



The Office of the National Coordinator for
Health Information Technology

The Patient Choice Technical Project

Pilots Working Group

October 13, 2017



Call Logistics

- If you are not speaking, please keep your phone on mute
- Do not put your phone on hold – if you need to take a call, hang up and dial in again when finished with your other call
- This meeting is being recorded
- Feel free to use the “Chat” feature for questions, comments or any items you would like the moderator or participants to know

Agenda

- Announcements
- Research Action for Health Network (REACHnet) Pilot Update
- Consumer Centered Data Exchange Lesson Learned
- Questions and Discussion

Announcements

- The Pilots Working Group will meet **monthly** on Fridays at 11 am ET
 - » The next meeting will be on Friday November 17th, 2017 at 11 am ET
- The [meeting information](#) for WebEx has been updated
- The project confluence space has migrated to a new location. Bookmark the new [URL](#) for your convenience

Research Action for Health Network (REACHnet) Patient Choice Pilot Update

Consumer Centered Data Exchange Lessons Learned Presentations

Aaron Seib – National Association for Trusted Exchange (NATE)

Bo Dagnall – DXC Technology

October 11, 2017

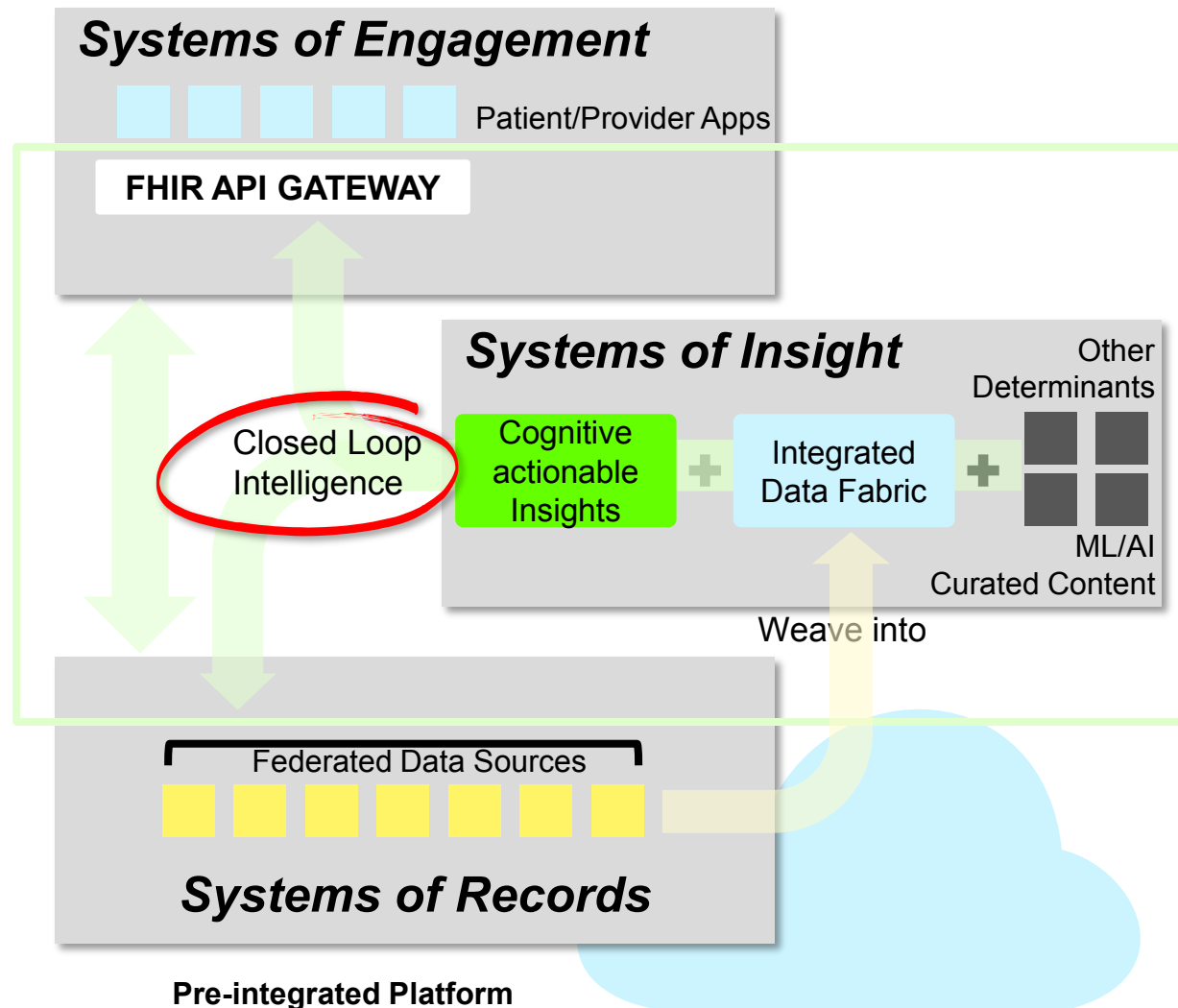
DXC Open Health Connect

FHIR Connectathon 16, Sept 2017
Consumer Centered Data Exchange Track

Focus on Consent Resource and Security Labeling Service

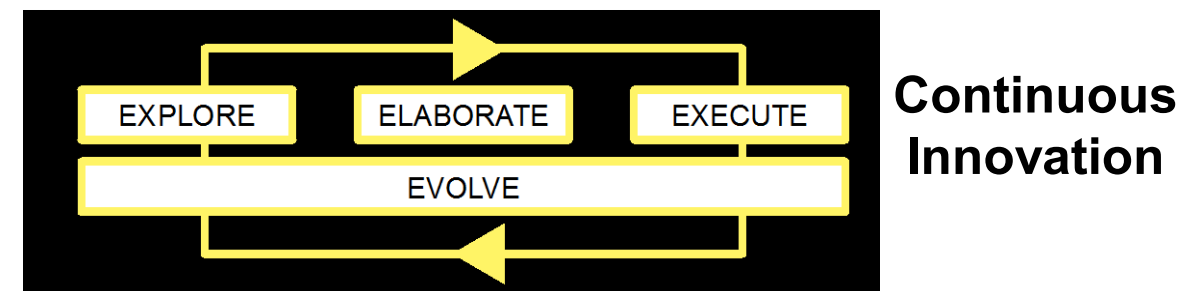
DXC Vision & Objective

“Enable continuously improving, fully digital, scalable, and adaptive 21st Century Digital Organization”



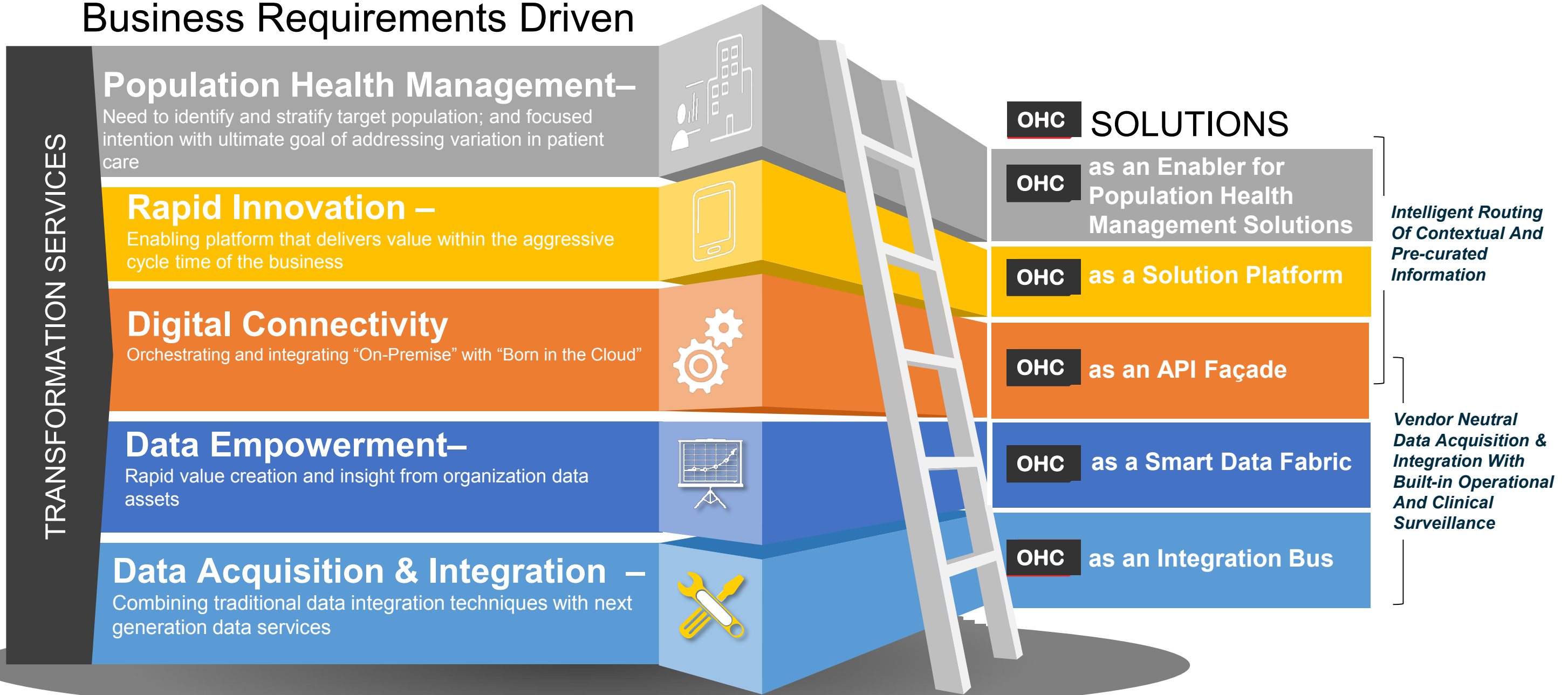
- ◆ cross-link information to derive new insights
- ◆ deploy new cognitive tools for knowledge workers, establish new communities
- ◆ develop a technology platform that enables information to be rapidly shared via APIs and Microservices

