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Section E

Public Health Imperatives

Three Imperatives for Public Health

1. Embrace national standards for system interoperability and participate in their development
2. Enable “special functions” of public health systems to be accessed directly by user systems
3. Organize an informatics focus in the agency to engage in and support local, regional and national initiatives

#1: Standards Initiatives

- Health Information Exchange
 - HHS HIT Policy Committee and HIT Standards Committee
 - Nationwide Health Information Network Cooperative

- Federal/state/local systems
 - Consolidated Health Initiative (CHI)
 - Federal Health Architecture (FHA)
 - Medicaid Information Technology Architecture (MITA)
 - Public Health Information Network (PHIN)

- Eclipsed activities
 - Health Information Technology Standards Panel (HITSP)
 - Health Information Security and Privacy Collaboration (HISPC)
 - American Health Information Community (AHIC)

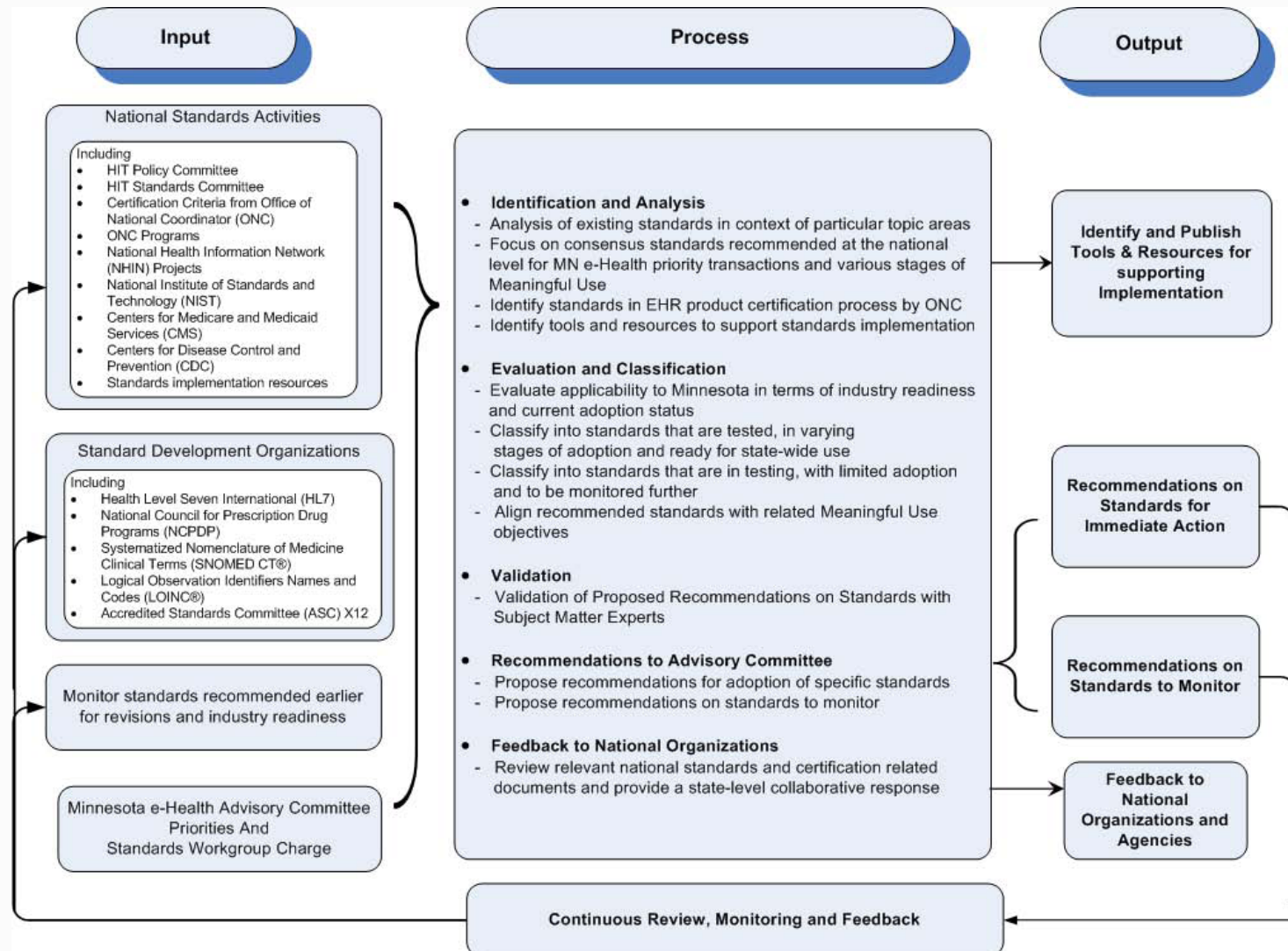
More Initiatives

- EHR System Certification Bodies
 - Certification Commission for Health Information Technology (CCHIT)
 - Drummond Group, Inc.
 - ICSA Labs
 - InfoGard Laboratories, Inc.
 - SLI Global Solutions

More Initiatives

- Industry interoperability
 - Health Level 7 (HL7)
 - Integrating the Healthcare Enterprise (IHE)
- Agency/jurisdiction standards and policies
- Public health organizations
 - Public Health Data Standards Consortium (PHDSC)

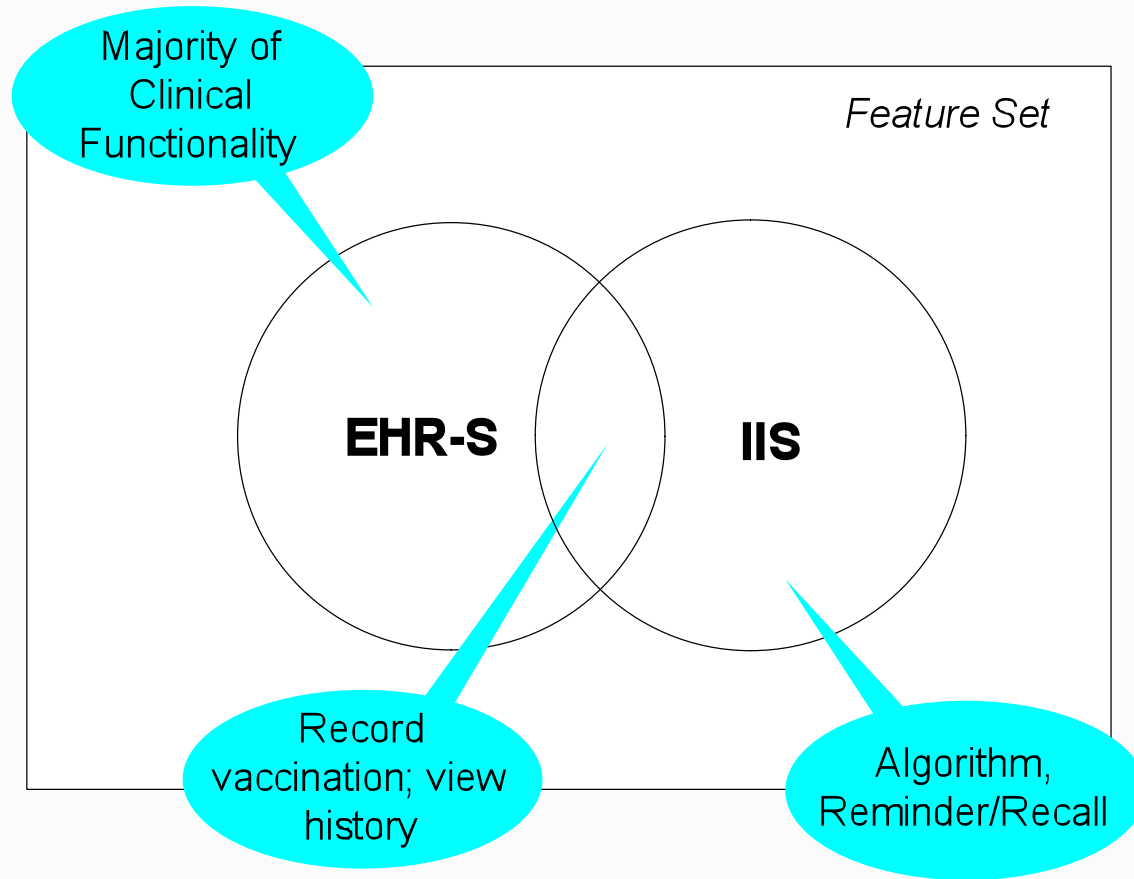
Case Study: HIT Standards Development in Minnesota



