization Program (OIP) identified the need for an external contractor to assess our needs and options.
- The Oregon Health Authority (OHA) contracted with HLN Consulting, LLC to facilitate a process evaluation and to solicit the opinions and ideas of diverse stakeholder groups, both in-state and out-of-state.



# Project Approach

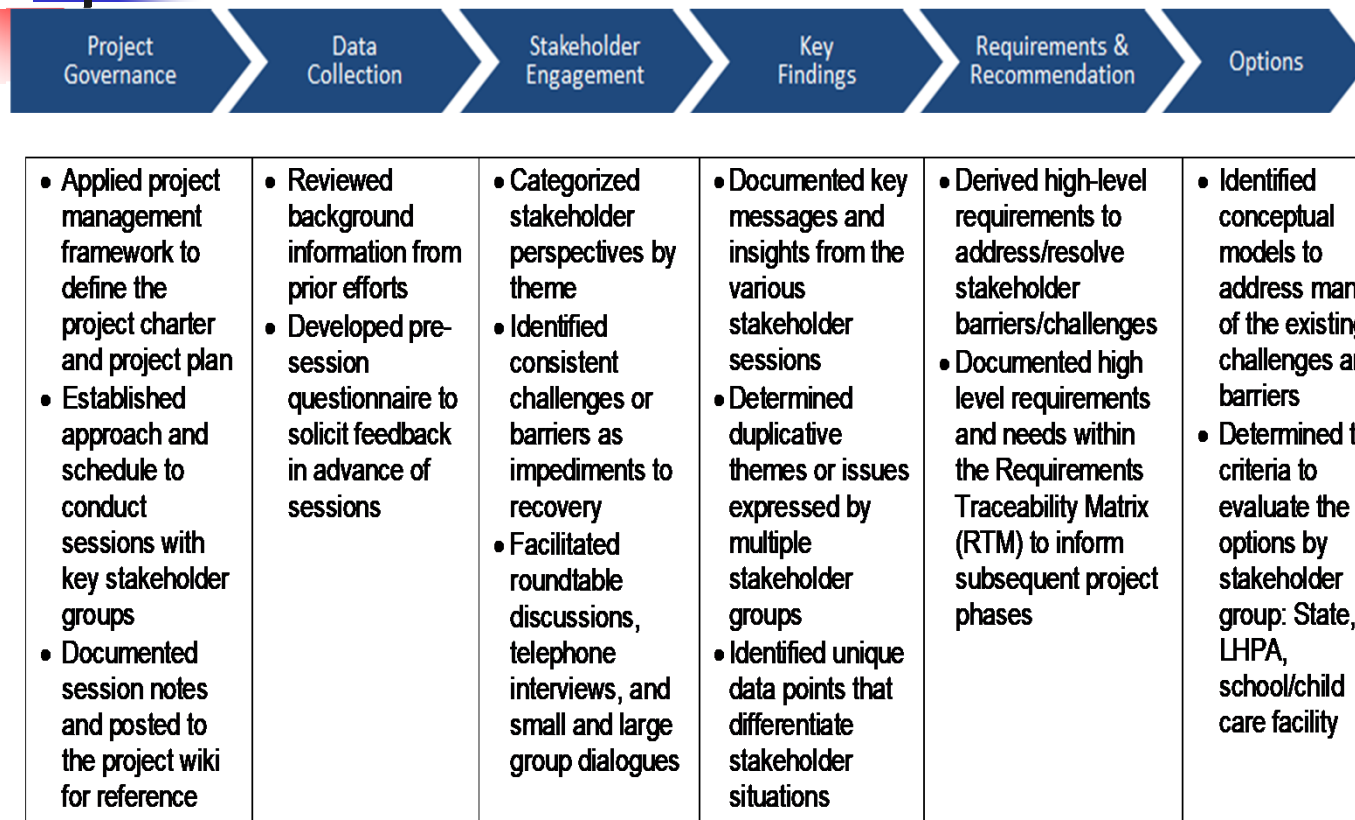
---

Applying a standard project methodology, various methods and communication channels were leveraged to solicit stakeholder perspectives and to document their opinions and ideas.

From the start of the project, during the kickoff meeting, a few conceptual models were developed for further discussion and consideration in building a solution.



