







The legacy of  
registries is a paper  
form for abstraction  
of data from paper  
charts.







Electronic means  
web forms, CDA and  
data from HL7 v2  
messages.







There is still a human  
involved in many  
transactions.







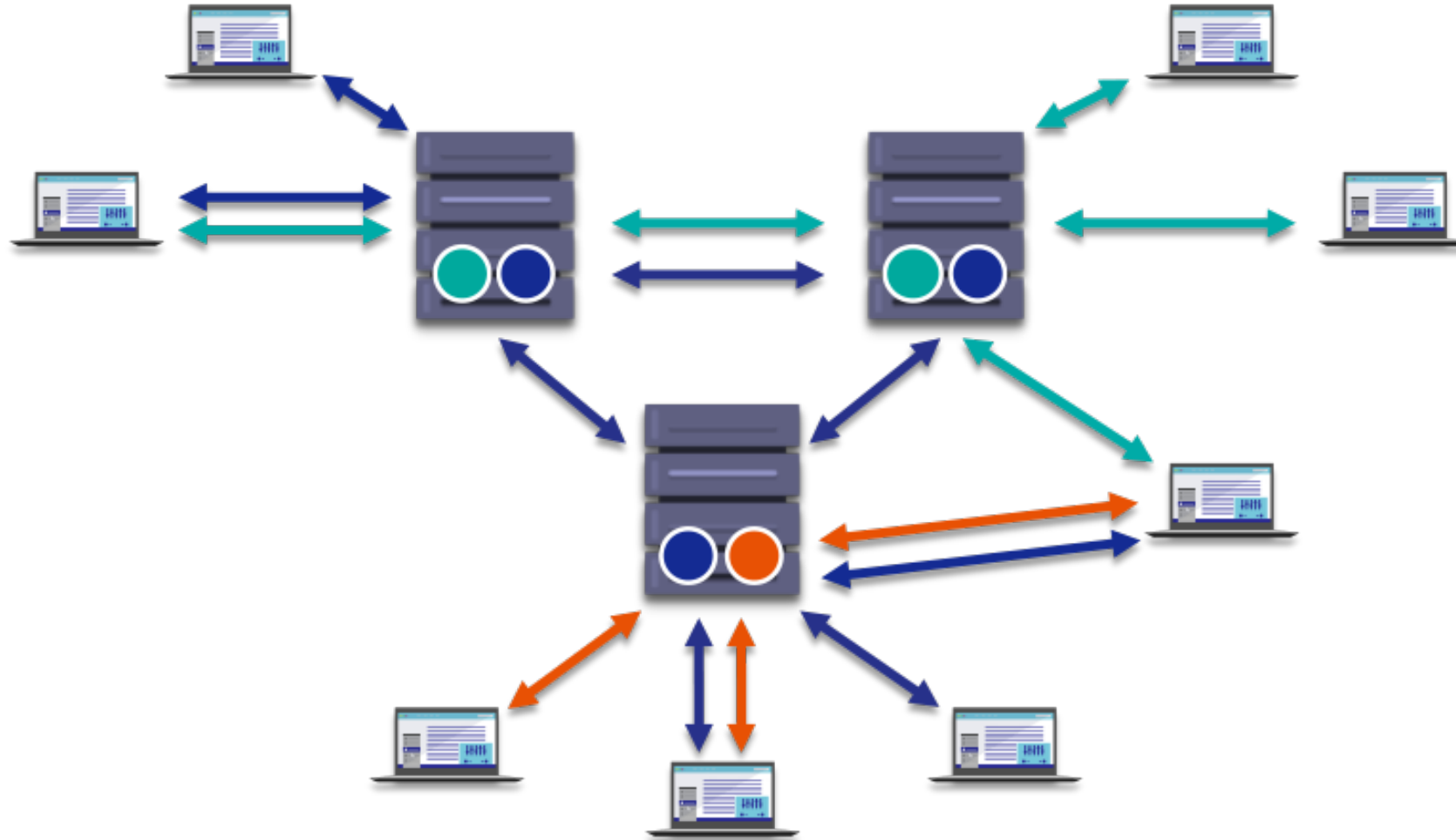
2006: 7 clinical  
specialty registries

2016: 165 clinical  
specialty registries



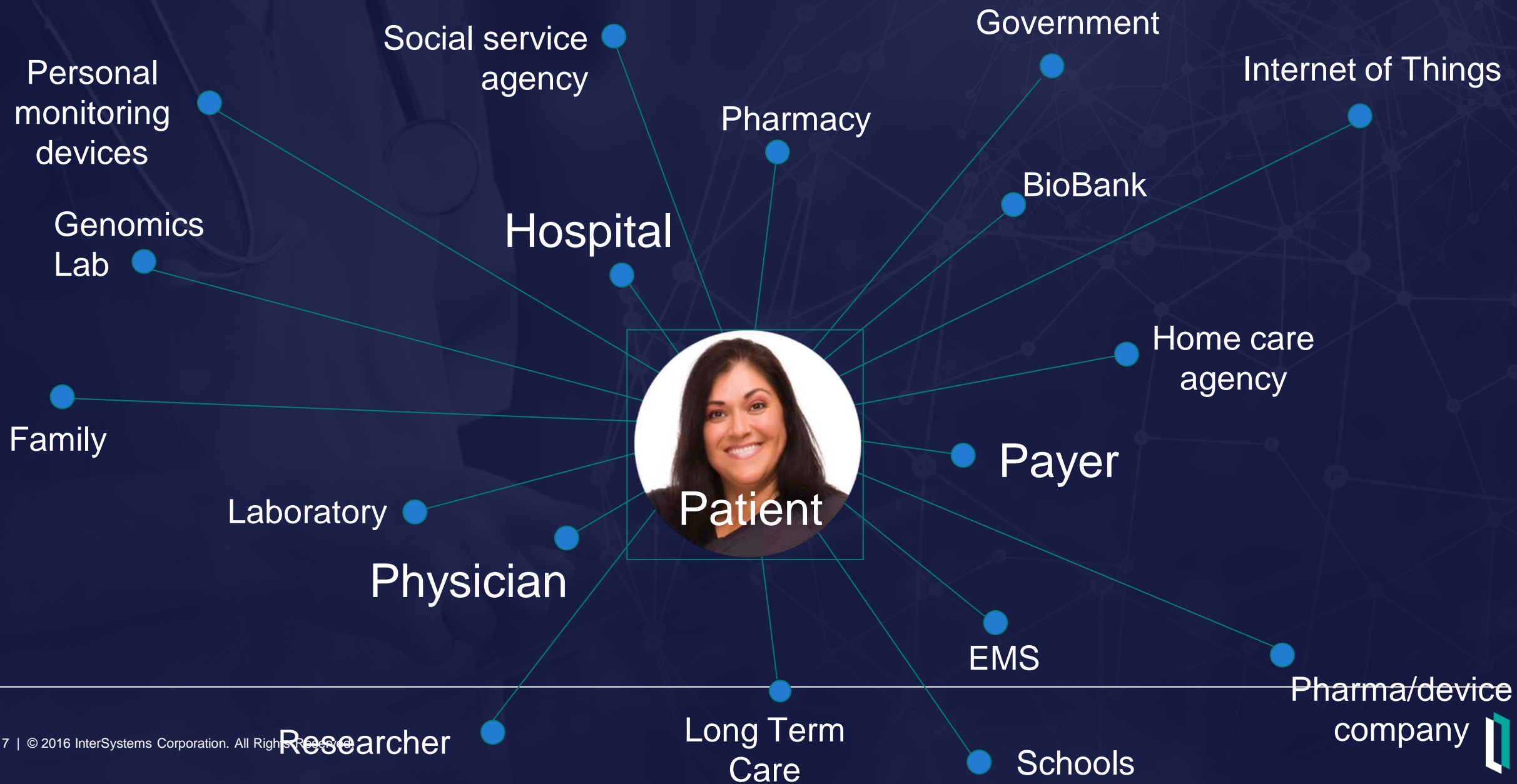


