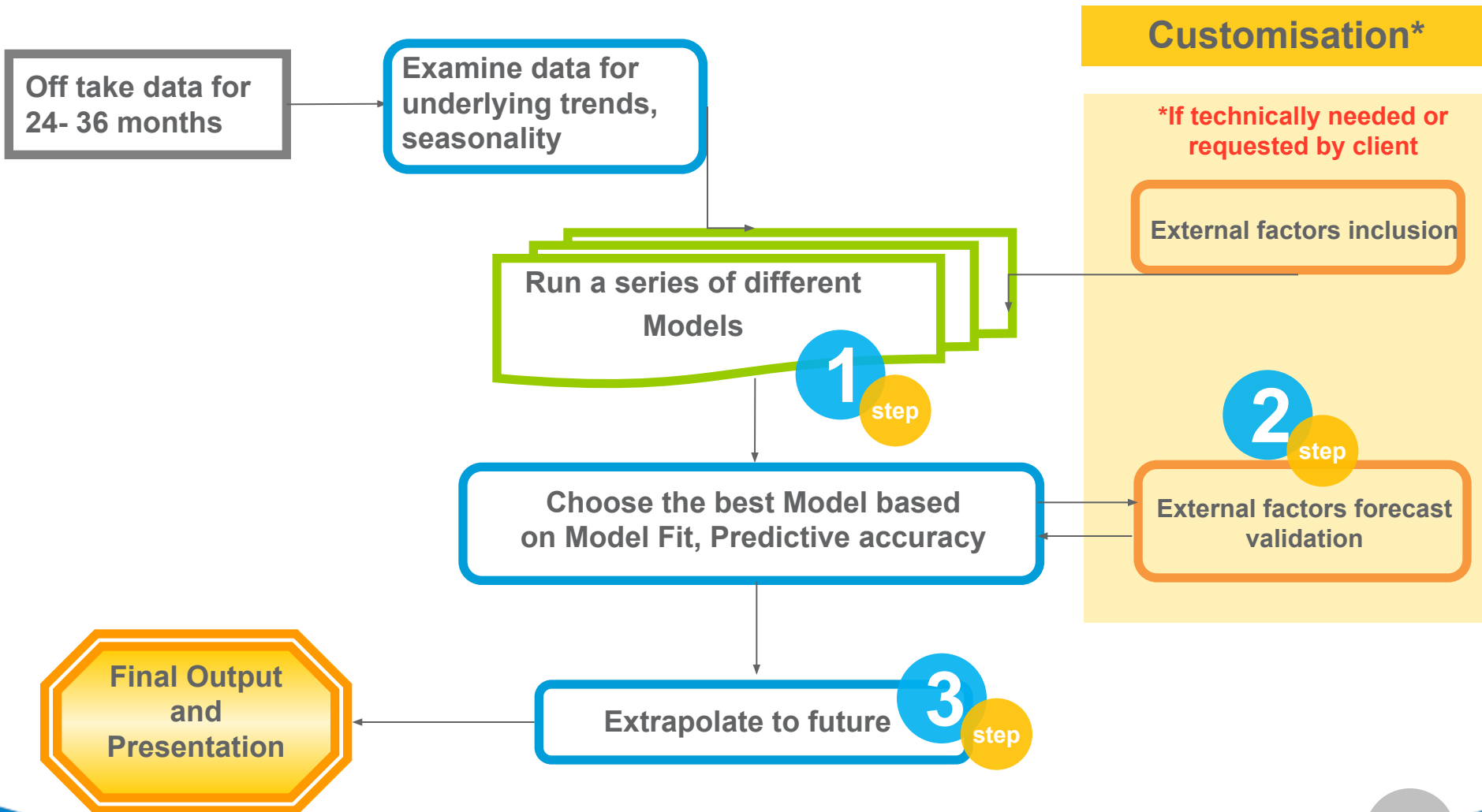


Forecasting Solutions Project Process Details



The Project Process



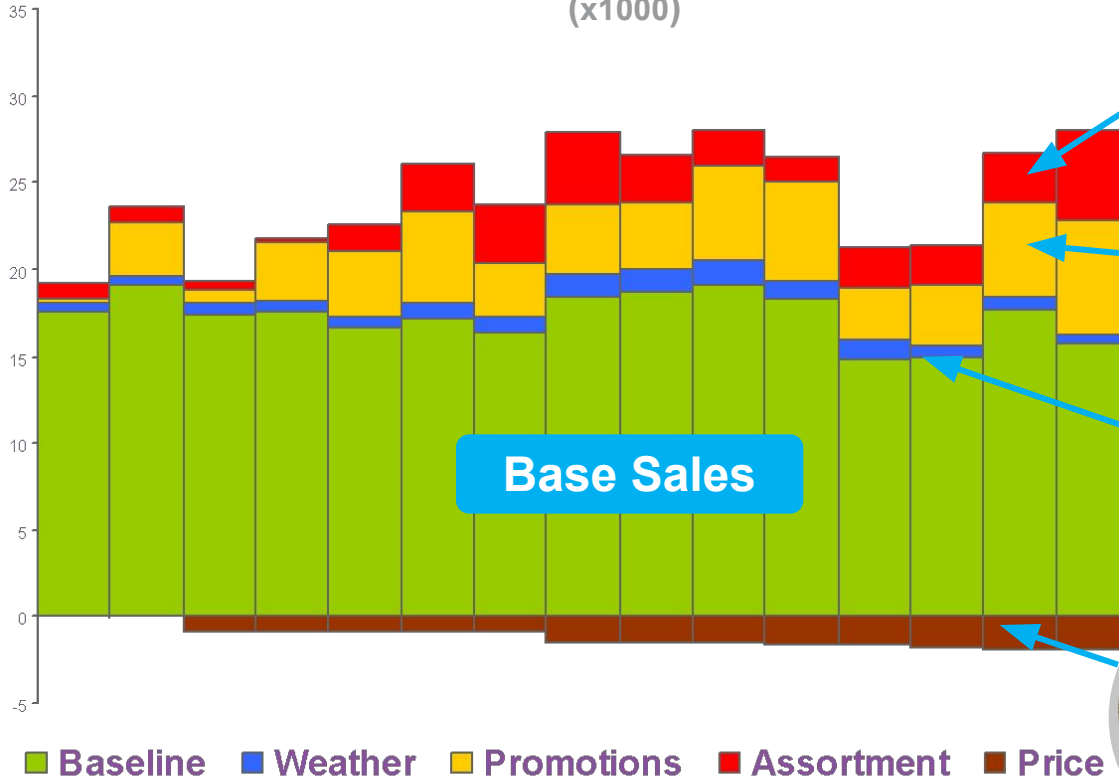
1

step

Decomposition of the sales data based on the observed influences, setting «coefficients»

Volume Trend Decomposition

(x1000)