# Project Approach



20 stakeholder engagement sessions culminated in:

- Solicitation of impacted stakeholders for perspectives and opinions of current/future state
- Documented and prioritized high level functional and non-functional needs (Requirements Traceability Matrix – RTM)
  - Requirements categorized as
    - R – Regulation
    - E – Essential
    - O – Optional
- Engagement session notes and key takeaways
- Conceptual models for selection/further refinement





# Stakeholder Summaries

## ■ State Staff

- Several things working well with current process
- Enhancements would be required in order for models to be considered as practical solution
- Options must consider all sites (with and without SIS)
- Need solution to decrease the workload on the state to test, develop new requirements, certify SIS

## ■ LPHAs

- Process timeframes are extremely tight – given the time of year with holiday and flu season
- Difficult to keep up with changes made after exclusion letters printed
- Inordinate amount of time spent conducting training, communicating with schools, and data entry

*Stakeholder Sessions  
(May 2017 - October 2017)*

Stakeholder Group	Sessions (#)	Participants (#)
State Staff	2	10
LPHAs	4	38
Schools	3	14
Child Care Facilities	6	6
Technical Partners	5	17
Total	20	85



# Stakeholder Summaries (continued)

---

- Schools/Child Care Facilities
  - No consistent approach followed
  - IZ coverage far outside the realm of schools and child care providers
  - Recommend statewide computerized process
- Technical Partners
  - Opportunity to leverage ODE student ID as unique identifier within SIS
  - Would support potential for centralized assessment logic



# What We Heard – Key Stakeholder Themes

---

## ■ **Roles & Responsibility**

- Dependence on school staff with limited knowledge, expertise and/or training in areas of immunizations or public health to accurately collect, assess and report on student immunization information.
- Significant need raised for additional training resources with requests for online tutorials and fact sheets.

## ■ **Process Inefficiencies**

- Preponderance of manual, time-intensive and redundant steps within the process, including multiple handoffs and actors involved to maintain and store paper-based records.
- Lack of capability or understanding to leverage the best source of electronic childhood immunization data, ALERT IIS.
- Querying ALERT IIS typically done one student at a time with resulting data then manually entered into another system.



# Stakeholder Themes (continued)

---

## ■ Process Timing

- Stakeholders inferred from the process timeframe that immunizations are critical for school attendance and disease prevention, but can wait until later into the school year (3<sup>rd</sup> week of Feb) to address with exclusion.
- The back and forth communication between parents and schools required to obtain complete student immunization records is a challenge for school staff in meeting allotted process timeframes.
- Difficult for parents to secure physician appointments by the exclusion date, particularly if well-child or other 'full' office visits are required for immunizations (*i.e.*, often no immunization-only visits by providers).
- Difficult for LPHA staff to juggle many required activities: provide support to reporting sites, conduct secondary review, enter data into IRIS, and print and mail exclusion letters.
- Difficulty in completing VARR process steps during the holiday/influenza season.

# Stakeholder Themes (continued)

## ■ Technology Platform

- Lack of a consistent process and technology to compile, store and share required information and support bidirectional communication between the State and stakeholders.
- Uncertainty as to the timing of the current IRIS application to be eliminated, and its replacement to improve the process.



Oregon law requires the following shots for school and child care attendance\*

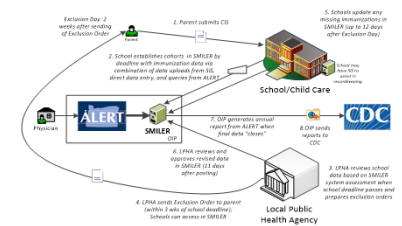
# Models and Options

- Models are provided:
  - As philosophical approaches to define a strategy
  - To inspire creative thinking to meet stakeholder needs and requirements
  - To be provocative in some cases to design an actual solution
  - To illustrate other State solutions, but are not solutions in and of themselves
- Models were evaluated based on defined criteria for:
  - State
  - LPHAs, Schools and Child Care Facilities

