

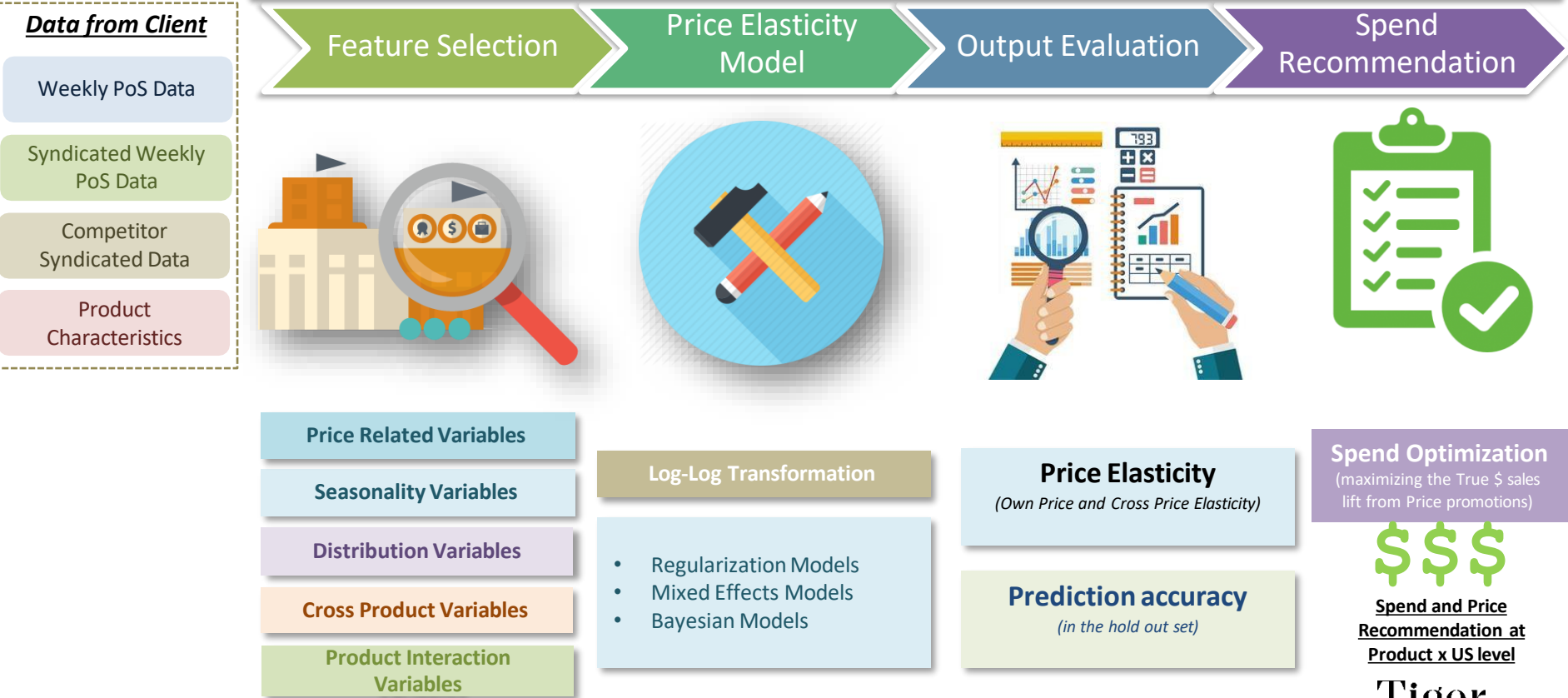
Partnering with Tiger Analytics

*Spend Optimization using Azure Platform - Solution Architecture
Reference Document*

