

Forecasting with the R forecast model

Forecasting is one of the most complex and valuable aspects of business intelligence. High-quality time series data is the basis for accurate forecasts. BCS Itera provides time series forecasting using R programming language. We use Power BI, which is compatible with the R language, to present the forecasts.

The forecast categories our customers use most often include:

- Cash flows
- Sales turnover by business unit
- Sales turnover by product
- Revenue/expenditure forecast for budgeting

There are several models for time series forecasting, we use two of them: ARIMA and SARIMA. These models are characterised by the combination of autoregressive (AR) and moving average (MA) models, with the SARIMA model also incorporating a seasonality component (S).

To find out more about these models, read the articles published in our magazine Äri-IT:

- <https://www.itera.ee/en/2022/09/forecasting-with-the-r-forecast-model/>
- <https://www.itera.ee/en/2023/11/seasonal-data-forecasting-using-the-r-forecast-model/>



Look to the future

For your company to implement the Power BI tool, which uses predictive models, you will need to participate in at least two workshops. The purpose of the workshops is to identify:

forecast categories such as:

- turnover
- cash flows

forecasting components:

- trend
- level
- seasonality
- noise

We select the forecasting model [ARIMA or SARIMA]. For instance, if seasonality is not a significant factor or if the length of a high-quality time series is around 2–3 years, then we recommend using the ARIMA model.

During the integration of R forecasts, we test the percentage error of the model by comparing the already realised present with the forecast, perform separate calculations for each model and forecast category and, where necessary, make adjustments to the model and add automatic forecast updating functionality.

The estimated volume of development and consultancy work is around 100 hours. This includes a forecast of the desired timeframe with up to 200 combinations of different numerical values and dimensions. The different combinations and their respective quantities will be discussed in the first workshop. Following this process, the customer will gain access to the forecasting tool 1.0, which will be further developed through additional needs mapping and workshops

Make strategic decisions with the team to enhance your competitiveness

Contact us

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