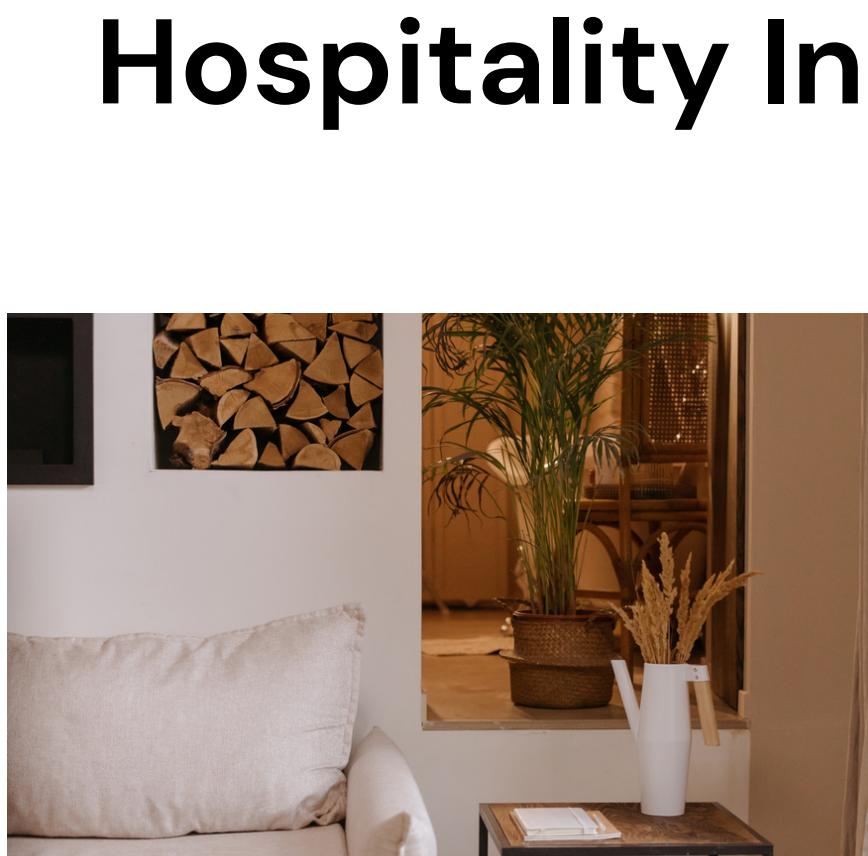
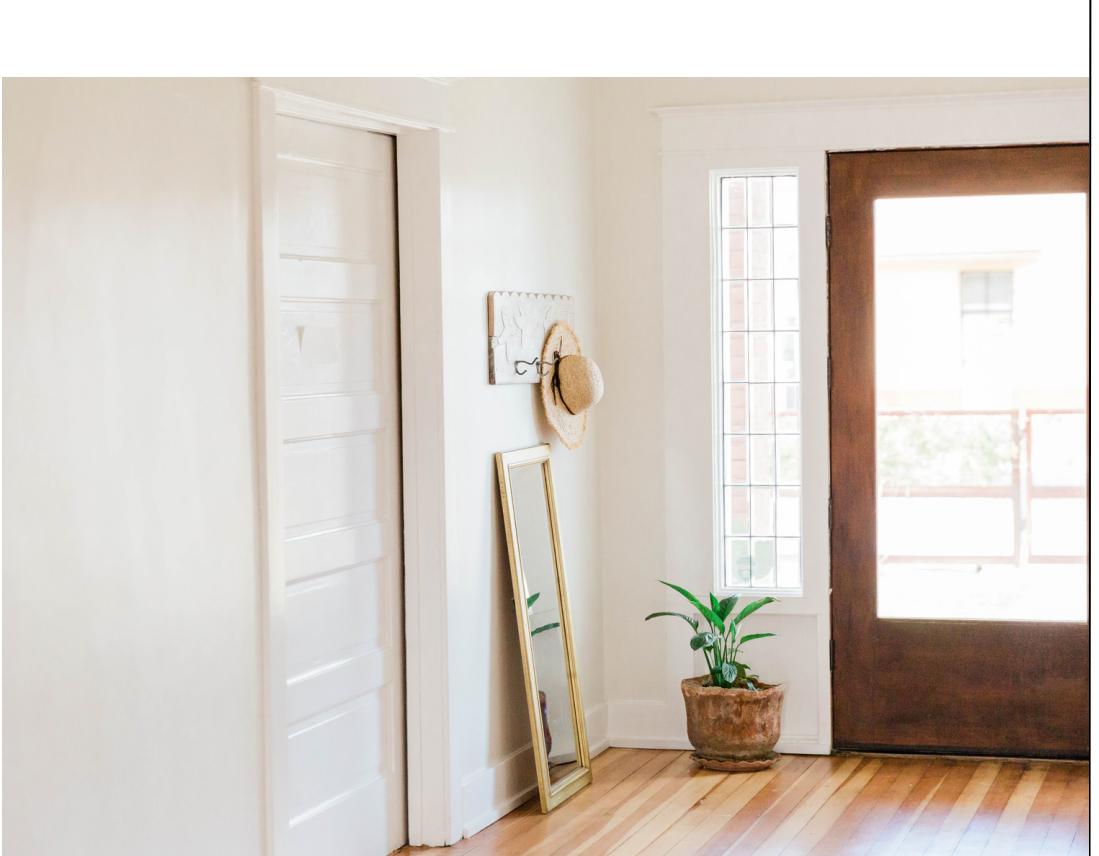
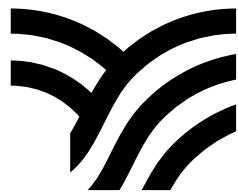