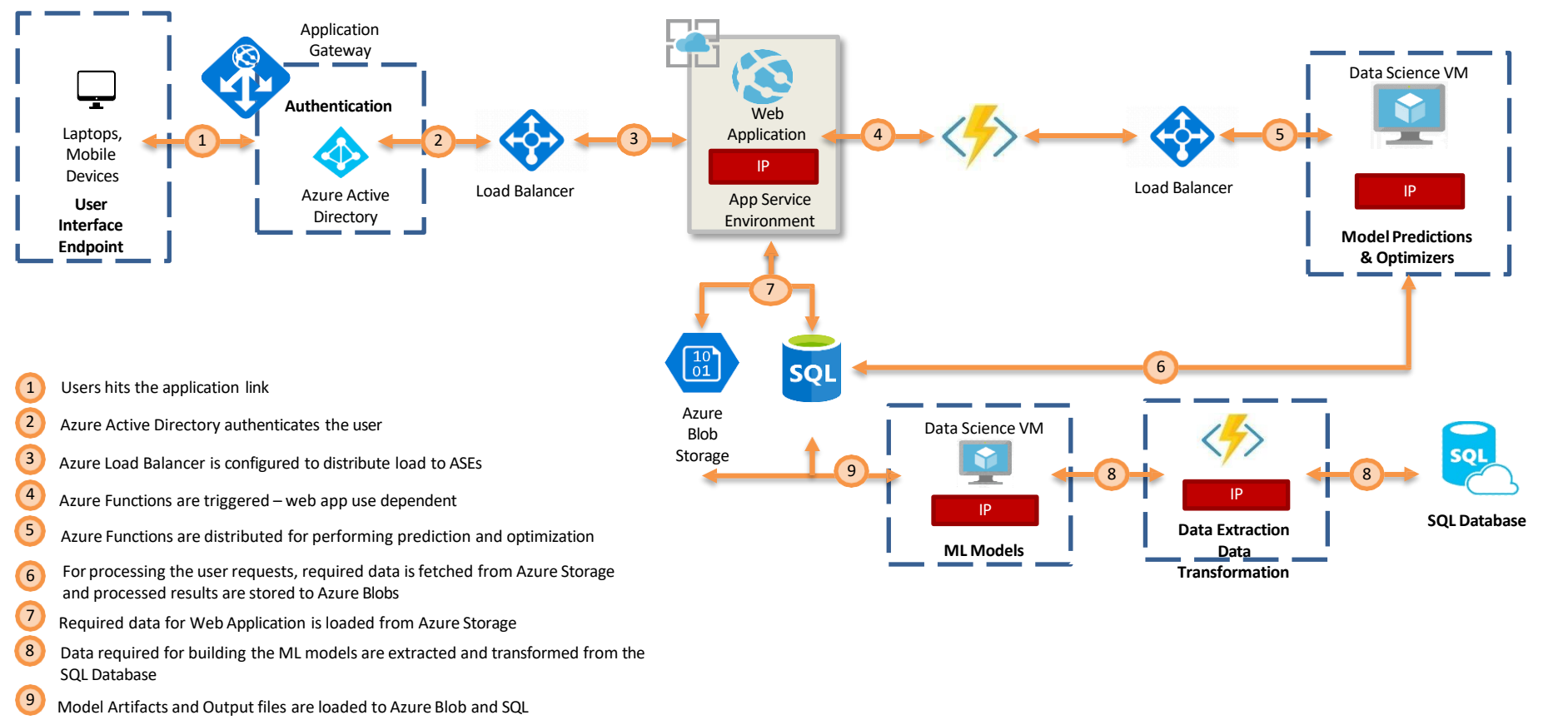
Solution Description

- Our solution drives the planning and optimization of various investments (marketing, trade) that brands make to improve outcomes like sales, new customers, leads etc.
- It provides following specific insights/tools for planners:
 - ROI on various investments
 - Forecast outcomes for future mix of investments
 - Optimize the mix to maximize the business outcome
- It leverages outcome data (sales etc.) and spend data by each activity (TV, Print, Digital, Trade) to build **machine learning models** to quantify the relationship between them. It further uses **optimization module** to generate an optimal investment plan accounting for all the relevant constraints.
- This solution is applicable across industry verticals – CPG, Retail, Financial Services, Hospitality etc.

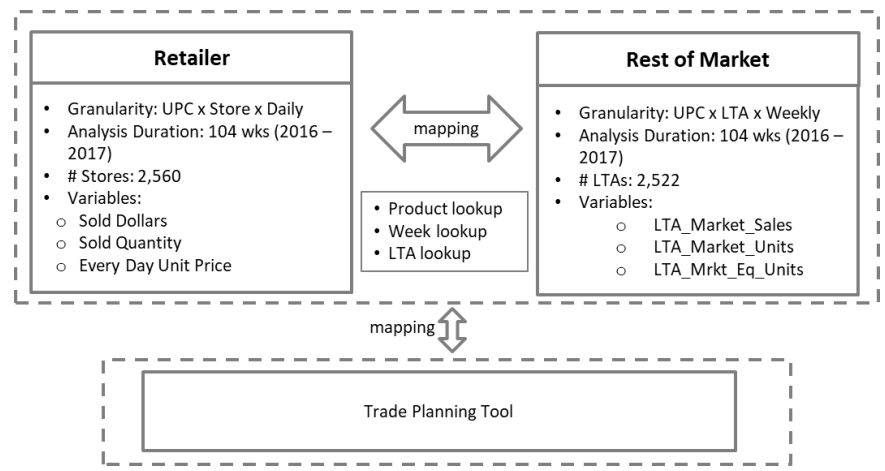
Solution Overview



Solution: Azure Reference Architecture



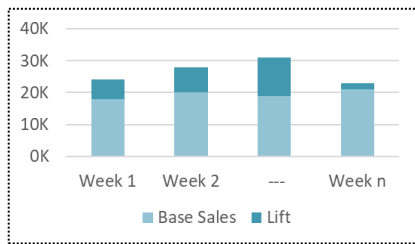
Data Preparation



Modeling

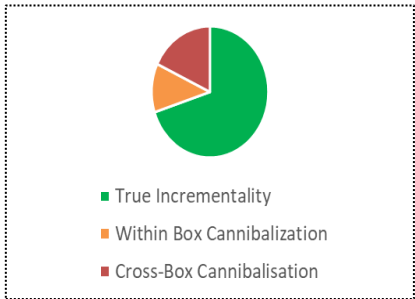
Baselining and Lift Estimation Modeling Framework

- Build model for predicting Sales Volume at a product level
- Estimate Base sales by feeding Base Price to the model
- $\text{Lift} = \text{Actual Sales} - \text{Estimated Base Sales}$



Decomposition of Lift

- Identify other products (within-box, cross-box) impacted by the promoted product
- Use data science models to estimate total cannibalization
- $\text{True Incrementality} = \text{Lift} - \text{Total cannibalization}$



Data Engineering Scope of Work

- Perform the extraction, storage, processing and OLAP services on Azure data Environment
- The job majorly includes designing the pipeline flow and development of the ETL Pipeline using Azure Components such as Azure Data Factory, Azure Data Bricks, Azure Logic Apps and Azure Active Directory
- Build a data ingestion layer using Azure Data Factory to extract data from data sources such as FTP, Rest API etc. into Azure Data Lake Storage
- Build data transformation logic in Azure Databricks implementing the required Business Rules and store the cleansed data in Sql Server and leverage Azure Logic Apps for email notification on the execution status of the pipeline such as Success, Failure etc.
- Control Identity and Access management using Azure Active Directory
- Post the testing and deployment, the support and maintenance to keep the setup up and running is to be provided.

Thank you