VA Open Digital Health

A heroic platform for our heroes

DHP Overview

1. ONE ELECTRONIC HEALTH RECORD SYSTEM (EHR) WITH ONE LOGICAL INSTANCE
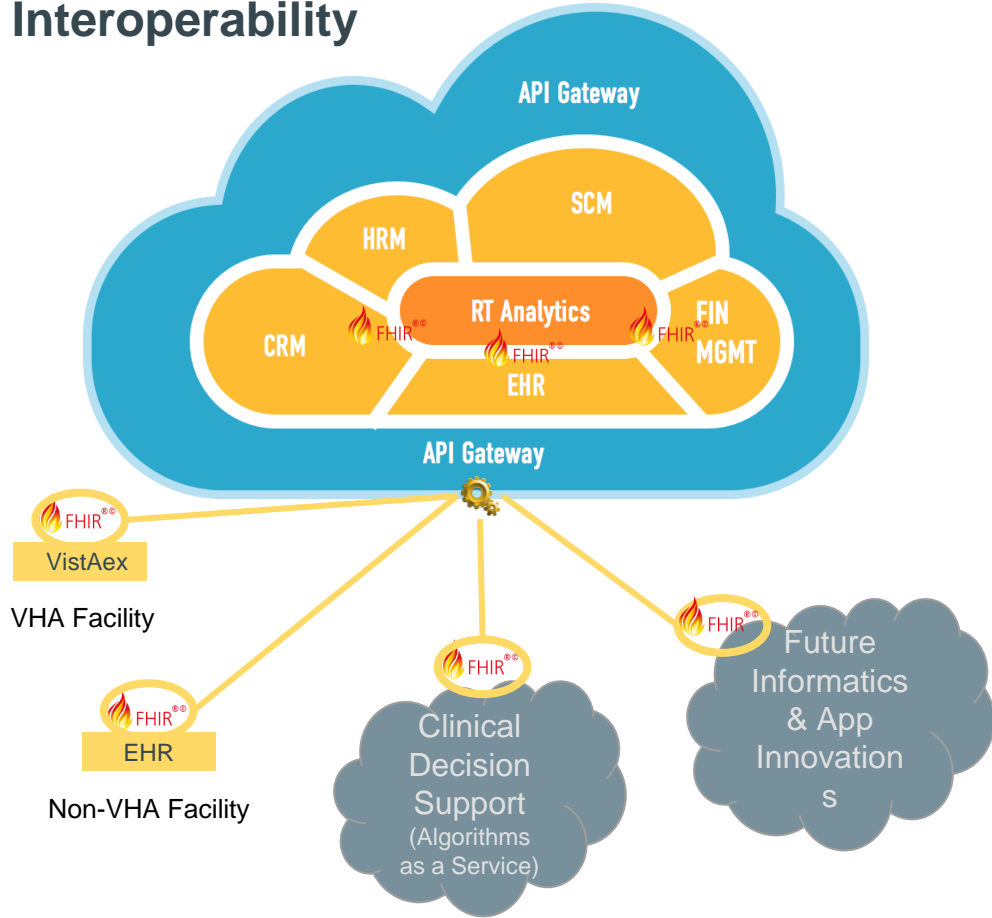
2. ONE OPERATIONAL MANAGEMENT PLATFORM WITH INTEGRATED RESOURCE MANAGEMENT, FINANCIAL AND SUPPLY CHAIN SYSTEM

3. ONE, INTEGRATED CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM

4. ONE REAL TIME ANALYTICS ENGINE

5. ONE API GATEWAY

Data Interoperability

Sprint 1: Storming to Performing in 4 weeks

Glimpse of what a successful public private partnership can look like

3 Day hackathon

3 Working weeks

3 Working weekends

19 APIs

4 Clouds

3 EHRS

7 Physicians

4 Solution Architects

12 Engineers

7 Account Managers

3 Project Managers

**1** Production Crew

1 Free Radical

Behind the scenes

When the Veteran Enrolled through the CRM it made a call to the the VA API Gateway

The API Gateway pulled the Veteran's Record from Cerner's FHIR Resources

The API posted the Veteran's Record in the VA EHR, the VA CRM (Veteran Engagement) and the VA Realtime Analytics Engine