# Interoperability: 2000



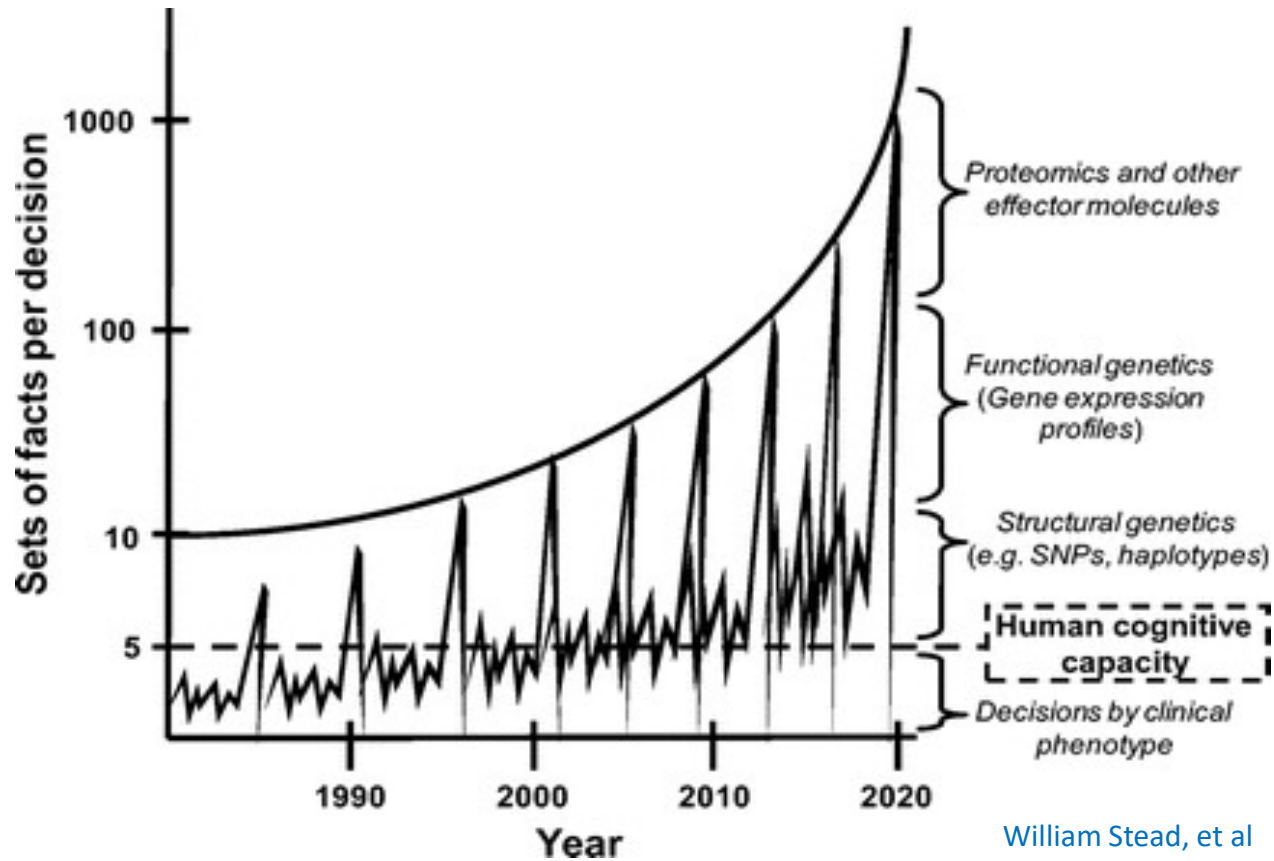


# Interoperability: The Future





# Data about an individual is growing relentlessly



William Stead, et al  
Academic Medicine. 86(4): 429-434, April 2011.





