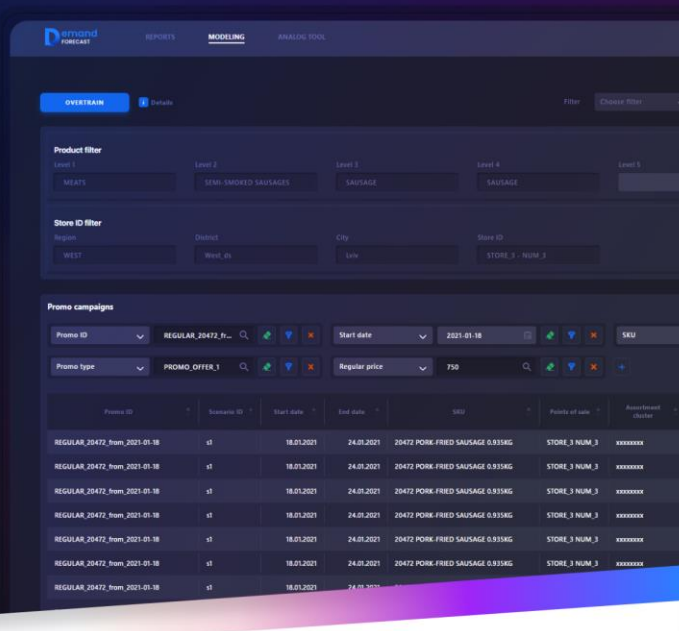
SMART Decision HUB
Demand Forecast

Demand forecast system based on ML & AI algorithms.

Improves operational planning in a changing environment and allows you to ensure that the business has optimal stock on time, maximize profits and service levels at low cost.



High level of data security. GDPR Compliance.

Quick integration with other Microsoft solutions.

Expert team that combines the experience of implementing IT solutions and analyzing data for demand forecasting in different areas.

Comprehensive demand forecasting for regular and promo sales.

WHY CHOOSE DEMAND FORECAST?

Increased quality of forecasting

- Short-term forecasting with SKU/Point of Sale/Day (Week) level drill-down.
- Use of advanced technologies and approaches to build forecasts based on artificial intelligence and machine learning.
- Adaptation to changing sales patterns.

Forecasting sales of products with insufficient history

- Automatic generation of a list of proposed analogs.
- Possibility of manual adjustment of analogs by the user in the interface.
- Generating a forecast based on the history of a product/analog store.

Increased transparency and efficiency of analytics

- Simultaneous access to analytics for cross-functional teams.
- Providing analytics at all levels of granulation.
- Drill-down of reports to analyze forecast quality.

EFFECTS OF USING SMART DEMAND FORECAST:

- Simultaneously forecast demand for promotional and regular sales in a high-quality manner
- Reduce workload of cross-functional teams
- Reduce stock
- Improve service level
- Ensure a high level of product availability
- Make informed managerial decisions
- Reduce write-offs
- Get reporting quickly

SYSTEM IMPLEMENTATION STAGES

STEP 1

Pilot project

Drawing up a schedule, setting project objectives & KPIs, describing all your business processes, determining the state of your database, organizing secure interaction. Preparation and launch of the model, further analysis of the results.

STEP 2

Product testing

Coordination of the test plan and schedule, setting up the integration process and deploying the solution infrastructure. Organization of training sessions on system operation.

STEP 3

System Go-Live

Full implementation of the solution and support of its functionality in accordance with emerging requests.

PILOT PROJECT RESULTS

Challenges:

Forecasting weekly promotions for one of the high-turnover product categories with a short shelf life (2-6 weeks):

- Assortment list: 150+ SKUs
- Number of points of sale: 700+
- Planning horizon: 8 weeks

Forecast detail level:

- Promo week
- Point of sale
- Product

Results:

Accuracy indicators at the product and point-of-sale levels in the promo week during the validation period (6 months) were as follows:

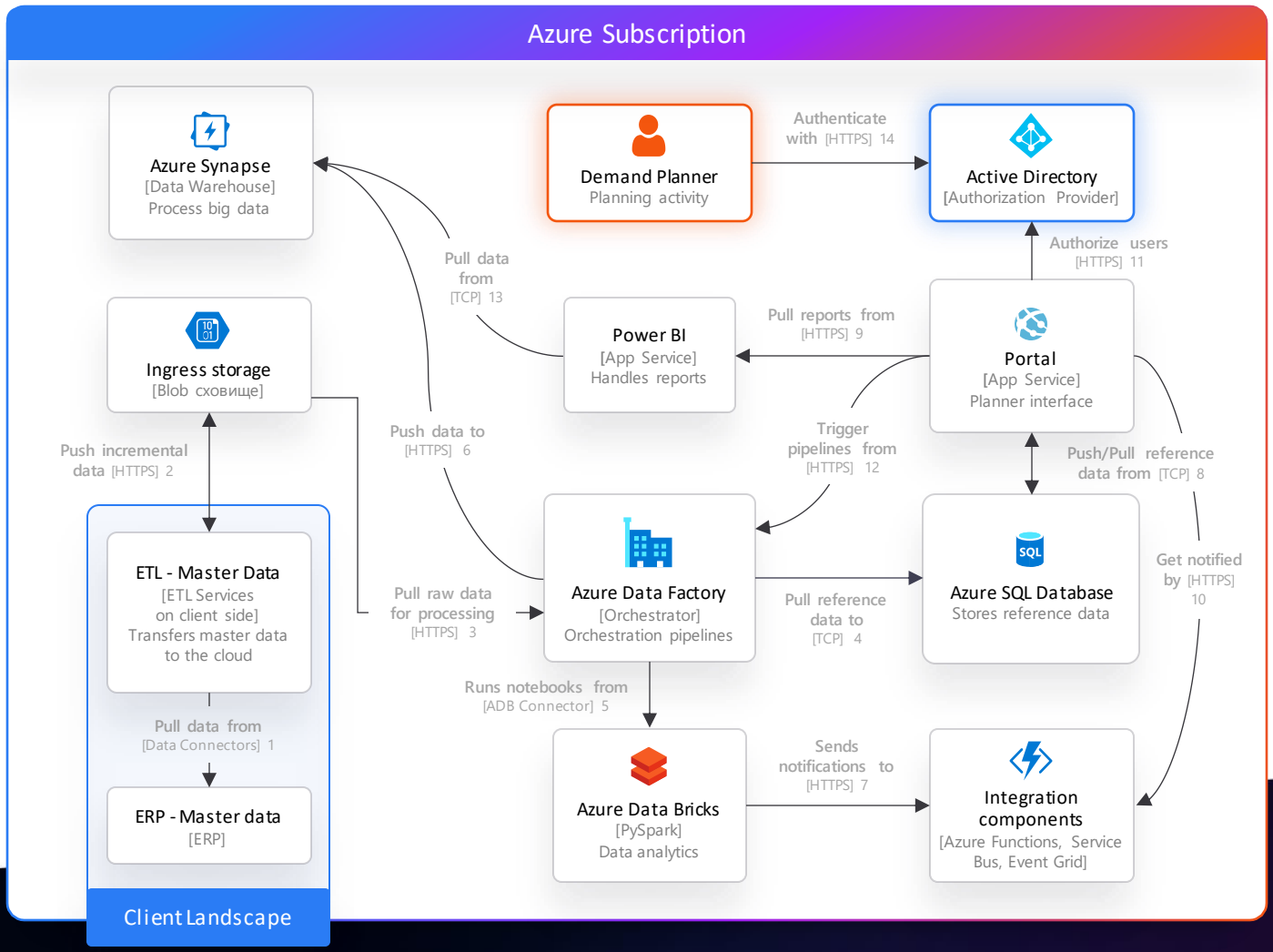
67,5% Mean accuracy

69% Weighed mean accuracy

SMART business | smart-it.com
info@smart-it.com | sales@smart-it.com | spsupport@smart-it.com

Microsoft Partner
2018 Partner of the Year Winner, UA
2019 Partner of the Year Winner, AZ
2020 Partner of the Year Winner, GE
2021 Partner of the Year Winner, AZ,GE

SMART DEMAND FORECAST ARCHITECTURE



DESCRIPTION

1. Retrieve historical data from master data ERP
2. Push historical incremental data to the cloud storage for further processing
3. Azure Data Factory gets data on schedule and process it from raw to prepared for planned
4. Transformed raw data incrementally stored in Azure SQL Database
5. Azure Data Factory triggers Azure Data Bricks to run notebooks during modeling, training and data health check process
6. Azure Data Factory triggers Azure Synapse to process big data
7. Azure Data Bricks notifies integration components while long-running operations
8. Portal works with data in Azure SQL Database
9. Portal gets reports from Power BI based on data in Azure Synapse
10. Portal use integration components for long-running operations
11. Portal uses Azure AD B2C to authenticate users
12. Portal triggers Azure Data Factory to run pipelines
13. Power BI gets data from Azure Synapse
14. Demand Planner uses Azure AD B2C to authenticate