The VA Analytics engine starts watching the patient's record, notices that this is the Veteran's first visit and schedules the visit
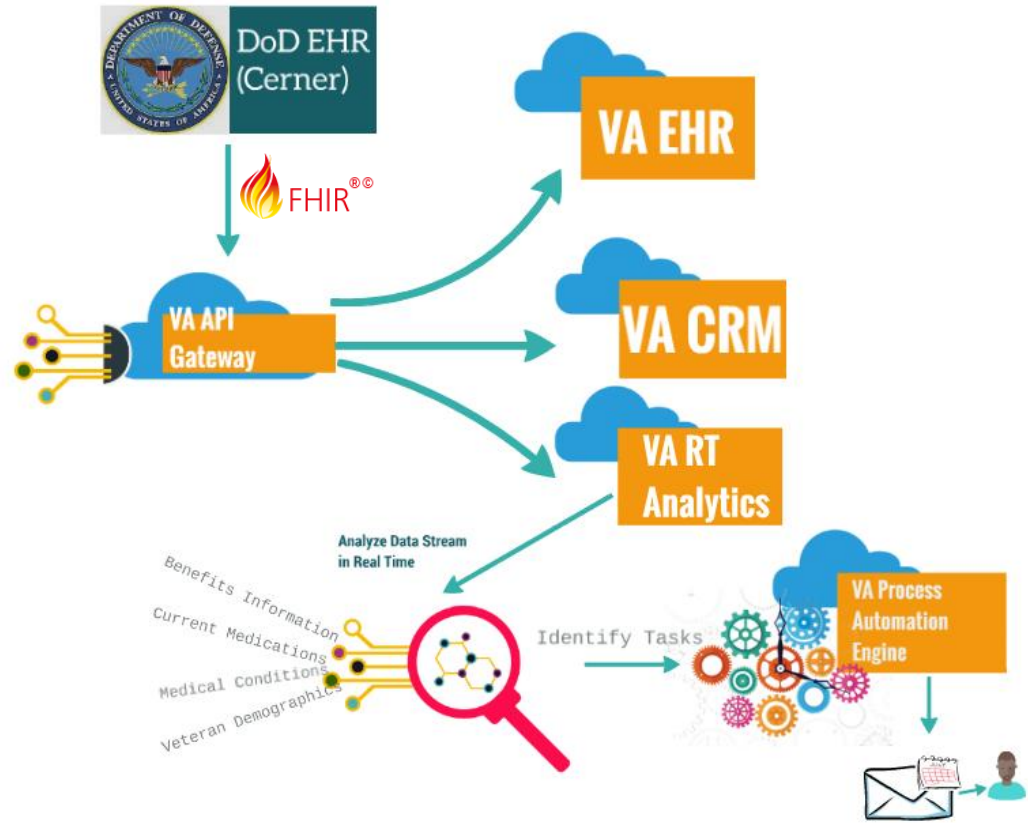
```
997
998
999 ▼   /:
1000 ▼     get:
1001        is: [search]
1002 ▼      queryParameters:
1003          _format?:
1004            enum: [application/json, application/xml]
1005 ▼    options:
1006        is: [conformance]
1007 ▼      queryParameters:
1008          _format?:
1009            enum: [application/json, application/xml]
1010      /_history:
1011        type: fhirHistory
1012 ▼    /metadata:
1013 ▼      get:
1014        is: [conformance]
```

```
1032        type: fhirHistory
1033      /{vid}:
1034        type: { fhirVersionedResource: { resourceName: Patient } }
```

▸ Types

Resources   API is behind a firewall (?)

