



Global Learnings on Data Collaboration In Healthcare

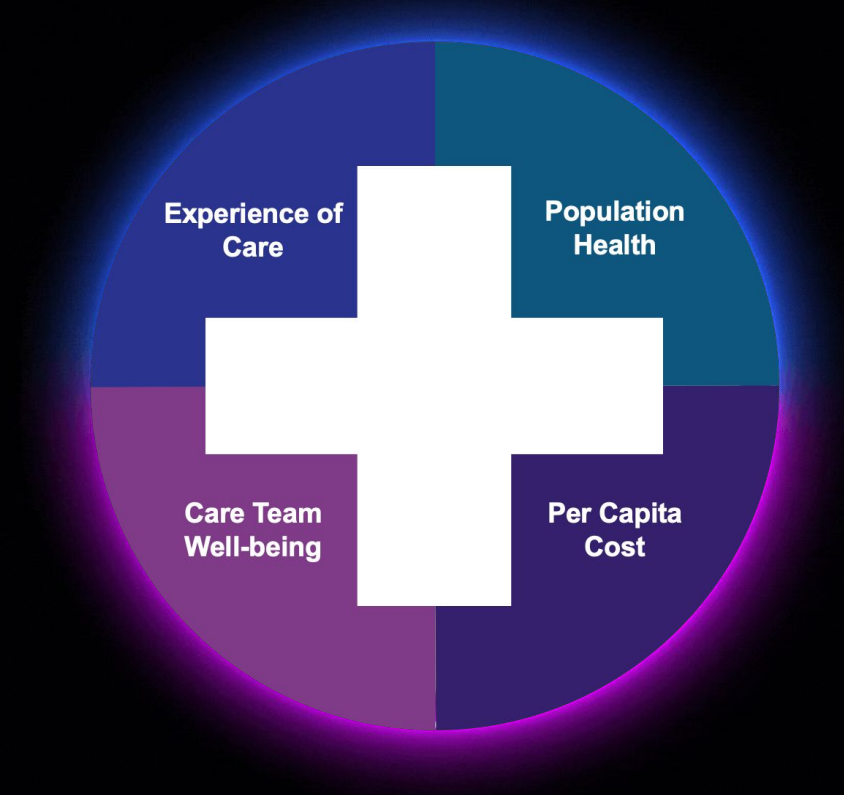
March 2023 - Stephen Ermann – v1.1



In Healthcare, It's About Time



In Healthcare, It's About Time



EHRs Have A Lot of Data

EHR systems are undoubtedly the most critical source of data across a healthcare provider organization