Enabled by a digital platform that creates the foundation for rapid innovation ecosystem that delivers capabilities within the cycle time of the business

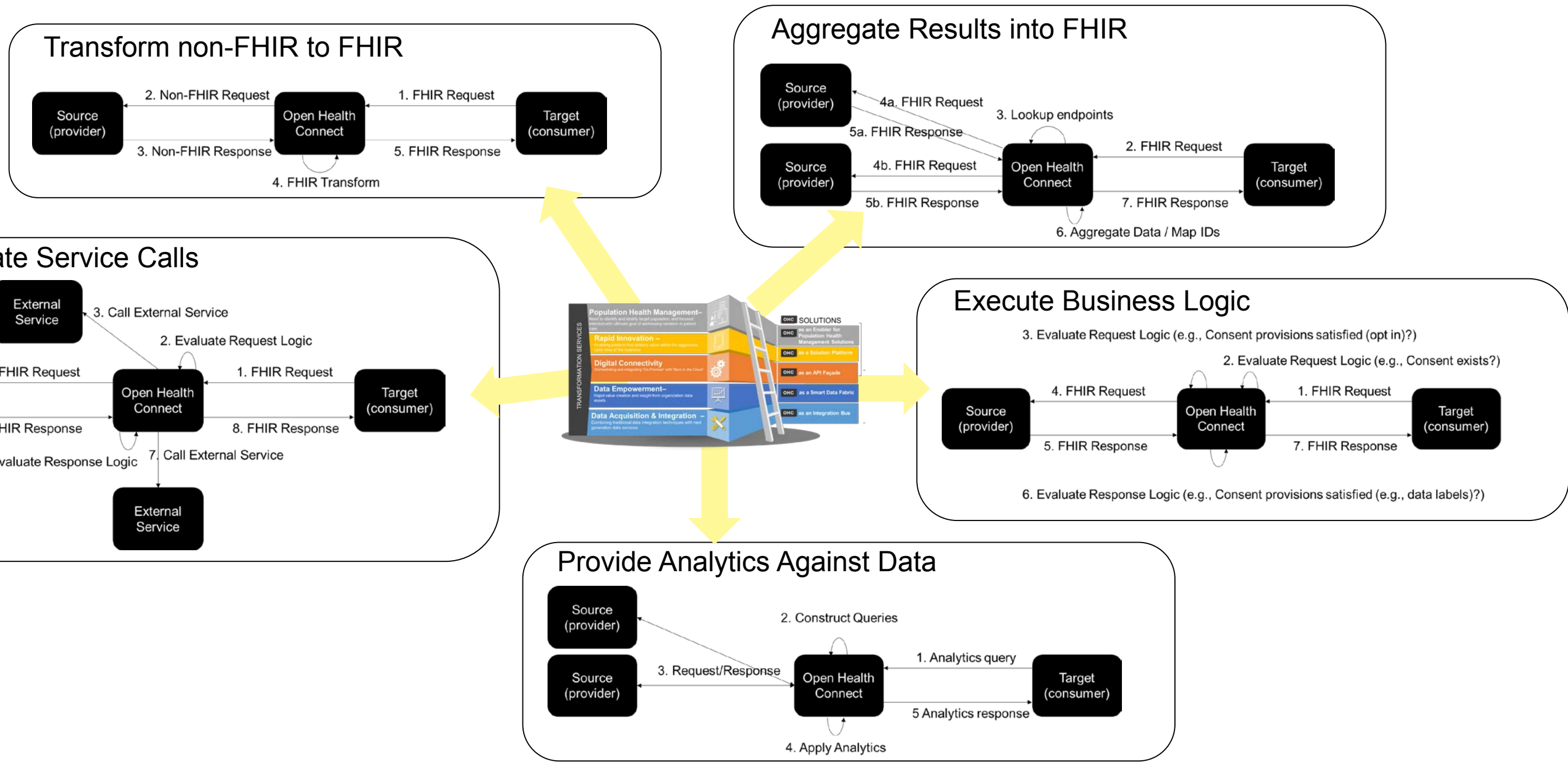


Open Health Connect (OHC)

