



Public Health Data for COVID-19 Disease Investigation, Contact Tracing and Analytics

**IQSC Data & Analytics
Conference
November 3, 2021**

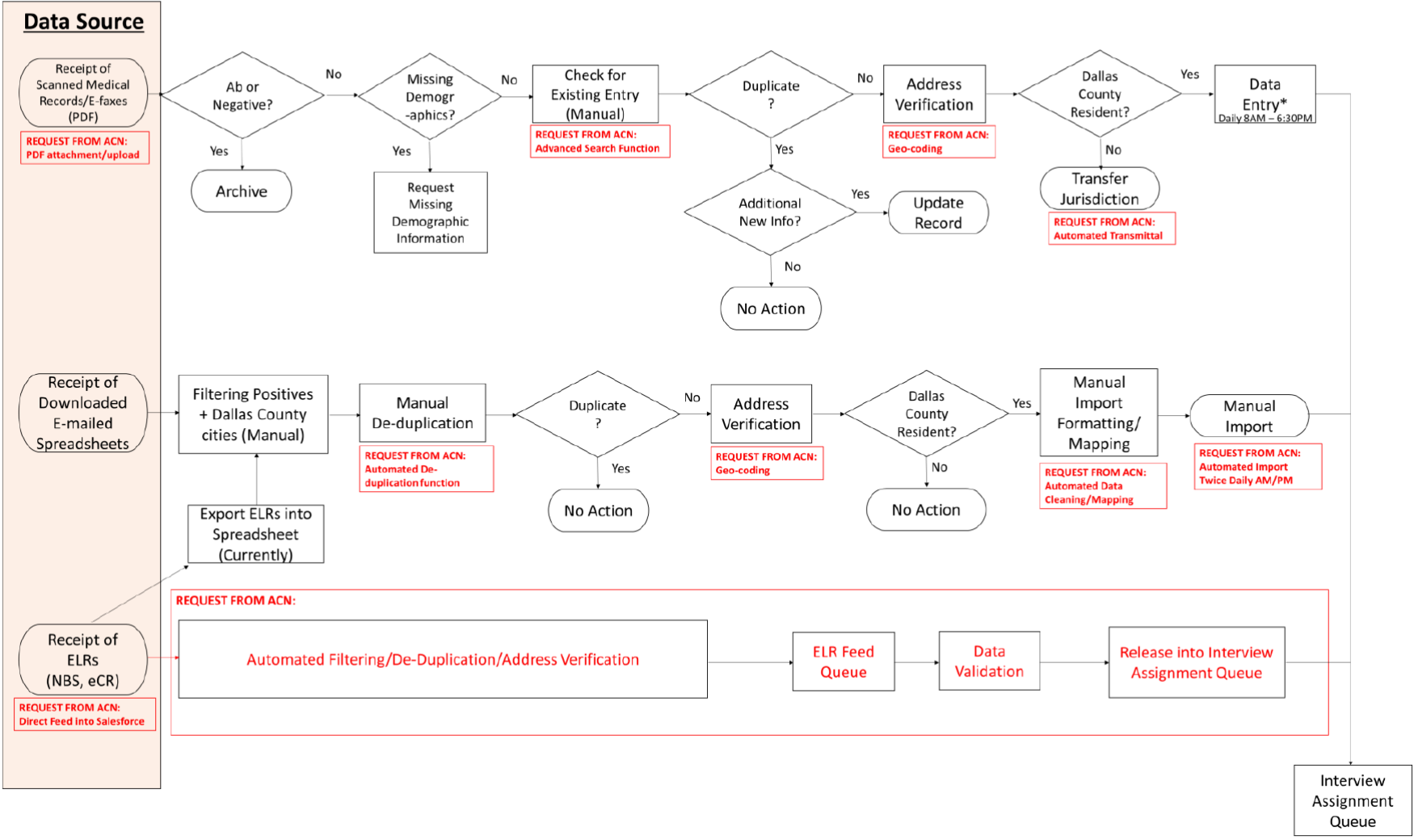
Presentation Objectives

- Understand data sources used for COVID
 - Challenges around data collection
 - How DCHHS is applying lessons learned from COVID 19 plans
-
- No conflicts of interest

Data Sources

- Electronic Lab Reports (ELR)
- Electronic Initial Case Reports (eICR)
- Vaccination Data
- Mortality Data

