Advancing Public Health
Data Interoperability with Integration Accelerators

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Forward Looking Statements

THANK You

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What to Expect From Today's Session

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Understand the **challenges** facing public health data exchange

Demystify the ease by which interoperability can be achieved

Learn how you can use **MuleSoft to accelerate common agreement**

We Have Critical Data Sharing Challenges

Data is siloed

Spreadsheets are the tool of choice

Legacy infrastructure limits exchange easily

Public health participation is low

Sharing is made too complex

Workforce is under prepared

Solving for These is Easier Said Than Done

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Public Health Partners

- Epic
- Cerner
- Immunization Information
- Labs
- Birth/Death Registries
- Surveillance

Challenges

Siloed Processes

Multiple Data Formats

Proprietary Systems

Lack of IT Resources

Legacy Tech

Multiple Ways to share

HHS & CDC

- IMZ Gateway
- DCIPHER
- NBS, EIP, Others
- HHS Protect

Why Interoperability Matters

Foundation for achieving data modernization

Impact of Public Health Programs

Track New Variants

Direct Response at Scale

Achieve Government Health Standards

Foundation for 360 view of Public Health

Eliminate Disease & Save Lives

MuleSoft's Advantage

Modern APIs as secure, reusable building blocks

Fast and agile by design

Pluggable, reusable building blocks supporting hybrid deployment

Secure across endpoints

Built-in security and governance at every node
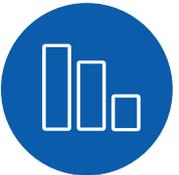
Dramatically lower costs

Lower development costs through reuse and self-service
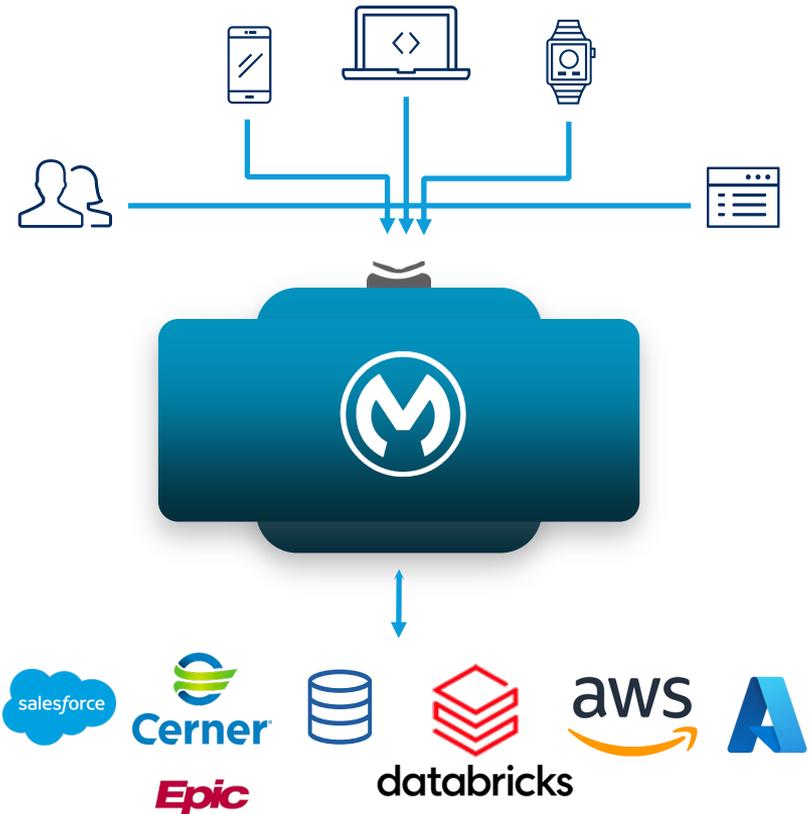
Realized in your North Star Architecture

