Data for Breakfast

snowflake®
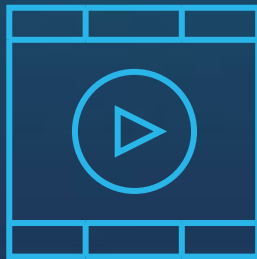
WELCOME

Sign up for your
Snowflake free trial
(Enterprise edition)

Slide deck will be
made available

Cell phones
on silent

https://trial.snowflake.com
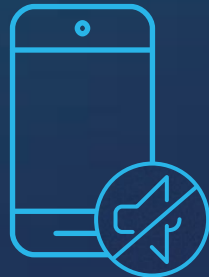
AGENDA

Breaking Data Barriers	20 mins
Technical Deep Dive	25 mins
Customer Session	25 mins
Q&A With Speakers	25 mins
Zero to Snowflake Workshop	90 mins

BREAKING
DATA BARRIERS

SNOWFLAKE
SQL DATA WAREHOUSE BUILT FOR THE CLOUD

3 years
in development

2,500
customers,
adding 500
a quarter

Growing
consistently
3x globally

Replacing
legacy & first
gen cloud alike

Gartner and
Forrester
"Leader"

OUR MISSION

ENABLE EVERY ORGANIZATION
TO BE DATA-DRIVEN

CURRENT DATA WAREHOUSE PROBLEMS

SILOED, DIVERSE DATA

Many data sources / stores

Semi-structured data

No single source of truth

Cannot easily share

SCALE AND SPEED ISSUES

Cannot easily scale up/out

Resource contention

Slow queries and ingest

COMPLEX, COSTLY INFRASTRUCTURE

Costly software & hardware

Over-provisioned for spikes

Lots of maintenance & tuning

Many languages

LEADS TO SLOW, LIMITED DECISION MAKING

Cannot easily scale up/out

Resource contention

Slow queries and ingest

THE SOLUTION:

ALL DATA CENTRALIZED AND SHAREABLE

All in one place, incl semi-structured data

Single source of truth

Securely share live data with others

UNLIMITED, AUTOMATIC SCALE AND SPEED

Separation of storage and compute

All workloads get proper, isolated resources

Automatically handles spikes

SIMPLE, COST EFFECTIVE INFRASTRUCTURE

No hardware

Fast time to value

Near-zero maintenance

Pay as you use

Complete SQL

LEADS TO FASTER, BETTER DECISION MAKING

Unlimited queries & users
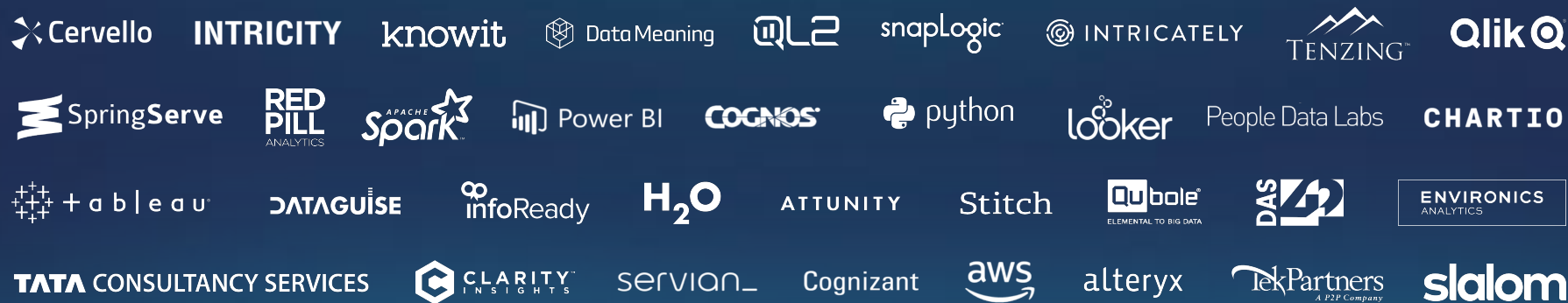
Fresh & complete data

Optimize revenue & costs

EVER EXPANDING ECOSYSTEM

Lacework · Azure · braze · SAFEGRAPH · databricks · webinfinity · Fivetran · MicroStrategy

Amplitude · SIRIUS · alooma · data.world · WEATHER SOURCE · Informatica · Segment · xignite The Market Data Cloud

wipro · WUNDERMAN · Cloudwick Big Data Success · Decisive Data insights for decisions · USEReady · computable · Capgemini