DATA INTAKE TO DATA ENTRY



Some of the Issues and Challenges

- 1. Evolving and Changing Situation**
- 2. Archaic Data Systems**
- 3. Manual Workflows**
- 4. Large Volumes (Redcap, Salesforce)**
- 5. De-duplication**
- 6. Address Validation**
- 7. Contact Tracing (Qualtrics, Call Center)**
- 8. Text Message Functionality**
- 9. Daily Reporting. Dashboards, Data Visualization**
- 10. Collaborations**

Dallas County COVID-19 Cases

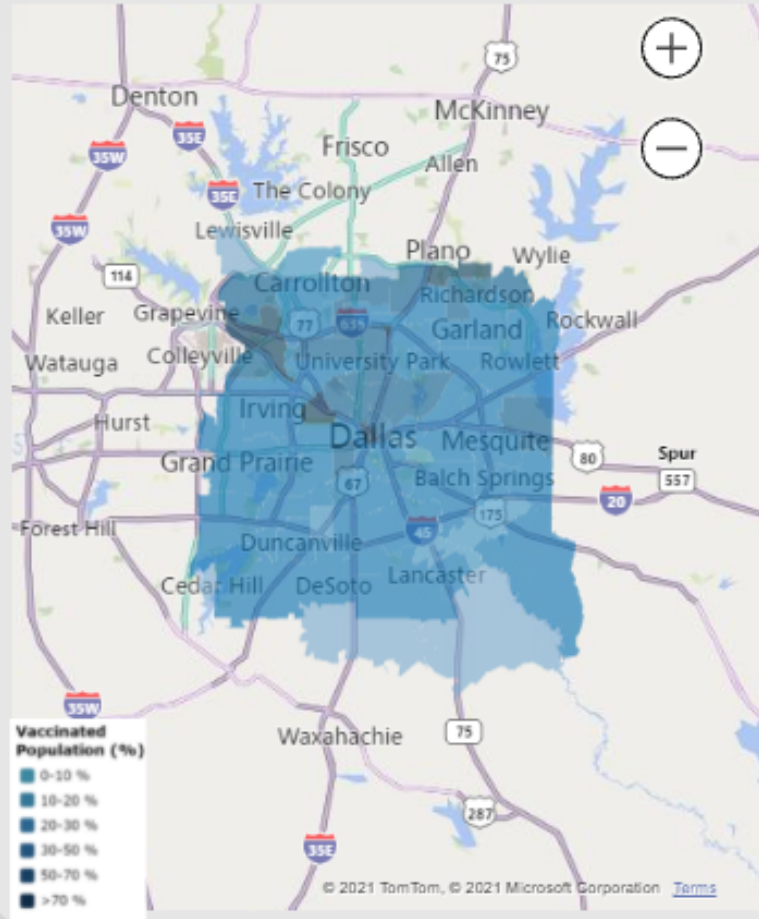


*'7 Days Trailing' refers to the last whole week of data received from the CDC. We take those 7 days and to get the daily average. 'Prior Week Daily Average' refers to the daily average of 7 days before that.



Vaccinated Population (%) (as of 10/21/2021)

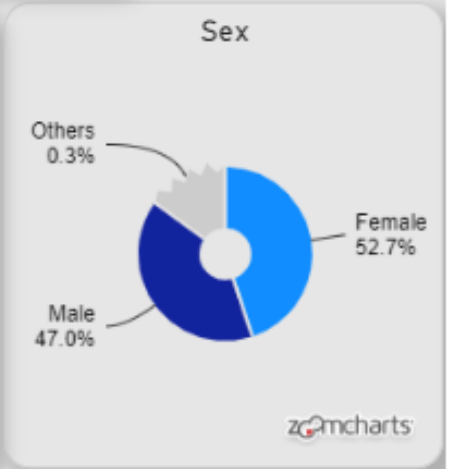
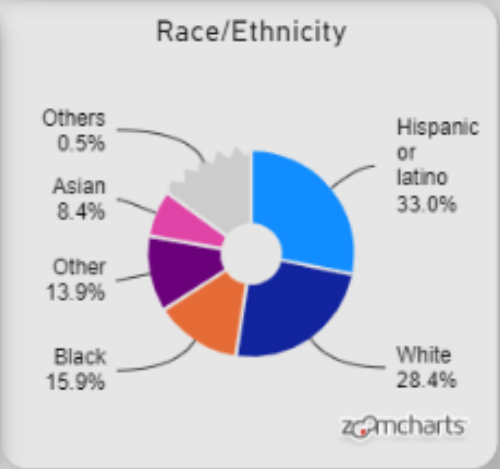
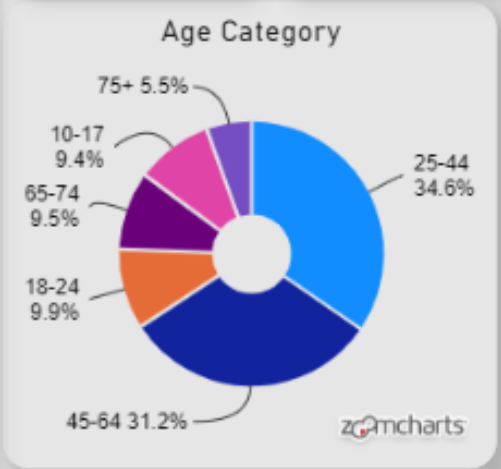
Legend Group ● >70% ● 10-20% ● 20-30% ● 30-50% ● 50-70%