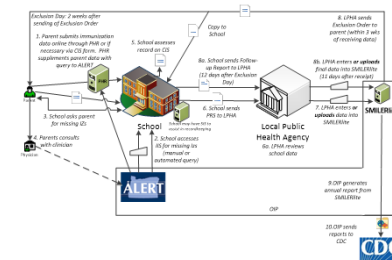
**Model 1: Leveraging ALERT IIS Data**



**Model 2: Introducing a New System of Record**

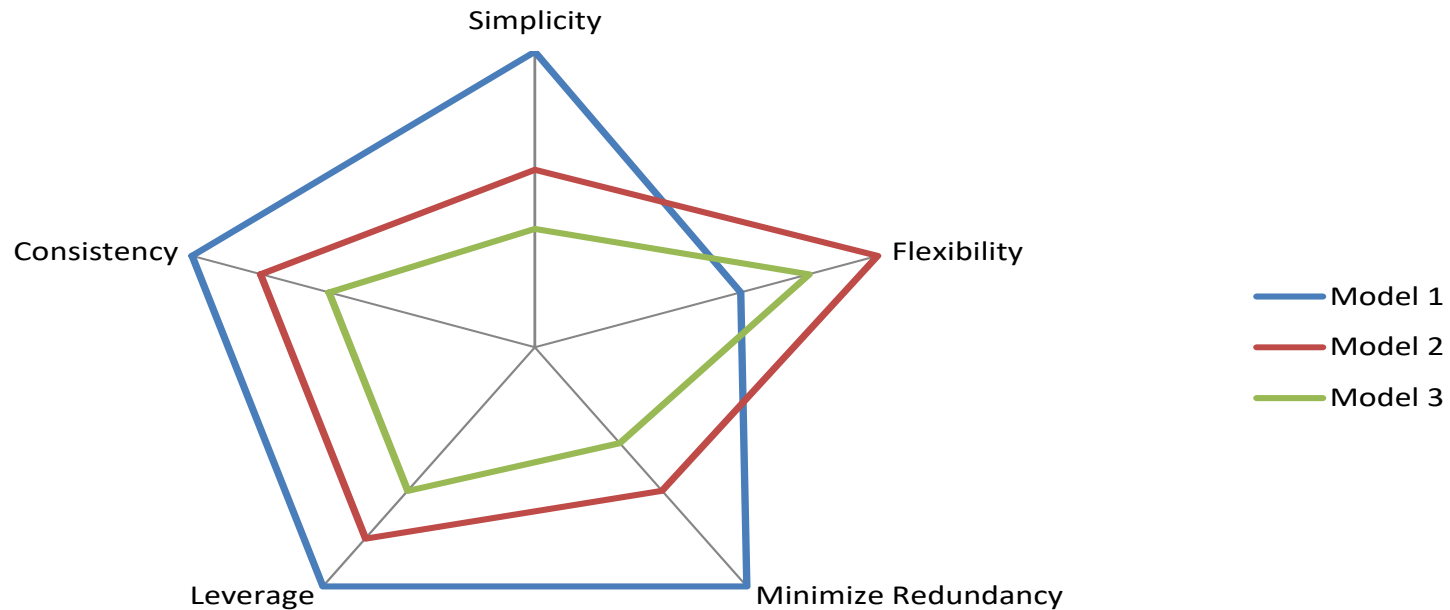


**Model 3: Replacing IRIS & Implementing a Personal Health Record**



# Model Comparison: Principles\*

The following Radar diagram reflects one way of displaying the evaluation criteria by model.



*\*Illustrative purposes only*





# Evaluation Criteria – State Perspective

---

- Process improvement
- Time to implementation
- Cost
- Staffing
- Interoperability



## Evaluation Criteria – LPHAs, Schools and Child Care Facilities

---

- Simplicity
- Flexibility
- Minimize redundancy
- Leverage
- Consistency
- Total cost of ownership
- Organizational impact/change
- Incremental technical and user support
- Speed of implementation

# Next Steps

- Unexpected benefits from the Project
  - Requirements Traceability Matrix
  - Low hanging fruit
- Next steps
  - Internal discussion of options
  - State IT context
  - Decision on state build versus vendor Request For Proposal





# Contact Information

---

## **Jenne McKibben**

Oregon ALERT IIS Director

971-673-0294 (Voice)

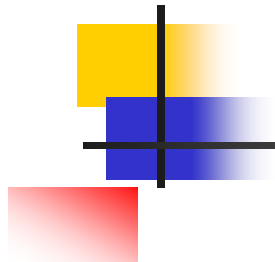
Jenne.mckibben@state.or.us

## **Marcey Propp**

HLN Project Manager

856-266-3175 (Voice)

mepropp@hln.com



# APPENDIX



# Project Principles

---

Identified during the project kickoff meeting as defining principles of the proposed solution that included:

