



HEALTHCARE
DELIVERED IT

Welcome to the Webinar!



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Philadelphia, PA
Bangalore, India



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About 314e



HEALTHCARE
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Established in 2004 to provide resource staffing and services, with an exclusive focus on healthcare IT



Headquartered in San Francisco, CA with a regional office in Philadelphia, PA and offshore delivery center in Bangalore, India



Being organically grown, with no external funding, has enabled us to focus on customer needs without external pressures



Industry partners/affiliations: CHIME, HIMSS, HFMA, Epic, HL7, Microsoft, AWS, Snowflake, Qlik, Tableau, InterSystems, Citrix



Best in KLAS for Technical Services, consistently high rankings in HIT Implementation & Staffing



Certified Minority Business Enterprise by National Minority Supplier Development Council



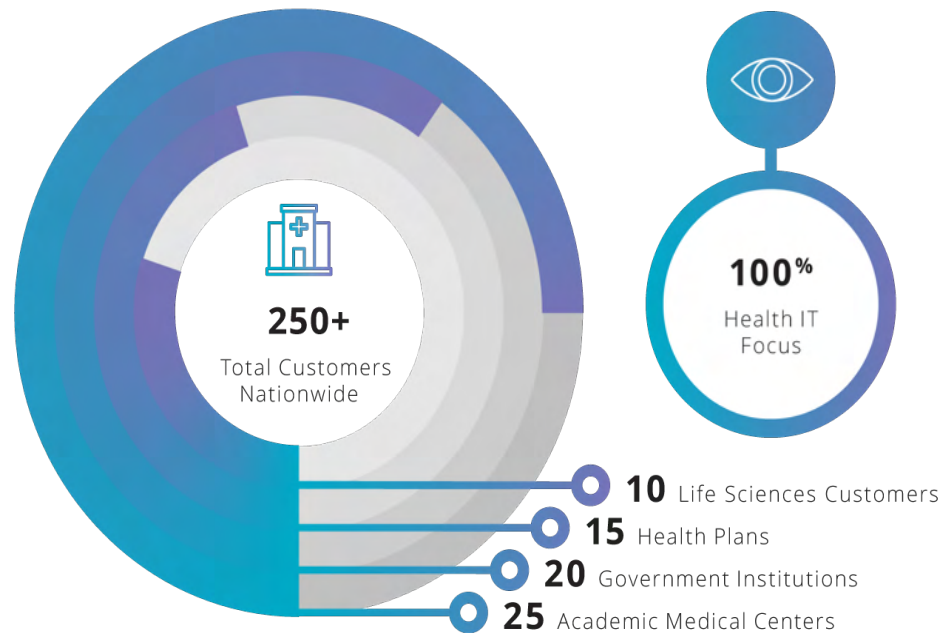
314e Experience and Services



HEALTHCARE
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Providers, Payers, and Life Science Customers

Full suite of IT services, resources and products
for healthcare organizations



EHR, Ancillary, ERP: Advisory, Implementation, Training, Go-Live Support, Digital Learning, System Upgrades and Optimization

Interoperability Services: Interface Development, Data Conversion & Archival, FHIR®

Data/Analytics Services: Business Intelligence, Big Data, Data Warehousing, ETL Processing, Data Quality, Master Data Management, Reporting and Data Visualization

Technology Services: Custom Programming, Robotic Process Automation, Digital Transformation, Cloud Adoption/Migration, Testing

Payer Services: Claims Platform Configuration and Testing (TriZetto, Facets, QNXT, HealthEdge, Tapestry)

Other Services: Managed Services, Staff Augmentation, Offshore Services, Products

Deep and broad experience across the Epic lifecycle with 200+ Epic clients and 20+ years in the Epic space

Collaborative approach and use of best practices to enable client success, improve efficiency and data usage and reduce costs



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Jumpstart your Health Data Strategy

Best Practices for Health Data Platforms

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Types of Healthcare Data



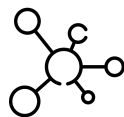
Clinical Data from EMRs



Medical and Pharmacy Claims



Care Management Data

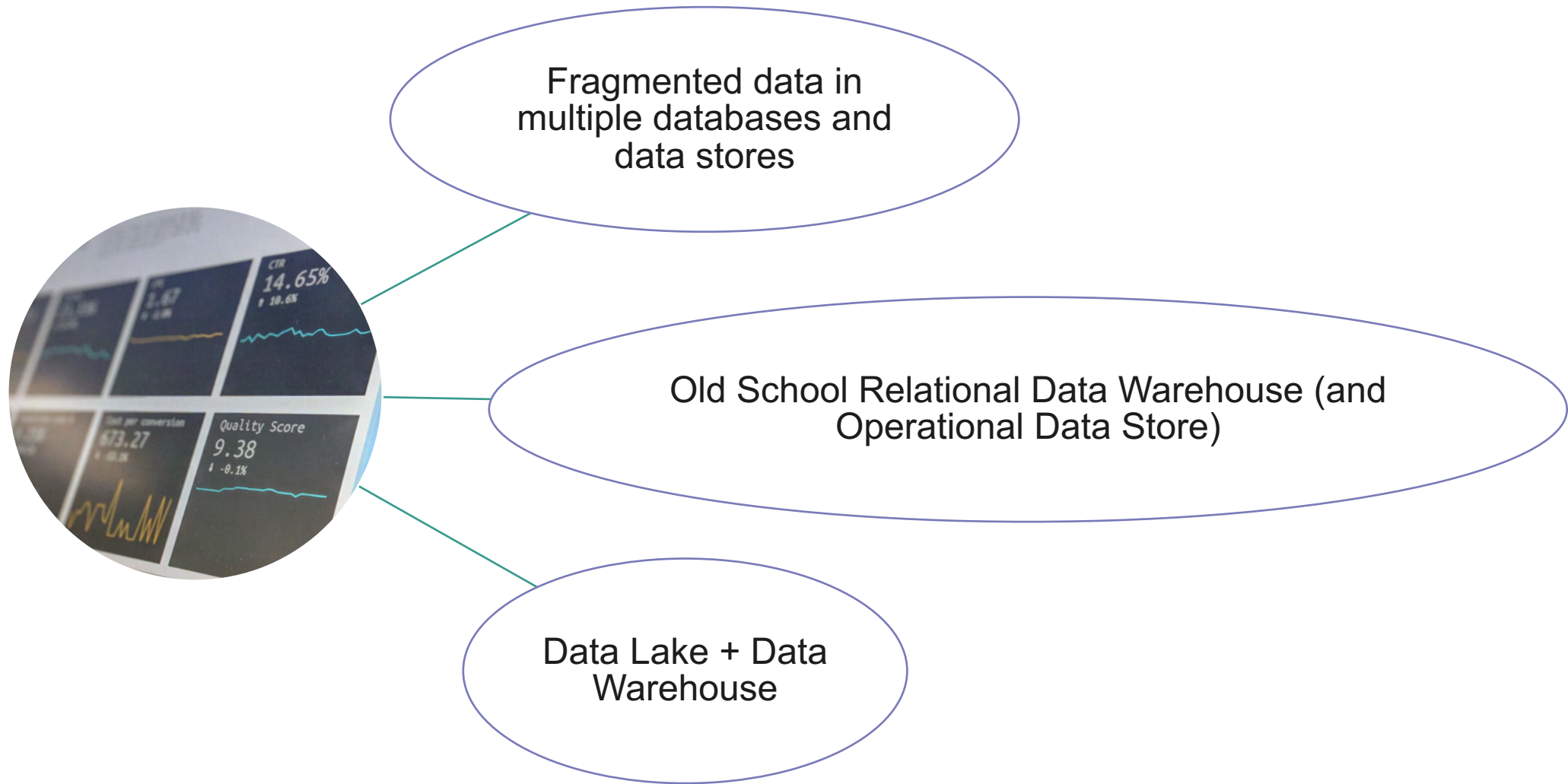


Omics data



Social Determinants of Health and other related data from external sources

The Three Main Stages of Current Health Data Platforms (OLAP platforms)



