



# Breakout Session: Issues in Immunization Information Systems

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**Mountain West HPV Project**  
**Biannual Virtual Consortium Meeting**  
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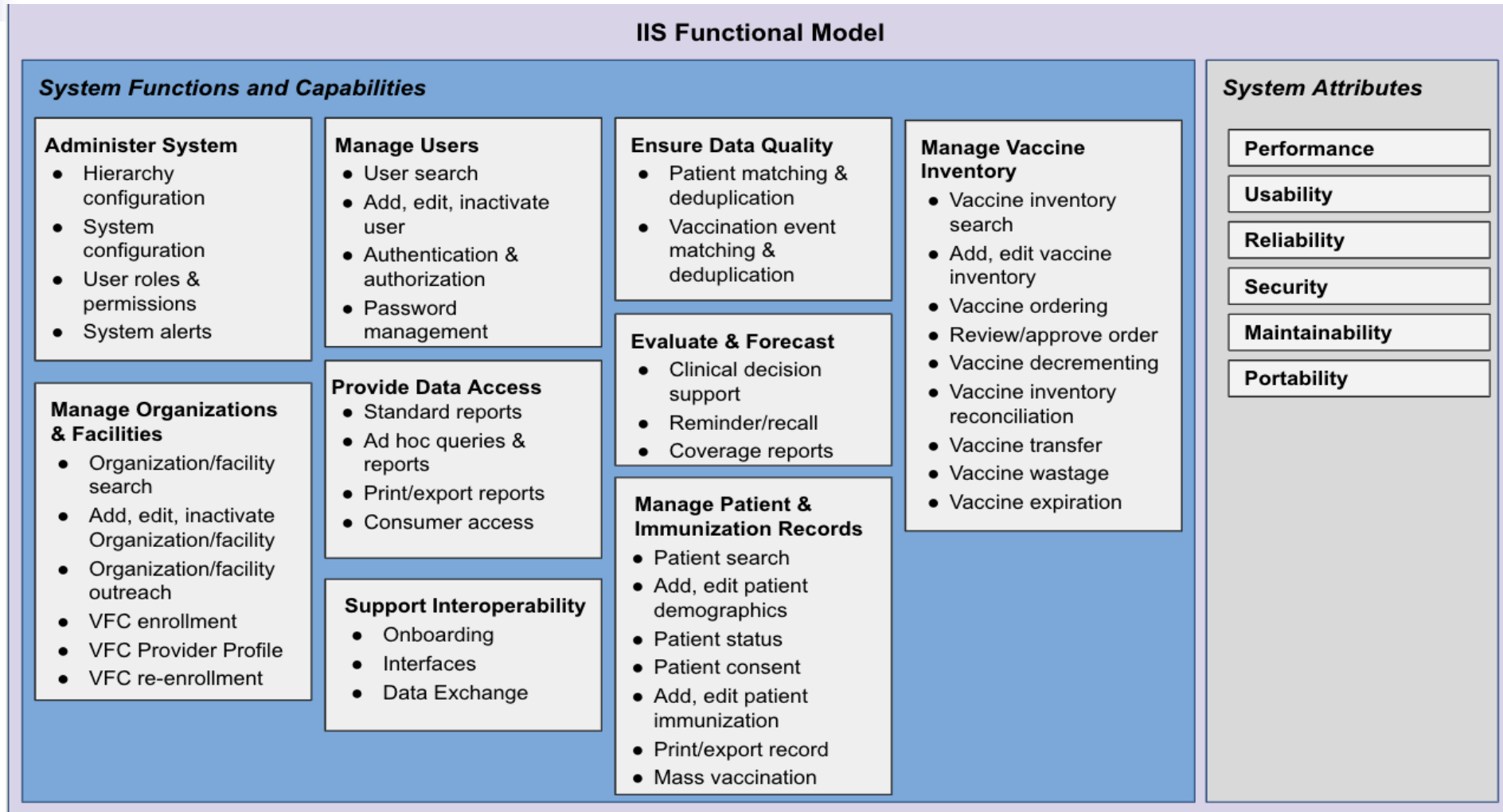
# Immunization Information System

Immunization information systems (IIS) are confidential, population-based, computerized databases that record all immunization doses administered by participating providers to persons residing within a given geopolitical area.