Cloud Architecture

Hospitality Industry



Group 4
Hellen Gaitan
Lovedeep Mehta
Shara Pineda
Ricardo Schmid

Outline

- The Company
- Goals
- Vision
- Cloud Architecture
- Pipeline
- Failure
- Conclusion



The Company

|



About the Company

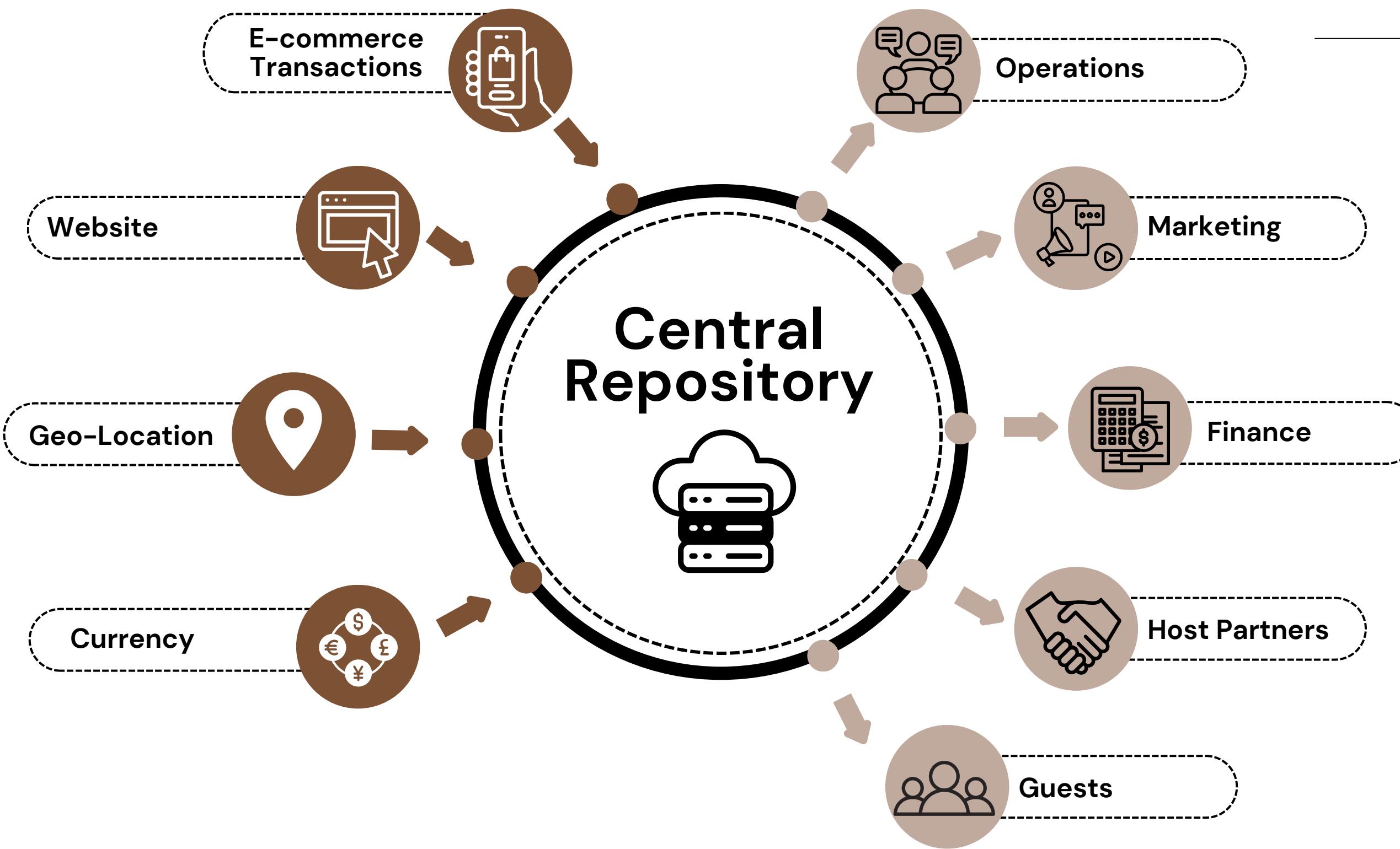
Airbnb is a platform that allows travelers to find and book unique accommodations and experiences hosted by local individuals. Airbnb offers a diverse range of options for different tastes and preferences.

- Optimize resource allocation driving increased profitability and sustainable growth.
- Design efficient processes and user friendly platform resulting to faster and streamlined experience for the host partners.
- Enhance customer engagement and satisfaction by allowing data-driven decisions.