- Collaboration. Compliance is a collaborative activity between schools, parents, clinicians, and students.
- Simplicity. Business processes for schools/child care organizations, LPHAs, OHA should be defined and described in as simple terms as possible.
- Flexibility. System should be able to accommodate changes in regulation and processes.
- Minimize redundancy. Activities should not be duplicated across the system-as-a-whole.
  - Child vaccination data should be entered once, as close to the source as possible.
  - Reminder/Recall should only be done by one entity to the same family.
- Leverage. Existing systems should be leveraged when possible, but not at the expense of data quality or compliance objectives.
- Consistency. Implement a consistent approach across sites.
- Ease of use. Implement solutions that are easy to use for most users.
- Timeliness. Systems should facilitate the timely completion of process tasks.



# Evaluation Criteria – State Perspective

---

- Process improvement

- The primary goal for the SMILER project is to improve the efficiency of the process while also reducing the time and resources necessary for its completion.

- Time to implementation

- The current LPHA reporting system, IRIS, must be migrated away from the legacy platform on which it resides.
- Additionally, calls for process change at the LPHA and school/child care levels are growing and require a solution to better meet the needs of these stakeholder groups.

- Cost

- Budgetary issues are an area of great concern and may necessitate a phased approach to implementing process improvements.





# Evaluation Criteria – State Perspective

---

- Staffing

- OHA hiring authority is difficult to obtain, and current staffing levels are insufficient to meet significant new or ongoing training needs for LPHAs, schools and child care facilities.

- Interoperability

- Data exchange between student information systems and ALERT IIS or a new school reporting system will have to be managed and supported, and it may not be possible to mandate or incentivize compliance.



## Evaluation Criteria – LPHAs, Schools and Child Care Facilities

---

- **Simplicity**
  - The option supports improvements to streamline the VARR process
- **Flexibility**
  - The option should be able to accommodate future changes in regulation and processes
- **Minimize redundancy**
  - The option features and functions should not be duplicated across the system as a whole
- **Leverage**
  - Existing systems should be leveraged when possible, but not at the expense of data quality or compliance objectives
- **Consistency**
  - The option should implement a consistent approach across sites