Use Cases for Robust Health Data Platforms



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Clinical Reporting



Financial Reporting



Business Intelligence
and Analytics



Competitive
Intelligence and
Benchmarking



Visualization and
Dashboards



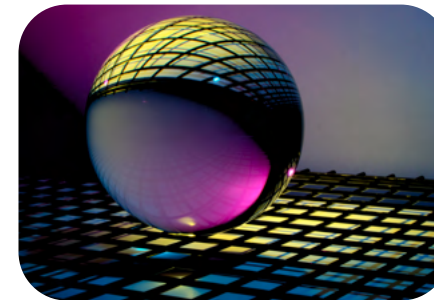
Clinical Measures



Compliance and
mandatory reporting
and analytics



Population Health
Management related
analytics and reporting



Artificial
Intelligence/Machine
Learning and
Predictive Models



Applications and APIs
built on top of the Data
Platform

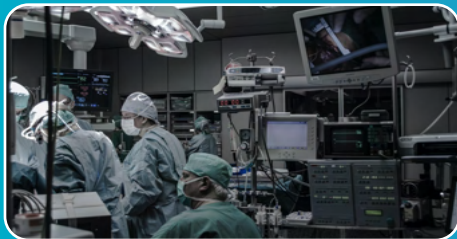
BEST PRACTICE 1: Industry-Standard Data Models for Clinical and Claims Data



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Fast Healthcare Interoperability Resources (FHIR)-based models



** Clinical Data
-- FHIR Clinical (EMR) Data Resources



** Medical and Pharmacy Claims Data
-- Explanation of Benefits resource in FHIR
-- All Payer Claims Database (APCD) Data Specifications and the APCD Common Data Layout

BEST PRACTICE 2: Enterprise Master Patient/Entity Index



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There is a need to link individuals if

- the same patient/member is represented in multiple streams and types of data with no linking identifier

- Enterprise Master Patient Index (EMPI) within the data management platform

- OpenEMPI (Open source EMPI)
- Commercial EMPI offerings

BEST PRACTICE 3: Managing ETL and ELT effectively



ETL: Extract-Transform-Load (Traditional processes to load the Enterprise Data Warehouse)

ELT: Extract-Load-Transform (When a Data Lake is being used)

Lambda Architecture: Batch, Speed, and Serving Layers

Processing tools: Spark, Kafka, etc.

Consider a Lakehouse instead of a traditional Data Lake + Relational Data Warehouse

BEST PRACTICE 4: Enable the use of Multiple Tools



- Standard Business Intelligence (BI) Tools like Tableau as well as SQL and NoSQL querying.

- Reporting and analytics using tools and programming languages like Python, R, SAS and SPSS, as well as advanced BI tools.

- Visualization using libraries and programming languages.

- Artificial intelligence and machine learning algorithms and predictive (Python, Spark, Scala, R, ...)

BEST PRACTICE 5: Enable Additional Processes



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A process to reconcile clinical, claims, and other types of data on the same member/patient

De-duplication algorithms

Master Data Management, including an understanding of the “source of truth” and a “single version of the truth”

Quality Control

Problems with Current Data Warehouses and Data Lakes



Data Staleness and High Data Latency

Reliability

Total Cost of Ownership, Complicated Lambda Architectures

Limited Support for Advanced Analytics like Machine Learning and Predictive Models

Atomicity, Consistency, Isolation, and Durability not guaranteed in the Data Lake

The Muspell Health Data Management and Analytics Platform by 314e



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314e Health Data Services

Excellent SQL compliance, fully ACID transaction support.

Full support for advanced analytics like machine learning and AI.

Data Strategy and Advisory Services

Data Platform Implementation

Industry-standard data models like FHIR for healthcare data.

Incorporates Master Data Management, Quality Control, robust ETL and ELT processes, and an Enterprise Master Patient Index.

ETL, ELT services

Business Intelligence, Visualization, and Reporting Services

Easy access through multiple Business Intelligence and Visualization tools.

Support for applications and APIs.

Application and API development



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Questions & Answers

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