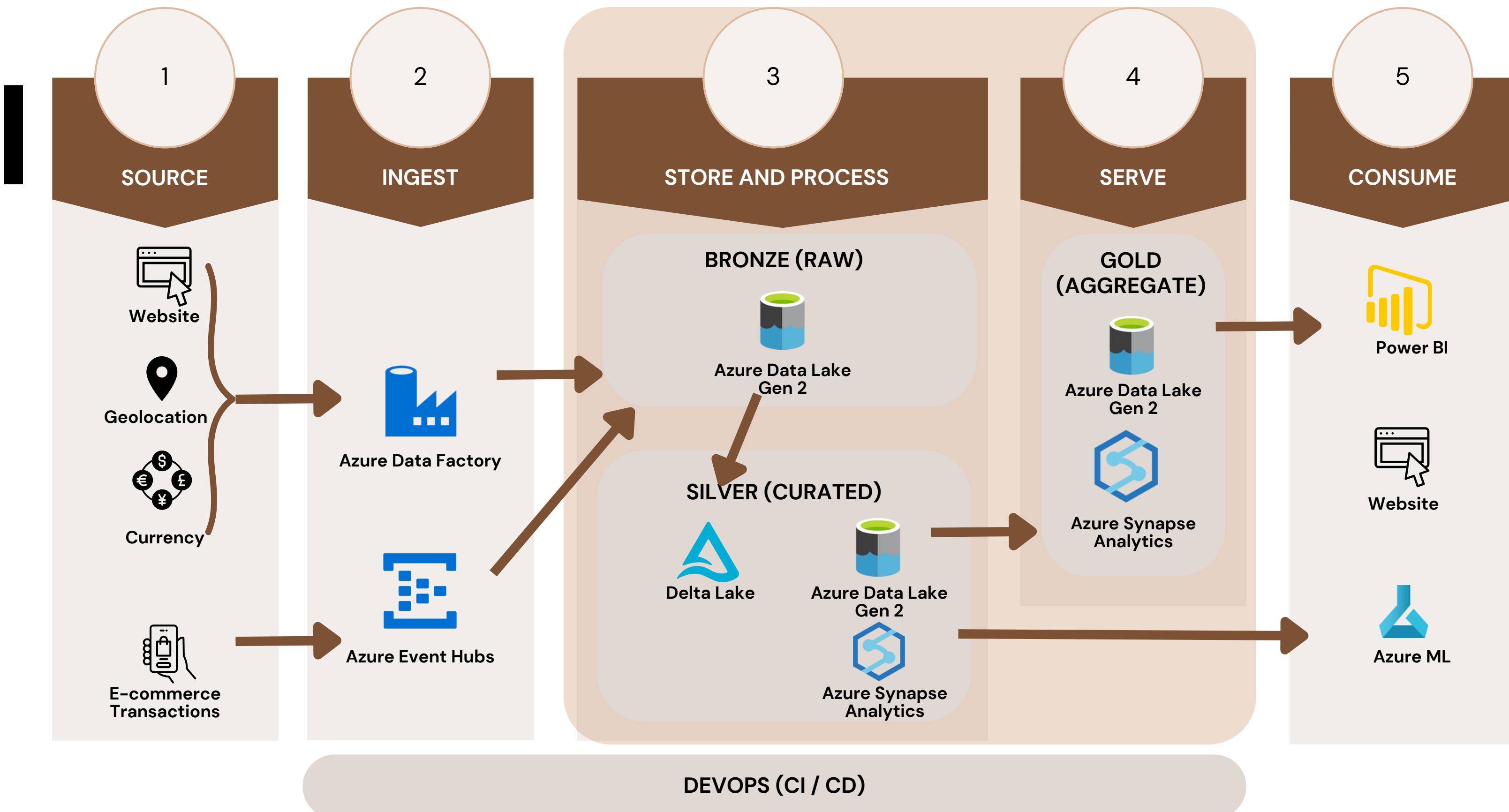
Goals



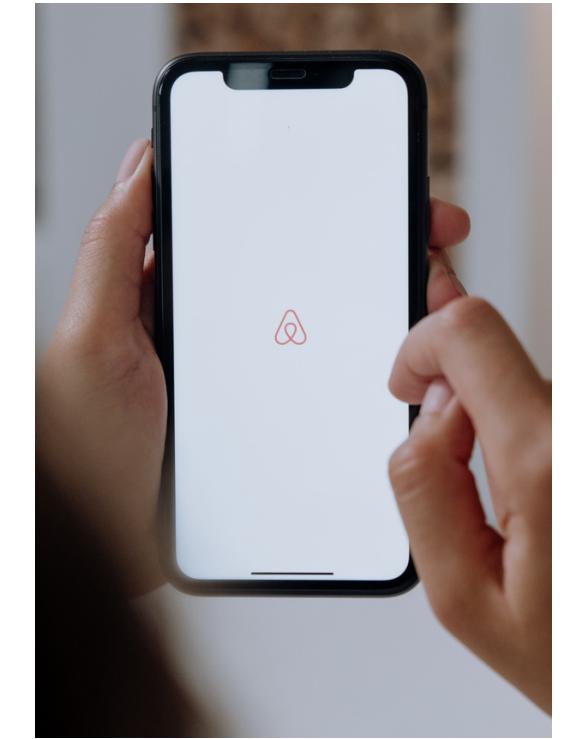
Vision



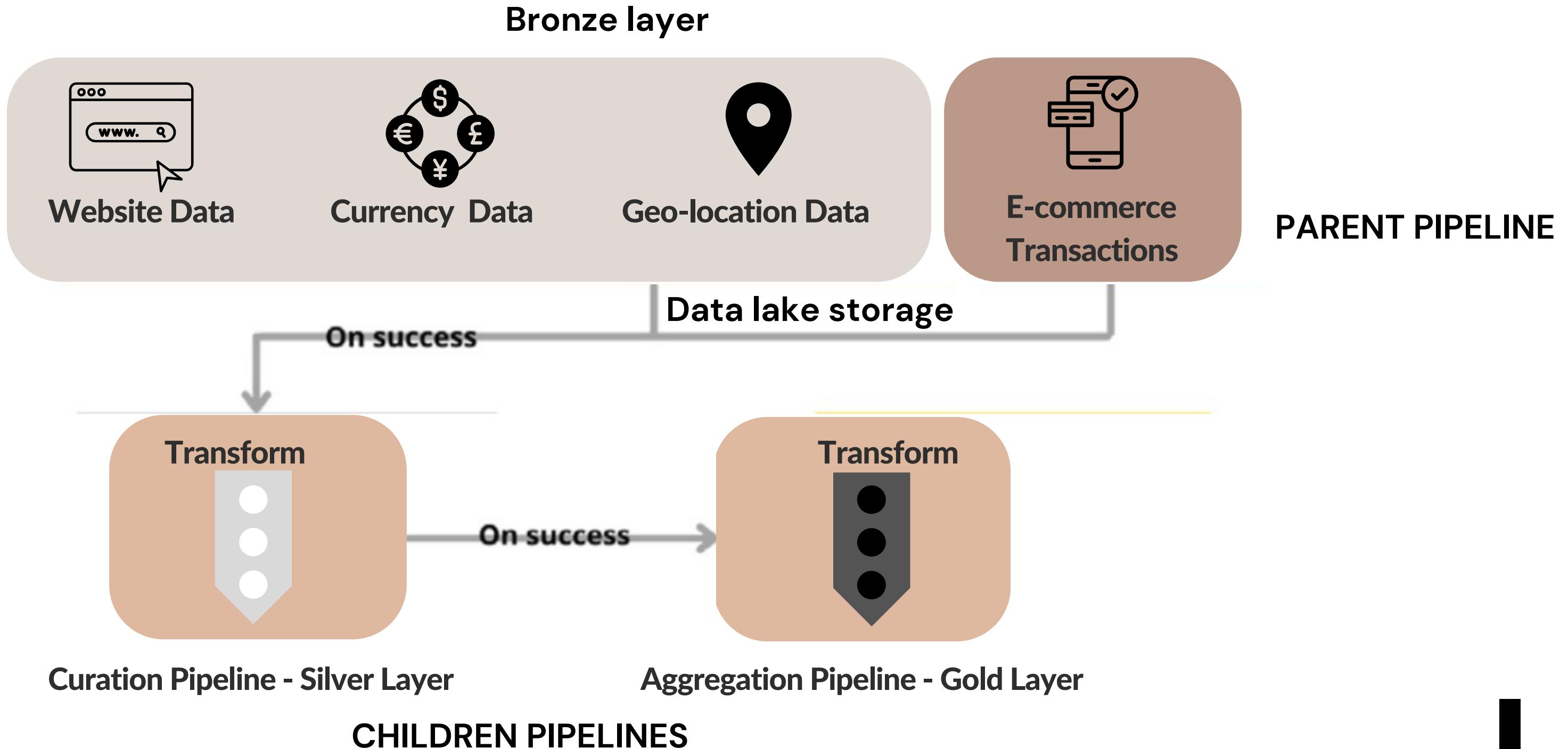
Cloud Architecture



Data Pipeline

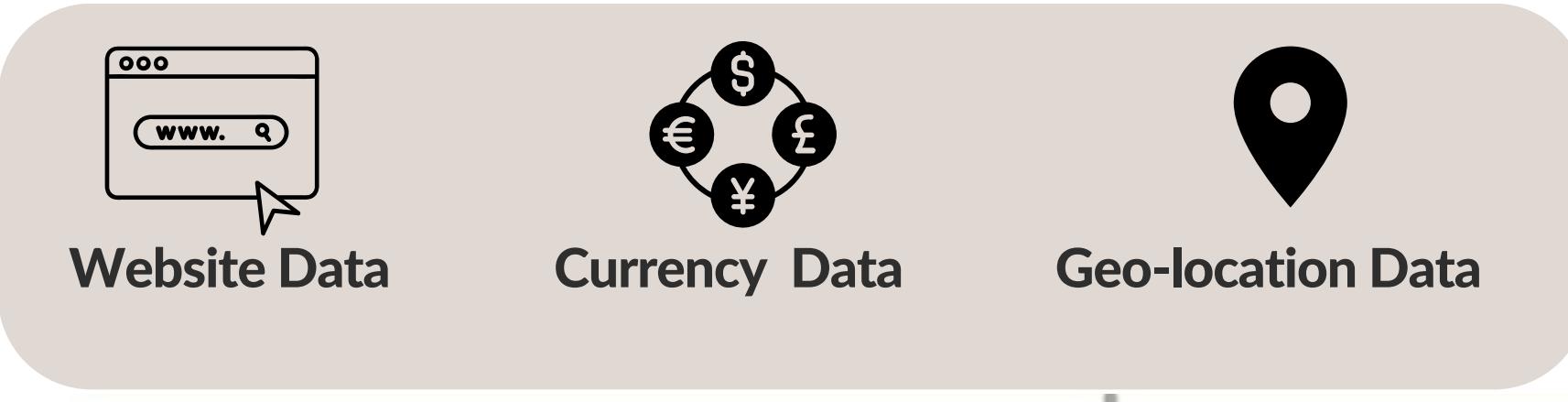