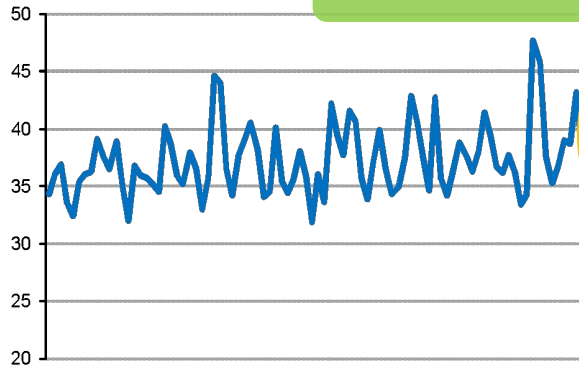
3

2

step

Forecast the economic and other category variables

of SKU



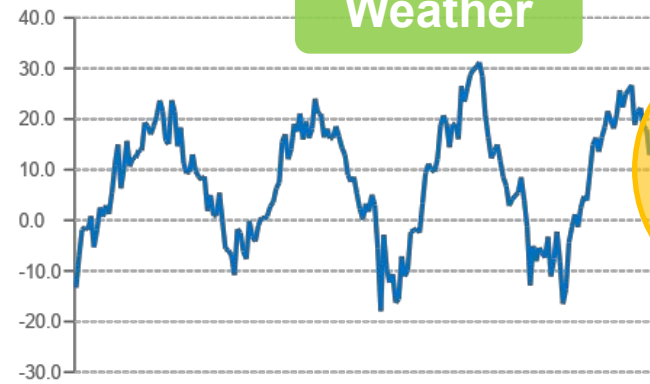
Inflation



— Sample

— Forecast

Weather



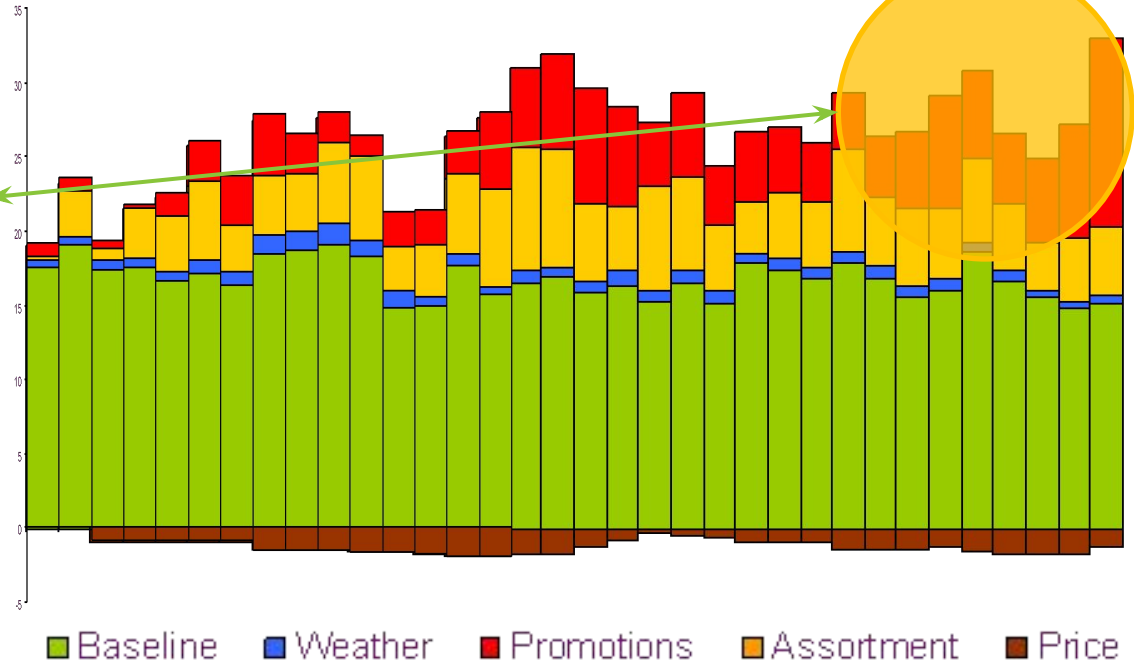
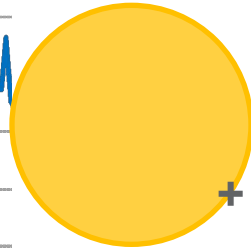
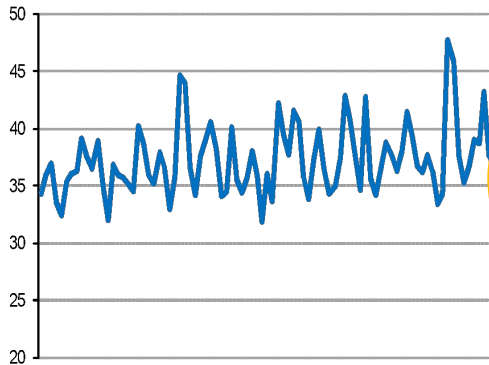
- Each forecast is totally independent
- Forecasted variable will be challenged by our Nielsen Market experts and other public forecast (IMF, OECD...)
- Some influences cannot be “forecasted” with high accuracy (e.g. weather), in that case we will use a scenario* based on the average past observations.