Breaking down public health data silos
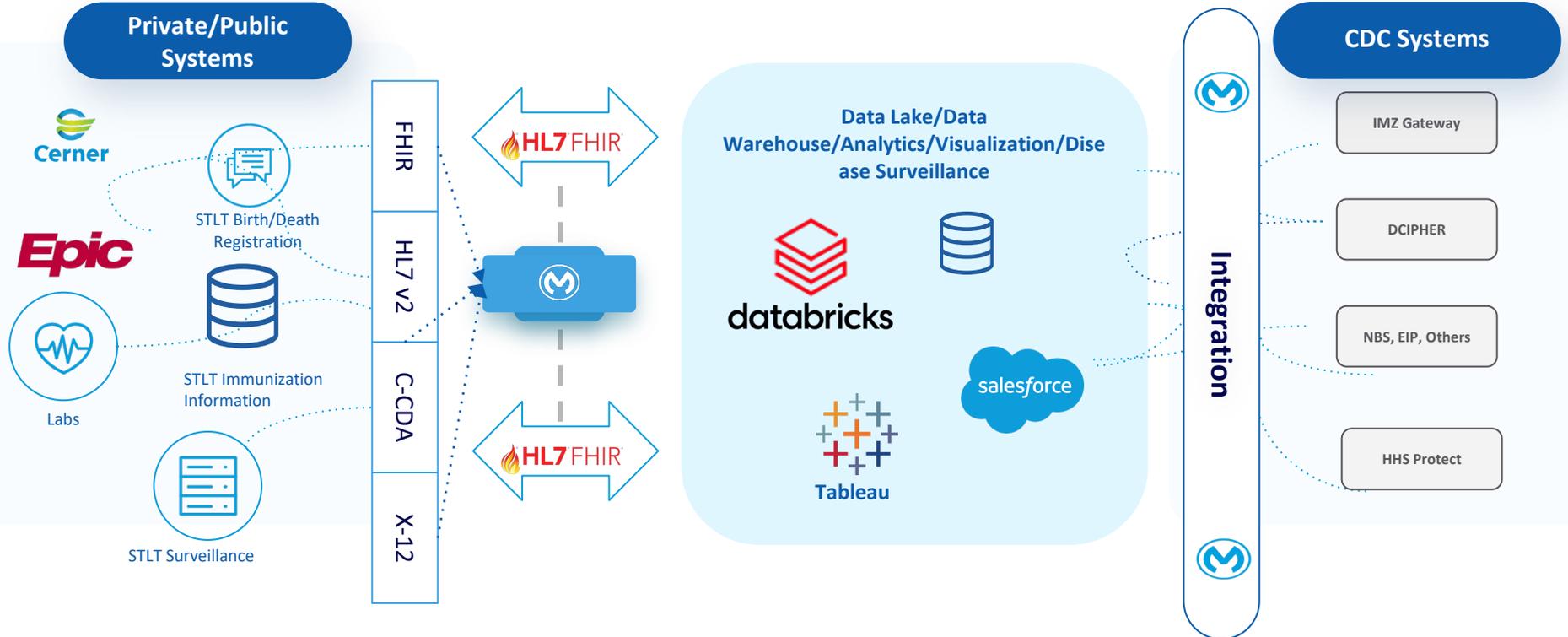
MuleSoft Anypoint Platform

World's #1 integration and API platform for public health agencies

Unlock and unify data anywhere

Integrate systems wherever they reside — on-premises, cloud, or hybrid

Securely empower your organization with APIs

Allow API discovery and reuse with centralized management and governance

Enable public health interoperability, *faster*

Easily apply proven assets and best practices from an API and integration marketplace. Accelerate delivery with no code/low code and 200+ connectors, templates, and examples.
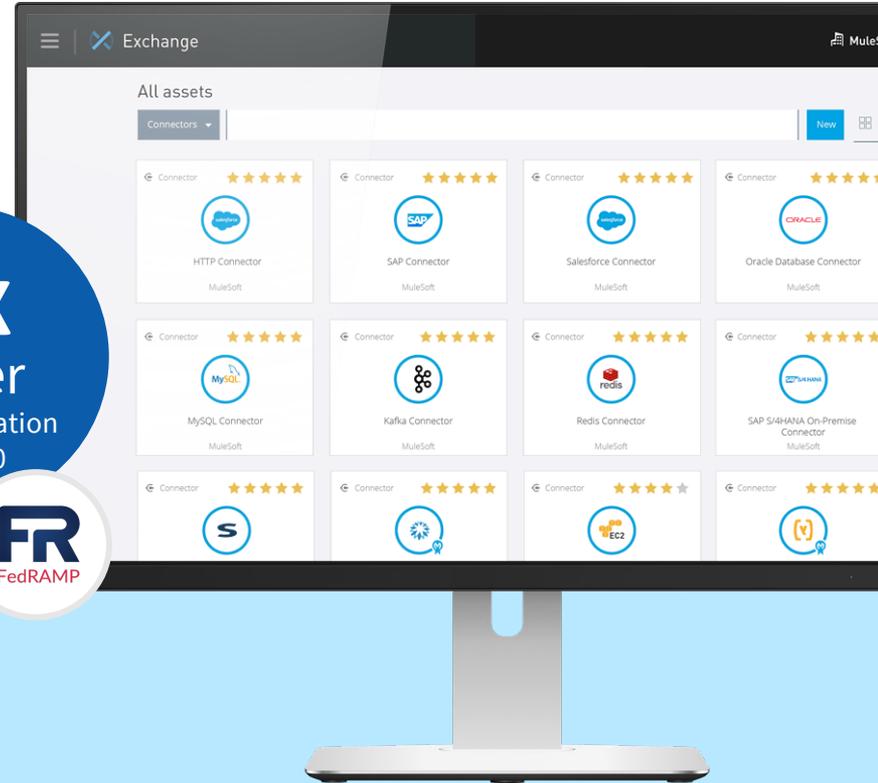
2x
faster
Implementation
of C360

