

# POS Streaming Analytics

Leverage Streaming and Lakehouse for Retail

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**14%** online purchases in  
retailers (1)

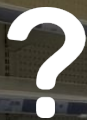


**71%** of retailers with “lack of  
real-time inventory visibility” (2)

(1) How Covid-19 Changed Retail - Probably Forever. Forbes. July, 2021.

(2) \$1 Trillion Problem: Managing Out-of-Stocks and Omnichannel Fulfillment During COVID-19. Retail Info Systems. March, 2021.





Inconsistent  
customer  
recognition



Mistargeted  
messaging



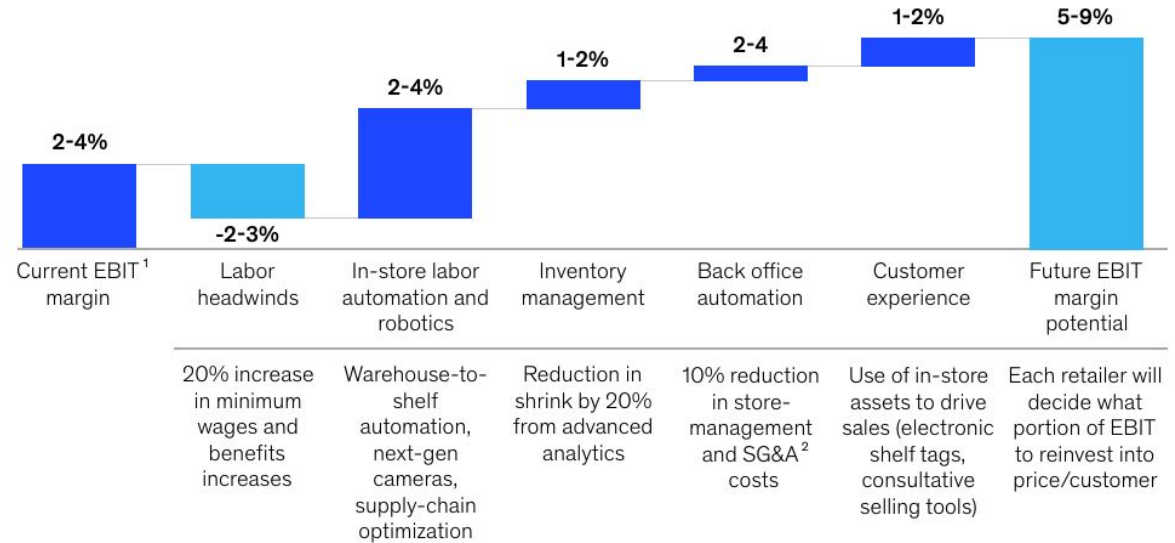
Substitutions,  
cancellation &  
errors



Inadequate  
problem  
resolution

# Technology will likely double store profitability (1)

- The “store of the future” can:
  - Double retailers’ EBIT margins
  - Provide a better customer experience
  - Have a positive ROI
- The technology needed to achieve this transformed P&L is already available



(1) The Future of Shopping: Technology Everywhere. McKinsey & Company. April, 2022.

# Inventory Management in the project

- Objective: Real-time inventory visibility
- Key metrics spanned in POS analytics:

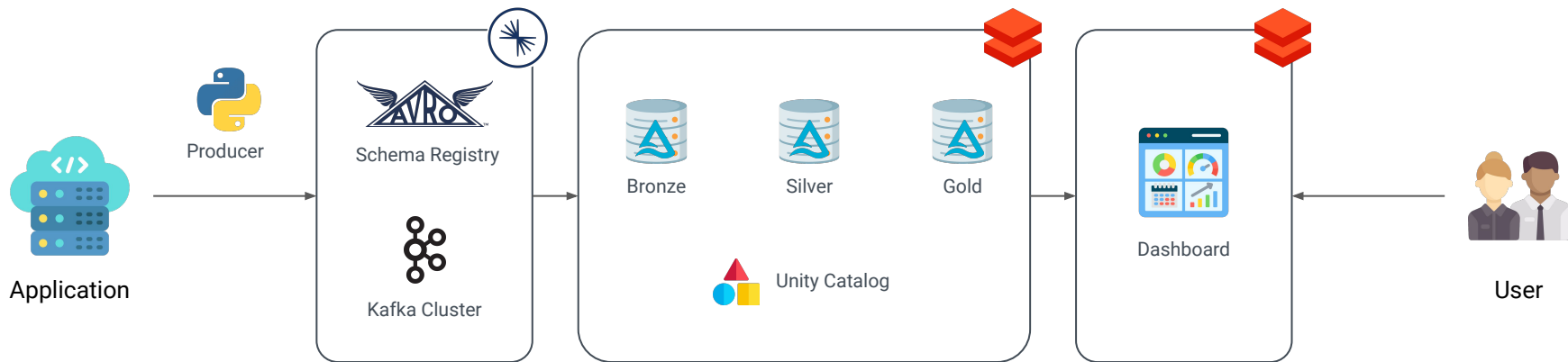
**Last transaction  
information**

**Current inventory  
quantities**

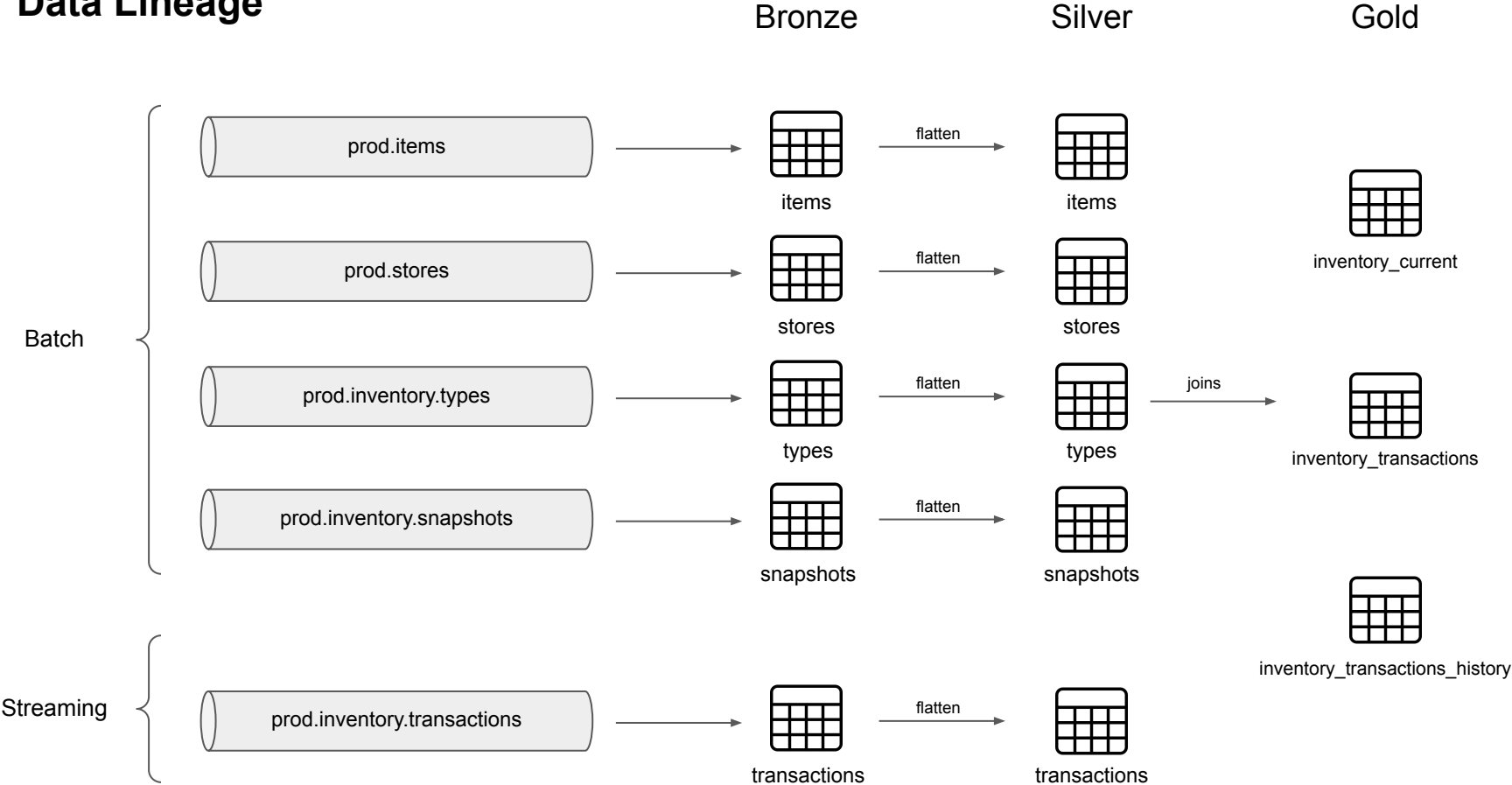
**Growth of items  
quantity over time**

# Architecture

- Streaming
  - Topics support avro schema evolution with Schema Registry
- Lakehouse
  - Tables are managed using Unity Catalog
  - Structured Streaming support the streaming flow



# Data Lineage





# POS Analytics Dashboard

- Dashboard link [here](#)
- Repository [here](#)