Parent-Child Pipeline Design

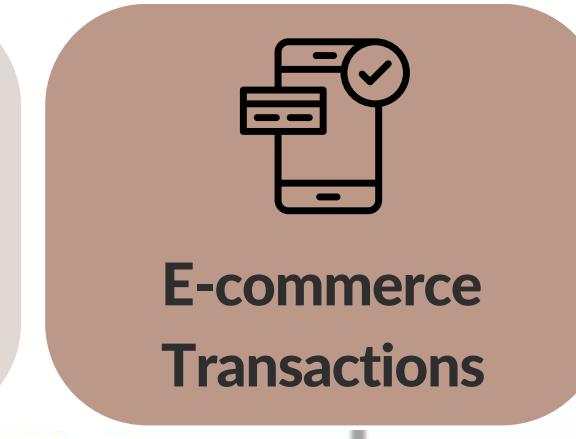


Ingestion

Batch ingestion Pipeline (ADF)



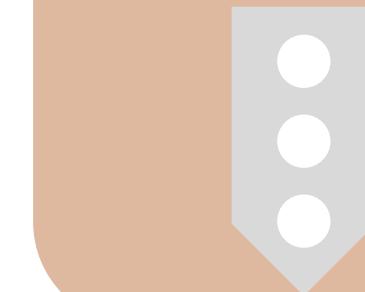
Streaming Ingestion Pipeline (Event Hub)