WhereScape · HEAP · DataRobot · virtusa · Google Cloud · Datalytyx · R · talend

Cervello · INTRICITY · knowit · Data Meaning · QL2 · snapLogic · INTRICATELY · TENZING · Qlik

SpringServe · RED PILL ANALYTICS · APACHE Spark · Power BI · COGNOS · python · looker · People Data Labs · CHARTIO

tableau · DATAGUISE · infoReady · H₂O · ATTUNITY · Stitch · Qubole ELEMENTAL TO BIG DATA · DAS 42 · ENVIRONICS ANALYTICS

TATA CONSULTANCY SERVICES · CLARITY INSIGHTS · servian_ · Cognizant · aws · alteryx · TekPartners A P2P Company · slalom

SNOWFLAKE USE CASES

Cloud Data
Warehouse

Data
Lake

Accelerated
Analytics

Data
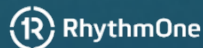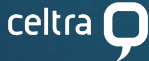Engineering

Secure
Data Sharing

Data
Applications

Data
Science

OVER 2,500 SUCCESSFUL CUSTOMERS

**More users,
faster analytics**

No more concurrency /
contention issues;
timely analytics
for 10+ LOBs

**Larger workloads
and data sets**

Easily bring in more user
workloads and data sets
while exceeding scale and
performance requirements

**More queries,
better analysis**

Can do 100 times more
queries per day for
quicker, better analysis

**Faster, scalable
analytic app**

Delivered new analytic
application to 10,000+
pharmacies with query
performance improved 150x

TECHNICAL DEEP DIVE

HOW IS SNOWFLAKE UNIQUE?

ARCHITECTURE

A NEW ARCHITECTURE FOR DATA WAREHOUSING

Multi-cluster, shared data, in the cloud

Traditional Architectures

Snowflake

Shared-disk

Additional capacity requires forklift upgrade

Reads/Writes at the same time cripples the system
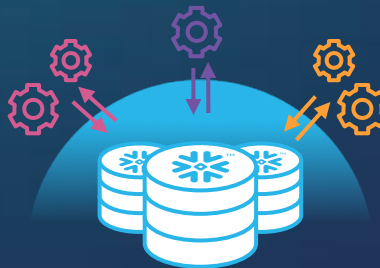
Replication requires additional hardware

Shared-nothing

Resizing cluster requires redistributing data. Shut down requires unloading.

Each cluster requires its own copy of data (ex: test/dev, HA)

