

Predicting the unpredictable

How we vaccinated our forecasts against Corona

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DDMA | 11 November 2021



Nice to meet you 🖐️



Cátia Silva

Senior Data Scientist

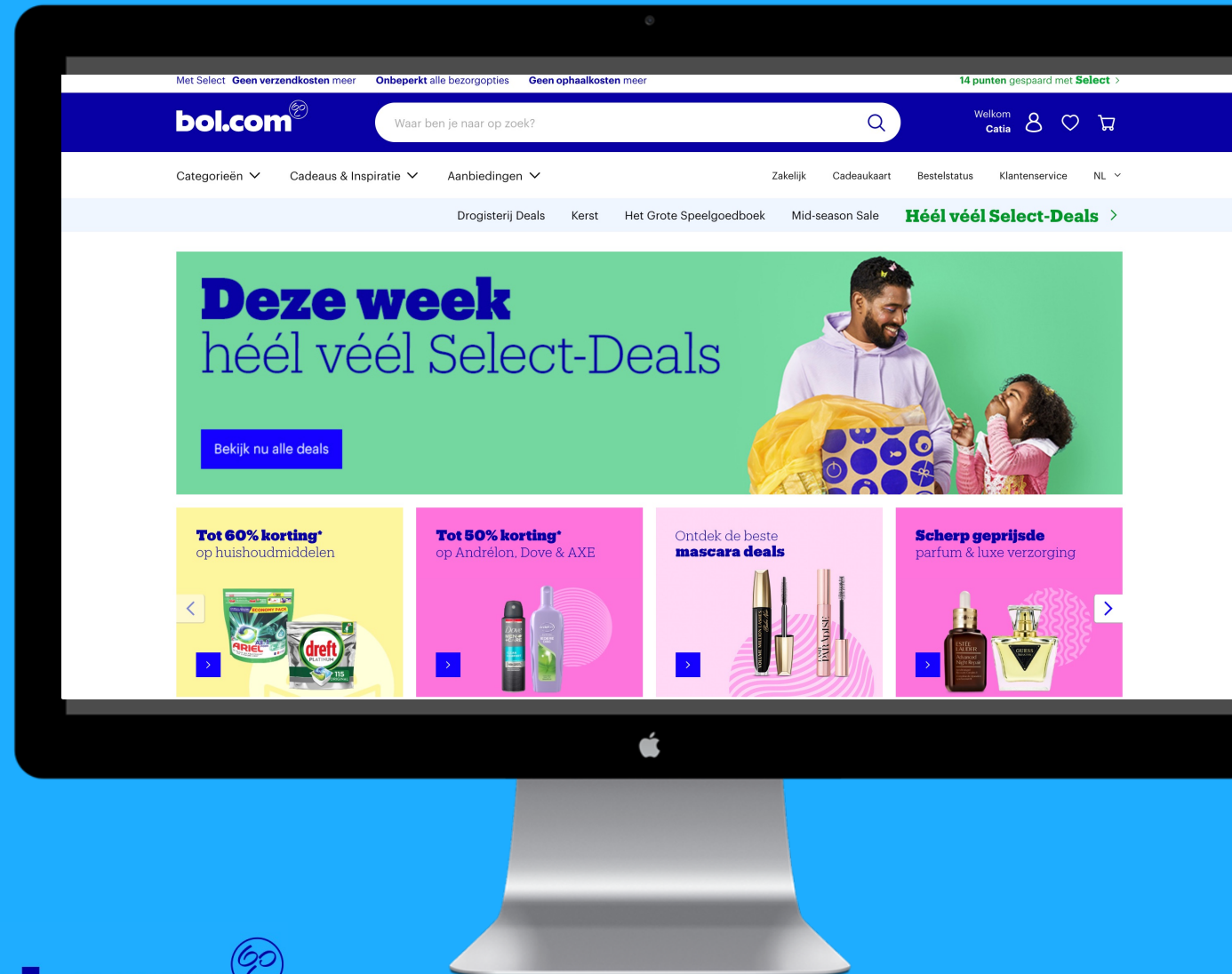


Erick Webbe

Head of Data Science

Intro bol.com

- Largest online retailer for The Netherlands and Belgium
- 12.5 million customers
- 34 million products
- 47,000 sellers
- 129 million visits per months