- Bookings
- Cancellations
- Calendar up to date

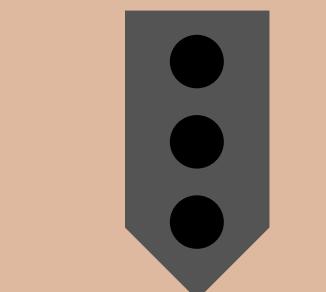
On success

Transform



Curation Pipeline - Silver Layer

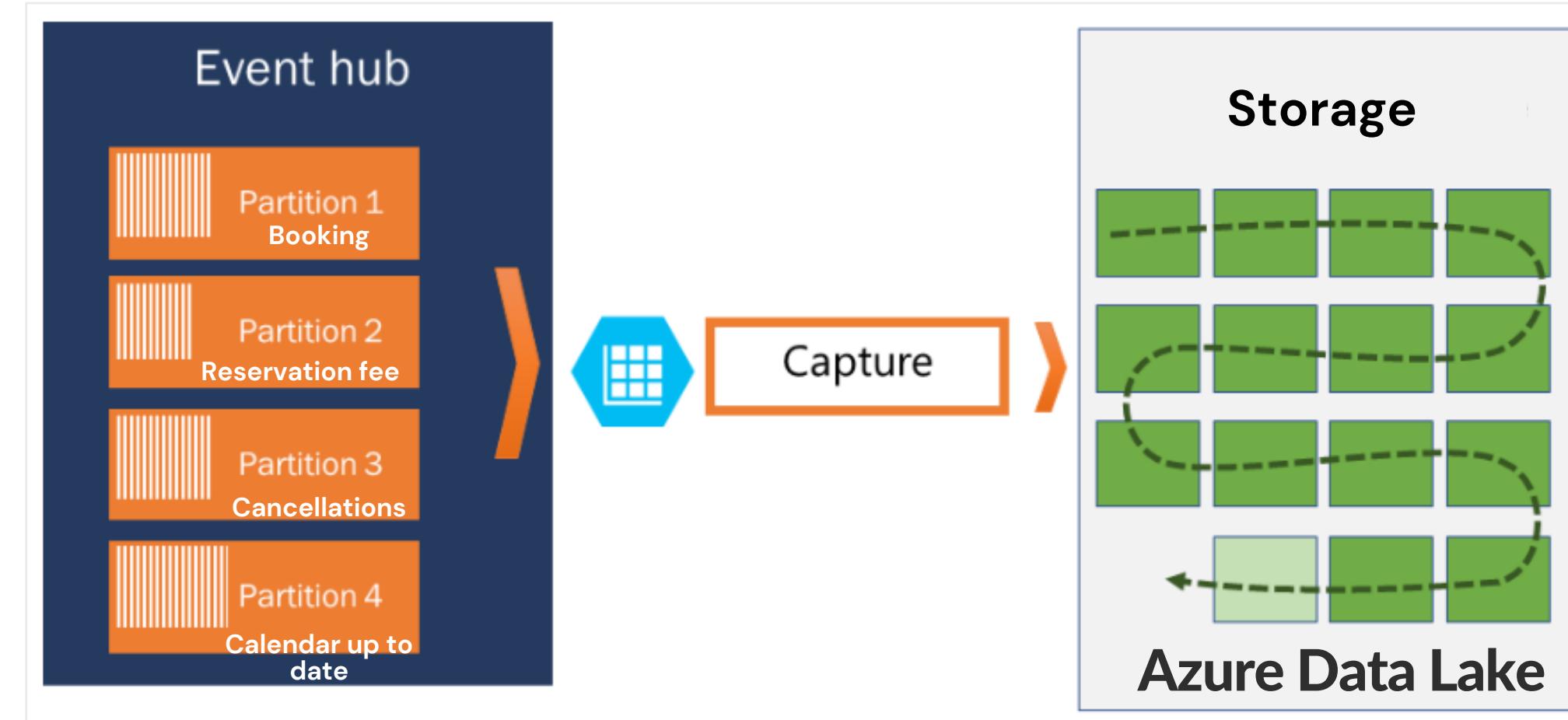
Transform



Aggregation Pipeline - Gold Layer

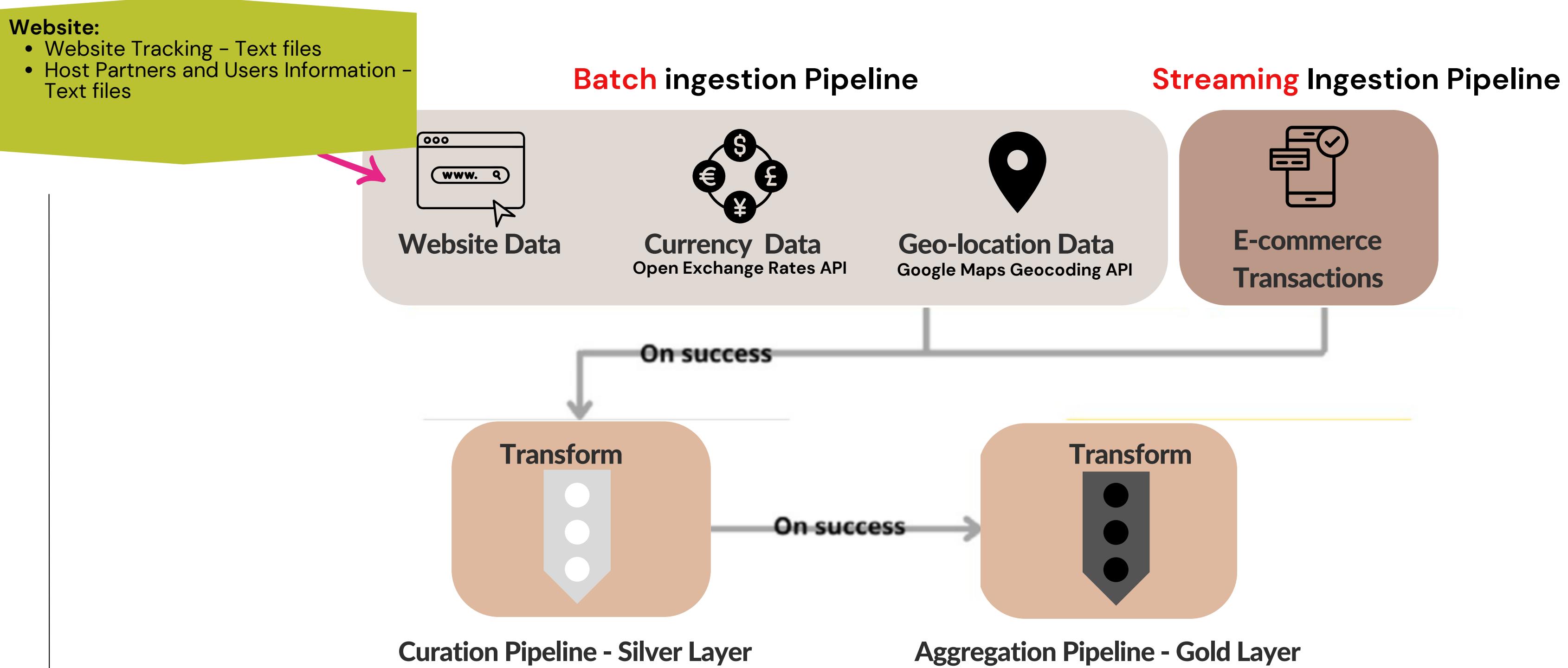
On success

Streaming Ingestion



