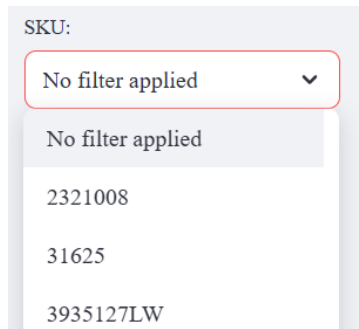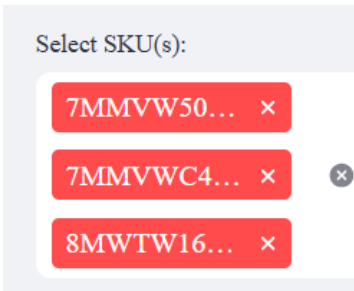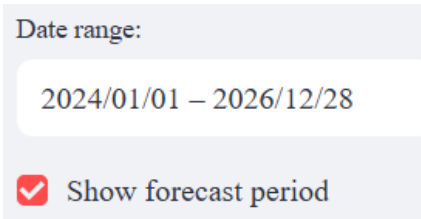# DASHBOARD INTERACTIVE WHIRLPOOL

The Trading Partner(s) filter lets the user select one or multiple retailers at the same time. When partners are selected, the dashboard updates all metrics and visualizations to show only the sellout, sigma behavior, and pricing performance for those specific retailers. This allows for direct comparisons across partners and helps identify differences in demand, margin behavior, and pricing sensitivity. If no partner is selected, the dashboard displays the full market view.

The SKU(s) filter allows the user to select one or multiple products simultaneously. When SKUs are selected, the dashboard updates to show sellout, sigma behavior, pricing trends, and model predictions only for those specific items. This enables product-level analysis and easy comparison between different models. If no SKU is selected, the dashboard displays the full product assortment.

The SKU filter allows the user to focus on a specific product. When an SKU is selected, all visualizations and metrics update to show only the sellout, sigma behavior, pricing trends, and demand for that particular model. This makes it easier to analyze how each product performs on its own and to compare it against others. If no SKU is selected, the dashboard displays the full product lineup.

The Date range filter lets the user define the specific period they want to analyze. All charts and metrics update to reflect only the data within the selected timeframe. The "Show forecast period" option adds the model's projected values beyond the historical data, allowing users to compare past performance with future predictions. This helps identify trends and anticipate pricing or demand changes.

Business Sales Forcasting KPI Dashboard

Predictive sales dashboard powered by machine learning to support commercial and inventory decisions.
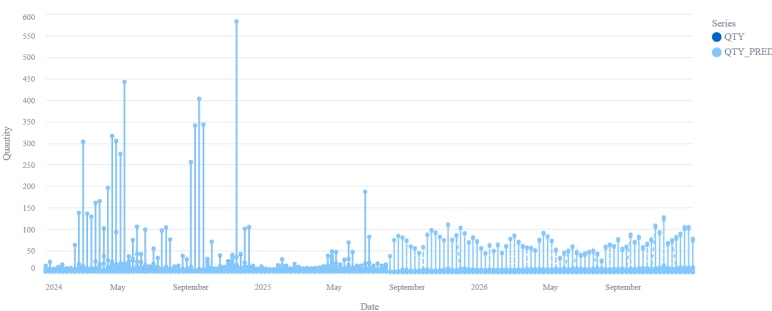
RMSE: 3.21, MAE: 1.02

KPI's

Total Sell-Out (QTY)	Total Gross Sales	Average Unit Price
4,681,797	13,333,895,579.64	4601
↑ +9%	↑ +2%	↑ +3%

The KPI section provides a quick summary of the most important performance indicators: total sell-out, total gross sales, and average unit price. Each card updates based on the selected filters and displays both the current value and its percentage change. This gives users an immediate understanding of overall sales performance and pricing trends, helping them spot growth, declines, or unusual shifts at a glance.

Real vs Predicted / Forecasted Quantity Over Time

This chart compares the actual quantity sold (QTY) with the model's predicted and forecasted values (QTY_PRED) across the selected time period. It shows how closely the model follows real demand patterns and highlights any deviations or spikes in sales. The forecasted section extends beyond the historical data, helping anticipate future demand levels. This visualization is useful for evaluating model accuracy and for planning inventory or commercial decisions based on expected trends.

This tool allows the user to select any week and view the model's predicted quantity for that specific period. The result updates according to all active filters, giving a precise estimate based on the chosen products, partners, and date range. It's useful for planning inventory, anticipating demand spikes, and supporting weekly decision.

QTY prediction for a specific week

Select a week (date):

2024/01/01

Get QTY Prediction for Selected Week

Total predicted QTY for selected week (current filters)

334.5

Detail by SKU and Trading Partner for that week:

	DATE	SKU	TP	QTY	QTY_PRED	DATA_TYPE
0	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	5	5.0516	historical
1	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	2	1.9828	historical
2	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	2	1.9624	historical
3	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	4	4.0302	historical
4	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	2	1.9284	historical
5	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	1	1.0176	historical
6	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	1	0.9821	historical
7	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	4	4.0232	historical
8	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	1	1.0594	historical
9	2024-01-01 00:00:00	7MMVW5035PW	LIVERPOOL	1	1.0133	historical

This table shows a detailed breakdown of all SKUs and trading partners for the selected week. It includes the historical quantity sold (QTY), the model's predicted quantity (QTY_PRED), and the data type (historical or forecasted). It helps users understand how each product performs at a granular level and compare real vs predicted values within the same week.

Filtered Dataset

	DATE	SKU	TP	QTY	QTY_PRED	DATA_TYPE
0	2024-08-26 00:00:00	7MMVW5035PW	BODESA	1	1.0016	historical
1	2024-08-26 00:00:00	7MMVW5035PW	BODESA	1	0.9974	historical
2	2025-02-10 00:00:00	7MMVW5035PW	BODESA	1	0.9987	historical
3	2025-02-17 00:00:00	7MMVW5035PW	BODESA	1	0.9988	historical
4	2025-03-03 00:00:00	7MMVW5035PW	BODESA	1	0.998	historical
5	2025-03-10 00:00:00	7MMVW5035PW	BODESA	2	1.9771	historical
6	2025-03-31 00:00:00	7MMVW5035PW	BODESA	1	1.0058	historical
7	2025-04-14 00:00:00	7MMVW5035PW	BODESA	1	1.0122	historical
8	2025-04-14 00:00:00	7MMVW5035PW	BODESA	2	1.9463	historical
9	2025-04-21 00:00:00	7MMVW5035PW	BODESA	2	1.9494	historical

This table displays the dataset after applying all selected filters, showing only the relevant SKUs, trading partners, and dates. It includes both the historical quantity sold (QTY) and the model's predicted quantity (QTY_PRED). This view helps users verify exactly which records are being analyzed and ensures transparency in how the dashboard calculations and forecasts are generated.

View detailed analysis and insights:

Download Whirlpool PDF

This button allows the user to download a PDF with the complete analysis and information generated by the dashboard. It consolidates key metrics, forecasts, and visualizations into a single report, making it easy to share the results or review them offline (this PDF).

Link Streamlit cloud: