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Deeper Dive:
Connected Health / iDAAS
(Intelligent Data as a Service)

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Current State of Healthcare – Transformation at work

Leadership Drivers

✓ Changes in reimbursement models

✓ Reducing proprietary debt: Technical, Functional, Operational and Knowledge

✓ Engagement: Consumer, Partner, Patient, Clinician and Technologist

✓ Driving Innovation while becoming a data driven organization

✓ Increasing Value to Business, Delivery Time to Market, ROI

IT Requirements

✓ Data accessible securely: business and patient focused

✓ Limiting proprietary technologies

✓ Innovation based

✓ Expert systems based capabilities

✓ Development shift: Everything as a code

✓ Bimodal technology support

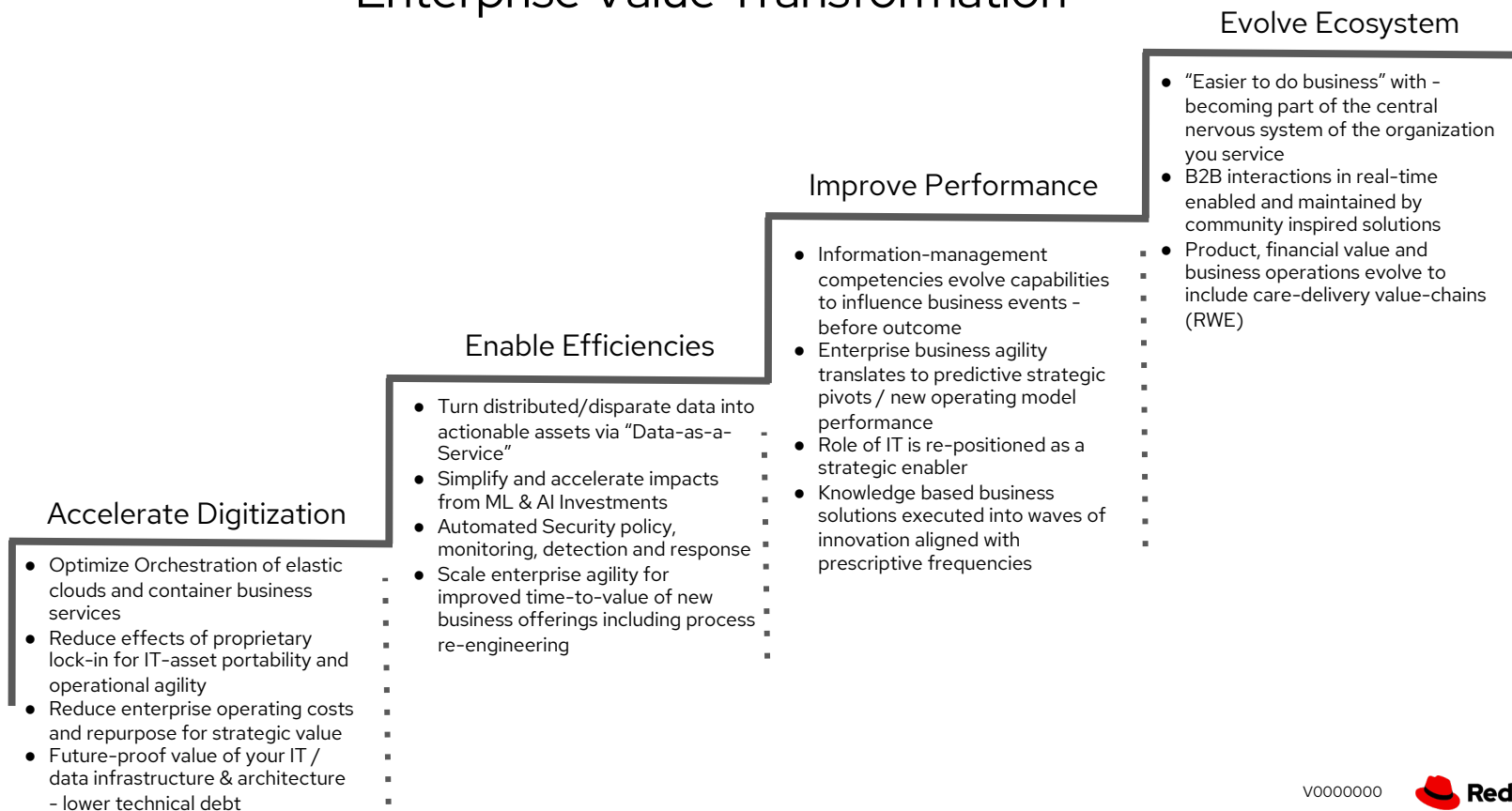✓ Data as a Service commoditization

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Data is the Asset:
It's all about Value Transformation

Amid these requirements, healthcare industry is going through transformative change driven by desire to deliver value to constituents.