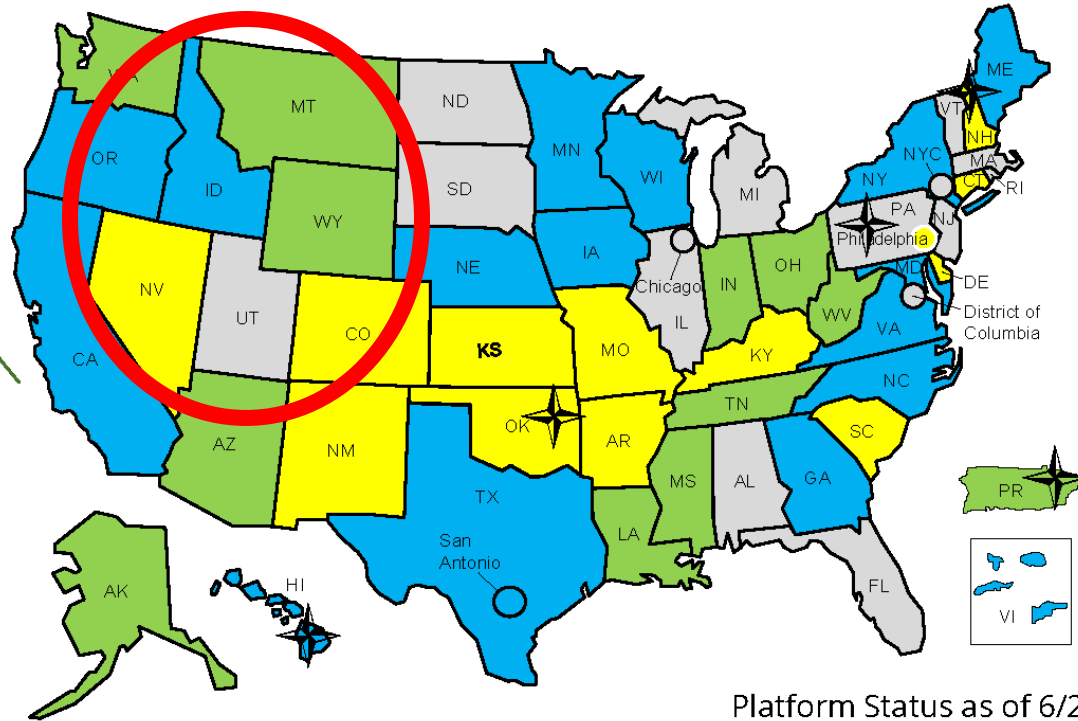
- At the *point of clinical care*, an IIS can provide consolidated immunization histories for use by a vaccination provider in determining appropriate client vaccinations.
- At the *population level*, an IIS provides aggregate data on vaccinations for use in surveillance and program operations, and in guiding public health action with the goals of improving vaccination rates and reducing vaccine-preventable disease.

<https://www.cdc.gov/vaccines/programs/iis/about.html>

# IIS Functional Model (Draft)



# IIS Product/ Vendor Landscape



*San Diego, San Joaquin, and Imperial Counties also support unique regional registries that feed into the CA system.*

● 6 Pacific Islands

- STC
- Envision
- WIR, Supported by DXC or other vendor
- Awardee-Developed
- ⊠ In Transition

Platform Status as of 6/2020





# Context: Environmental Scan

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- Long-term IIS market consolidation
- Increasing but unfocused global interest
- Movement away from home-grown systems (with some CDC encouragement)
- Existing IIS products built on aging technologies
- Decoupling of IIS from integrated Agency systems
- Lip service to Open Source but little concrete commitment
- Continuing centralization of IT support along with increasing interest in cloud computing
- HITECH ending in 2021; new CDC funding for surveillance systems/data modernization; COVID-19 funding
- CDC awarded contract in September 2020 for replacement of WIR software
- Increased pressure for IIS to “perform” under pandemic



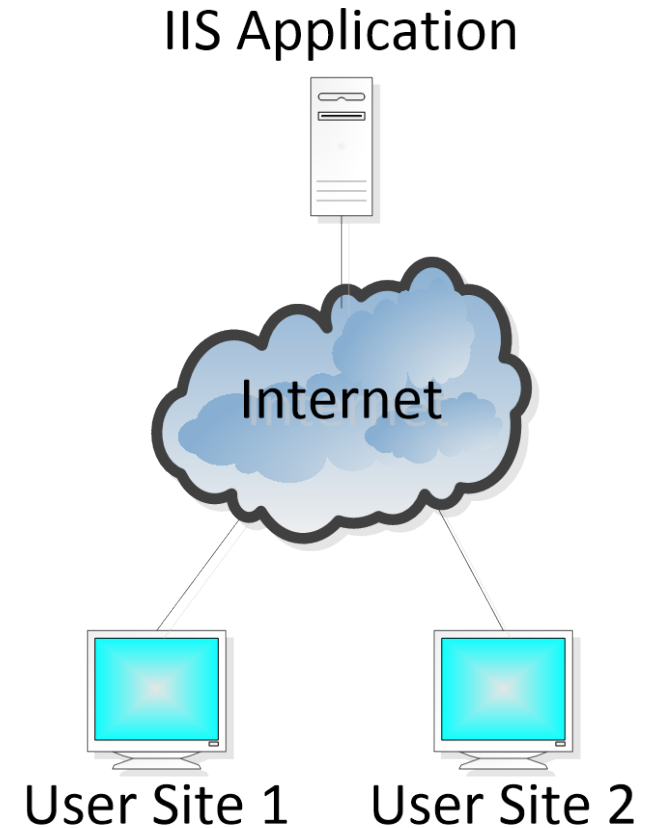
# Context: Market Assessment

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- Limited IIS market will continue consolidation with movement away from awarded-developed systems
- Vendors struggling to support current technologies and customer base effectively
- Budget environment fluid
- IIS clinical users will continue to migrate away from web interface to their own products and increase reliance on system-to-system interoperability; vaccine ordering will remain as a key *administrative* function
- HHS/ONC initiatives (*e.g.*, TEFCA) will initially have limited impact on IIS, though the initiative to reduce the admin and regulatory burden to using EHRs and Health IT (21<sup>st</sup> Century Cures Act) may take on more relevance
- Cloud hosting will continue to gain popularity both to save cost and in some cases bring more independence from central IT
- Full inter-program integrated systems will become a tougher “sell” to central IT and will become harder to maintain.
- CDC NCIRD views WIR deployments as “home grown” and needing replacement