# Interoperability: 2020

Data for an individual or population located in multiple systems is accessible, and data is viewable from one system and usable in the workflow of the viewer





# REST: The Essence of FHIR

REpresentational State

Google, Twitter, FaceBook

Your favorite travel  
website





# HL7® FHIR®

Fast

Healthcare

Interoperability

Resources



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FHIR is both the  
technology and the  
meaning of the data.





# The Challenge





A black horse with white stripes  
..... or a white horse with black stripes?







Diabetes type II

BP 100/70

What if you took  
scissors and cut a  
History & Physical  
into data elements?

Not Known

Blood glucose 135





# Detailed Clinical Models = FHIR Profiles

When is a blood pressure not a blood pressure?



## Detailed Clinical Models:

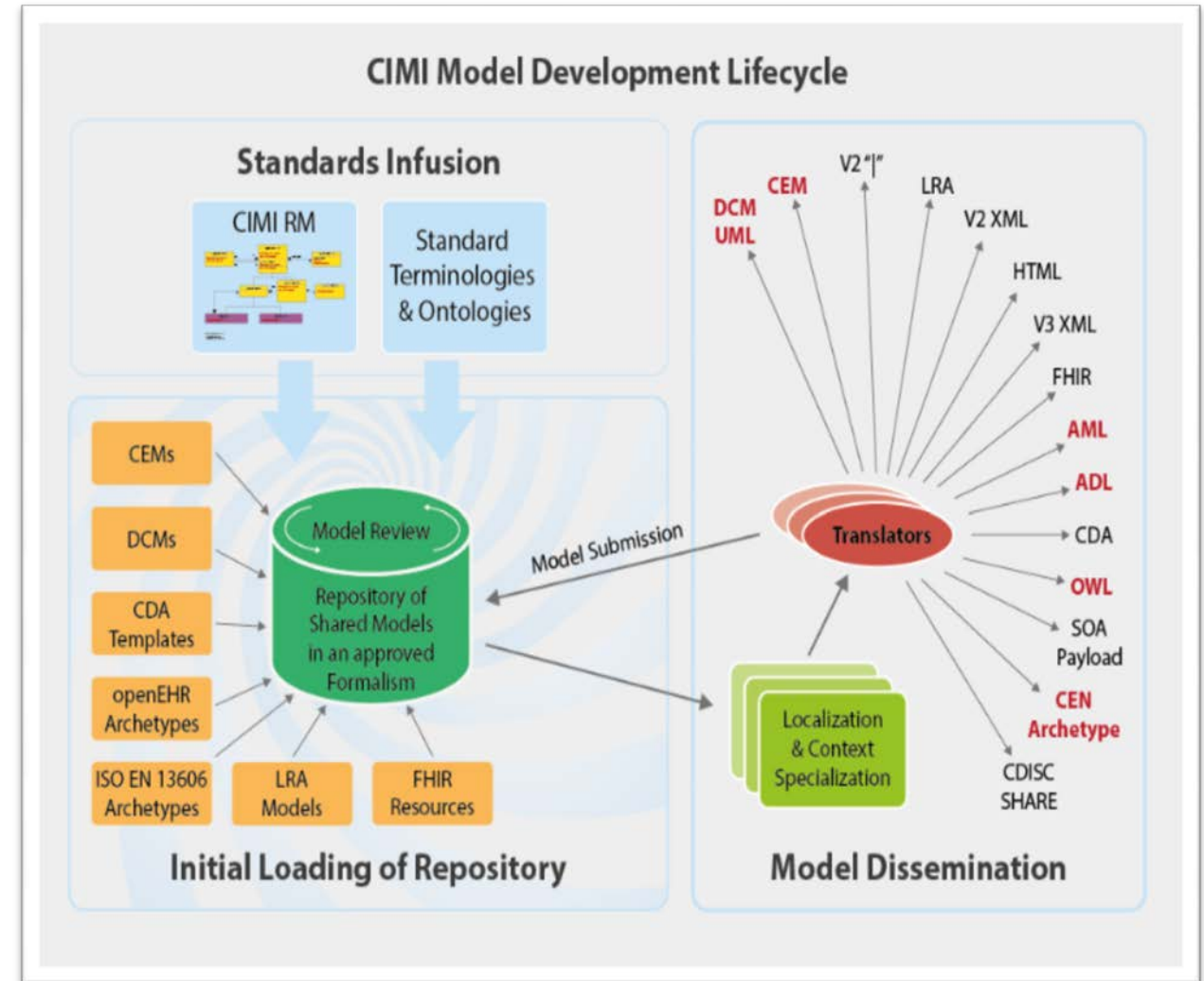
Profiles that give data context and semantic interoperability.