Value = Outcome / Cost

We call this Value Transformation which involves technologies that enable content and context aware decisioning, driving culture shift in care journey and delivery, new process re-inventions to capitalize on them.

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Enterprise Value Transformation

Evolve Ecosystem

- "Easier to do business" with – becoming part of the central nervous system of the organization you service
- B2B interactions in real-time enabled and maintained by community inspired solutions
- Product, financial value and business operations evolve to include care-delivery value-chains (RWE)

Improve Performance

- Information-management competencies evolve capabilities to influence business events – before outcome
- Enterprise business agility translates to predictive strategic pivots / new operating model performance
- Role of IT is re-positioned as a strategic enabler
- Knowledge based business solutions executed into waves of innovation aligned with prescriptive frequencies

Enable Efficiencies

- Turn distributed/disparate data into actionable assets via "Data-as-a-Service"
- Simplify and accelerate impacts from ML & AI Investments
- Automated Security policy, monitoring, detection and response
- Scale enterprise agility for improved time-to-value of new business offerings including process re-engineering

Accelerate Digitization

- Optimize Orchestration of elastic clouds and container business services
- Reduce effects of proprietary lock-in for IT-asset portability and operational agility
- Reduce enterprise operating costs and repurpose for strategic value
- Future-proof value of your IT / data infrastructure & architecture – lower technical debt

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Regulations on Horizon:

Focused around Reducing Data Barrier(s)

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Upcoming Key CMS Requirements for Providers and Payers

Patient Data Access API – (Early 2021)

- Adjudicated Claims
- Provider Remittances
- Enrollee Cost Sharing
- Encounters
- Clinical Data
- Formulary Data (Med Advantage Part A and D)

Provider Directory API – (2021)

- Provider Names
- Address
- Phone Numbers
- Specialties
- Pharmacy Directory (Medicare Advantage)

Payer to Payer Data API – (2022)

Payer to Payer Data Transfers:

- Send and Receive data as maintained by Payer after 2016 when initiated by Patient in accordance with USCDI v1
- Payers need to maintain data for 5 years of access after patients switch plans

USCDI v1:

- Allergies
- Immunization
- Problems
- Procedures
- Care Team Members

- Clinical Notes
- Goals
- Concerns
- Medications
- Vitals

CARIN Alliance Blue Button ®

Developer Site and Implementation Guides

- Claims and EOB Payer Data
- Uses OAuth2 and OpenID Connect
- Provide maintained clinical data (USCDI)

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Red Hat's Healthcare Transformation:
"It's About Value and Data as an Asset"
Connected Health / iDAAS

