



# The Race To Accelerate Business Insights From Raw Data & How To Win It

A practical approach and customer stories

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# What does it mean to be a "data-driven" organization?



Place data at the  
front and center of  
the work done

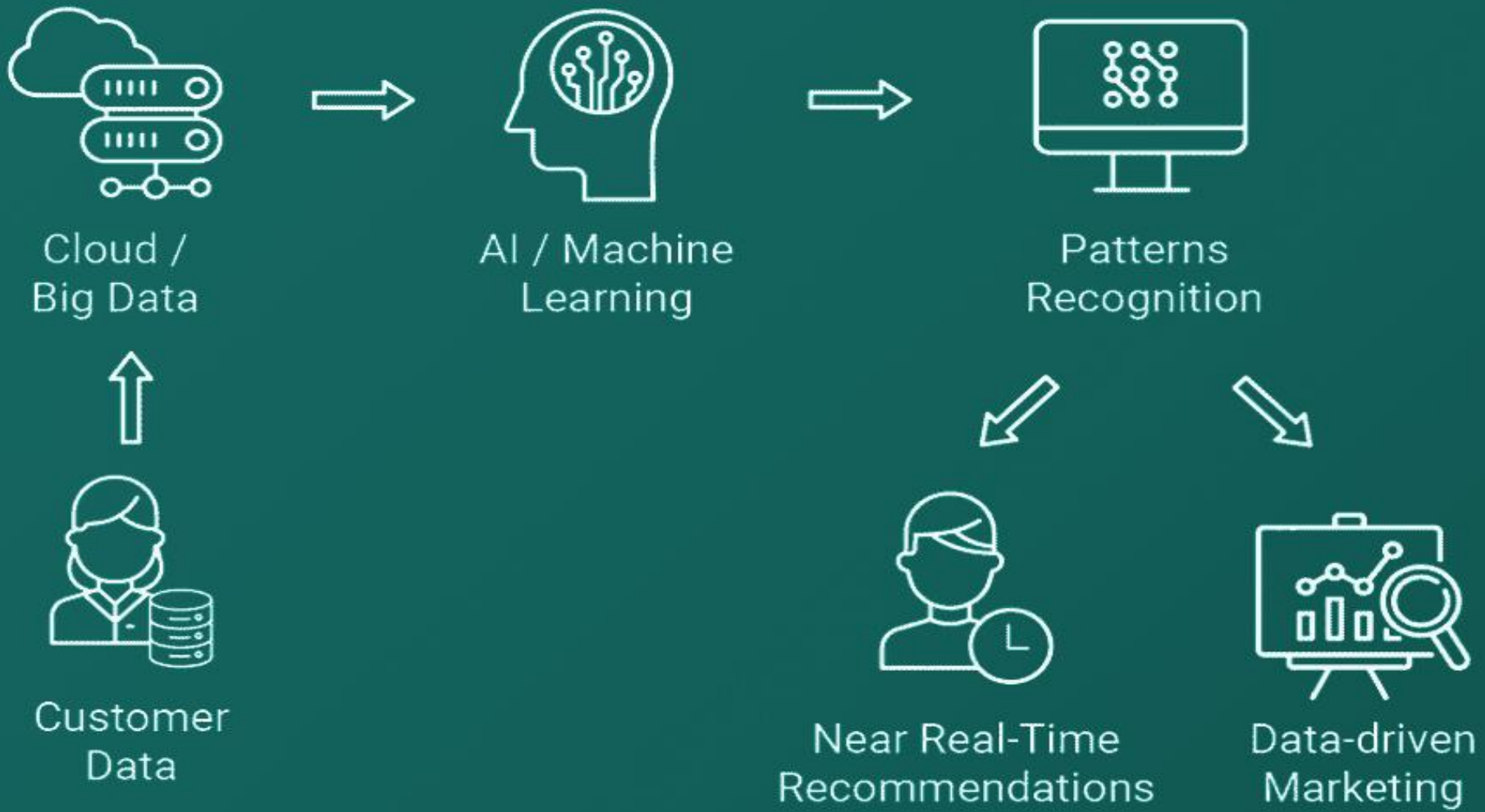


Utilize data  
effectively and  
generate insights



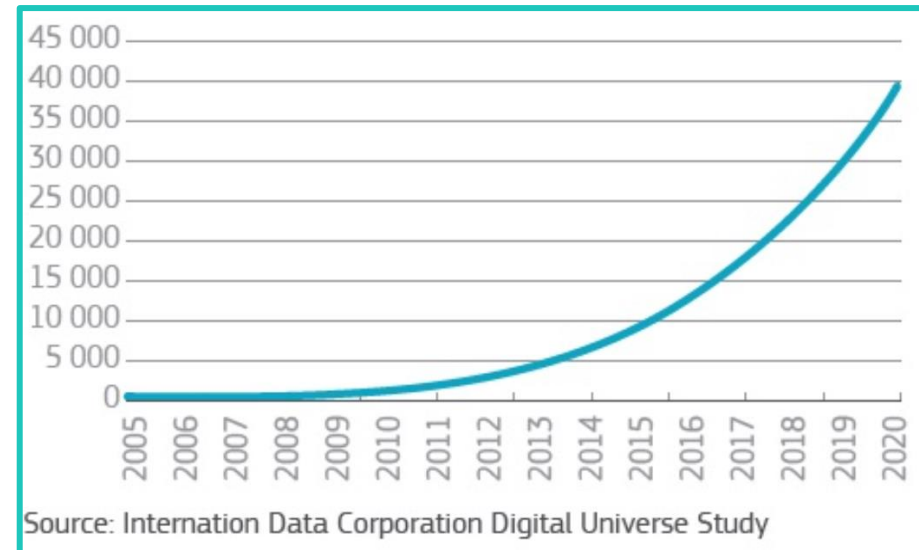
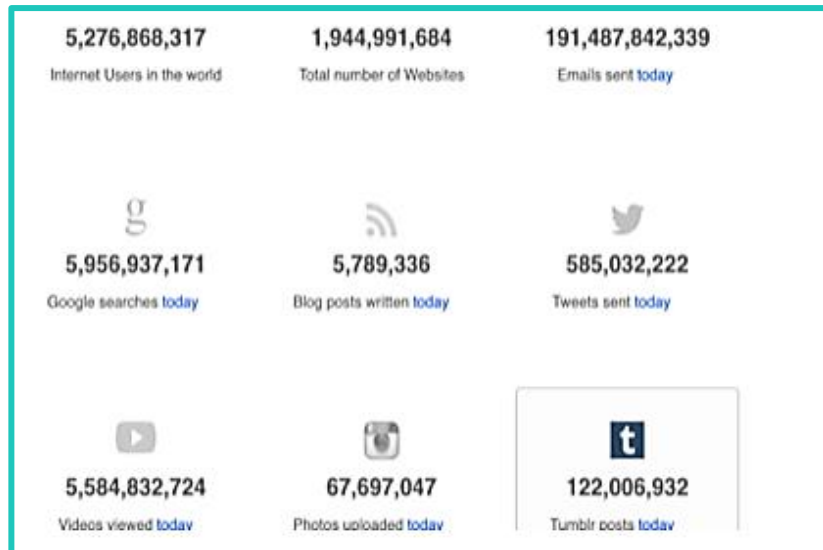
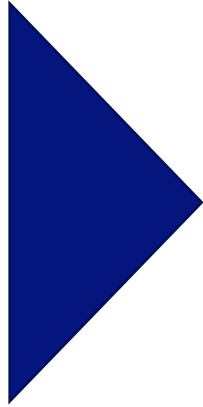
Drive change,  
innovate new  
products, acquire  
more customers