3

step

Baseline forecast and decomposition of forecasted sales based on forecasted variables

Volume Trend Decomposition (x1000)



- Forecast base sales by segment using the past base sales
- Then, we applied the coefficients from the model to the forecasted influencers

Variables Forecast

Sales Forecast

4

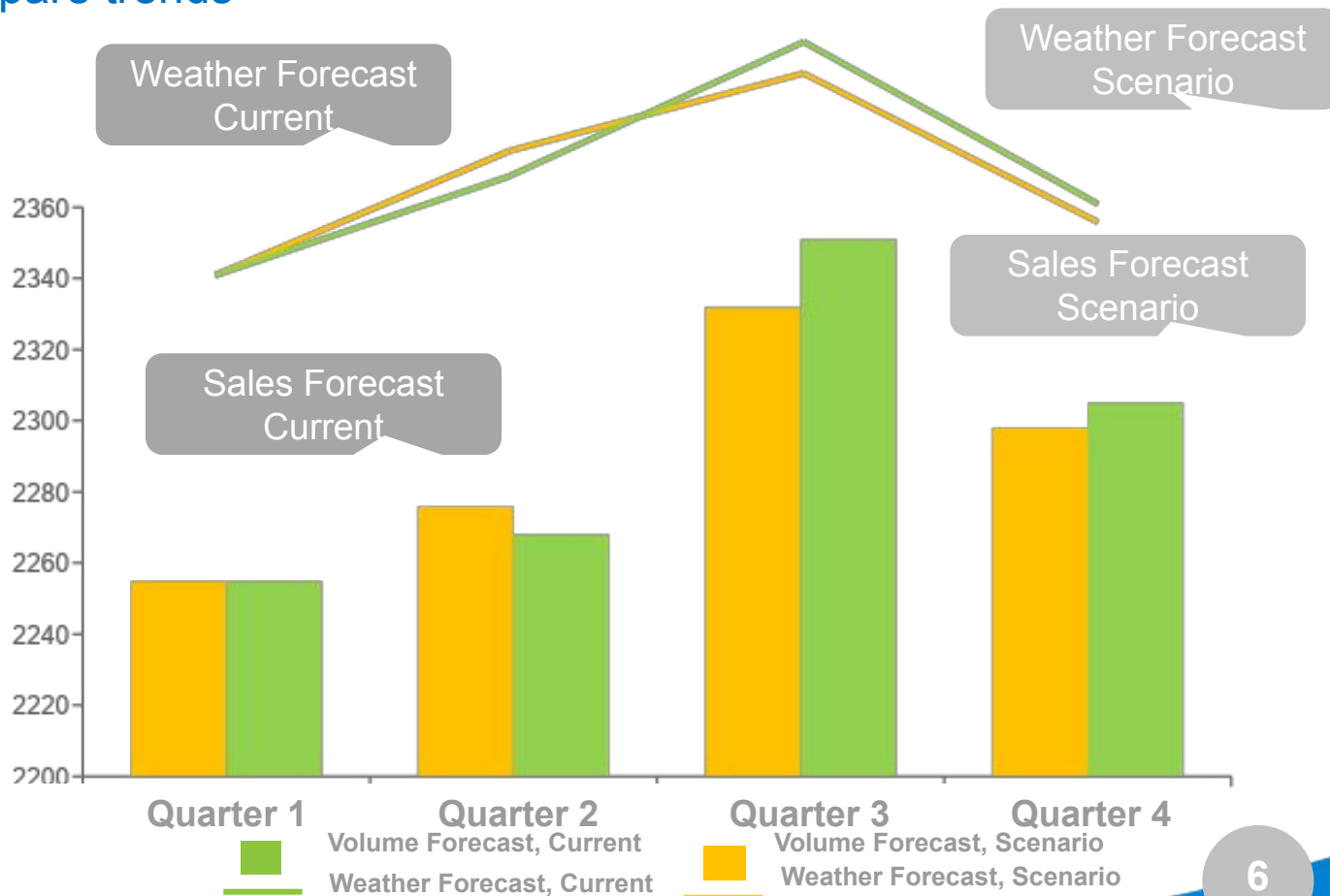
step

Scenarios simulations

We change influences forecast at Step 2 and repeating Step 3 and can see how category sales will react to this change and compare trends

Example of scenario:

What if during next summer temperature is +5°C higher?