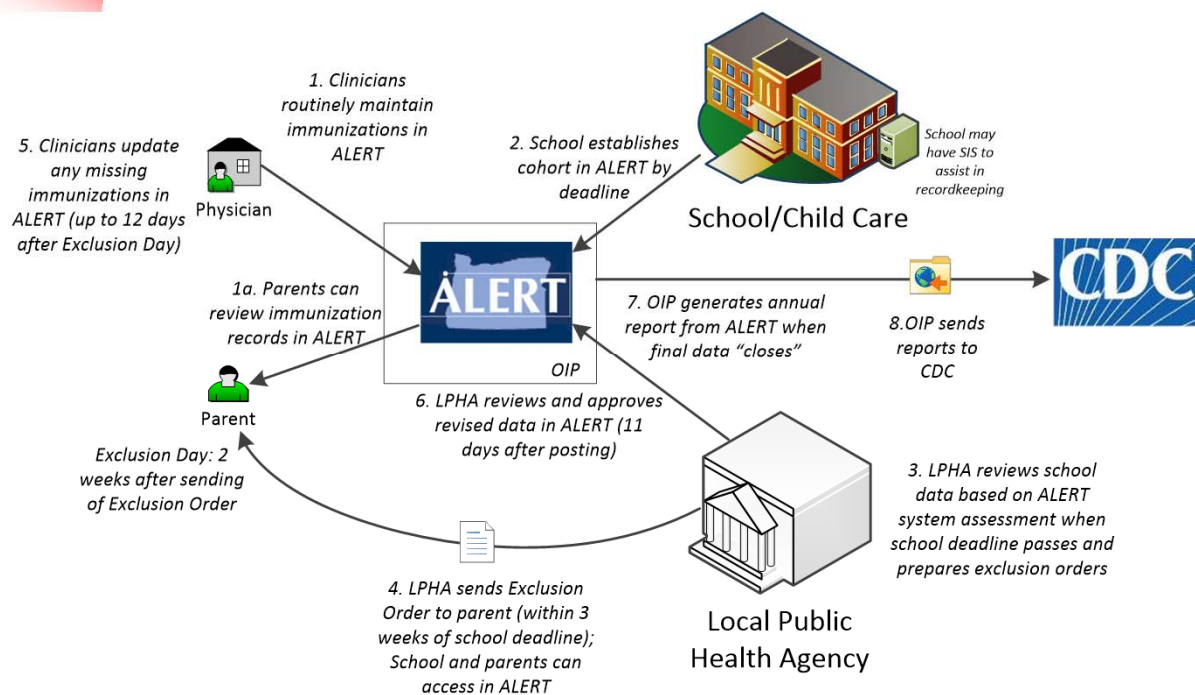


## Evaluation Criteria – LPHAs, Schools and Child Care Facilities

---

- Total cost of ownership
  - The direct and indirect cost of the option including implementation and operational expenses for all stakeholders
- Organizational impact/change
  - The option's overall impact on the processes, staffing, and resource requirements of the stakeholder organizations involved in VARR
- Incremental technical and user support
  - The incremental level of technical and ongoing user support required for the option post implementation
- Speed of implementation
  - The amount of time from selection of the option to its implementation

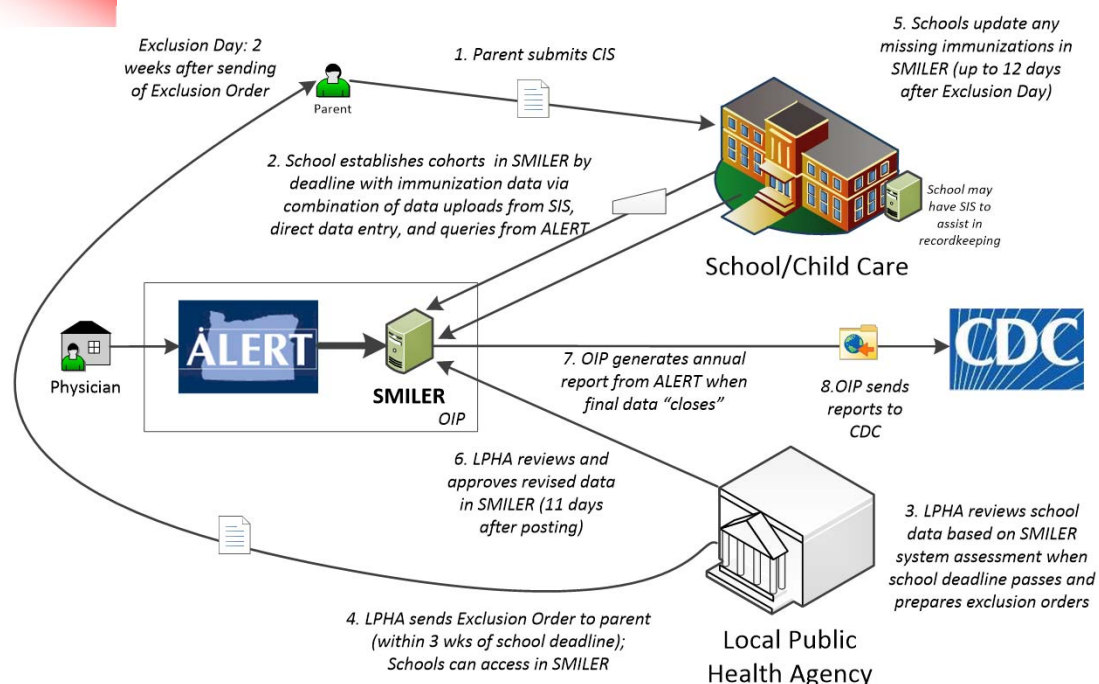
# Model 1: Leveraging ALERT IIS Data



## Main Features:

- Much simpler process
- ALERT IIS is the "System of Record" for school immunizations – all data entered directly into IIS by clinicians and schools
- Parents can view (only) ALERT IIS records
- Paper CIS forms eliminated in establishing the *initial* student record, though may be used to supplement missing immunization/exemption data
- School establishes cohort in ALERT IIS to track students
- PRS, Exclusion Orders, OIP State statistics generated directly from ALERT IIS