# Data-Driven Decision Making



How did we get here?

# The Big-Bang of Data!





# How did we get here? Better tools for better data



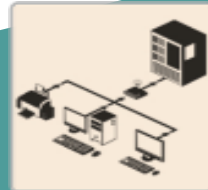
**Cellphone**  
More powerful than  
computers used for  
Apollo mission



**Tabulating  
Systems Era**



**Programmable  
Systems Era**



**Cognitive  
Systems Era**



**An Explosion of Bandwidth  
and Computational Power**

# BENEFITS OF DATA-DRIVEN DECISION MAKING



Valuable  
Insights



Continual  
Growth



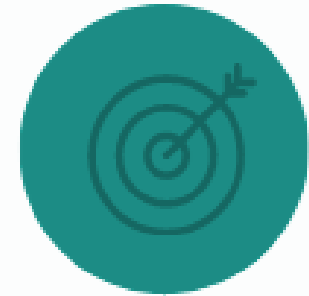
Improved  
Program  
Outcomes



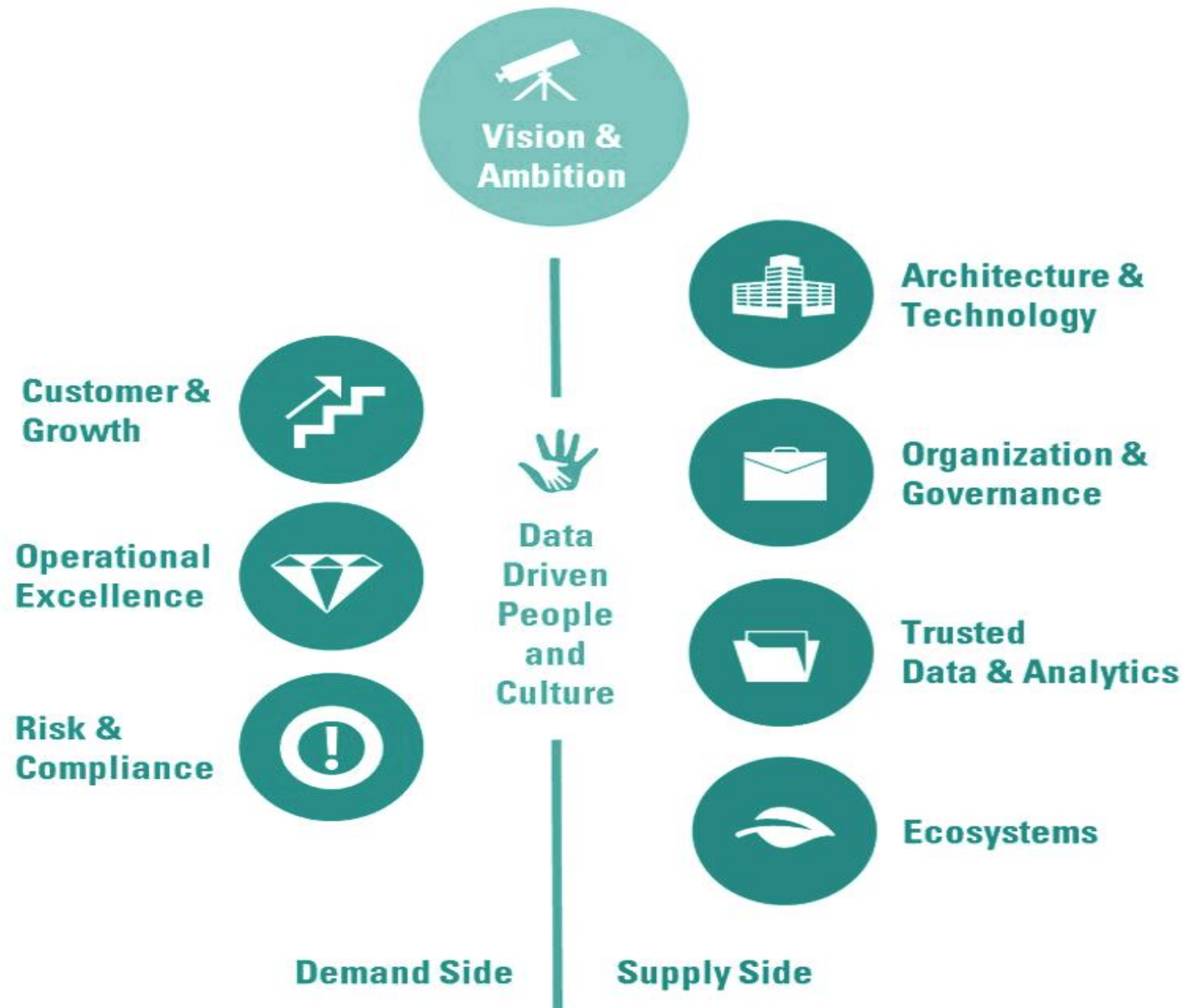
Optimised  
Operations



Prediction  
Of Future  
Trends



Actionable  
Insights



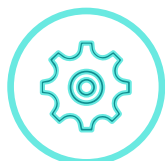
# SQream - A New Architecture For Large Scale Data