Business Requirements Driven



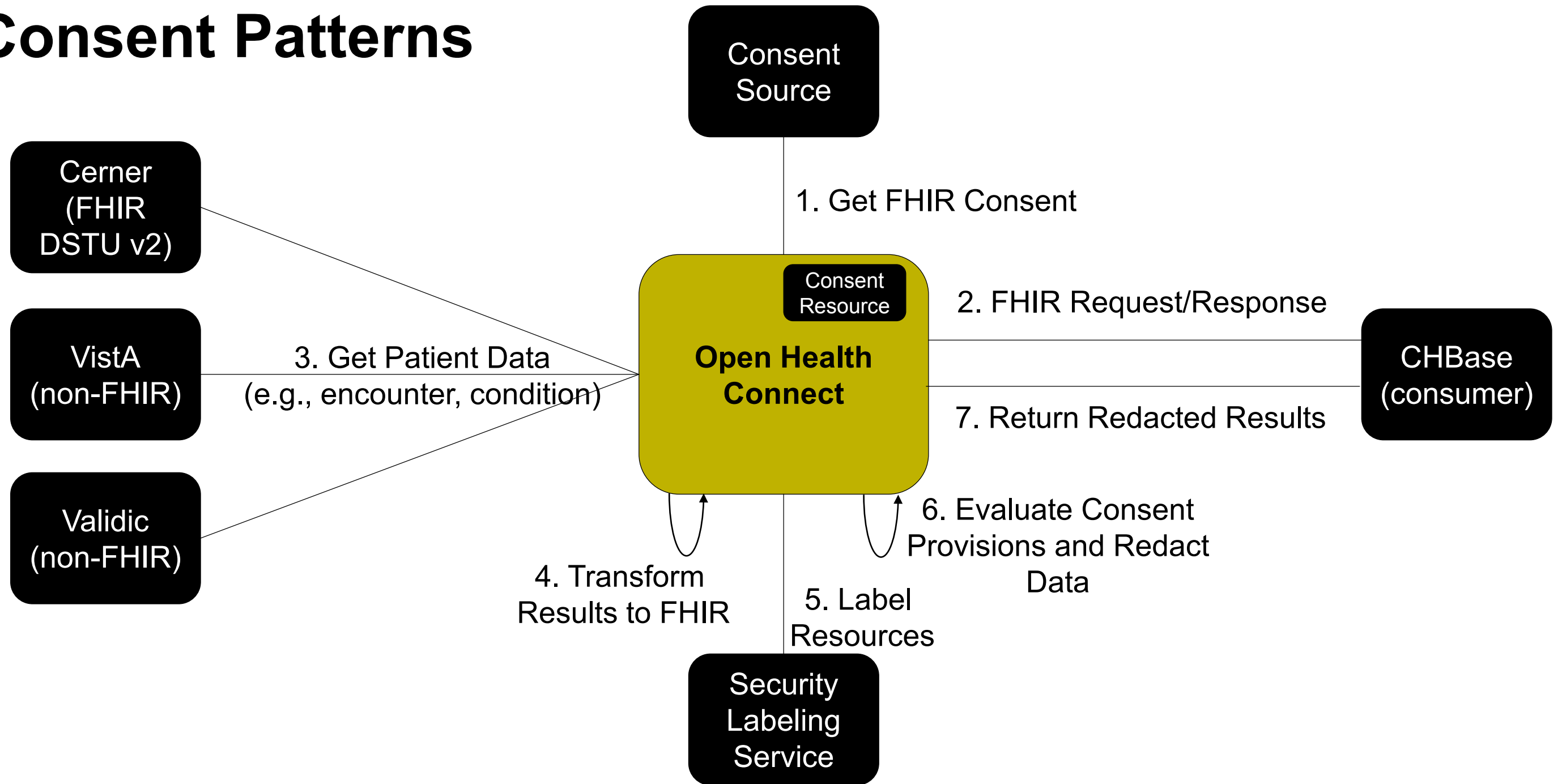
Open Health Connect Usage Patterns



Consent Resource Example

```
{
  "_index": "consent",
  "_type": "Consent",
  "_id": "3",
  "_score": 0.32716757,
  "_source": {
    "resourceType": "Consent",
    "id": "3",
    "status": "active",
    "patient": {
      "reference": "Patient/1234"
    },
    "organization": [{
      "reference": "Organization/2"
    }],
    "policyRule": "opt-out",
    "except": [{
      "type": "permit",
      "securityLabel": [{
        "code": "N"
      }]
    }]
  }
}
```

Consent Patterns





Demo

Digital Health Ecosystem Prototype

Integrating and standardizing a heterogeneous and fragmented data environment to support a large, diverse set of application and analytics use cases through a standards-based API

Pattern: Transform non-FHIR to FHIR

- Cerner FHIR DSTU v2 to FHIR DSTU v3
- Validic proprietary JSON to FHIR

Pattern: Aggregate Results into FHIR

- EMR data: VistA, Cerner, Allscripts, AHLTA
- Patient-generated data
- Device data: via Validic and CareInnovations

Pattern: Orchestrate Service Calls

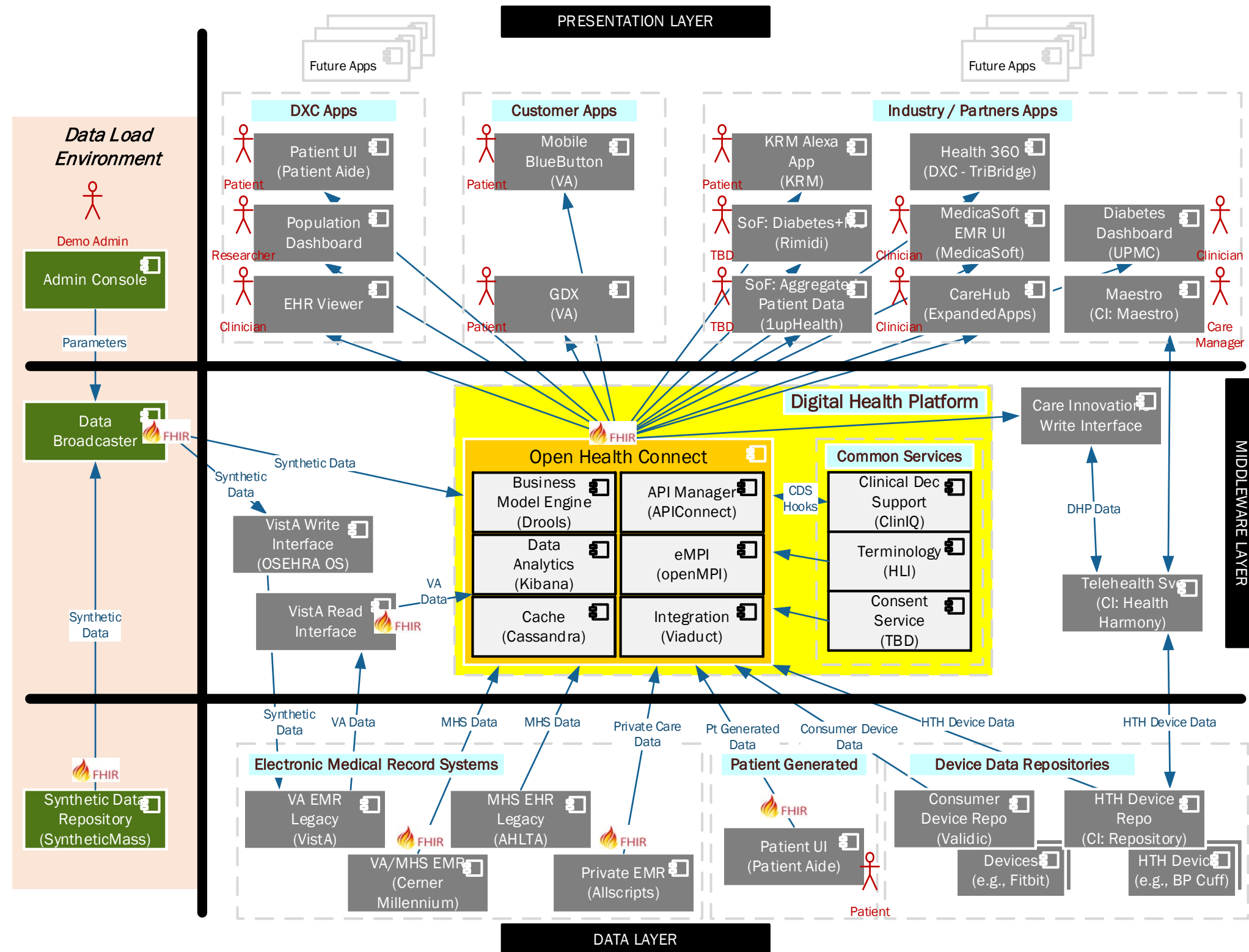
- ClinIQ via CDS Hooks interface
- Health Language for terminology

Execute Business Logic

- Data transforms
- MPI – identity resolution
- Consent processing
- Custom workflows

Provide Analytics Against Data

- Kibana and dashboards
- CDS Hooks



Debi Willis – PatientLink

Debi Willis
CEO/Founder, PatientLink



FHIR Opened The Door to a New Era



Apps will change healthcare



Remember these?



Thank You Steve Jobs!



All those –
and more
on ONE device

Brilliant!

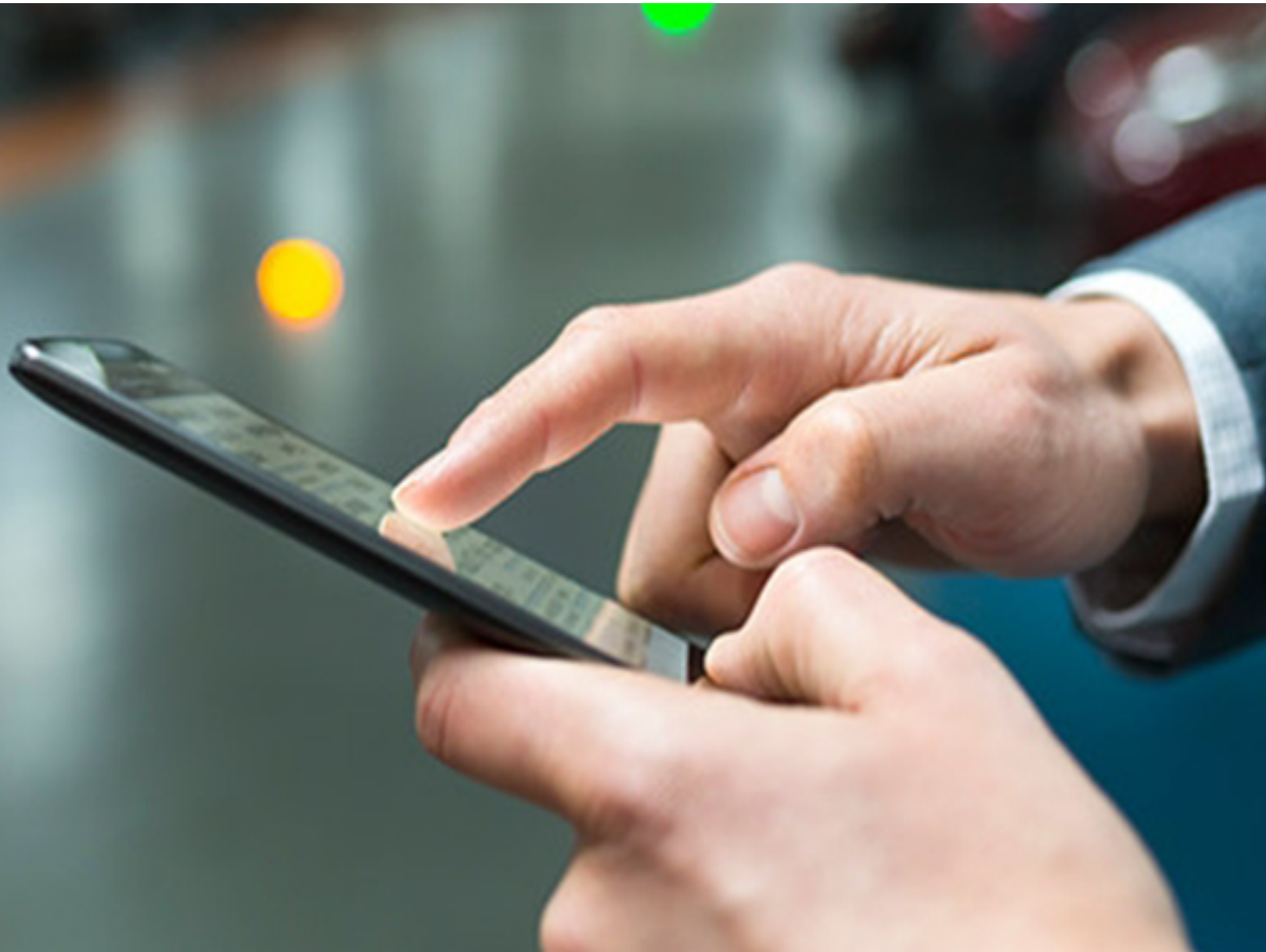
App Based EHRs



Providers will choose EHRs based on apps



Patients will choose providers based on apps



» Introduction



» Our FHIR app



» Our experiences



» Where does the FHIR community have
more work to do?





Software company in Oklahoma City focused on Health IT

- » Founded in 1999, 15 employees
- » Software to capture & share data to improve health
- » Work with many EHR vendors, researchers, pharma, universities, CDC

What is our FHIR app?





Linking Us Together for Better Care

Cloud-based Consumer-facing Mobile-responsive



An Interactive Platform

allows patients to download and share ALL
their medical records

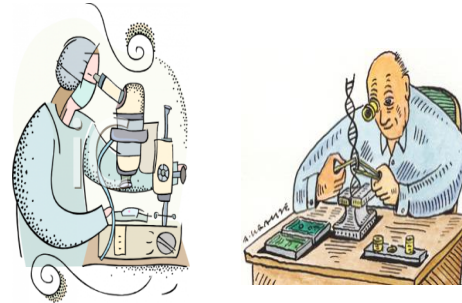