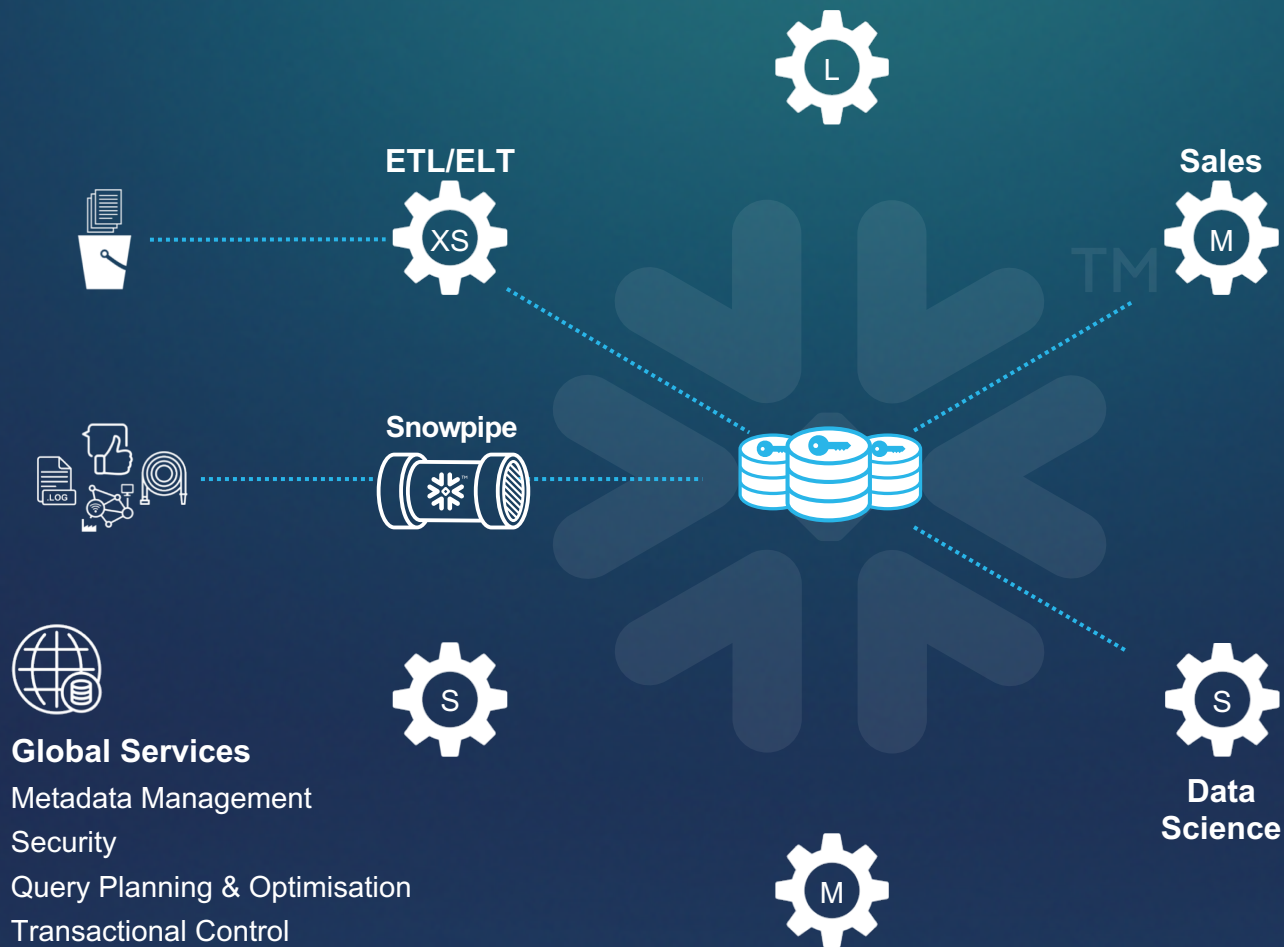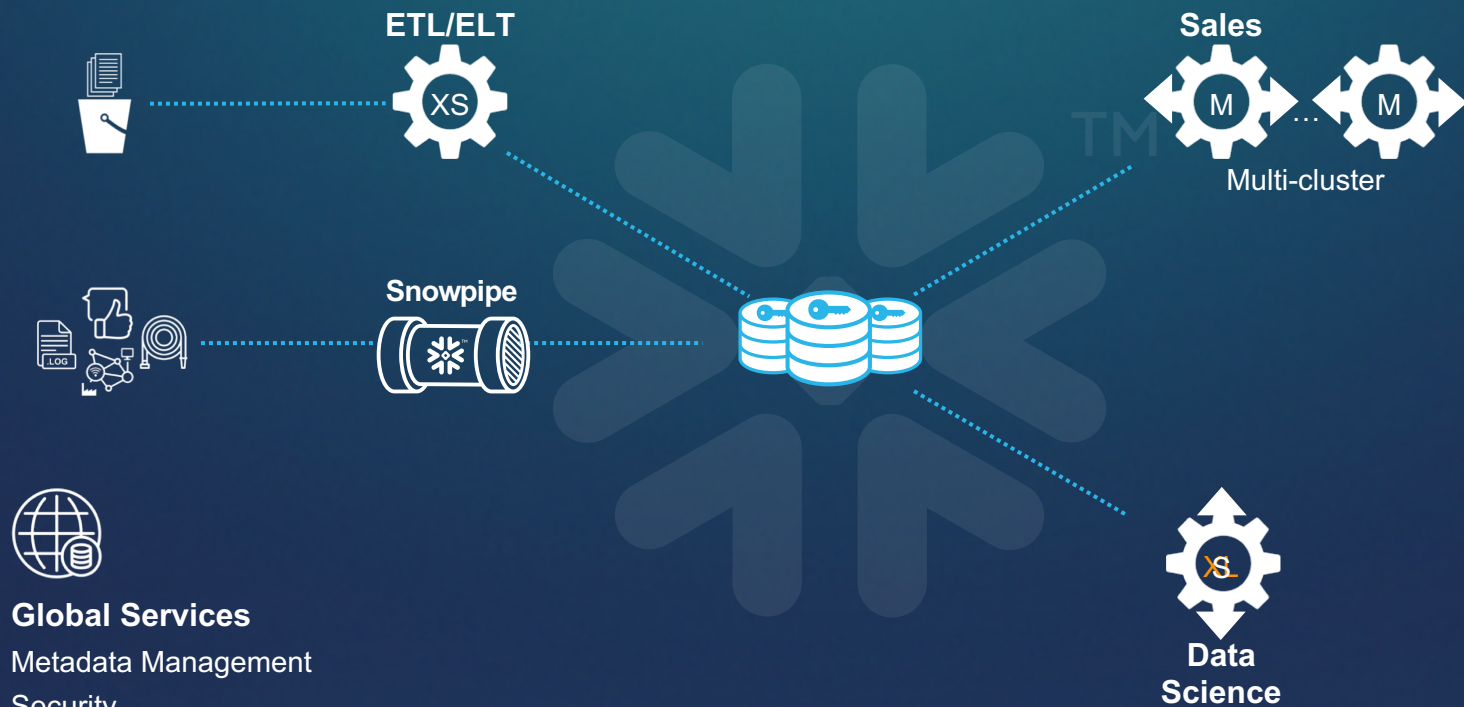Vacuuming processes needed to maintain sort and distribution for performance

Multi-cluster, shared data

> Centralized, scale-out storage that expands and contracts automatically

> Independent compute clusters can read/write at the same time and resize instantly

> Automated backup across multiple availability zones/regions

> AWS, Azure, GCP

ETL/ELT

Sales

Snowpipe

Global Services

Metadata Management

Security

Query Planning & Optimisation

Transactional Control

Data Science

ETL/ELT

XS

Sales

M ... M

Multi-cluster

Snowpipe

LOG

Global Services

Metadata Management

Security

Query Planning & Optimisation

Transactional Control

Data
Science

XSL

External

ETL/ELT

XS

Data Sharing

Sales

M ... M

Multi-cluster

Snowpipe

Structured & semi-structured

Clone

Global Services

Metadata Management

Security

Query Planning & Optimisation

Transactional Control

Dev Ops

XL

Data protection & time travel

Data Science

XL

Finance/DBAs

L

SECURE BY DESIGN, DATA AVAILABILITY

Authentication

- Embedded multi-factor authentication
- Key Pair authentication
- Federated authentication / SSO supported

Access control

- IP whitelisting
- Roles-based access control model
- Granular privileges on all objects & actions

Data encryption

- All data encrypted, always, end-to-end
- Encryption keys managed automatically

External validation

- Certified against enterprise-class requirements
- PCI and HIPAA available

Data availability

- User error: Time Travel, Failsafe, Cloning
- Zone failure: Data replicated to multiple zones in a region
- Region/Provider failure: Data replication & failover
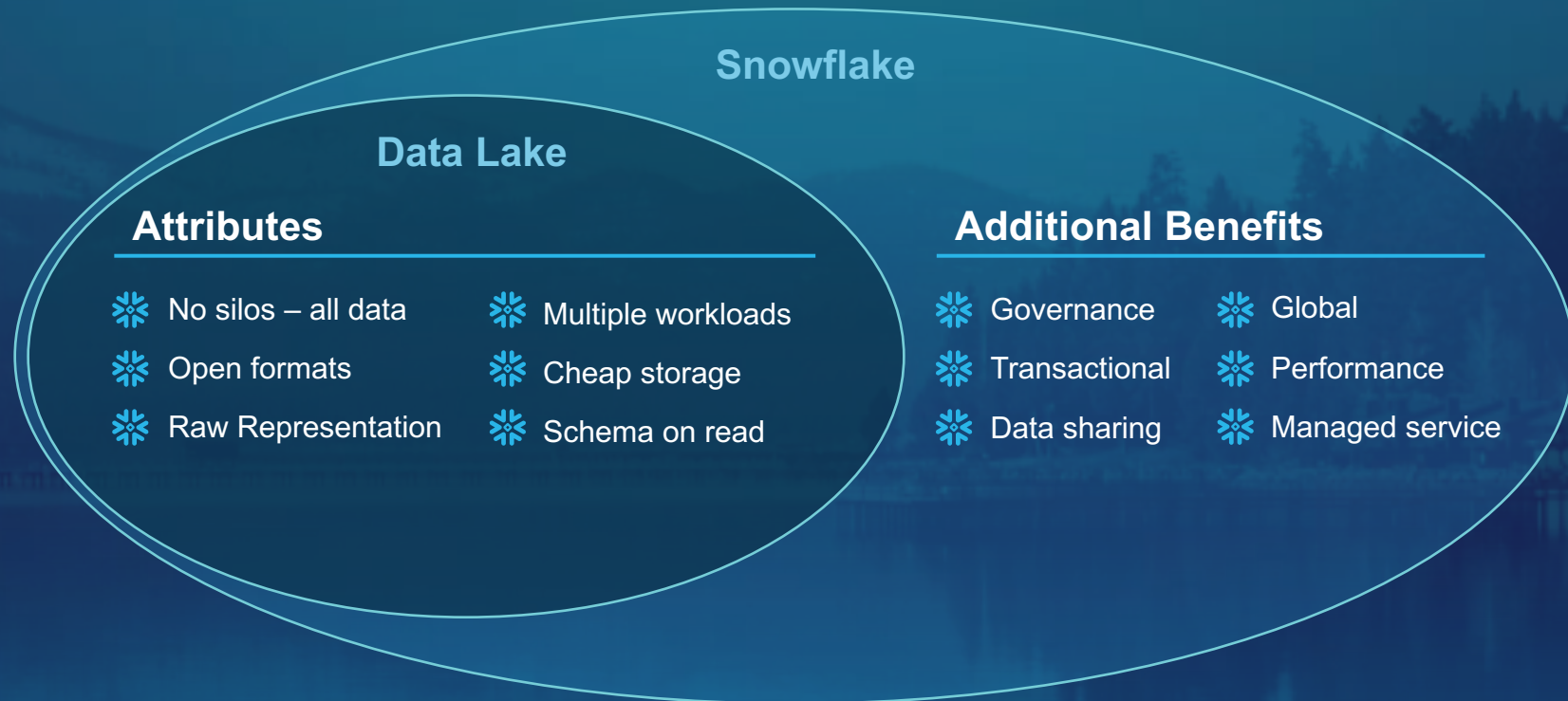
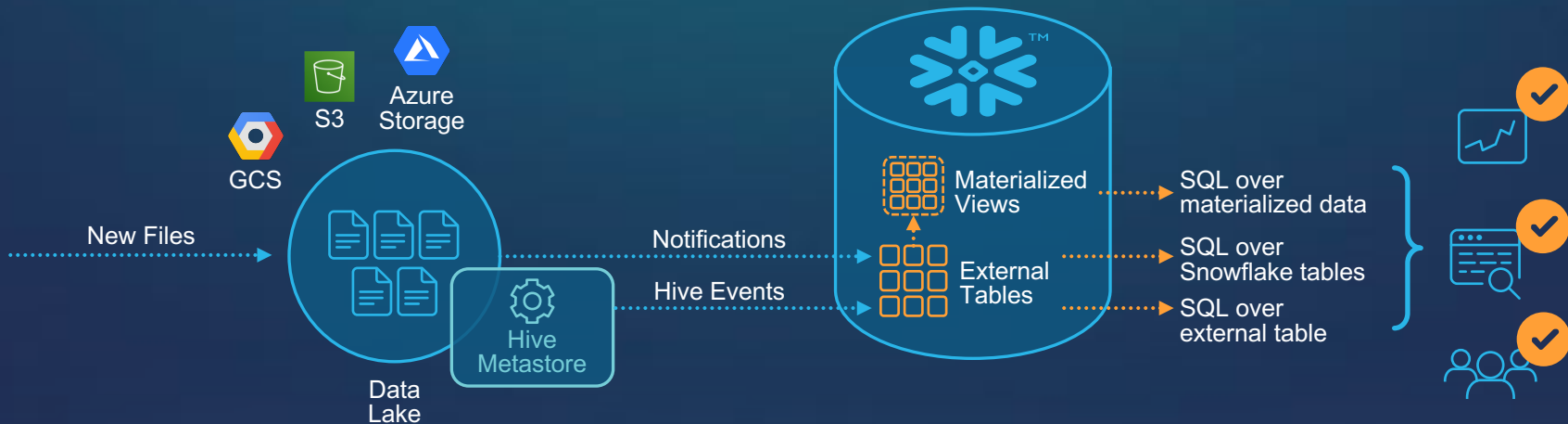# MORE ON USE CASES