#2: Enable Special Features: Public Health Example

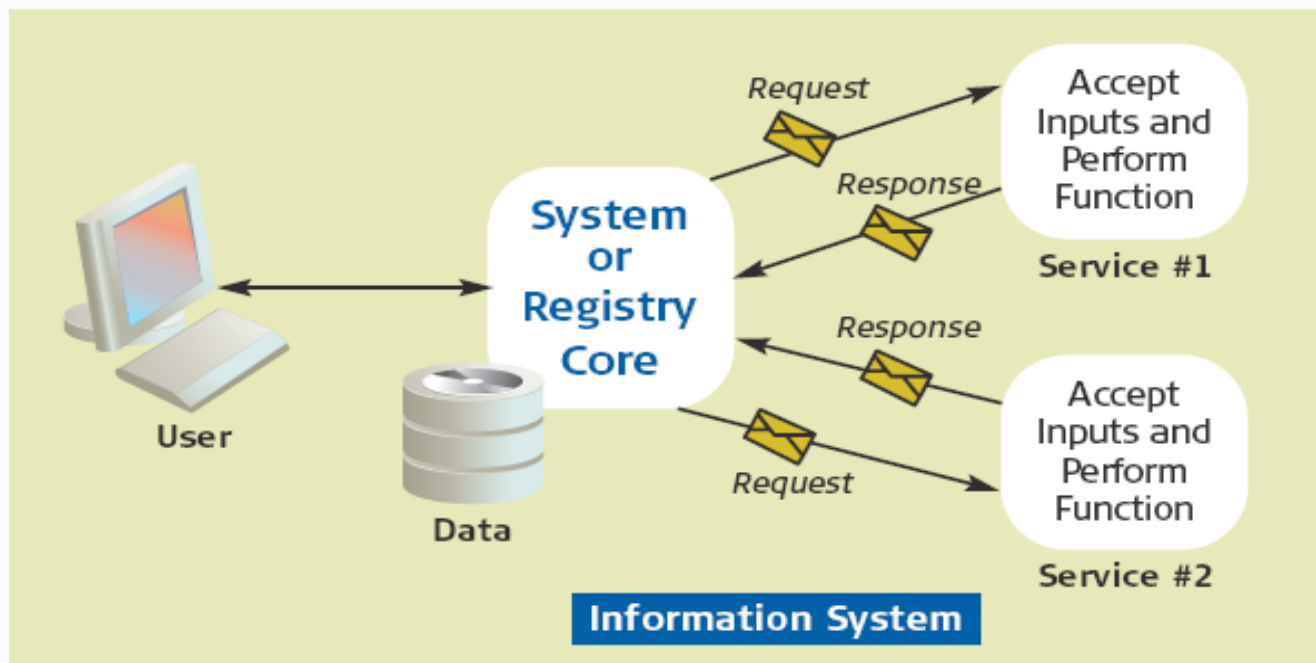
- Immunization Information Systems (IIS) serves a jurisdiction by providing a common repository for immunization information
- IIS provides specialized features not typically found in an EHR-S, such as:
 - Recommendations of next immunizations due
 - Reminder and recall to ensure that patients return
 - Vaccine ordering and order processing
 - Practice-level assessment of up-to-date status

IIS-EHR-S Tension



Enable Special Features: One Suggested Solution

- **Service-oriented architecture (SOA):** a building block approach to systems design that allows discreet functions to be accessed by any authorized system