Linking us together in three areas

- » with all our care providers (and data)



- » with researchers



- » and with each other





Better Care



The Office of the National Coordinator for
Health Information Technology



First Place



**ONC's Consumer Health Data Aggregator
Challenge**

What Are Our Experiences



Eight unique connections include:

- ✓ Allscripts TouchWorks EHR
- ✓ Allscripts Sunrise EHR
- ✓ Allscripts Professional EHR
- ✓ AthenaHealth Clinicals EHR
- ✓ Epic EMR
- ✓ NextGen Ambulatory EHR
- ✓ Cerner EHR

VA



We get constant requests from clinics:

- ✓ They want to comply with mandate
- ✓ They see the value to patients
- ✓ They see the value to the clinics
 - Better coordination with patients
 - Ability to get patient data easier





My focus is on consumer FHIR apps:

- Patient experience

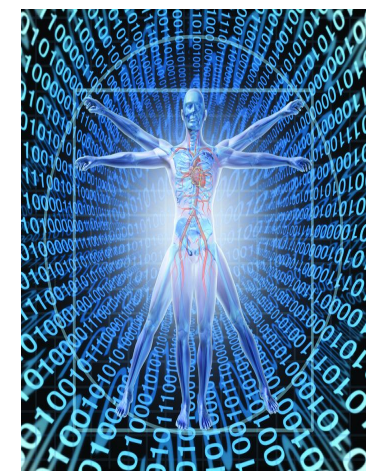


- FHIR Endpoint Directory



If We Want Consumers To Use FHIR Apps:

- Must be easy to sign up and use
- Get their data from all healthcare providers



Must Be Easy To Sign Up and Use



Current Patient Signup & Verification - Awful!