Adding propellers to old planes **won't** turn them into jets



# GPU Based SQL Analytics Platform @ Any Scale



## POWERED BY GPUs

- Massively parallel engine
- Faster & smaller than CPUs
- Consolidate servers



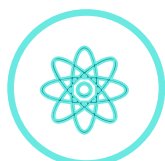
## MASSIVELY SCALABLE

- Terabytes to petabytes
- Not limited by RAM
- Not limited by data size



## LIGHTNING FAST

- Ingests 3TB/hour per GPU
- Accelerated streaming
- Always-on compression



## EXTENSIBLE FOR ML/AI

- Python, AI, Jupyter, etc.
- Built for data science
- Accelerated training



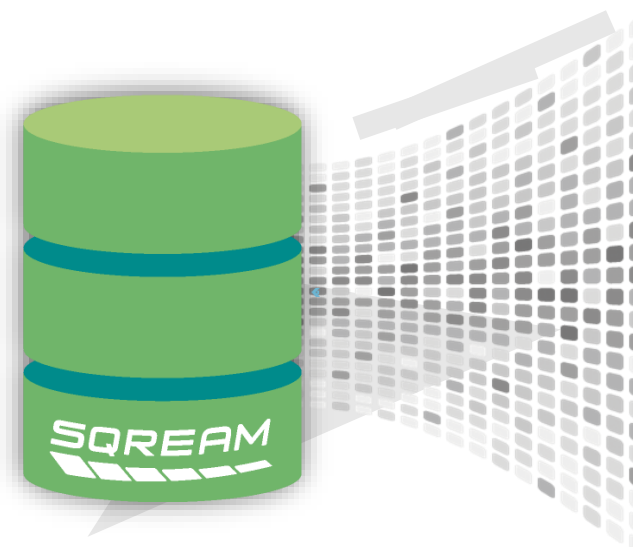
## MINIMAL FOOTPRINT

- High throughput compute
- Very cost-efficient
- Lowest CO<sub>2</sub> emissions



## SQL DATABASE

- Familiar ANSI SQL
- Standard connectors
- No learning curve



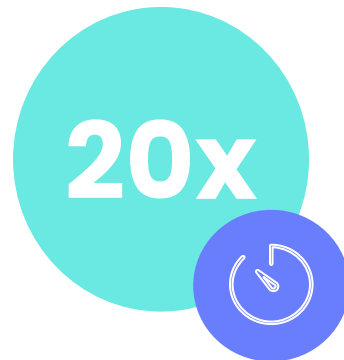
# GPU Based SQL Analytics Platform @ Any Scale