SOA Benefits

- Increased scalability through increased modularity
- Lower cost through software component reuse
- Applicable either to entire systems or just to parts of systems, making it a flexible approach with no single “right answer” in the context of a particular application
- Components tend to be more platform independent than other strategies
- Offers increased flexibility as services can be rewritten and/or replaced as needs change with less impact on the overall system than other methods
- Offers the potential for more agile and speedy system modification and improvement through its modular design

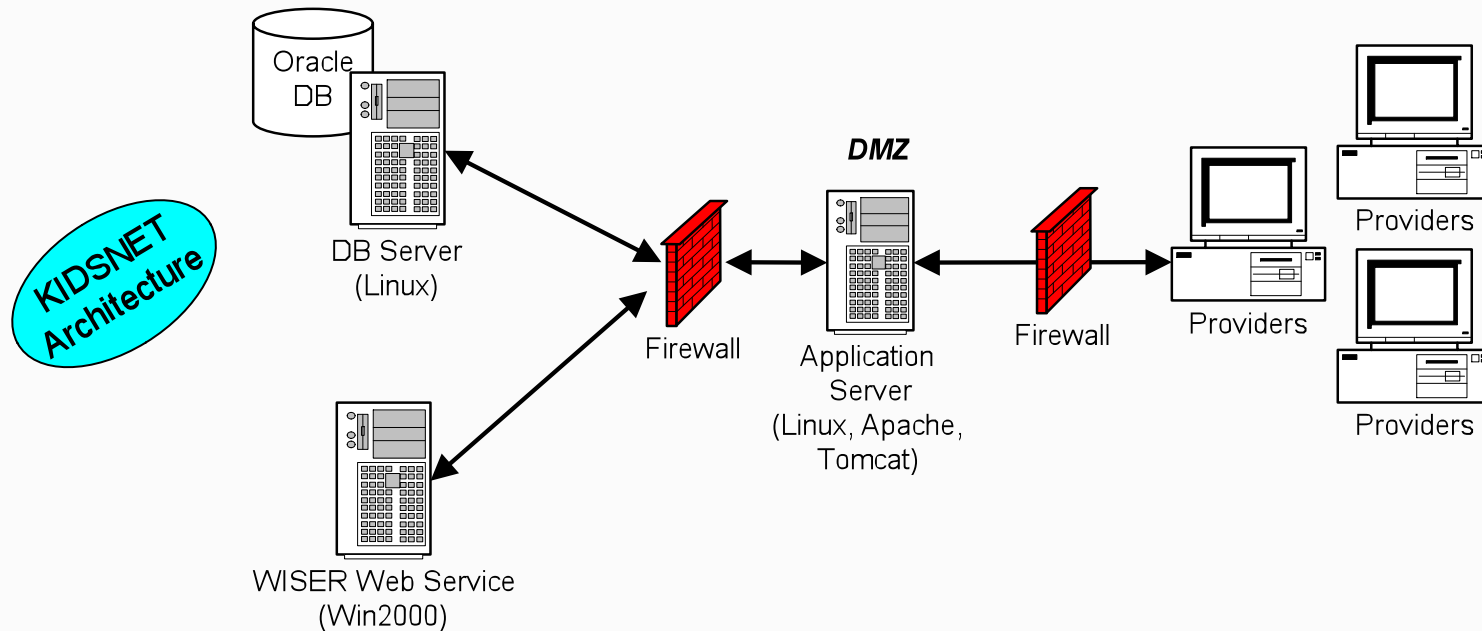
SOA Limitations

- Implementations may run slower or require more processing power as data flows between loosely coupled components that may not be optimized for these data flows
- There is a lot of hype in the marketplace over SOA, and it may be difficult to discern when components that are acquired are well tested and operating properly
- Just because a system is developed using SOA, it does not mean it will be developed using good practices or appropriate methods