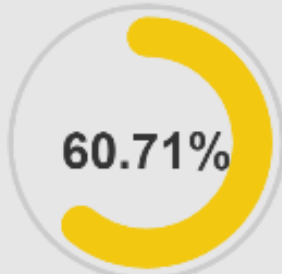
Sex
All

Age Category
Select all 10-17 18-24 25-44 45-64 65-74 75+

Select group(s) from the options at left to drill down on vaccine demographic data. Use the eraser button at the top right of each filter to clear selection.



% Total Population Vaccinated with at least 1 dose



1.60M
Who Received One Dose

1M
Completed Series

Vaccine	Vaccination Counts
Pfizer	1028368
Moderna	488158
Janssen	83538
Total	1600064

Future Objectives

Implement the next generation Disease Surveillance platform in order to:

- Enable a platform that is **agile, flexible and scalable** to automate and relate diseases, resident data and workflow process for disease investigations.
- Institute a scalable data model for enhanced disease reporting, analytics and automation with real time dashboarding and metrics to enable leadership decisions and health policies.

Guiding Principles

Build Structure



Use Salesforce for **static disease forms and workflow management**

Standardize where possible



Institute naming conventions and templates in order to **ease maintenance**

Reduce Manual Work



Create automations and integrations to allow the team to **focus on EPI work**

Build for the Future



Build needed functionality today as a **building block for tomorrow**

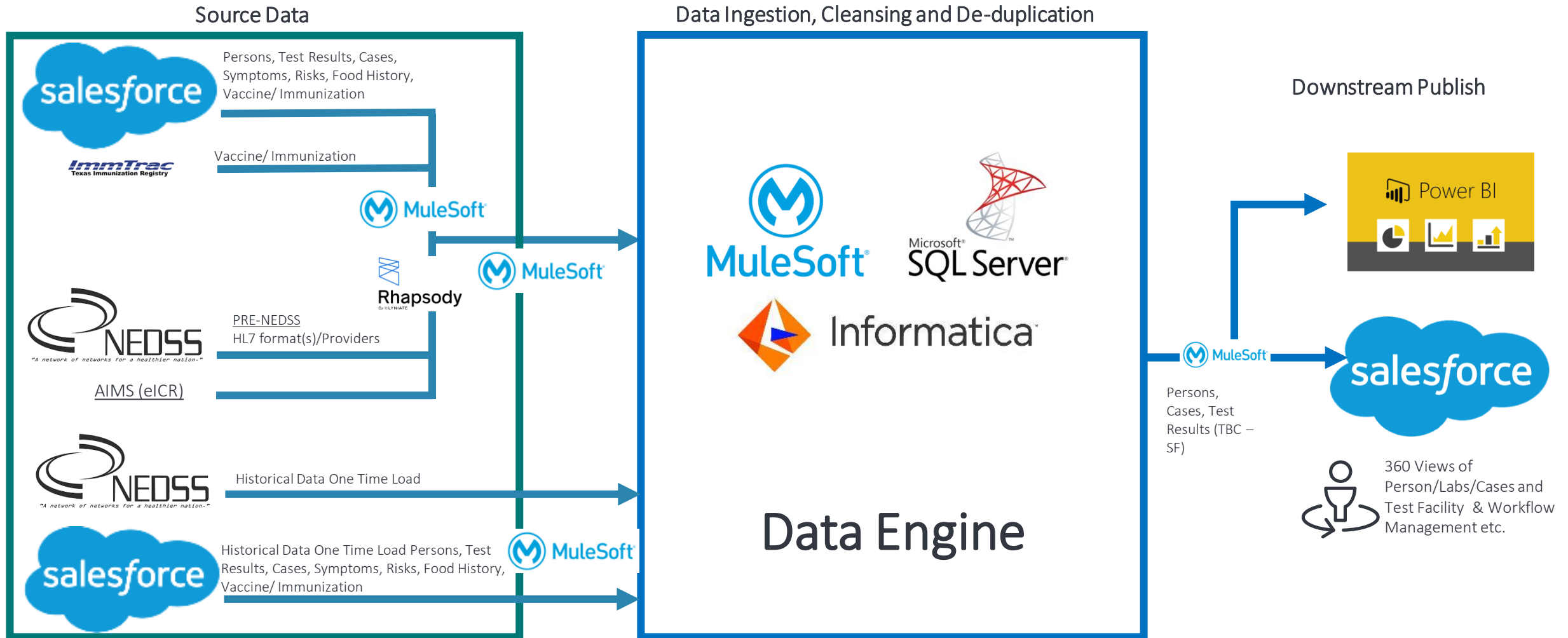
Build Engine



Use Informatica MDM for **standardization, cleansing, deduplication, matching & merging, and aggregation**

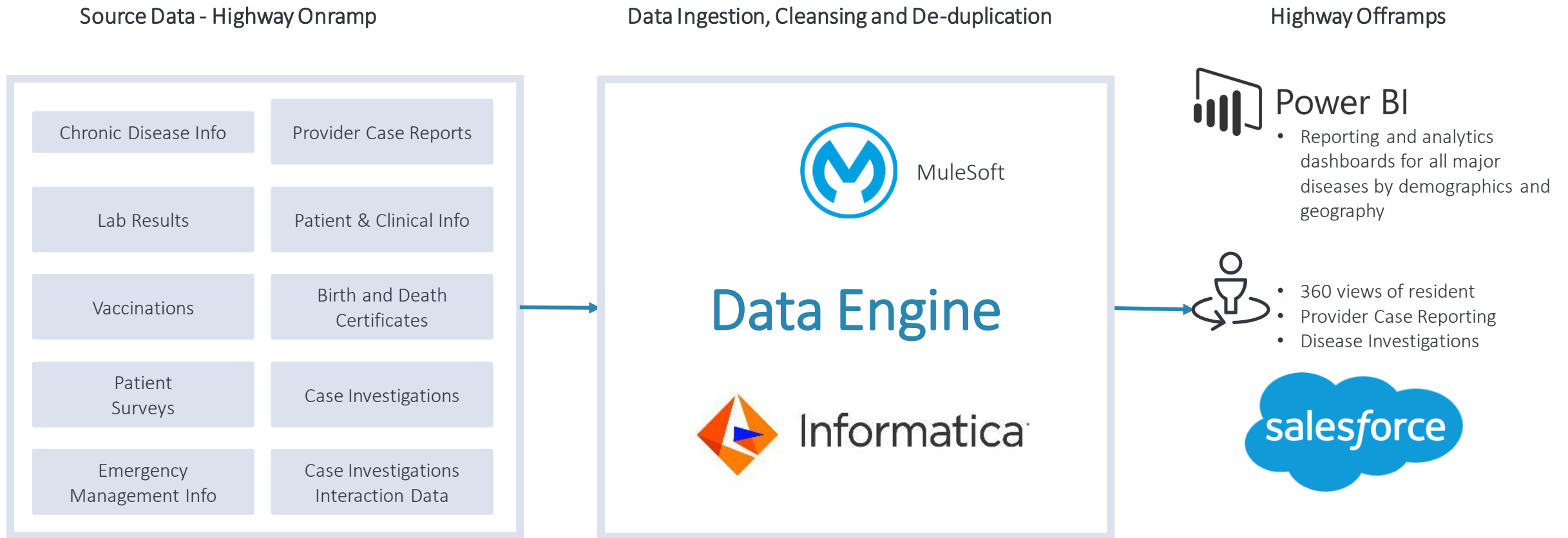
Data Engine Architecture – Dec Release

MDM will utilize data-sources to ingest accounts for mastering and will pass these golden records to Salesforce. During this process, the remaining data source feed into Salesforce will be cut-off.



Future Disease Surveillance System

Future Disease Surveillance System combines **agility, flexibility, scalability, and automation**. The increased automation involves building a **highway into the Data Engine**, which will drive enhanced reporting capabilities, result in time savings and help facilitate more informed health policy decisions.



Questions?