Analyze



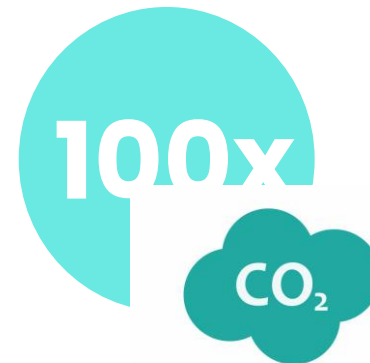
more data

Queries



faster

Emissions



less

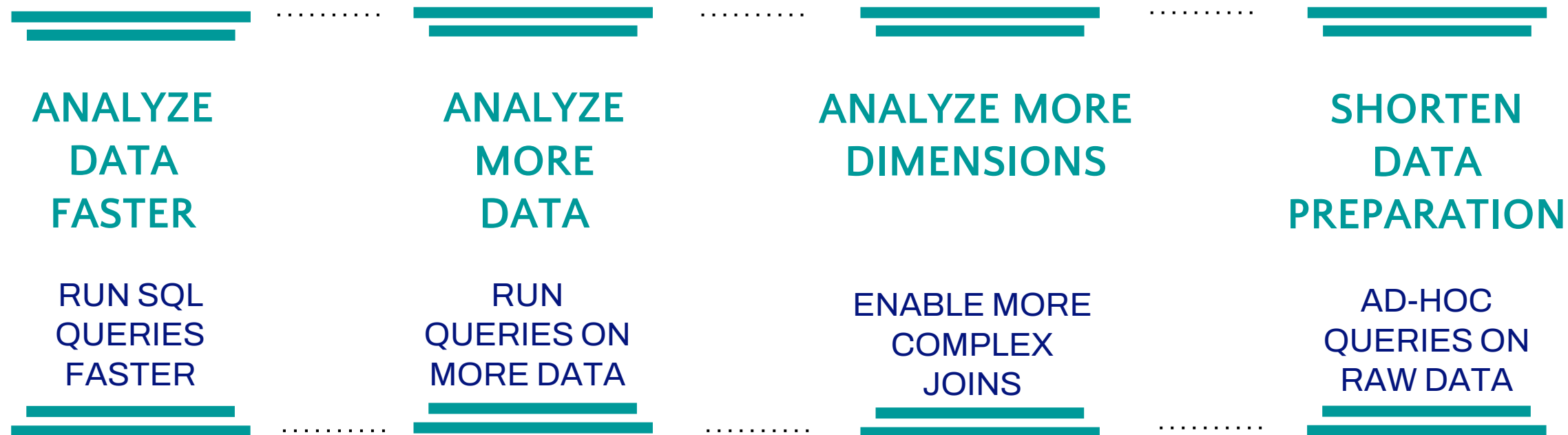
Cost Saving



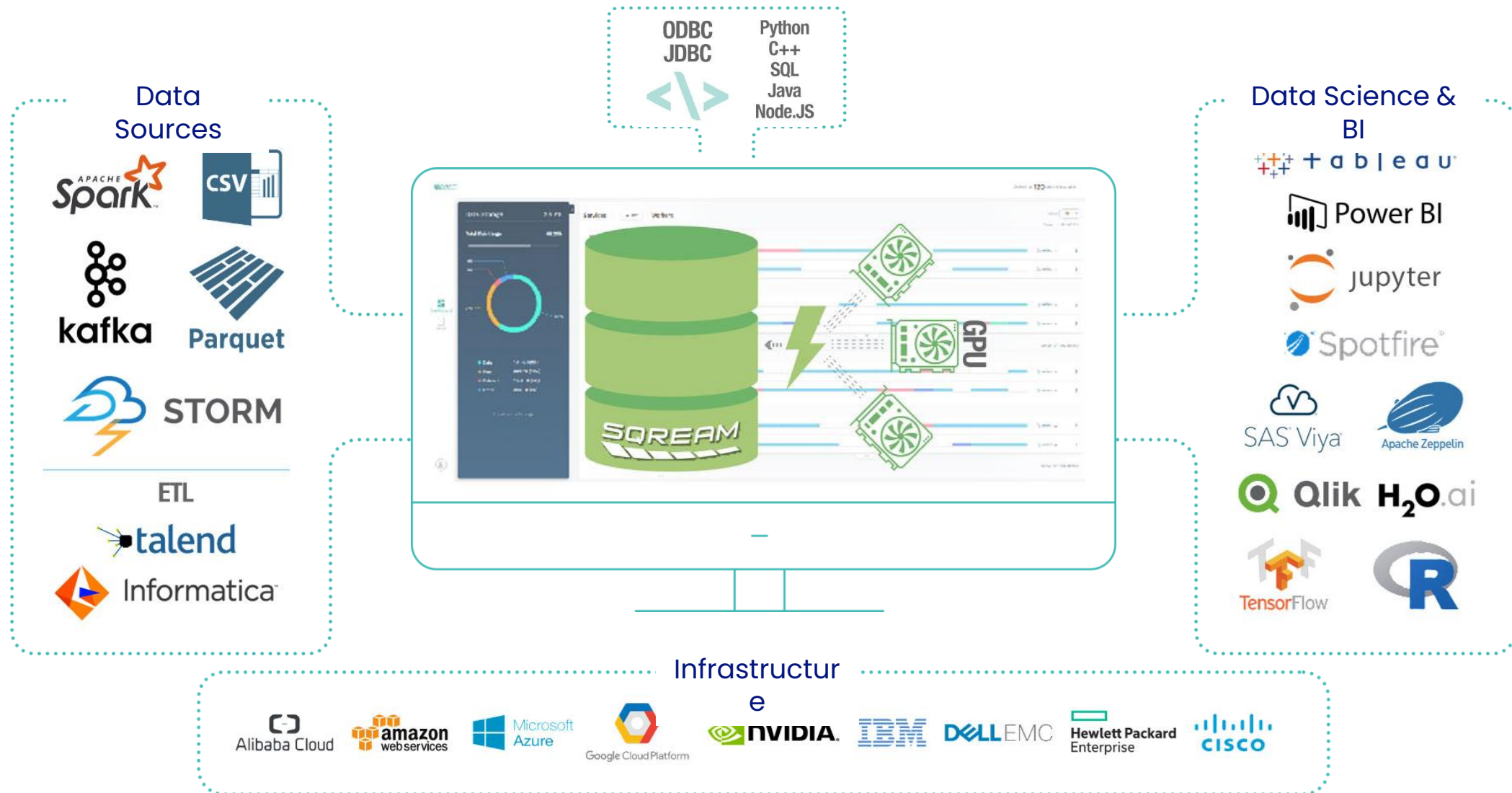
of resources

# Rapid Analytics On More Data More Frequently

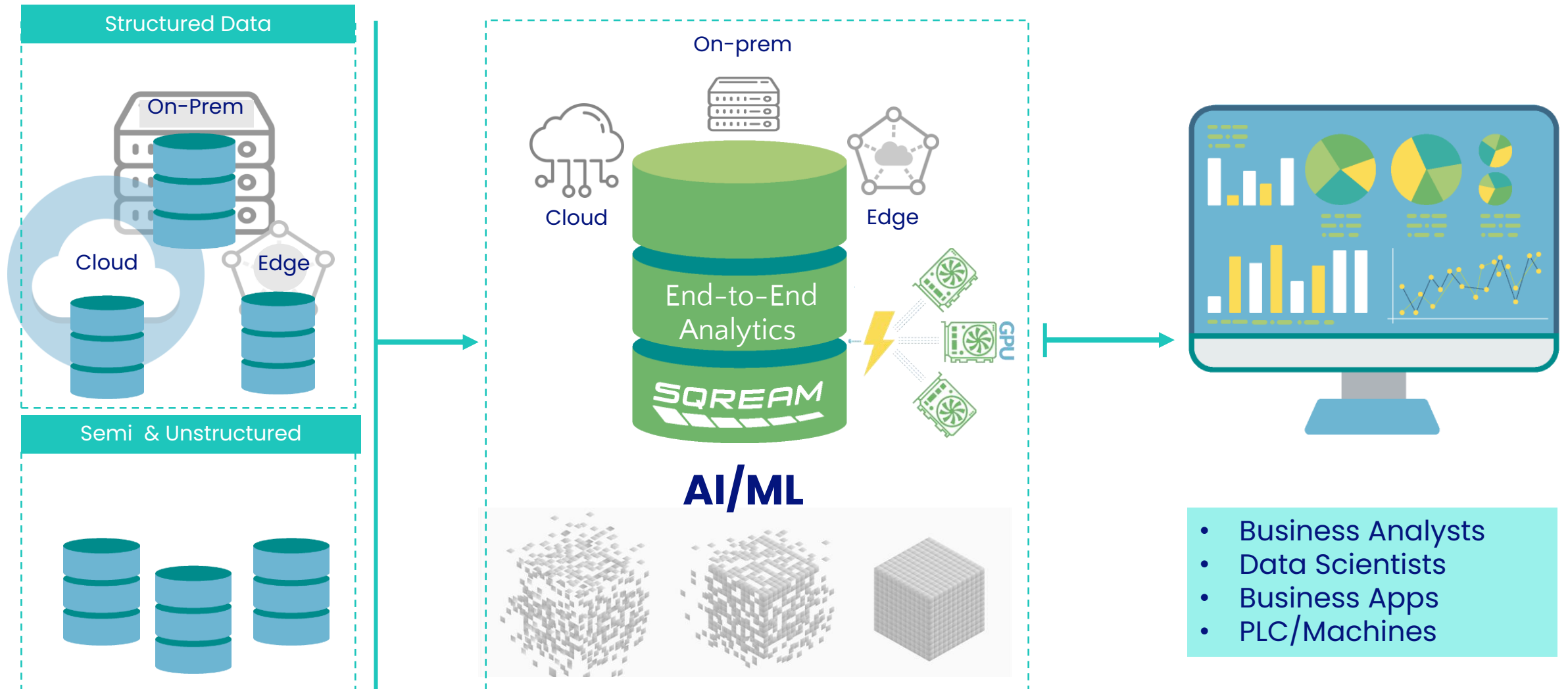
**Rapidly** analyze the full scope of your **massive data**, from terabytes to petabytes,  
to achieve **critical insights** that were previously unattainable



