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.

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High level of data security. GDPR Compliance.



Quick integration with other Microsoft solutions.

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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.





SYSTEM IMPLEMENTATION STAGES

STEP 1

STEP 3

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

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:

Coordination of the test plan and schedule, setting up the integration process and deploying the solution infrastructure.

Organization of training sessions on system operation.

67,5%

69%

Mean accuracy

Weighed mean accuracy

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SMART DEMAND FORECAST ARCHITECTURE

Azure Subscription



DESCRIPTION

- Retrieve historical data from master data ERP
- 2. Push historical incremental data to the cloud storage for further processing
- Azure Data Factory gets data on schedule and process it from raw to prepared for planned
- 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 Bl 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 Bl gets data from Azure Synapse
- 14. Demand Planner uses Azure AD B2C to authenticate