But They Lack Insights

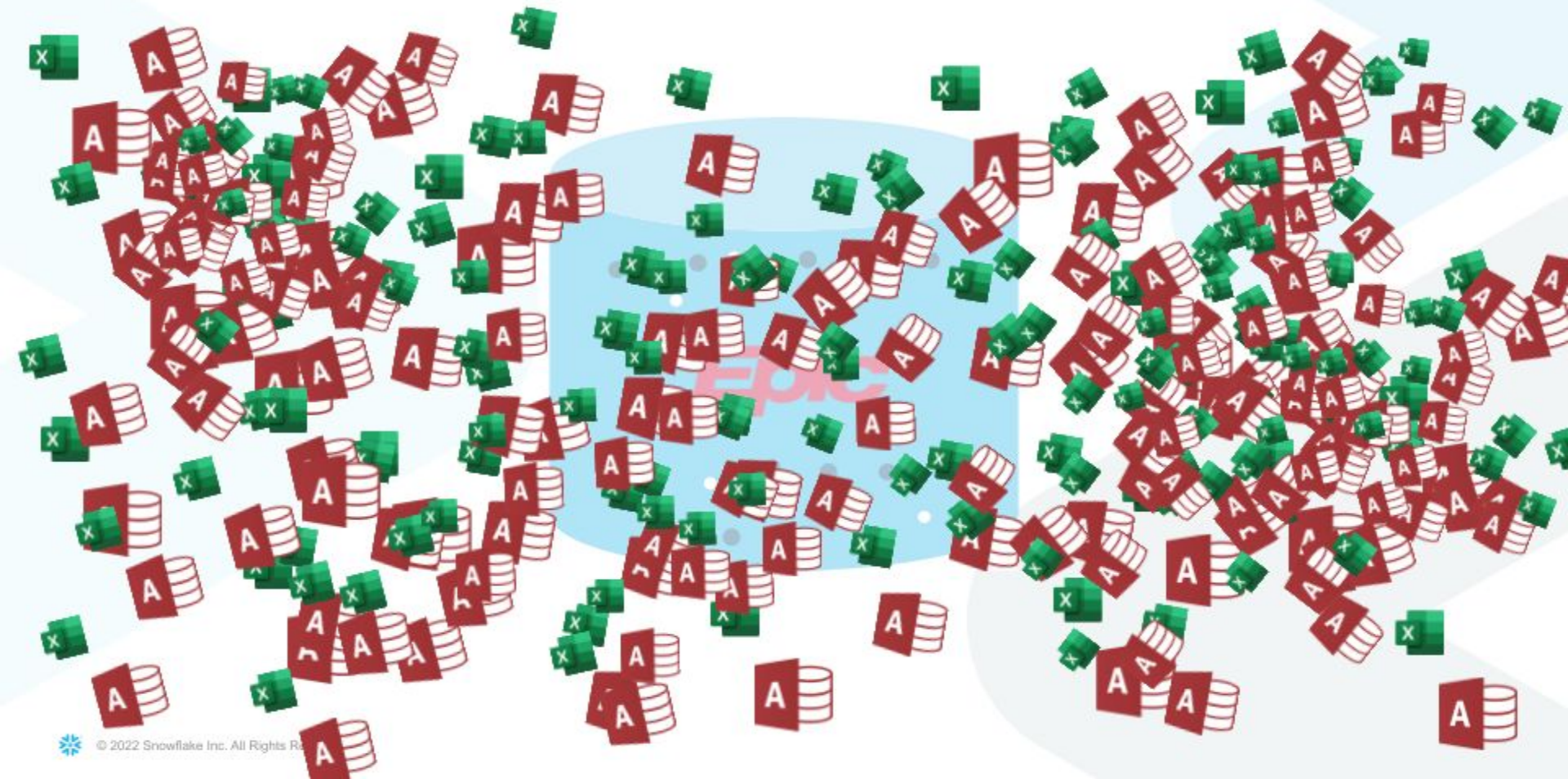
Capturing and storing the clinical and revenue cycle data is what EHRs are best at.



So What Happens?



3 Es: Excel, Extracts, and Exhaustion



3 Es: Excel, Extracts, and Exhaustion

Note: This image is fictitious.

The actual case is much, much worse...

One organization recently scanned and found over **43K** (that's forty-three *thousand*) MS Access databases with EHR data within their network.

They were unable to account for Excel and CSVs.



Every Hospital & Clinic

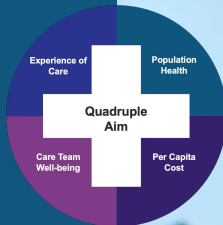
Nurse Staffing

Per Capita Cost,
Care Team Well-being

“Grady [Health] is expected to spend an extra \$80 million on staffing this year. If unable to secure enough nurses, the hospital may have to reduce available bed numbers.” - 11Alive Feb 2022

Agency nurses make 2-3x
Staff nurses today

- + Multiple Data Sources
- + ML for predictive trends



Betty is getting
paid what?!
I'm outta here.



Every Hospital

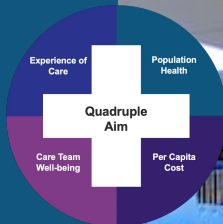
Supply Chain Ops

Per Capita Cost,
Experience of Care

Improved forecast accuracy &
inventory utilization/
optimization

- Avoided yet another point solution totaling \$1.5M
- Improve days in inventory by at least nearly 1 day, for annual benefit of \$1.2M+
- Improve analytic processes by over 5.7K hours, which was invested into greater insights and foresights

*Learn more in the
Value Engineering Case Study!*



Maybe if we get rid
of our Fax
machines, we
could get some of
those Amazon
robots...



Academic Medical Centers

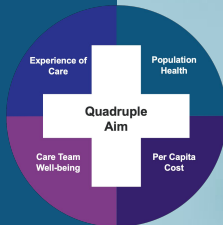
Research Explorer

Population Health

Delays in IRB approval hinder enrollment, data collection and analysis, and submissions to regulatory oversight agencies.