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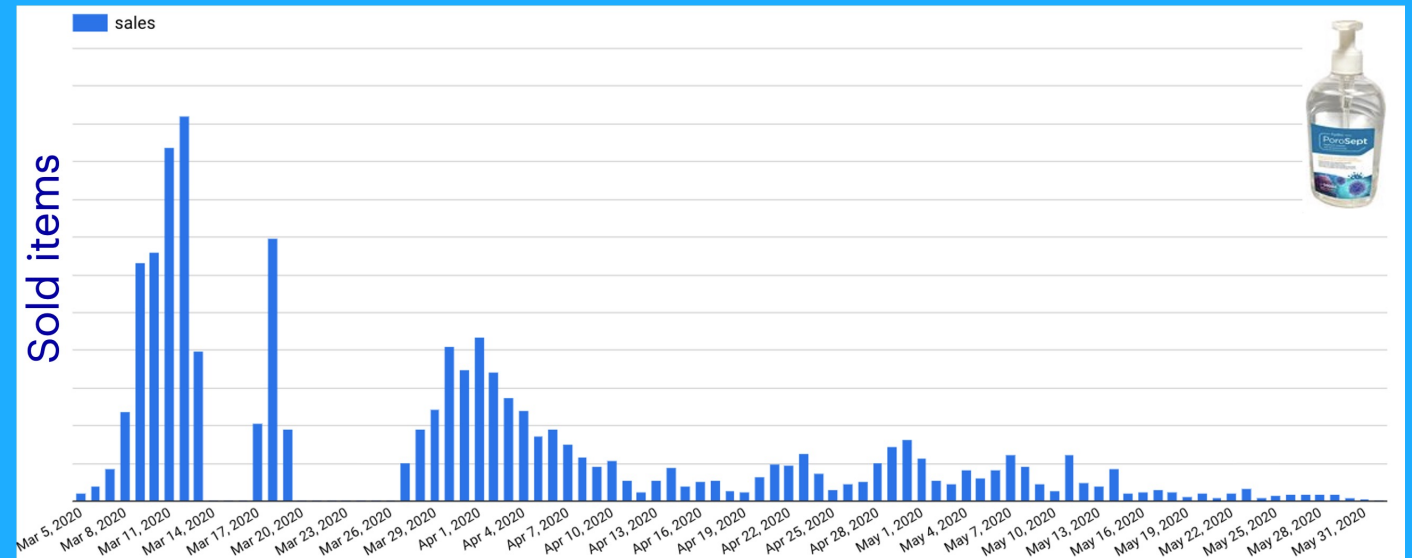
**Together we change retail to
make everyday life easier**

”