FR
FedRAMP

MuleSoft Accelerator for Healthcare

Deliver connected healthcare experiences, faster

Enable data interoperability

Unlock and extend data across various stakeholders and support adoption of industry standards including USCDI, FHIR, HL7v2, X12, and C-CDA

Power Citizen 360 and population health initiatives

Expose critical EHR data using pre-built assets to patient engagement platforms including Salesforce Health Cloud as well as data lake/house systems like Databricks, Snowflake

Establish a future-proof foundation

Benefit from our proven, API-led approach that allows for flexibility, agility, and reuse for related future use cases on the horizon

Included in MuleSoft Subscription
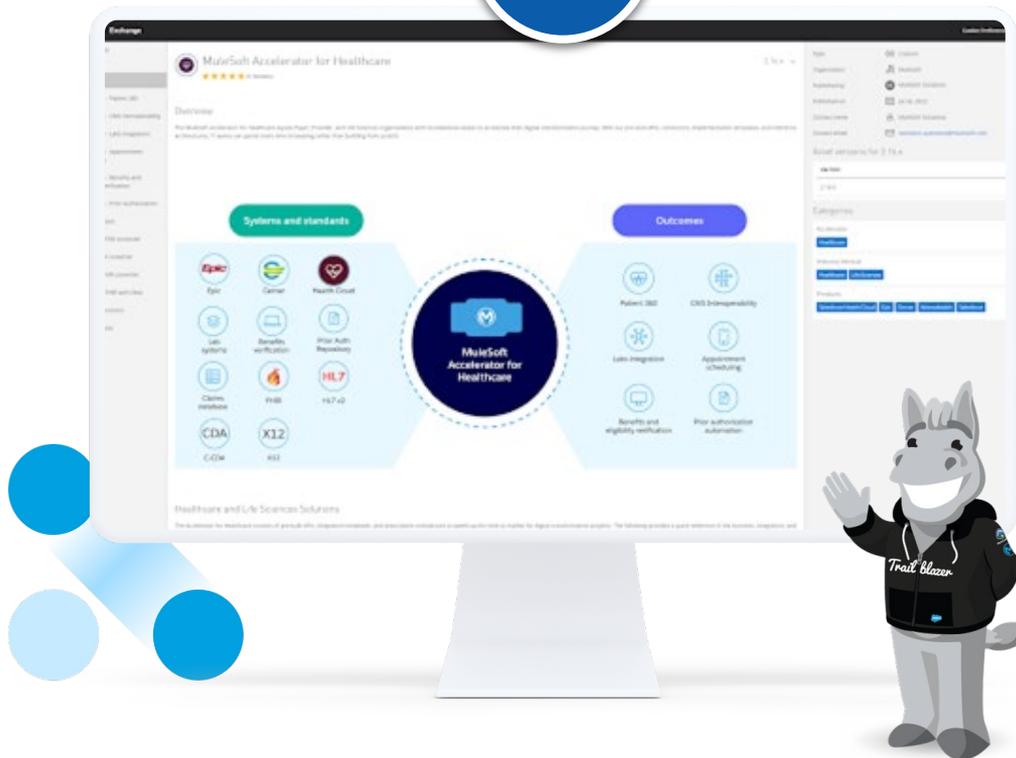
Comprehensive FHIR R4 support

Includes all 145 FHIR R4 resources and other assets to support developing FHIR APIs

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FHIR R4 Resources: Asset list

API specifications, data types, and libraries built to meet compliance with FHIR R4 standards.

Category	Library	API Specification
Foundation - Confirmance	CapabilityStatement [N] StructureDefinition [N] ImplementationGuide SearchParameter OperationDefinition [N] CompartmentDefinition MessageDefinition StructureMap GraphDefinition ExampleScenario	CapabilityStatement [N] StructureDefinition [N] ImplementationGuide SearchParameter OperationDefinition [N] CompartmentDefinition MessageDefinition StructureMap GraphDefinition ExampleScenario
Foundation - Terminology	CodeSystem [N] ValueSet [N] ConceptMap NamingSystem TerminologiesCapabilities	CodeSystem [N] ValueSet [N] ConceptMap NamingSystem TerminologiesCapabilities
Foundation - Security	Provenance AuditEvent Consent	Provenance AuditEvent Consent

R4 assets include:

- **USCDI library**

- **Full list of FHIR R4 resource**s

- **FHIR error API Policy:** Captures error responses and formats them in an FHIR OperationOutcome-compliant format