# Seamless integration into your ecosystem



# Insights Platform @ any scale





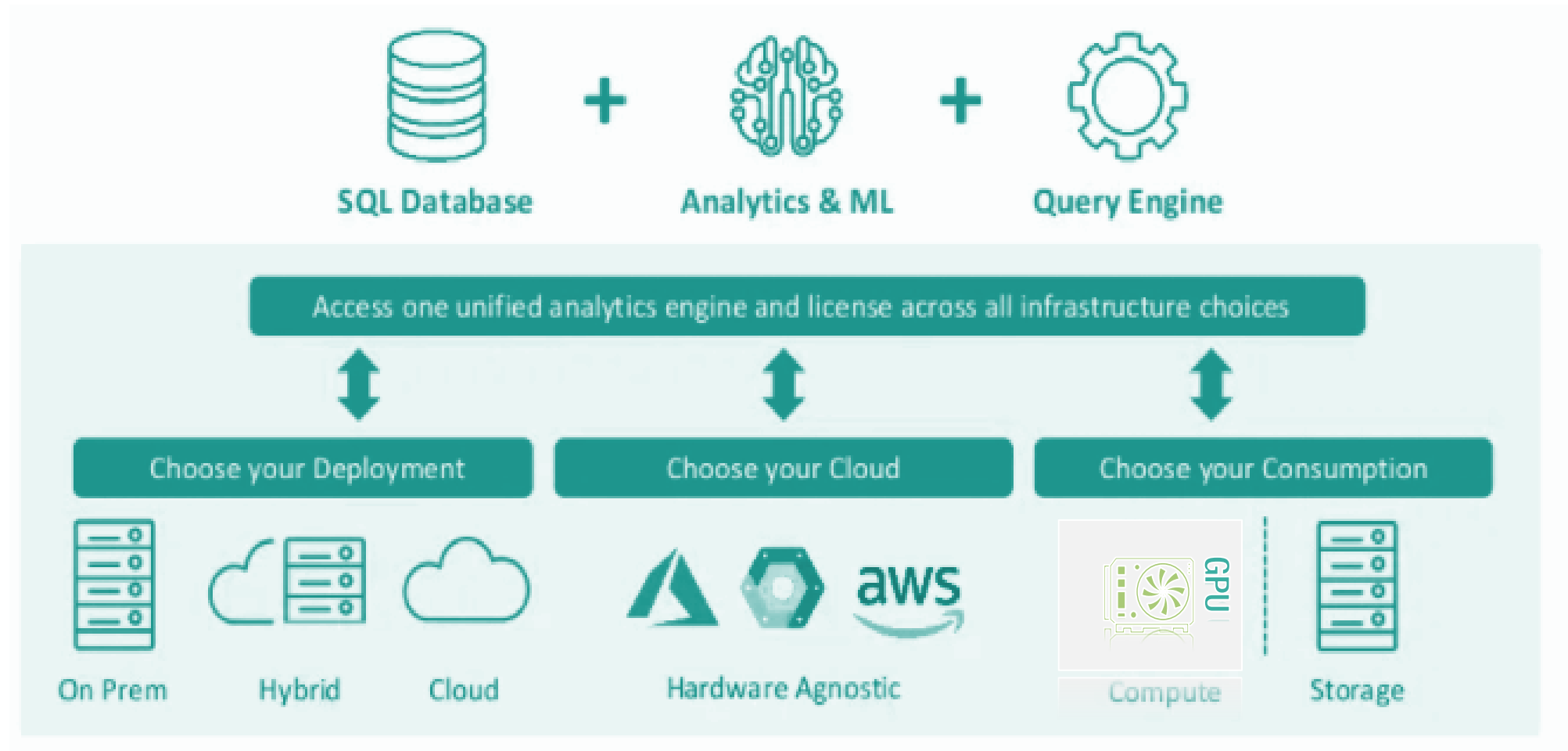
# Benchmarks

## Telco Customer Use Case – 13 Queries 11.5TB

	 AWS			 Google Cloud Platform			 Azure		
	SQream	Snowflake	Amazon Redshift	SQream	Snowflake	Google BigQuery	SQream	Snowflake	Synapse
Ingestion	0:28:08	3:35:46	2:42:22	0:28:01	4:15:56	0:21:25	0:36:00	5:52:15	17:09:32
Query	3:45:00	4:14:43	6:13:01	3:07:21	3:57:40	7:01:13	7:12:16	11:20:28	X*
TTTI	4:13:08	7:50:29	8:55:23	3:35:22	8:13:36	7:22:38	7:48:16	17:12:43	25:39:32
Compute Cost	\$65.00	\$125.00	\$232.00	\$63.00	\$131.00	\$112.00	\$74.00	\$275.00	\$461.00
TCO	\$99.00	\$180.00	\$344.00	\$96.00	\$180.00	\$392.00	\$108.00	\$330.00	\$523.00

\*Crushed after 08:30 hours

# End to End Acceleration SQL Solution



# Enterprise Fraud Management (EFM) in Financial Institutions Using ML

Fraudulent transactions have cost a financial institution in the Netherlands millions of Euros per year, due to their not being detected in time and acted upon accordingly. Using Machine Learning models has allowed this organization to study how regular transactions behave, and more importantly, to pinpoint abnormalities and swiftly prevent fraud. In order for the model to be as accurate as possible, it needs to be based on a wide and all-encompassing database, joining together a vast array of data sources.