Data Lake

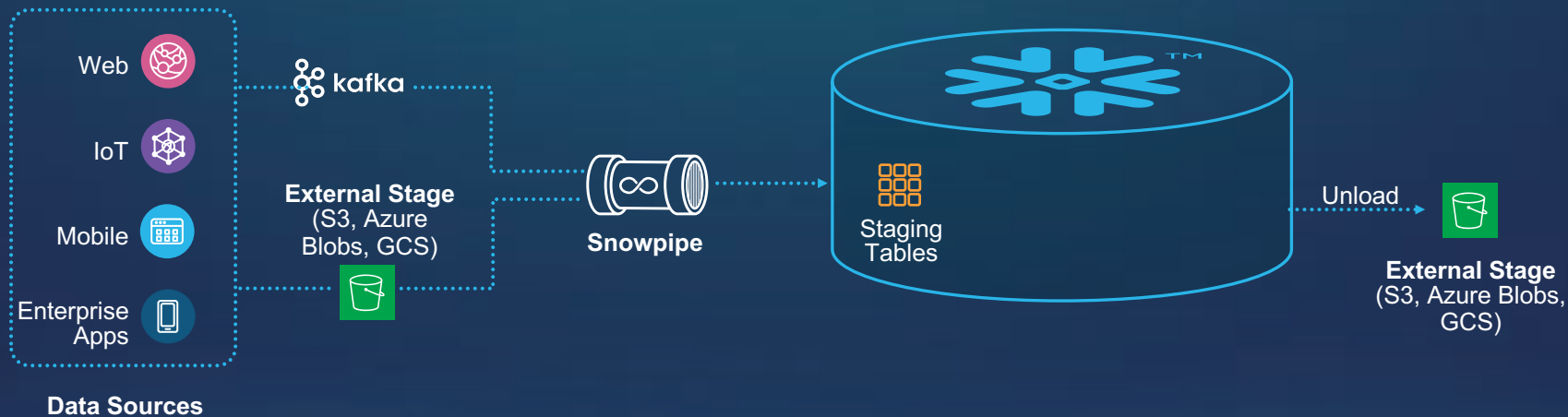Data Engineering

Secure Data Sharing

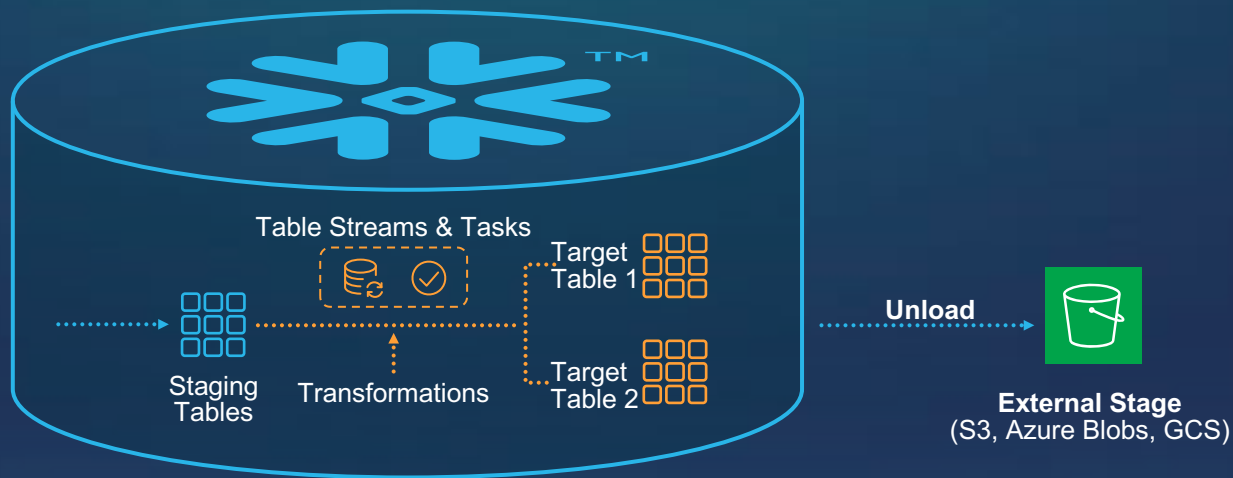# HOW IS A SCALABLE DATA WAREHOUSE DIFFERENT FROM A DATA LAKE?

Snowflake

Data Lake

Attributes

- ❄ No silos – all data
- ❄ Open formats
- ❄ Raw Representation
- ❄ Multiple workloads
- ❄ Cheap storage
- ❄ Schema on read

Additional Benefits

- ❄ Governance
- ❄ Transactional
- ❄ Data sharing
- ❄ Global
- ❄ Performance
- ❄ Managed service

AUGMENTING EXISTING DATA LAKES

LOW LATENCY INGEST

Web

IoT

Mobile

Enterprise Apps

Data Sources

kafka

External Stage
(S3, Azure Blobs, GCS)

Snowpipe

Staging Tables

Unload

External Stage
(S3, Azure Blobs, GCS)