Accelerator for Healthcare FHIR Converters

Transform legacy healthcare standards using MuleSoft
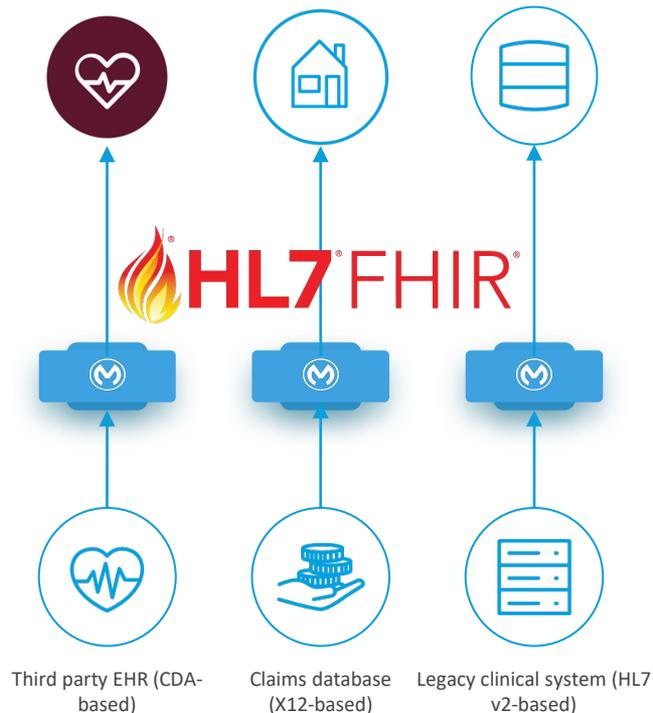
Capabilities and benefits

- Follows industry **best practices** prescribed by HL7 and X12

- Remove **manual work** associated with conversion

- Solution supports **most frequently** used document / event types across HL7 v2, C-CDA and X12

- Easily **modified and extended** for customer-specific requirements

Convert Healthcare Data From HL7v2 to FHIR

HL7 v2 to FHIR Converter

- Remove manual work associated with HL7 v2 and FHIR conversion

- Solution supports ADT A01 and OML O21, the most commonly used HL7 v2 messages

- HL7 connector is preconfigured for this use case to easily read HL7 v2 messages

Follow best practices prescribed by HL7

- Mappings follow implementation guidelines provided by HL7

Let's Break Down the Details

Alignment of Mulesoft with Common Agreement

Current challenges

Data necessary to meet interoperability rules is in a variety of different repositories

Data is multiple data formats (e.g. HL7, FHIR,CSV)

Making services accessible and discoverable is complex especially to CDC and public health partners at state, tribal, local and territorial levels

Integrations are point-to-point, tightly coupled, and built from scratch for most new use cases

Proprietary disease systems are a black box, not open or flexible

How Mulesoft solves for these

Data is orchestrated and composed to meet new interface requirements

Data transformation from raw format to FHIR R4

Required APIs are secure, easily discoverable, and consumable by stakeholders

Composability and reuse to accelerate interoperability and innovation

Openness and extensibility to meet the complexity and evolving needs of the healthcare

Pre-built FHIR integration assets accelerate access to critical population health data

Created a more complete patient view by quickly and securely converting legacy C-CDA format files from the Centers for Disease Control and regional hospitals into modern FHIR standard

Utilized pre-built implementation templates provided by the MuleSoft Accelerator for Healthcare to save over 300 hours of development time

Unified FHIR-formatted data in Microsoft Azure to provide visibility and access for analytics and data science teams to develop models and reports, informing their strategic population initiatives

Large City Public Health Department

salesforce

INTEGRATION

Hl7

ACCELERATOR FOR HEALTHCARE

1000s Of patient records processed

300+ Development hours saved

Why agencies choose MuleSoft

Accelerate innovation with integration, API management, & automation

Accelerated delivery

Fast to start, faster over time

Resilient operations

Built-in reliability, scalability and visibility

Automated security

Security and governance by default

Future-proof foundation

Flexible and built for change

Continue Your Journey With Us

Join us at the Salesforce Booth!

For a live demo of Healthcare Accelerator
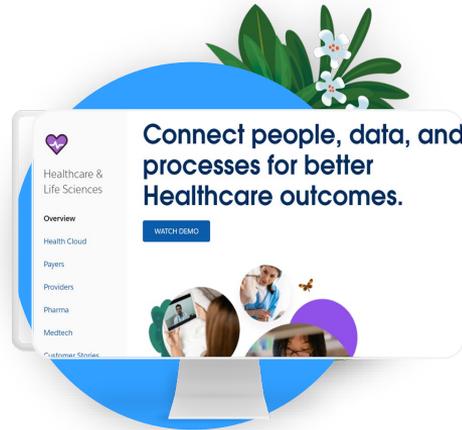
Learn more online

Learn more about the Healthcare Accelerator at MuleSoft.com/exchange

Scan QR Code

Thank You