Industry Vertical:	Finance
Economic Buyer:	Security and Monitoring Team
Enabler:	BI Teams; Lead Data Scientist

## Why Do Anything?

According to CNBC, users around the world lost almost 6-billion dollars to banking fraud in 2021 alone, a 70% rise in comparison to 2020, breaking some dubious records. In addition, the European Union has allocated a dedicated budget to measure, prevent, detect, report, and prosecute fraud.

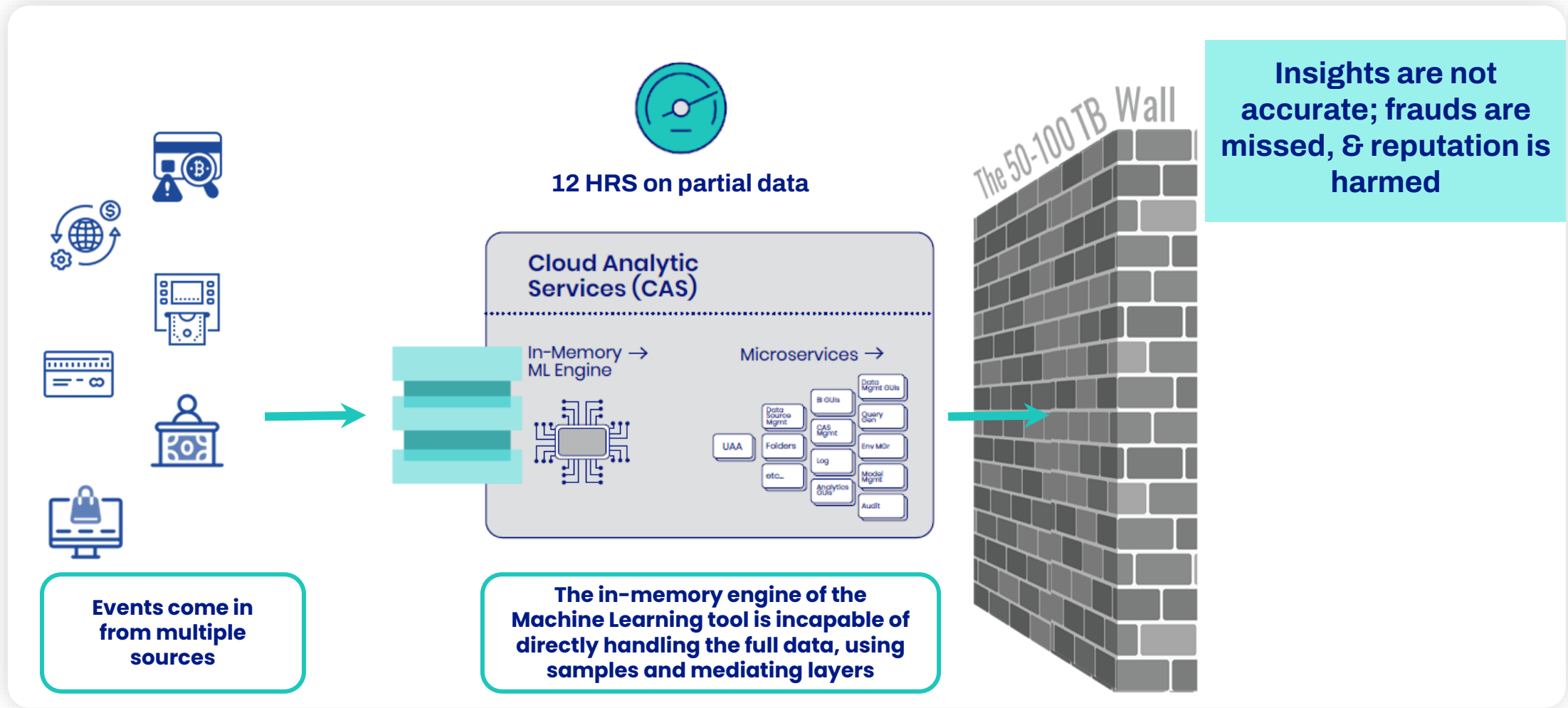
## Why Now?

With digital transactions increasing due to Covid-19, as well as the rise in popularity of Apple and Google Pay causing an increase in more complex frauds, the organization was harmed both financially and in reputation. This motivated their search to improve EFM.

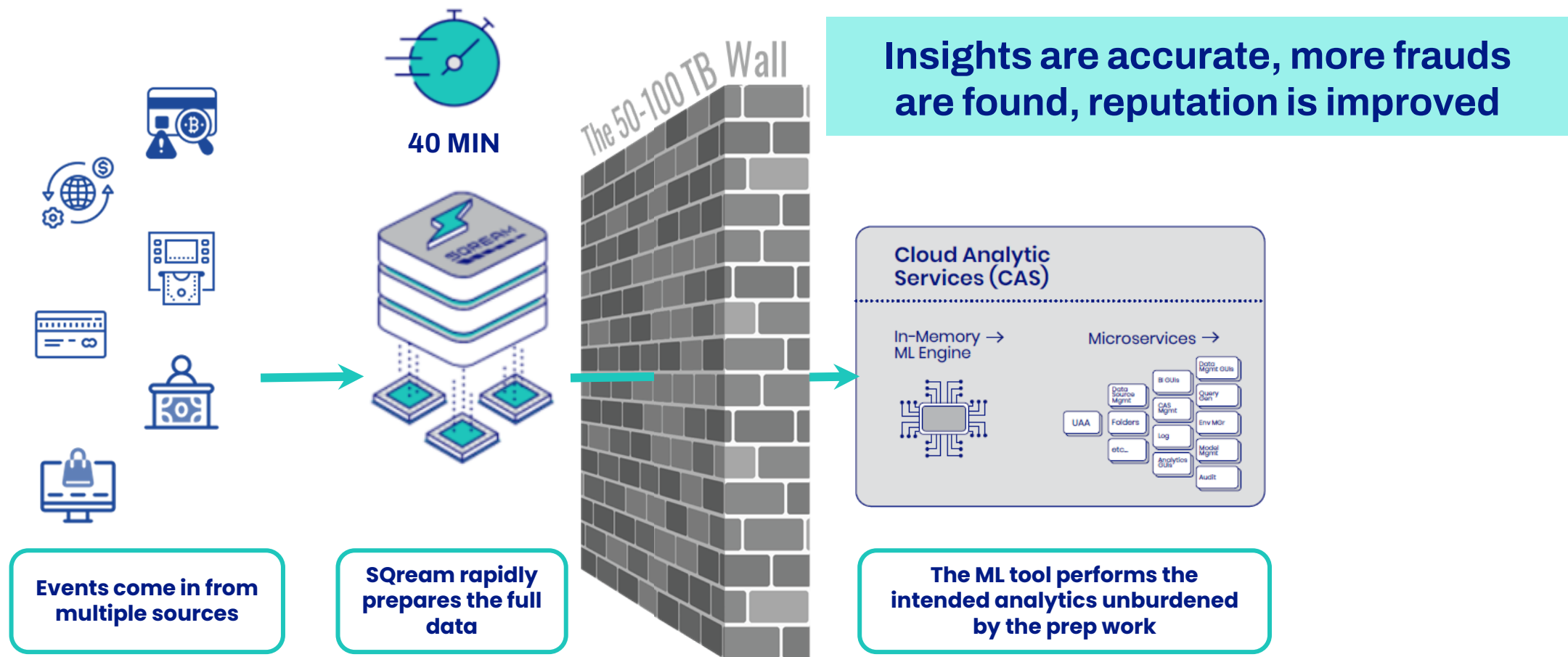
## Why SQream?