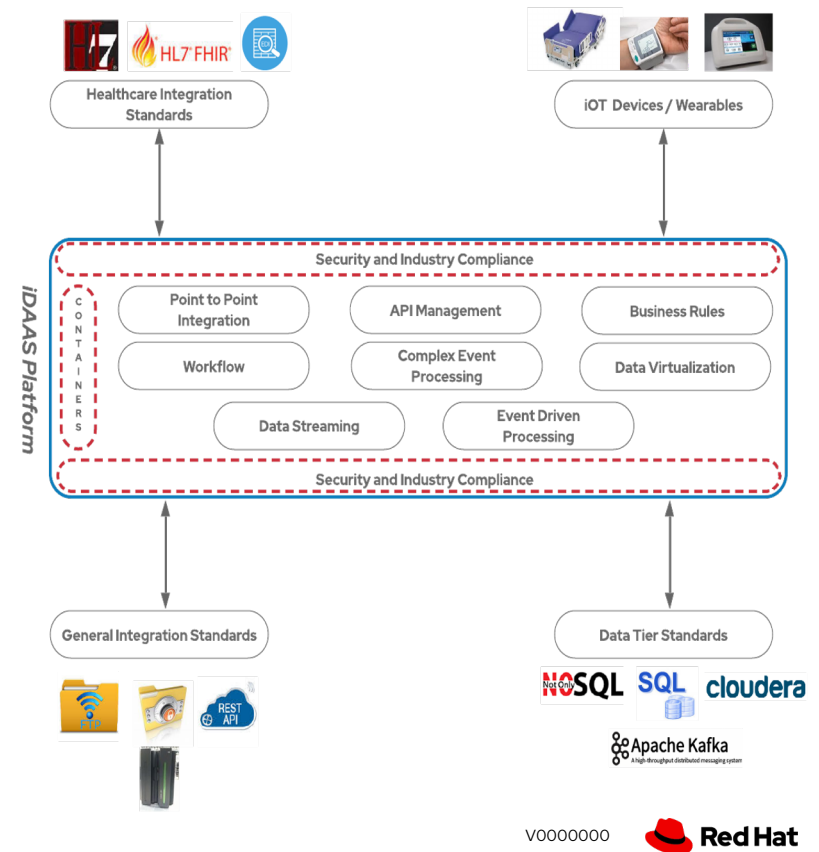# Connected Health / iDAAS - Background

Why

Data is the central nervous system for every industry, Within healthcare our focus is to unify teams around data as the asset to help organizations build amazing platforms consistently in a secure, scalable and reusable manner.

What

Repeatable and reusable design pattern focused on meeting data where it is. From industry standards to legacy or modern locations the focus of our capabilities are providing access to data where it is and at a scale determined by client volume needs.

How

Driven by our open organization and open-source culture we have focused on ensuring we help the healthcare market deliver consistency with a hybrid cloud approach to enable our customers business needs.

Healthcare Integration Standards

iOT Devices / Wearables

iDAAS Platform

Security and Industry Compliance

CONTAINERS

Point to Point Integration

API Management

Business Rules

Workflow

Complex Event Processing

Data Virtualization

Data Streaming

Event Driven Processing

Security and Industry Compliance

General Integration Standards

Data Tier Standards

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Connected Clinical Health / iDAAS Demo

Clinical and Financial

- HL7 Message Based Integration
- FHIR Clinical Resources – Concept
- FHIR Financial Resource – Claim
- Healthcare Event Distribution
- Event Driven Architecture – Event Builder

CMS

- Patient Data Access API
- Provider Directory API
- Payer to Payer Data API

Start DEMO

Connected Health / iDAAS Important Links

Red Hat Healthcare's general page:
https://github.com/RedHat-Healthcare/

Connected Health/iDAAS General Content
Page: http://connectedhealth-idaas.io/

iDAAS Testing Component: This is a limited implementation of iDAAS for testing.

https://github.com/RedHat-Healthcare/iDAASTestingComponent

iDAAS Connect Clinical Industry Standards: Processes 8 HL7 messages and 40+ FHIR Resources all clinical, also we handle all reporting FHIR resources as well.

https://github.com/RedHat-Healthcare/iDAAS-Connect-Clinical-IndustryStandards

iDAAS Middle Tier: This is the HCDD Enterprise integration pattern for all the clinical transactions. It is implemented ONLY because with over 50 events the code became unruly within the iDAAS Connect Clinical Industry Standards code base.

https://github.com/RedHat-Healthcare/iDAAS-Connect-Clinical-MiddleTier

iDAAS Connect Financial Industry Standards: Handles all 16 FHIR Resources for financial transactions. No middle-tier component needed for this, small codebase.
https://github.com/RedHat-Healthcare/iDAAS-Connect-Financial-IndustryStandards

You will also notice iDAAS Connect Clinical Third Party and iDAAS Connect Financial Third Party, these efforts are for external connectivity to data sources like Kafka (streaming in from other sources), JDBC, FTP/sFTP/FTP(s), File, Cloud Vendor centric components and dozens of others.

Every repository should have platform-scripts which has the relevant Kafka scripts to start, stop, create, and list Topics needed for the specific repo. With that being said the only tweak we have heard being needed is the base directory where Kafka is installed. Also, we have ALL the test data for anything we do are located here: https://github.com/RedHat-Healthcare/iDAAS/tree/master/testdata. Feel free to leverage as these are all fictitious sample data transactions.

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Connected Clinical Health / iDAAS Q&A

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