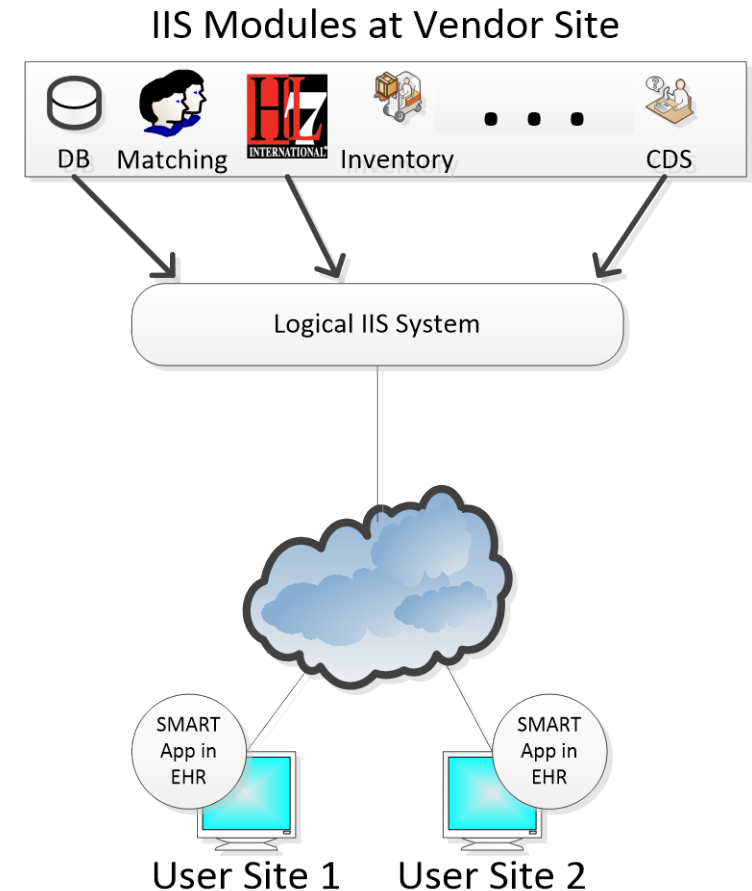
# Traditional Server-based IIS

- IIS web application and associated services run in hosted environment available to users over the Internet.
- Hosted environment may be within the IIS program, jurisdictional data center, or outsourced data center
- Hosting entity manages underlying technology (*e.g.*, network, server(s), operating system, storage) and operations (*e.g.*, backup/restore)
- Jurisdictions may share the same version of commercial software with other jurisdictions or may be using customized implementations



# Future: Platform as a Service

- Application runs on a cloud platform in a “virtual site” typically accessible through a web browser; some features may run within local systems
- User organization does not manage any aspect of the underlying technology (*e.g.*, network, server(s), operating system, storage) or operations (*e.g.*, backup/restore)
- Each project assembles modules they desire to use into a functioning “logical system”
- Vendor provides underlying tools and capabilities used by the modules
- APIs are key!







# COVID-19 Data Management Plan

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- Complex and evolving with many moving parts
- Key Documents
  - CDC [Interim Playbook for Jurisdictional Operations](#) (v2)
  - OWS [Strategy for Distributing a COVID-19 Vaccine](#)
- Several interlocking components
- Jurisdictions have choice

# System Landscape

Function	EHR/Pharma	IIS	CDC VAMS	POD/Mass Vax	HLN VPAS	PHR	CDC VTrckS	CDC Data Clhse	CDC Data Lake	Vaccine Finder	Tiberias
Provider Registration		✓	✓		✓		✓		✓	✓	✓
Vaccine Ordering & Inventory		✓	✓				✓		✓	✓	✓
Dose Administration	✓	✓	✓	✓				✓			
Second Dose Recall	✓	✓	✓(?)	✓		✓					
Consumer Access	✓	✓				✓				✓	
Data Analysis		✓							✓		✓



# HLN COVID-related Articles

- *Open Health News* articles (reprinted as blogs):
  - [Open Source Solutions for Immunization Tracking and COVID-19](#)
  - [Open Source Solutions For Public Health Case Reporting and COVID-19](#)
- Additional HLN Blogs
  - [Leveraging the ICE Open Source Immunization Forecaster during COVID-19](#)
  - [Data Management for Large-scale COVID-19 Immunization: This is all not as simple as it seems](#)
  - [Crucial Elements in Jurisdiction COVID-19 Vaccine Planning](#)
  - In process: *PPRL: What's It All About?*
- AIRA Snapshots
  - [COVID-19 and Immunization Forecasting](#)



# Contact Information

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