- Flexible connectivity to leading Machine Learning vendors such as SAS and IBM
- Fast ingestion, near-real-time feedback
- Rapid joining of many tables with large datasets to fit the Machine Learning model format and achieve multiple reference points
- Can upload 30 TB in 2-hours
- Supports multiple data types, SQream runs 5x faster than the other competitors

# Architecture Consideration (Before)



# Architecture Consideration (After)





# Embracing the Digital Market at PetaByte Scale

A large retail chain in the UK has decided to adopt an extensive, data analytics-based approach to its marketing and inventory management, to increase customer loyalty and optimize stock and warehousing. As they begin combining different sources (web, app, ERP tools and more) they find that their current tools cannot handle the volume, forcing them to rely on partial data and slow processing. Using SQream, they manage to begin utilizing the full scale of collected data for accurate and rapid insights.



**1.4%**  
increase in  
sales  
turnover



**ROI of one  
month**



**5x faster  
than the  
competition**



**40%**  
obsolescence  
reduction

**Industry Vertical:**

**Retail**

**Economic Buyer:**

**CMO; CEO**

**Enabler:**

**Head of Operations  
Development**

## Why Do Anything?

Covid-19 has caused a massive shift in consumer habits, emphasizing a move to a more online shopping oriented retail landscape. This move is a gamechanger, opening the door to a new type of customer-based approach, in a game that the retailer has decided they are ready to win.

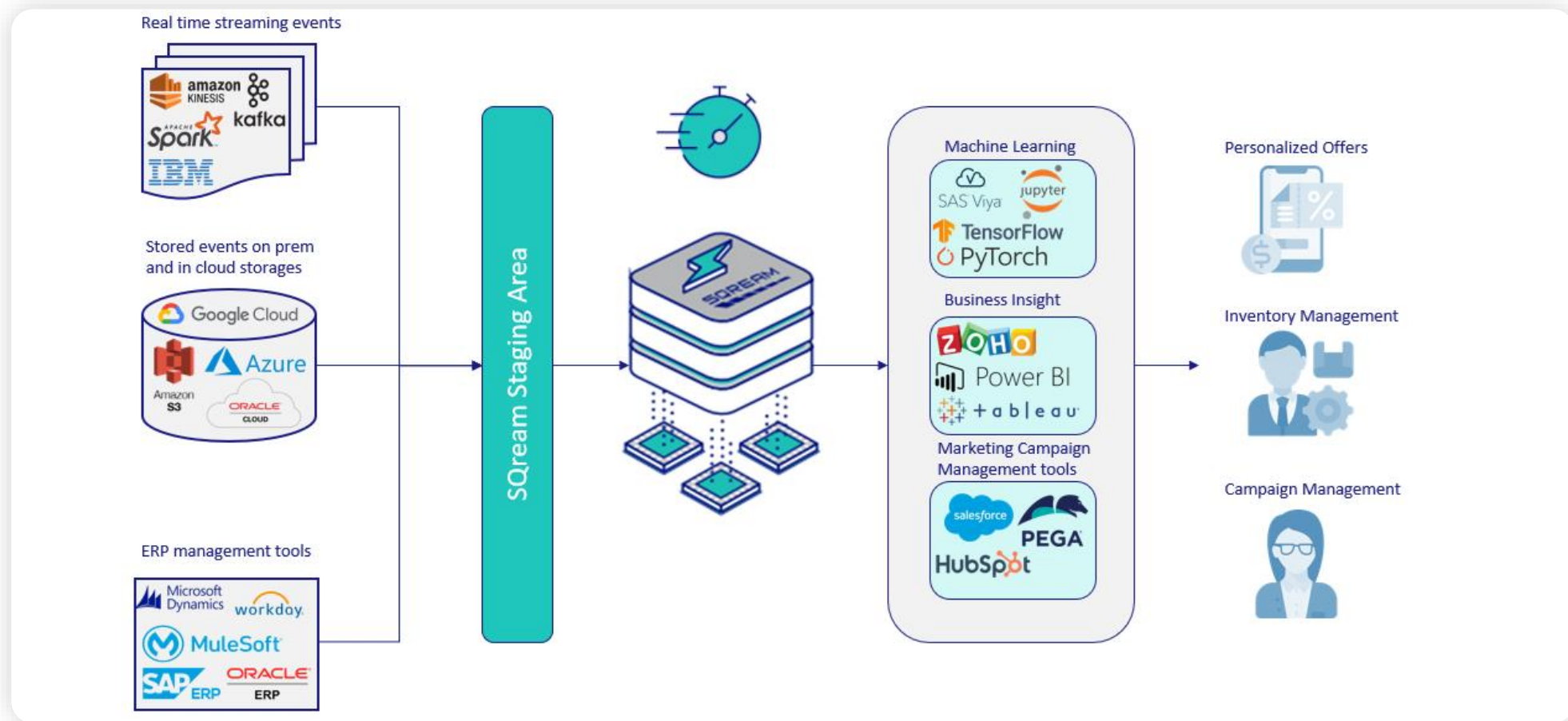
## Why Now?