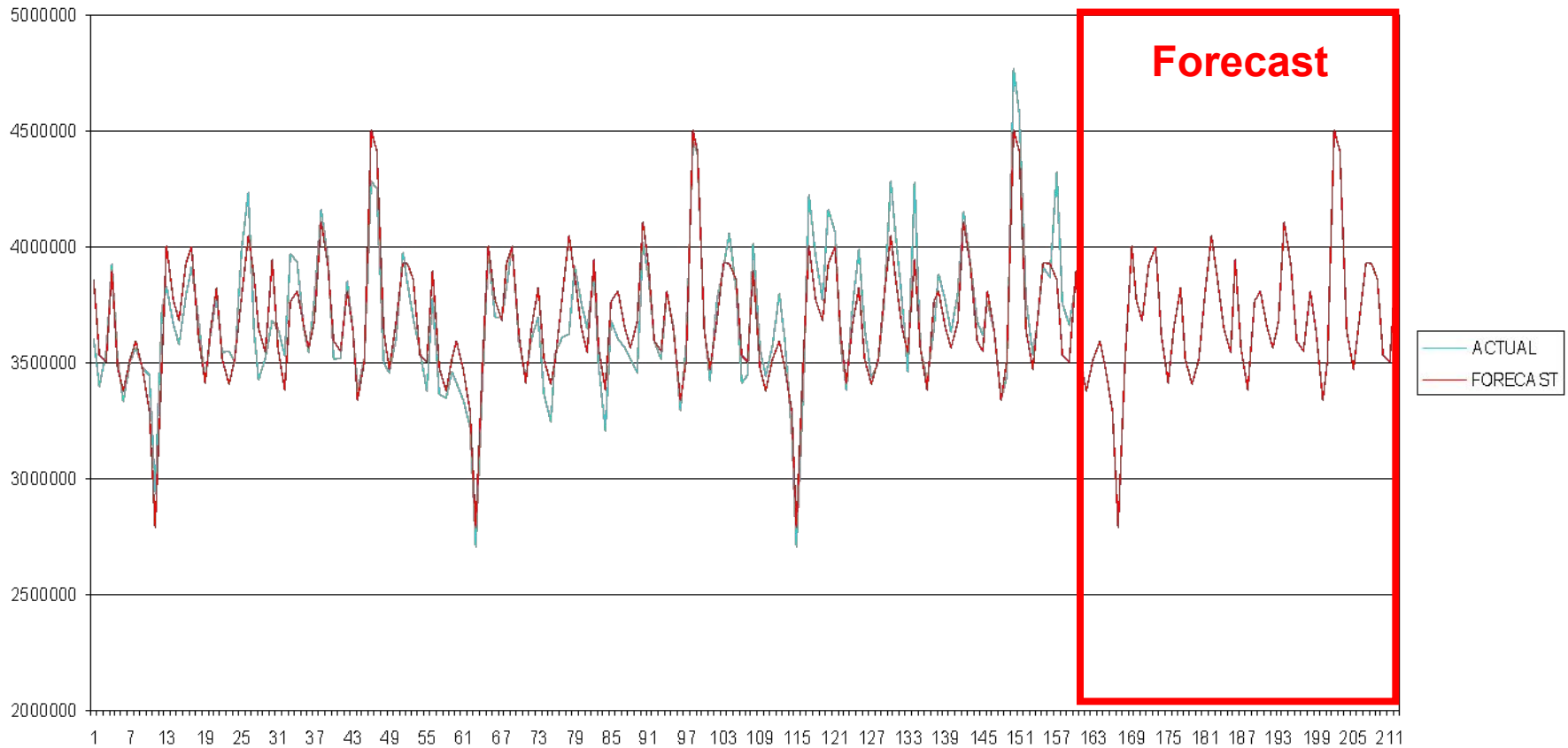


Accuracy evaluation

Oral care category (France)

MAPE* = 2.57

Very good MAPE value



***Mean absolute percentage error (MAPE)** = is a measure of accuracy in a fitted time series. It expresses accuracy as a percentage. The closer the value is to 0 the better is the fit.