Researchers can browse de-identified data to select suitable cohorts for studies and re-identify once approved.

- + Multiple Data Sources
- + Secure Data Sharing
- + ML and NLP for deep analysis
- + Writeback to tag cohorts



Wait... Was it
Pts_202212_v2.xls or
_v2_final_3.xls that
has the data I need?



“Getting data into the Data Cloud allowed us to reimagine analytics and execute at a pace that was not possible when we were on-prem.”



Ashok Chennuru
Chief Data and Analytics Officer




Healthcare & Life Sciences in the Post-COVID Era

Driving Transformational Change Across Every Function



Shift to digital / remote care



Increased Personalization /
Individualized Offerings



Decentralized research



Onshoring, collaboration,
multi-enterprise supply
planning



Omnichannel approach
becomes the norm



Traditional barriers to
collaboration are falling



Snowflake in a Nutshell



SNOWFLAKE'S PLATFORM

**DATA
SOURCES**

OLTP DATABASES

ENTERPRISE
APPLICATIONS

THIRD-PARTY

WEB/LOG DATA

IoT



**DATA
CONSUMERS**

DATA MONETIZATION

OPERATIONAL
REPORTING

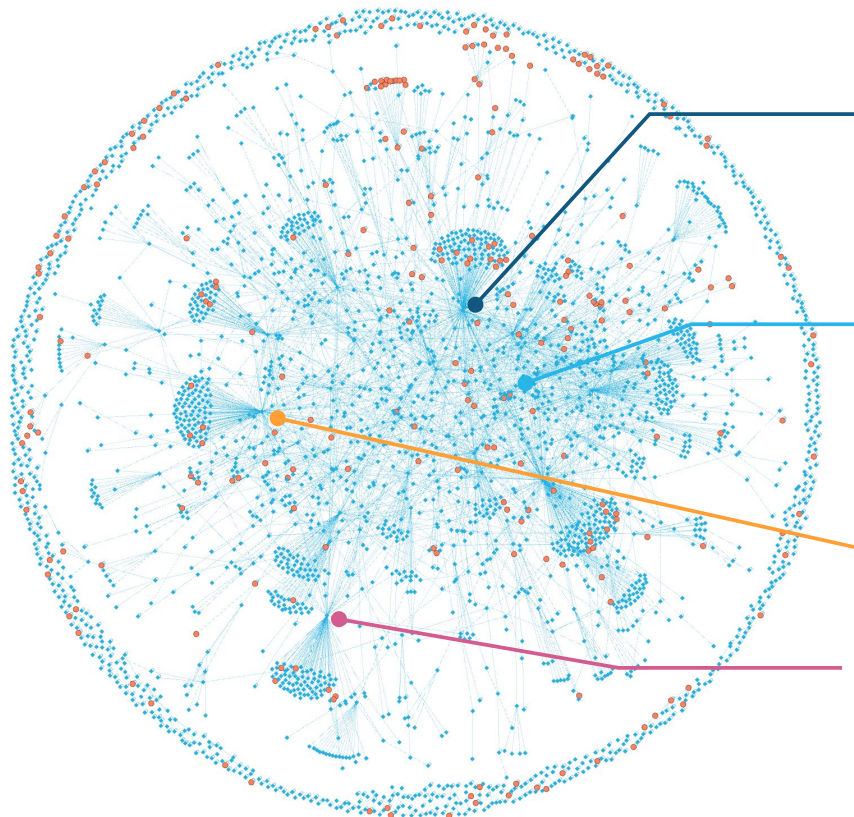
AD HOC ANALYSIS

REAL-TIME ANALYTICS



DATA CLOUD TODAY IN HEALTHCARE

THOUSANDS OF
ORGANIZATIONS
ACROSS
INDUSTRIES
COLLABORATING
WITH THEIR
ECOSYSTEM



Healthcare Providers & Payers

Anthem

Spectrum
Health

Center for Medicare
& Medicaid Services

NYC
HEALTH+
HOSPITALS

Data Providers

INVITAE

comple

IQVIA

PRECISIONxtract

Fortune 500 Pharmaceutical, Medical Device & Genomics

Digital / Health Tech

athenahealth

komodo
HEALTH

HealthCatalyst

fireflyhealth

* Visualization based on actual Data Cloud sharing activity as of July 31, 2022



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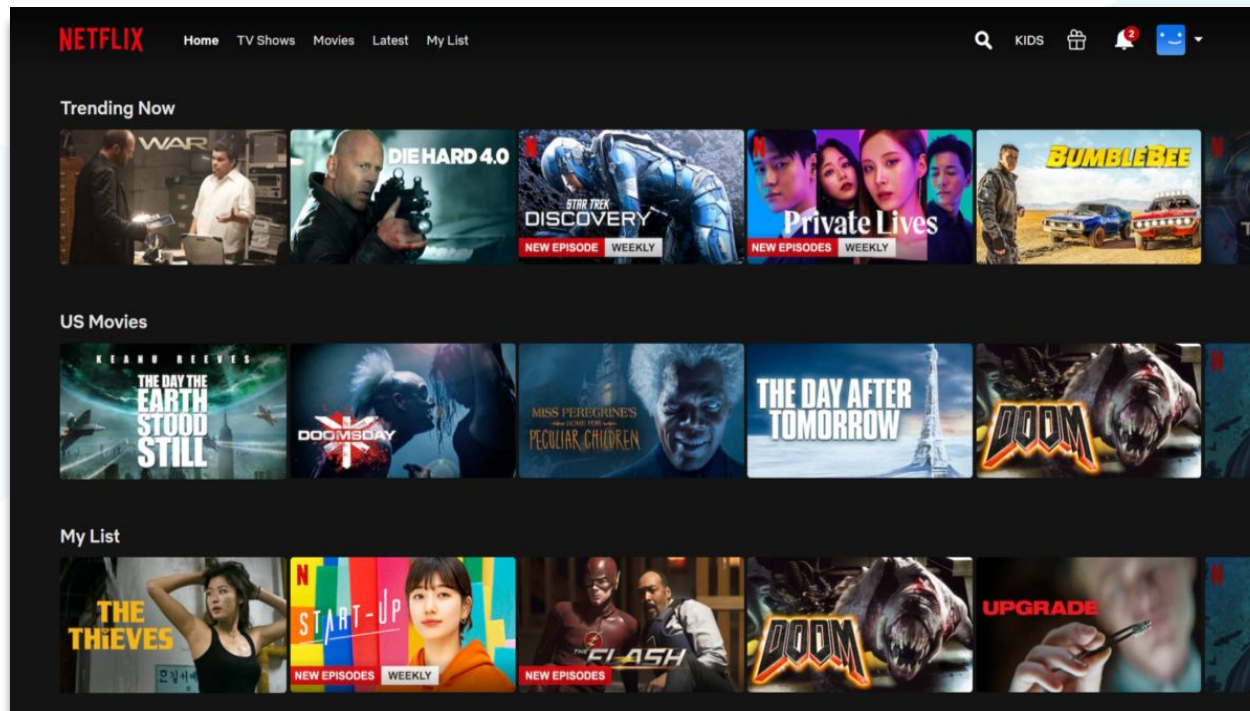
Snowflake Data Collaboration