SCALABLE TRANSACTIONAL TRANSFORMATIONS
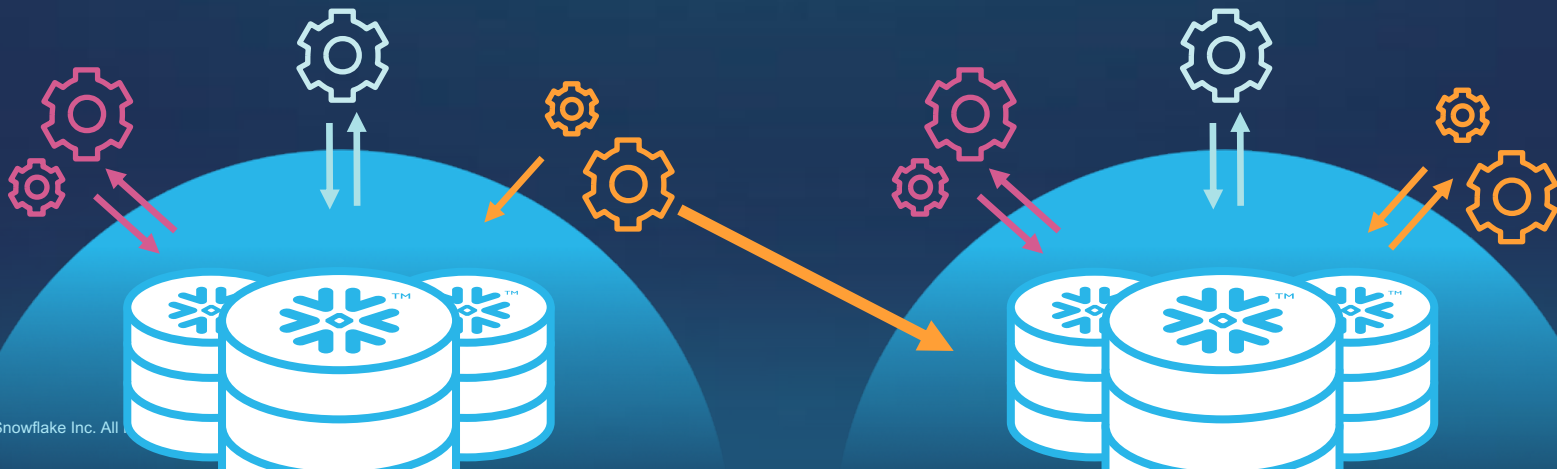
SECURE DATA SHARING

Secure   Live   Frictionless   Personalized   Global