# HL7 CIMI WG

## Clinical Information Modeling Initiative

- Fostered by HL7 in 2010
- Create reference detailed models of clinical data
- Create processes to transform reference models into implementable artifacts







# FHIR Profiles



## Profiles are implementation guides

Built for specific use cases ranging from simple to complex  
Encompass the entire scenario

## Profiles include entire implementation

Multiple Resources & Extensions, the building blocks of FHIR  
Vocabulary/terminology/code binding

## Interoperability is in the FHIR Profiles

FHIR Profiles are based on formal information models  
Shared profiles create interoperability





# Functions of Future Registries

Patient index





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Key characteristics





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Key characteristics

Consent management





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Key characteristics

Consent management

Data locator service





# Functions of Future Registries

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Key characteristics

Consent management

Data locator service

- Data subscriptions

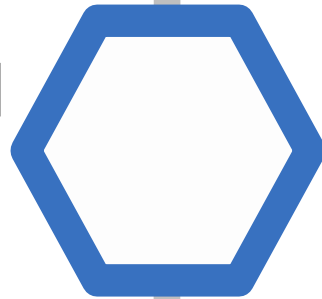




## Mobile App



SMART enabled  
EHR System



## FHIR Layer

Presentation

Open Health APIs



Services

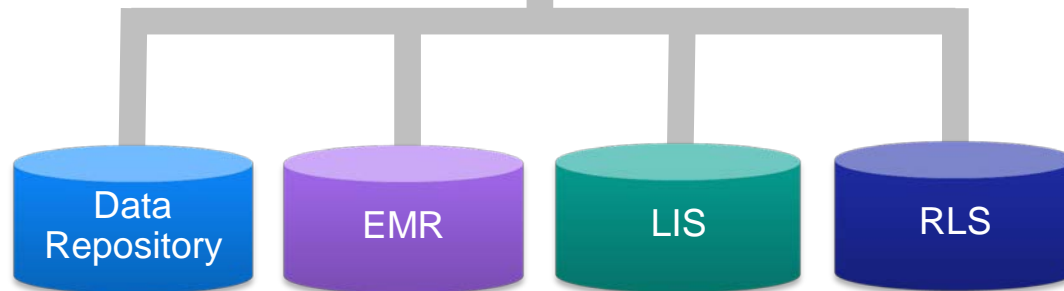
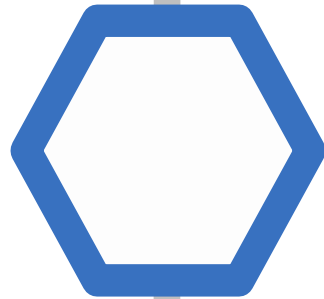




## Mobile App/ Web App



## Health Information Exchange Platform



## FHIR Layer

### Presentation

Open Health APIs



### Services





Thank You

Questions?

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