Enabling Special Features: A Case Study

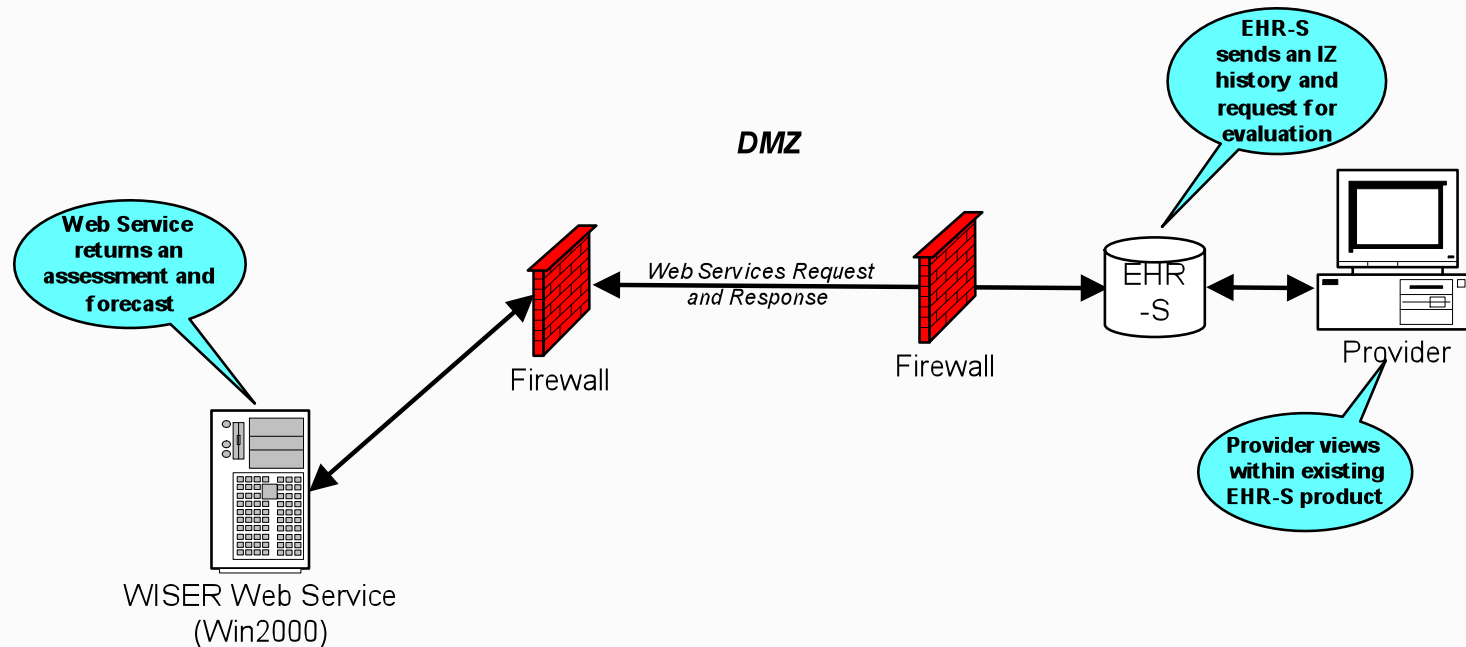
- KIDSNET, the integrated child health system in RI, did not have a robust immunization predictor algorithm
- Decided to use a version of the algorithm developed in another state (with permission)
- Deployed algorithm as a web service rather than absorbed into KIDSNET
- Other applications could now easily make use of the service

Enabling Special Features: A Case Study



- Web service is called in real time from KIDSNET application when needed
- Core KIDSNET system (Linux/Oracle) interoperates with Microsoft-based Web Immunization Service Evaluation and Recommendation (WISER) without issue

Extending Special Features: A Possible Future



- This future vision can co-exist with the previous model: Web service can interact with IIS and provider EHR systems

#3: Informatics Focus

- Not only tactical but *strategic*
- Reporting to a senior agency official
- Links to academic informatics programs
- Links to appropriate associations (e.g., AMIA , HL7, HIMSS)
- Example: CDC National Center for Public Health Informatics (NCPHI), MN Center for Health Informatics