The shift to the online space brings with it another critical result: physical distance between seller and consumer is now less important, and loyalty will be determined by ease-of-use and personalization of offers. If a retailer wants to retain existing customers and gain new ones, the customer must feel catered to.

## Why SQream?

- Ability to rapidly join many tables with large datasets.
- Ease of use on ML and BI tools on the PetaByte scale.
- Ability to run on- and off-premise and link between them.
- Real-time streaming Pub/Sub with Kafka, trigger transformation based on business events.
- SQream runs 5x faster than the competition.

# Architecture Consideration



1. SQream platform receives data (files, events, structured data) from multiple resources.
2. SQream engine rapidly performs various joins and aggregations in order to prepare the data.
3. The processed results are ready to be sent to various tools.
4. Insights are available immediately to both automated systems and relevant decision makers.

# Personalization for Always-on Marketing (Next-Best-Action)

Tier O in Europe has adopted SQream to create a scalable, cost-effective, ultra-fast processing layer that can join batch and streaming data, and run complicated transformations with the ability to store data on the cloud in relational structure.



**Contributes  
up to 5% to  
your net profit**



**ROI of one  
month**



**5x faster**

**Industry Vertical:**

**Telco**

**Economic Buyer:**

**CMO; CEO**

**Enabler:**

**Head of Engineering**

## Why Do Anything?

The current solution was failing. It was not stable, required lots of patching and ad-hoc resources, and still didn't deliver smooth operation. The Tier 0 operator was losing customers to the competition. In addition, the current solution didn't have the capacity to incorporate new parts of the business, such as cable customers and IoT.

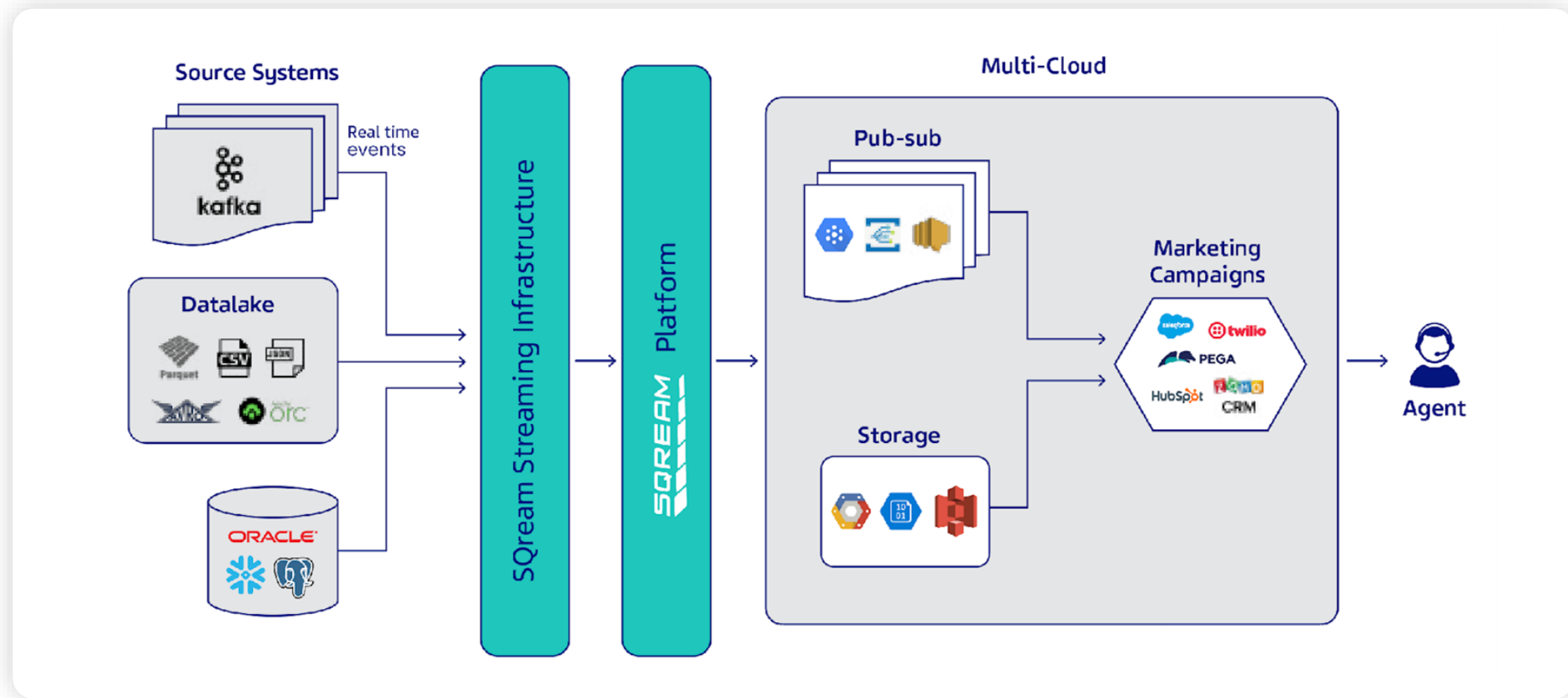
## Why Now?

The customer lost approximately one-million Euro per day, due to inaccurate data. This could stretch from days to weeks.

## Why SQream?

- Ability to rapidly join many tables with large datasets.
- Ability to recognize only the delta of changes (incremented instead of full load).
- Ability to run on- and off-premise and link between them.
- Real-time streaming Pub/Sub with Kafka, trigger transformation based on business events.
- SQream runs 5x faster than the competition.

# Architecture Consideration



1. SQream platform ingests data (files, events, structured data) from multiple resources.
2. SQream engine performs various joins and aggregations in order to prepare the data for Pega.
3. The processed results are ready to be sent to the CRM various data stores.
4. The agent has an up-to-date Next-Best-offer for every customer.

# Trusted by 250+ large enterprises





# Come to our booth to see a demo & giveaways!

**To book a “Trial & Buy”,  
Feel free to contact us on all platforms!**



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