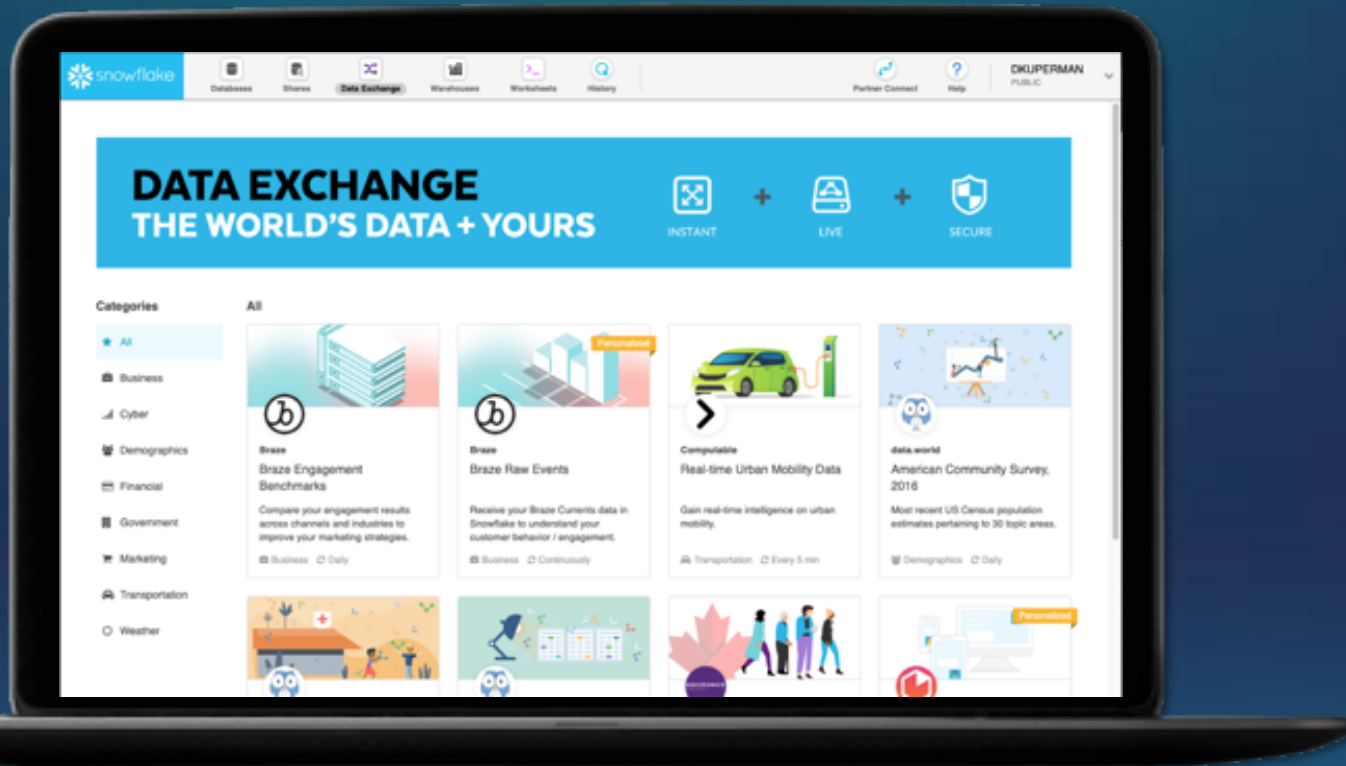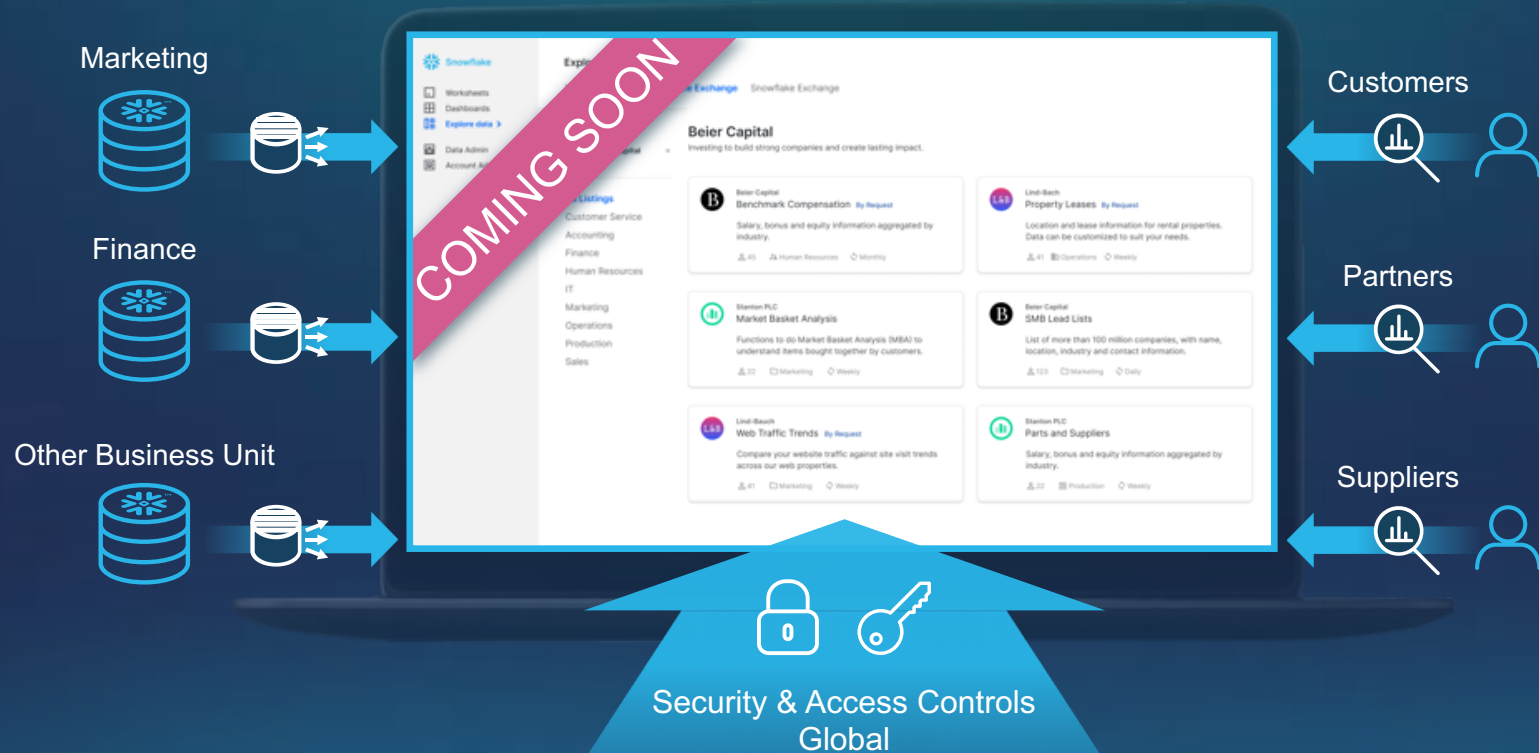
PUBLIC DATA EXCHANGE

THE PRIVATE DATA EXCHANGE

THANK YOU

Data for Breakfast

snowflake®