                                             Collapse All

▾ /   OPTIONS   GET

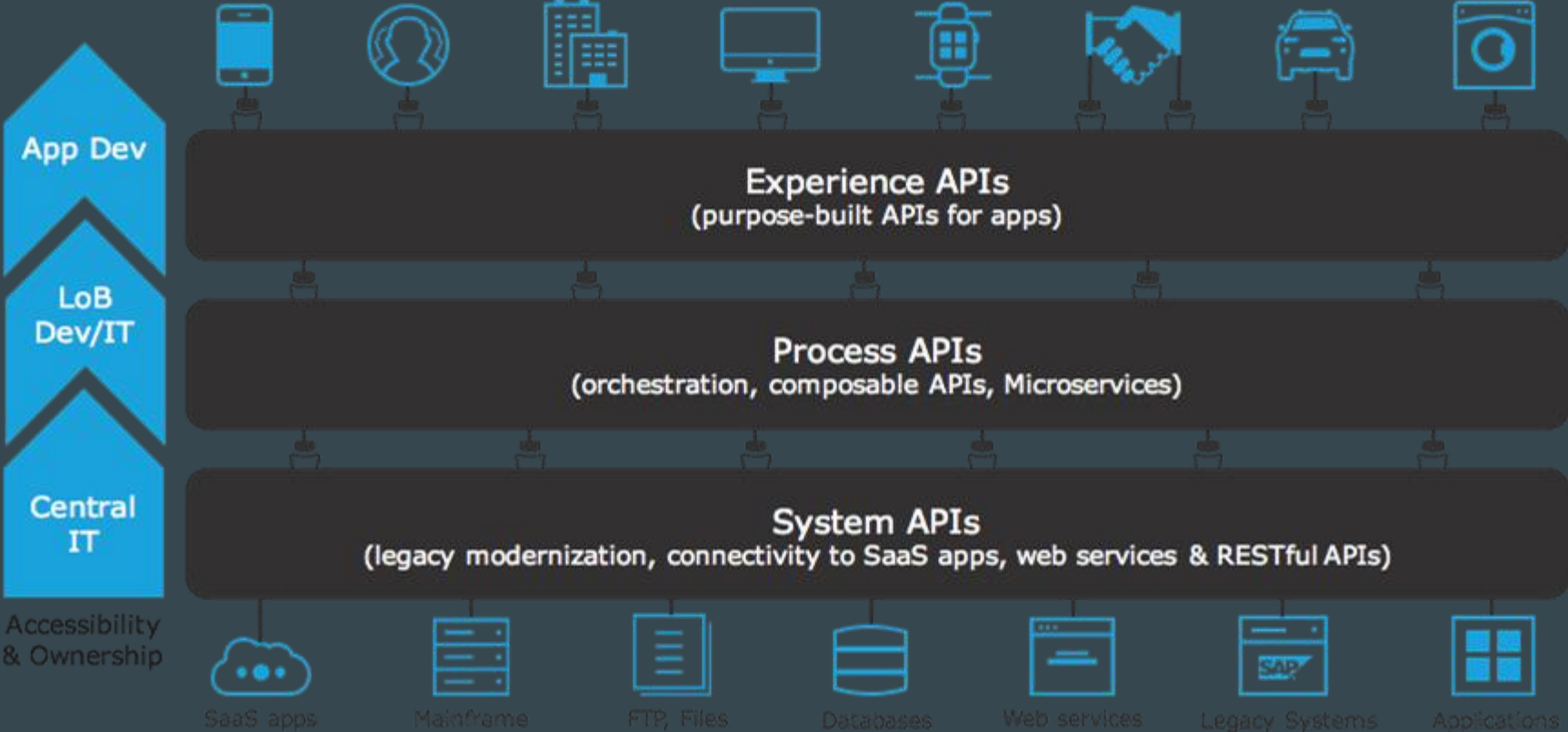//_history   Type: fhirHistory   GET

/metadata   GET

/Patient/{id}/Condition   Type: fhirCompartment   GET

Meet our first heroic sidekick

The API GATEWAY

Cast : Mulesoft's Anypoint Platform,
Georgia Tech's TechOnFHIR, VA's
VistaExchange

Platform for API-led Connectivity

App Dev

LoB Dev/IT

Central IT

Accessibility & Ownership

Experience APIs
(purpose-built APIs for apps)

Process APIs
(orchestration, composable APIs, Microservices)

System APIs
(legacy modernization, connectivity to SaaS apps, web services & RESTful APIs)

SaaS apps   Mainframe   FTP, Files   Databases   Web services   Legacy Systems   Applications

Design Approach - Map Business through API's

Took the first scenario and broke it down to identify the business process flow

Mapped each major step as a potential API

Without bothering about how it will be implemented, listed the data need for each step of the process

SECOND PASS

Went through the second scenario and followed the same process

If the API's identified in the first pass did not address some of the newer needs, either added a new API or modified one from the earlier list

Behind the scenes

When the Patient record was transferred over, the VA Realtime Analytics Engine noted the Traumatic Brain Injury problem.

It went through the library of Clinical Pathways, found that Byron was "Eligible" for the TBI Pathway called the Pathway Enrollment API which posted the Pathway.