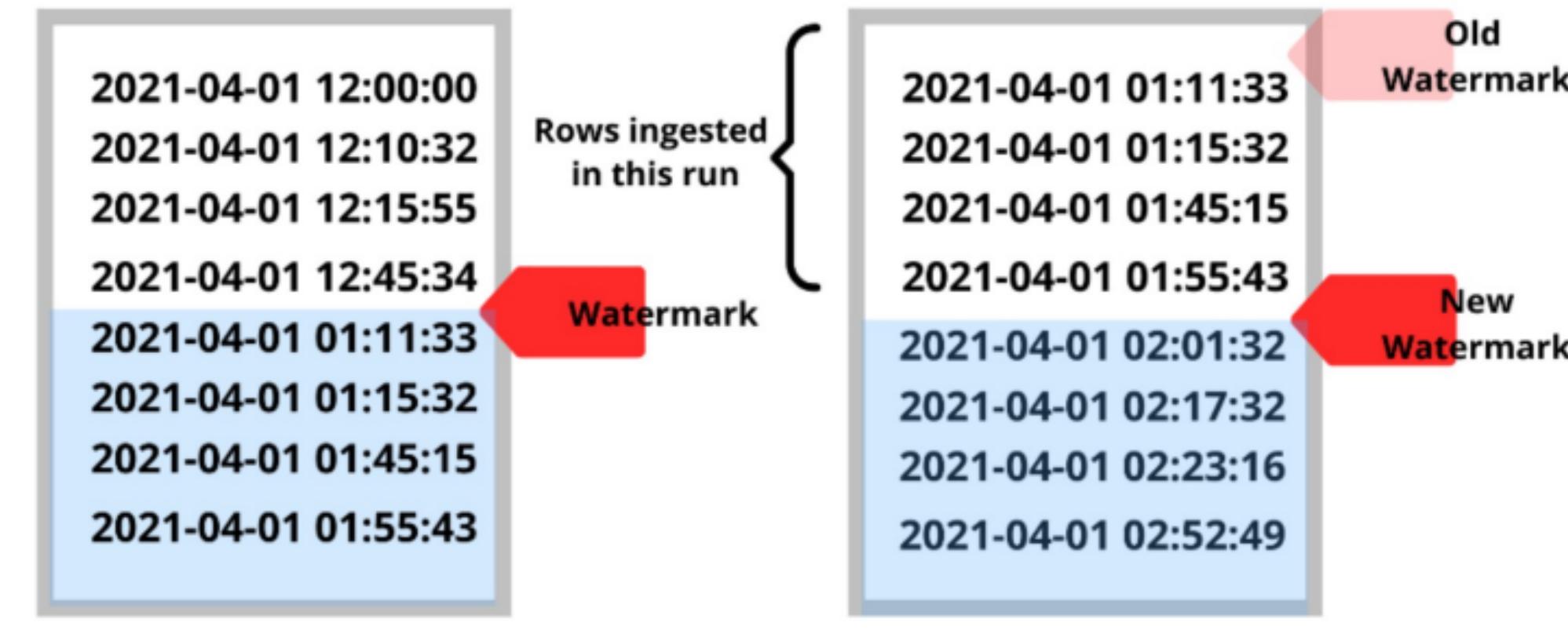
Timing: 2 Seconds

Ingestion



Batch Ingestion: Watermark Approach

Incremental Data Ingestion

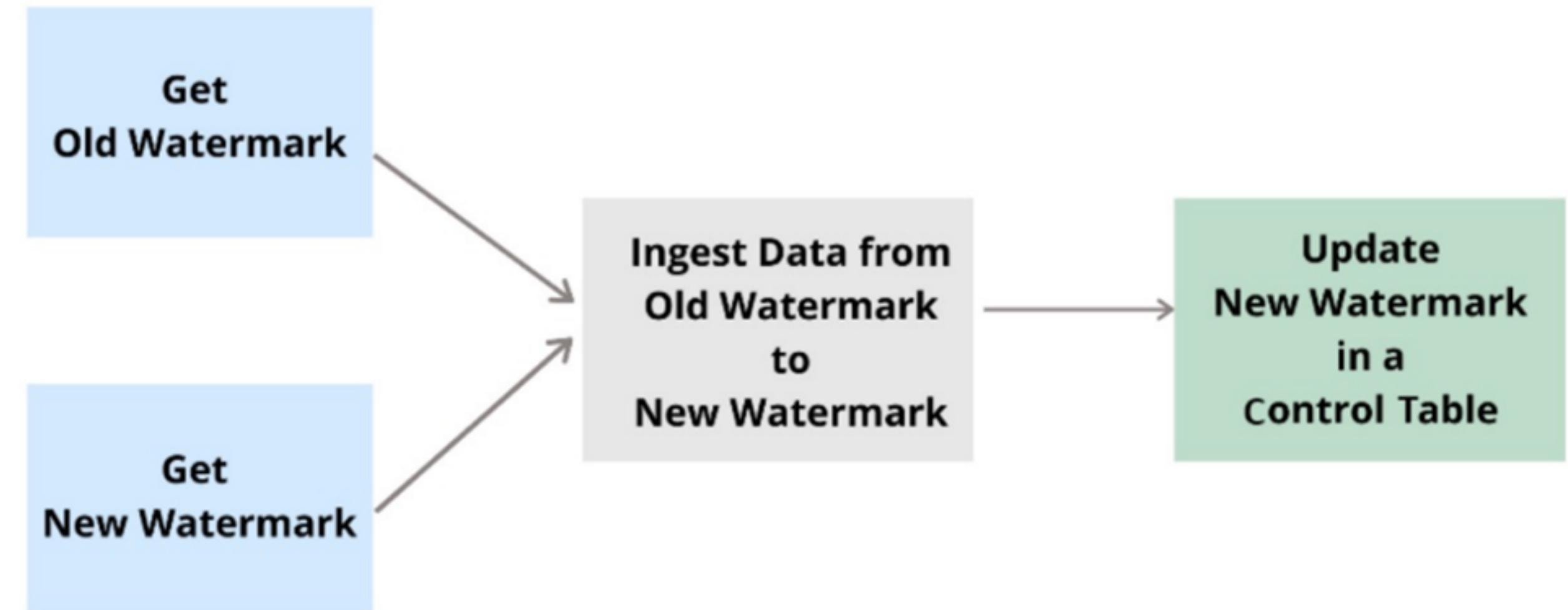


Ingested 8 hours ago

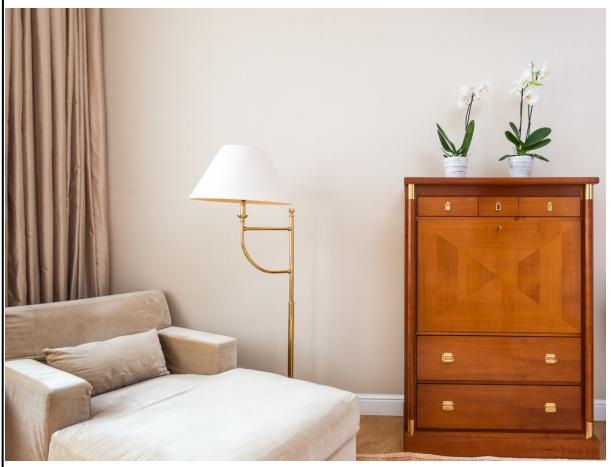
Ingested just now

Watermark update at every ingestion run