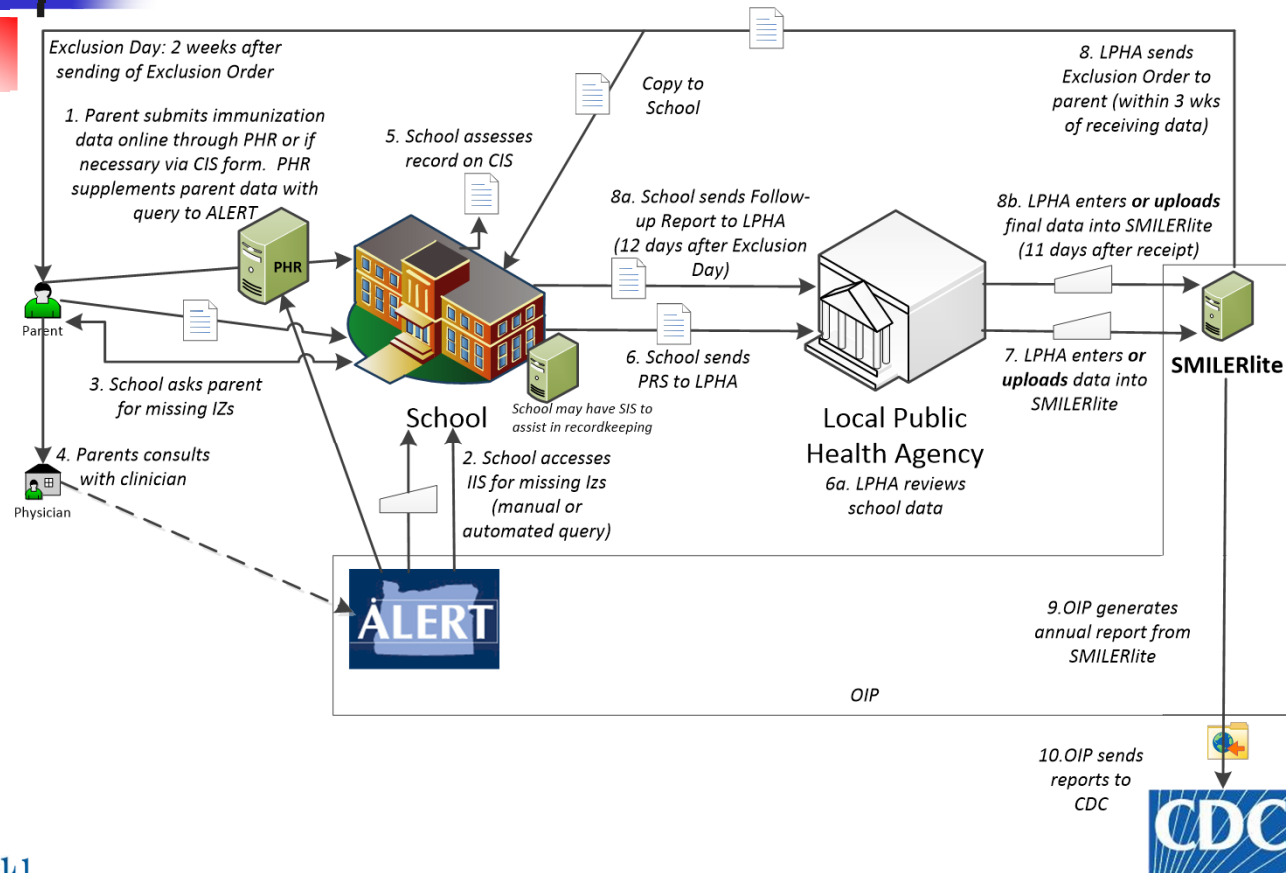
# Model 2: Introducing a New System of Record



## Main Features:

- SMILER is "system of record" for VARR data (only) - New system houses all school immunization data for all children
- Query capability to ALERT IIS
- School establishes cohort in SMILER to track *all* students
- Paper CIS forms used to submit missing/new immunization or exemption data
- Exclusion Orders conveyed as paper documents, but available in SMILER
- PRS, OIP State statistics generated directly from new system
- Option: Parent access could be provided to ALERT IIS

# Model 3: Replacing IRIS/ Implementing a Personal Health Record



## Main Features:

- New system replaces IRIS, no more no less
- Increased *automated* data flows between systems
- PHR intermediary facilitates data collection from parents informed by query to ALERT IIS
- CIS forms remain for parents who do not access PHR
- PRS initially sent on paper, but move to electronic interface as SIS become capable
- Exclusion Orders, OIP State statistics generated directly from new system, though conveyed as paper documents

# Model Comparison: Barriers\*