When the Physician agreed and accepted the pathway, the workflow associated with the pathway was passed over to the VA CRM and added to Byron's Care Plan by calling the Care Plan API
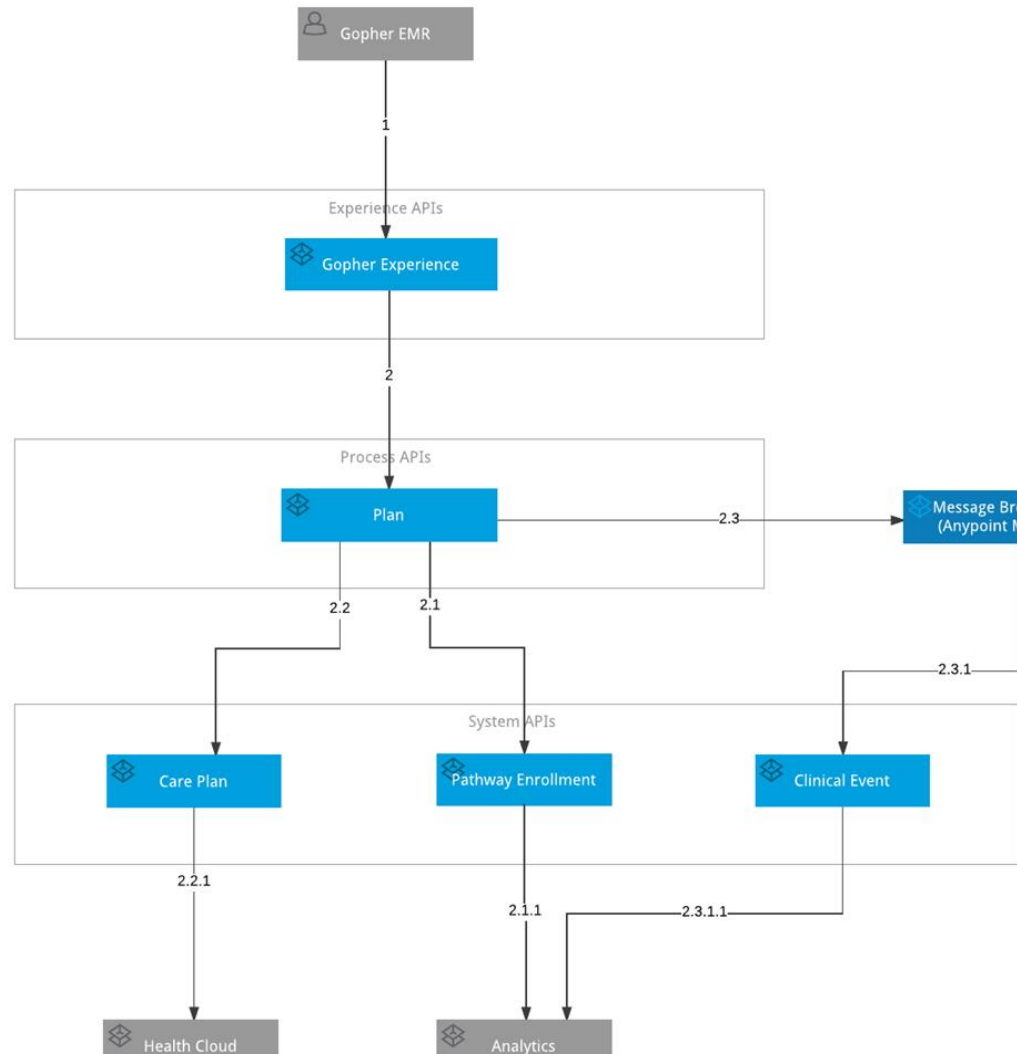
Sprint 2:
Going Mobile

Connecting the Veteran to the Internet of Healthcare Things

3 Day hackathon

3 Working weeks

3 Working weekends

19 APIs

4 Clouds

3 EHRS

+

6 Working weeks

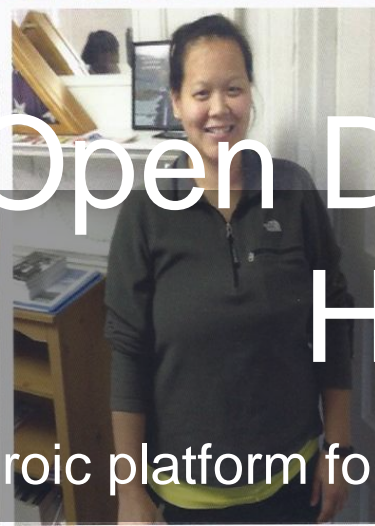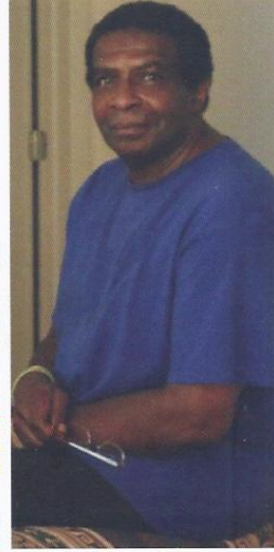**1** MyVA Care Mobile App

4 Device & Video APIs

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