Bronze (Raw)



Silver (Curation)



Gold (Aggregation)



| Data Marts

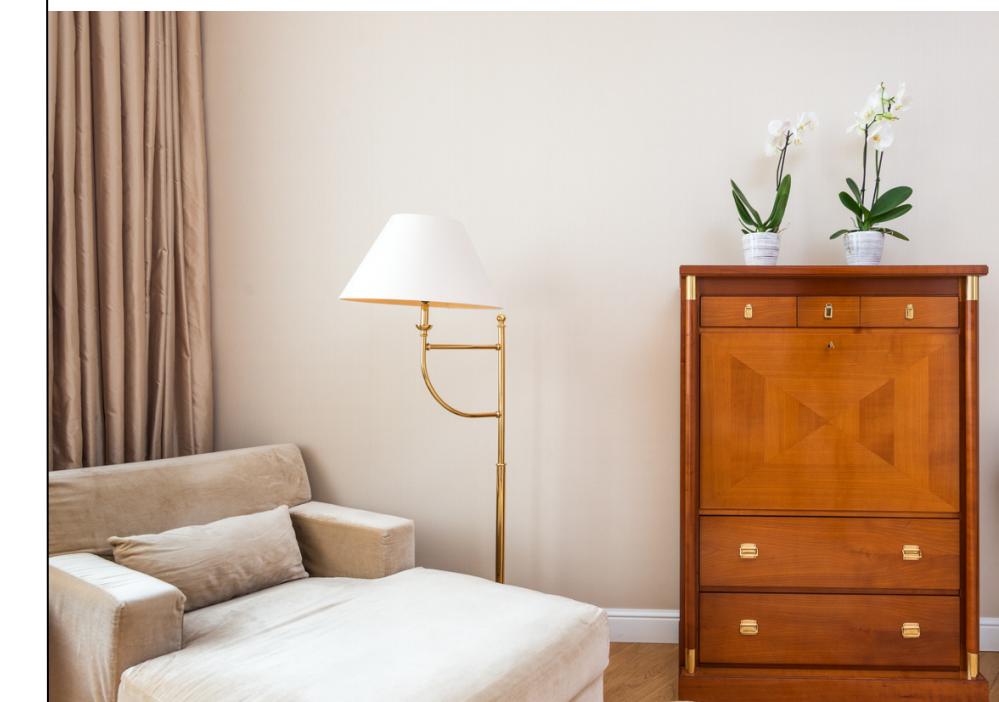


Booking and Revenue

Property Performance

Marketing and Campaign

Customer Engagement



Failures



Timeout:
24 hours

Retry Interval:
3 tries
Batch: 5 minutes interval
Streaming: 20 seconds interval

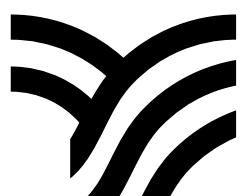
Add alerts for failures:
Pop ups and Email

Conclusion

- Airbnb is an online marketplace
- Cloud Architecture based on Azure
- Parent-Child Pipeline
- Accomplish Goals



Thank You!



Group 4
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