EVOLVING FROM DATA EXPORT TO DATA ACCESS



EVOLVING FROM DATA EXPORT TO DATA ACCESS

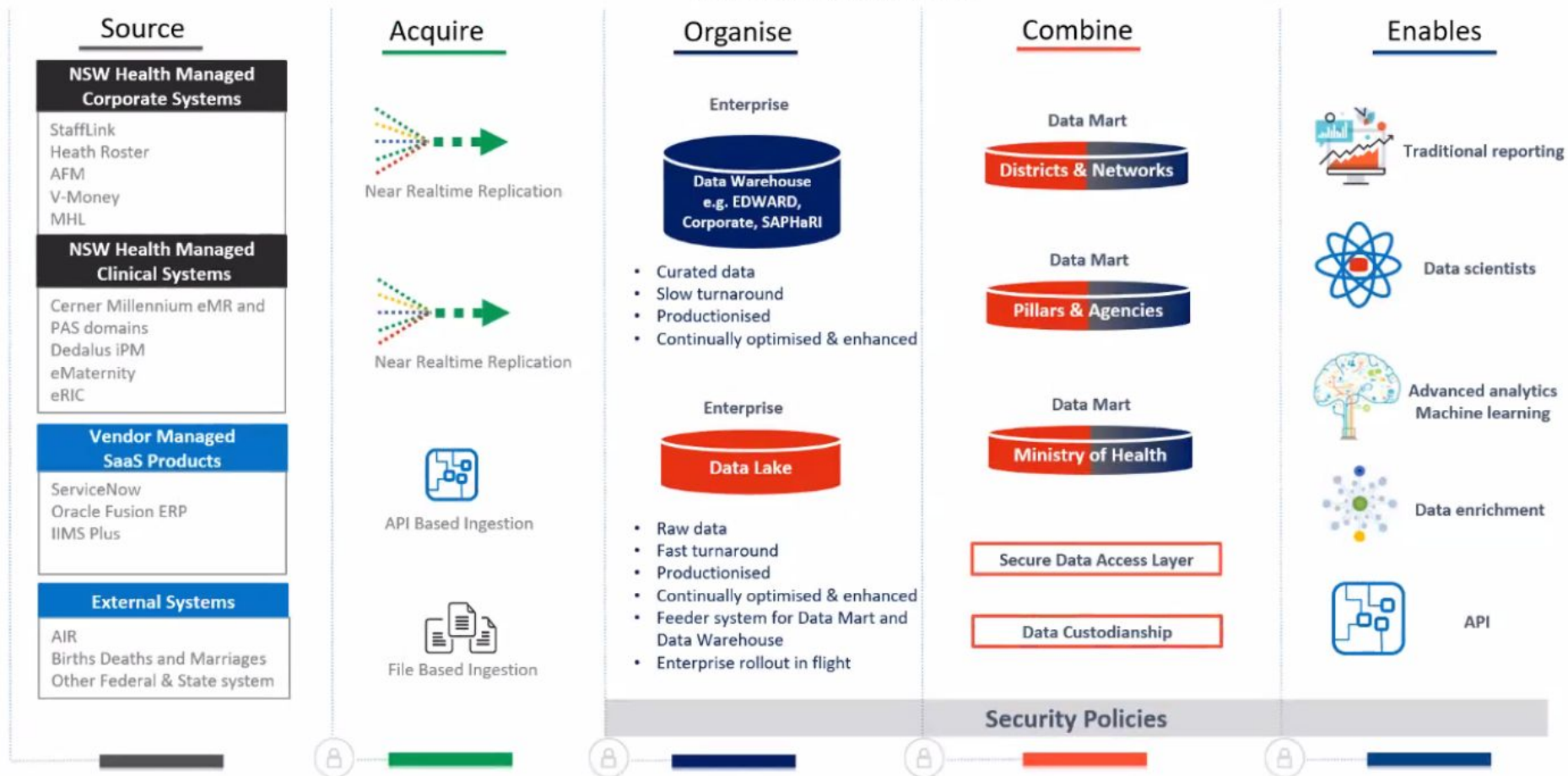


NSW Health

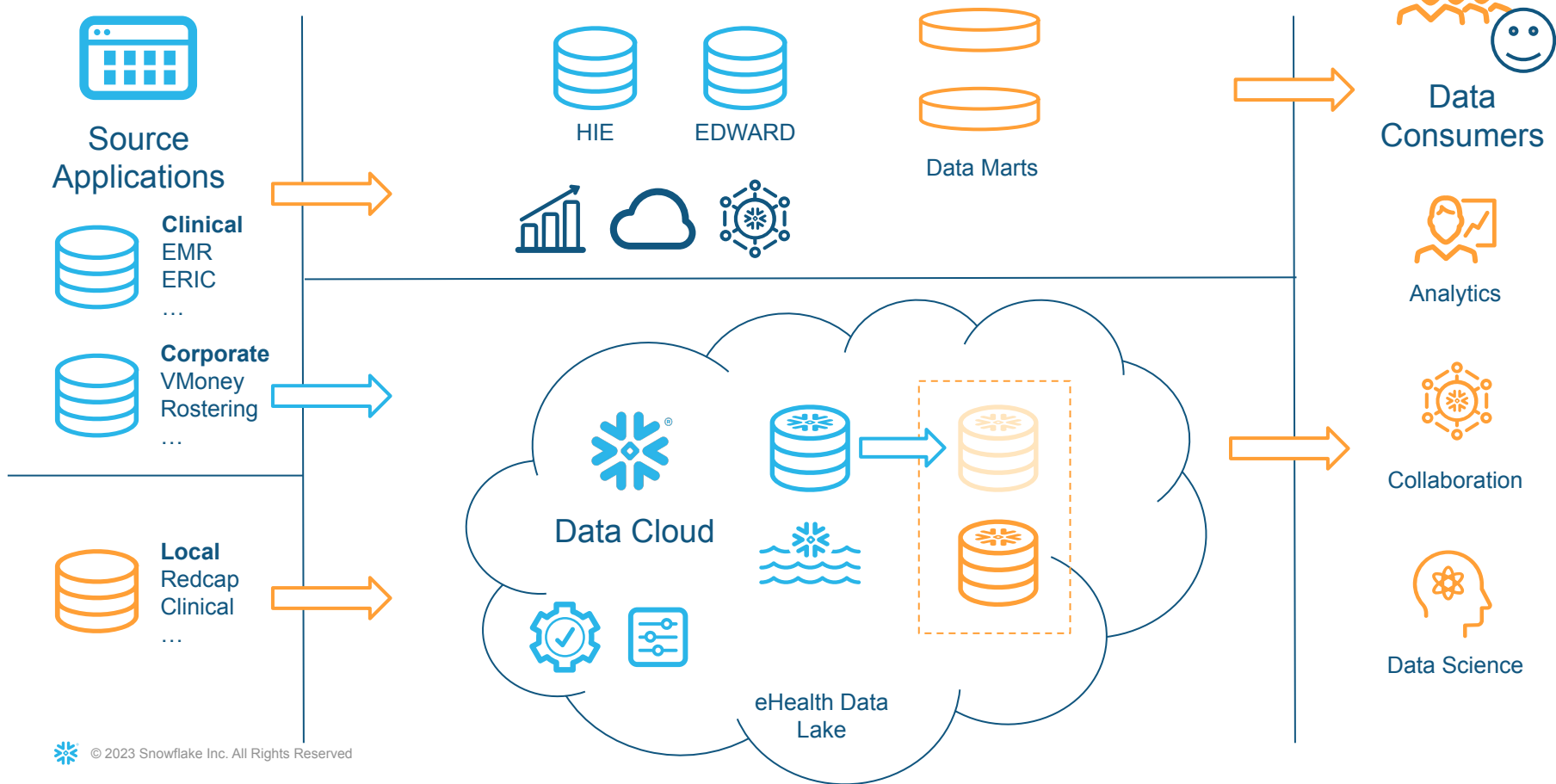


Data Landscape – Wider Context

Data Governance Framework



Data Lake Concept - NSW Health



Some of our Initiatives

OMOP Implementation Accelerator	Designed to streamline the process of onboarding OMOP (Observational Medical Outcome Partnership) analysis or data sharing workloads into Snowflake.
PHI Management Framework - Data Sharing	Organizations struggle with defining strategies and processes to manage PHI (Personal Health Information) on their data platforms. The framework allows customers to share PHI data in a secure and compliant manner as part of an overall data management lifecycle.
Healthcare Data Collaboration	Snowflake Data Collaboration & Sharing collaboration can greatly help reduce organizations who are currently on Snowflake to seamlessly share data through private listing of data shares on Snowflake based on the payer/provider terms. Snowflake provides capabilities to share data with non-snowflake customers as well in the form of reader accounts.
Medication Adherence Framework	The Medication Adherence Scoring Framework within Snowflake allows customers to calculate patient PDC (Proportion of Days Covered) scores in accordance with Pharmacy Quality Assurance (PQA) standards.
DICOM Accelerator	DICOM (Digital Imaging and Communications in Medicine) Accelerator provides End-to-End medical imaging framework for ingestion into Snowflake and UI for Analytics Patient Visit → Images Taken → Ingest DICOM (local DICOM server → cloud storage → Snowflake) → Streamlit app



THANK YOU



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