Current process to verify a patient's identity:

- Patient must have a portal account (if they don't, they must create one)

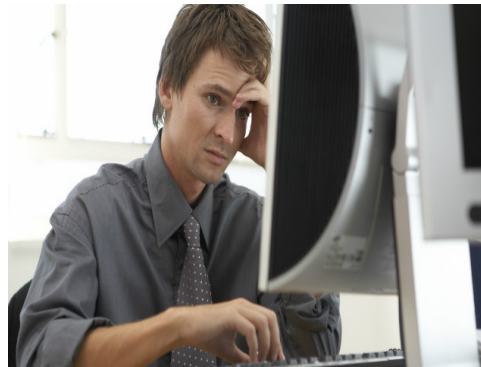
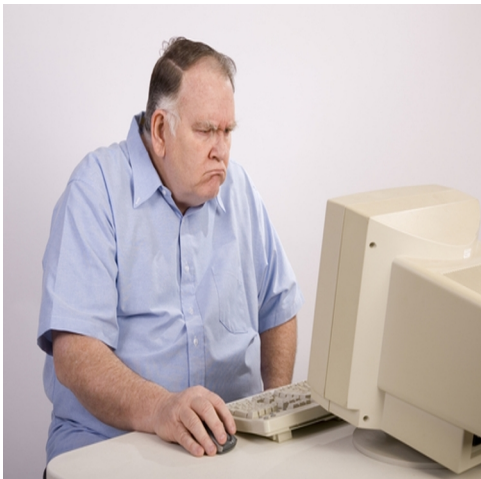


Create a portal account

For EACH healthcare facility!



Log into each facility from the FHIR app AGAIN!



What Can We Do To Make This Better?

Let's work on the patient experience

Authenticating via portal credentials

- » Good place to start - we needed to prove FHIR
- » Now let's make the patient experience better



We need to Consider

- Ease of use by a patient



- Security



- Cost



- Ease of implementing across industry



- Timeliness





App of Patient's Choice



» Objective says “using any application of the patient’s choice” –

- If they choose ~~not~~ to use a portal or other clinic application, that is their right

» Acceptance of multiple portals is low



» Some healthcare orgs don't have portals

Patients should be able to verify their identity from within the app – should be “self-contained”



- » Better for the patient – patient is in control of the whole experience without delays



- » Better for the clinic - clinics will not have to be part of the workflow to help patients get access



Dynamic Knowledge-Based Authentication

- Currently used successfully in several industries
- HHS provides for a use case where a “form could ask for basic information about the individual that would enable the covered entity to verify that the person requesting access is the subject of the information requested or is the individual’s personal representative“



<https://www.hhs.gov/hipaa/for-professionals/privacy/guidance/access/index.html>

5.3.2 Knowledge-Based Verification Requirements

“The following requirements apply to the identity verification steps for IAL2 and IAL3. There are no restrictions for the use of KBV for identity resolution.”

<https://pages.nist.gov/800-63-3/sp800-63a.html>

Scenario

1

Patient chooses FHIR app and enters demographics information

2

Wants to get data from “Southside Clinic” and FHIR app presents patient demographics to clinic’s FHIR API

3

FHIR app pulls information from EHR to question user (examples):

- What was the date of your last appointment?
 - April 27, 2016
 - February 9, 2017
 - December 21, 2015
 - I don’t know

- Which one of these are listed as a contact number for you?
 - xxx-xxx-1234
 - xxx-xxx-1964
 - xxx-xxx-2720
 - I don’t know

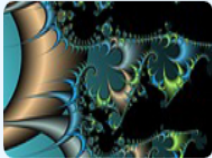
Patients should be given right to choose

Once an account is established with the clinic, patients should be allowed to use their FHIR app login as their only login (instead of logging into each EHR)


[Forgot Your Password?](#)

Your security image and caption are important to us! This lets you know you are on the MyLinks website.

If the image and caption are not yours, do not attempt to login.



Artistic Sky



Issue: MUST Have FHIR Endpoints

All FHIR apps need to know the FHIR endpoint for the clinic



Certification requires EHRs provide an “Open API”. It is reasonable to assume that FHIR endpoints need to be open to provide access to the API



Current method – Go to each EHR vendor/health organization and get updated list of FHIR endpoints



A single consolidated list for FHIR apps to locate production Endpoints



Where would this reside?



How would it be funded?



Should policy require directory compliance?



Recap

Wins! 

- FHIR has been proven to work
- FHIR acceptance is good



Needs Work:

- ID proofing  matching (KBA)
- Allow patients to decide login length/need
- Open FHIR Endpoints to allow patient access

Recap

Wins!



FHIR has been proven to work
FHIR acceptance is good



Needs Work:

- ID proofing
- Allow patients to decide login length/need
- Open FHIR Endpoints to allow patient access



Thank You!



Questions?

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Thank you!



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