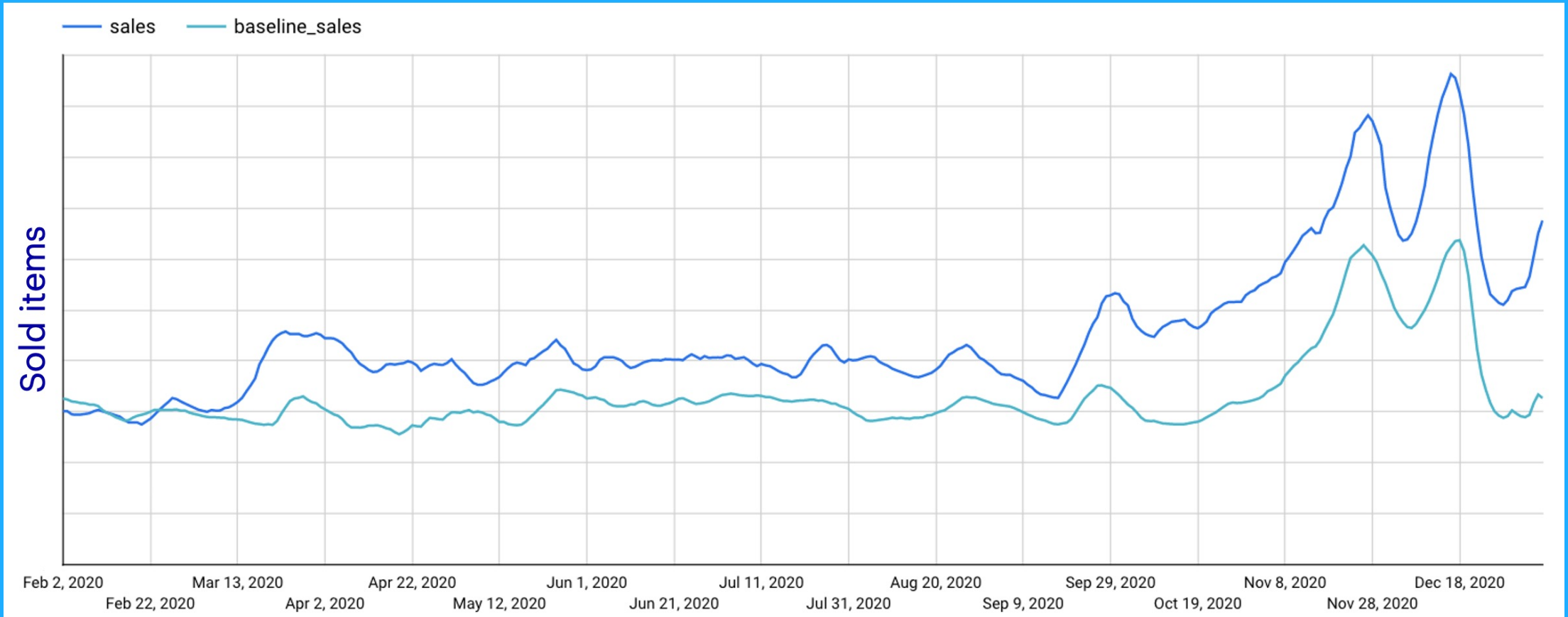
Forecasting landscape at bol.com



The effect of the pandemic on sales' patterns and demand



The effect of the pandemic on sales' patterns and demand



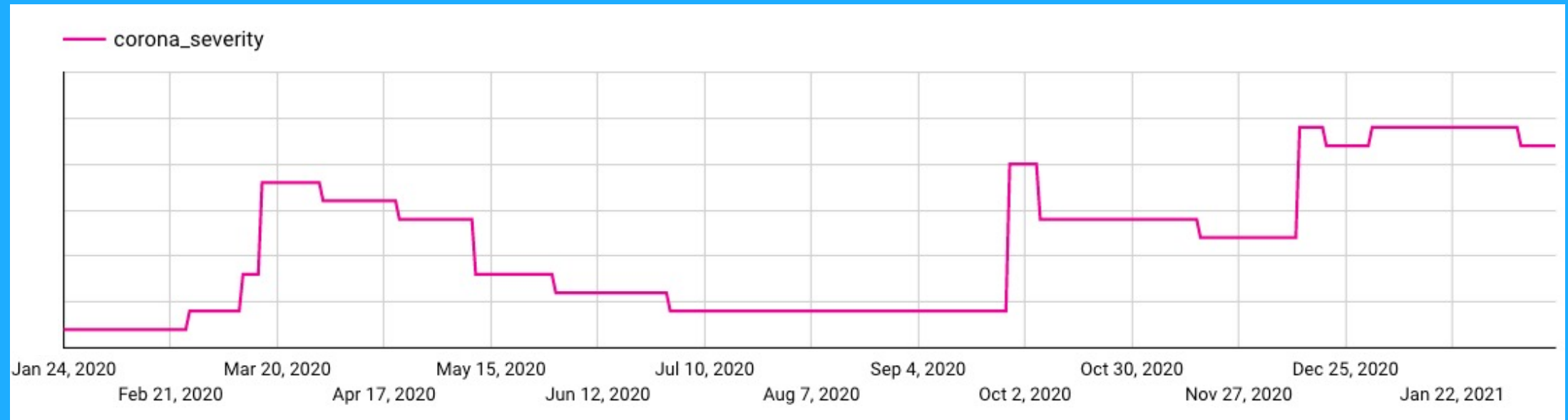
Possible solutions

1. Identify Corona influenced sales ✗
2. Create time features that represent important moments ✗
3. Corona severity level



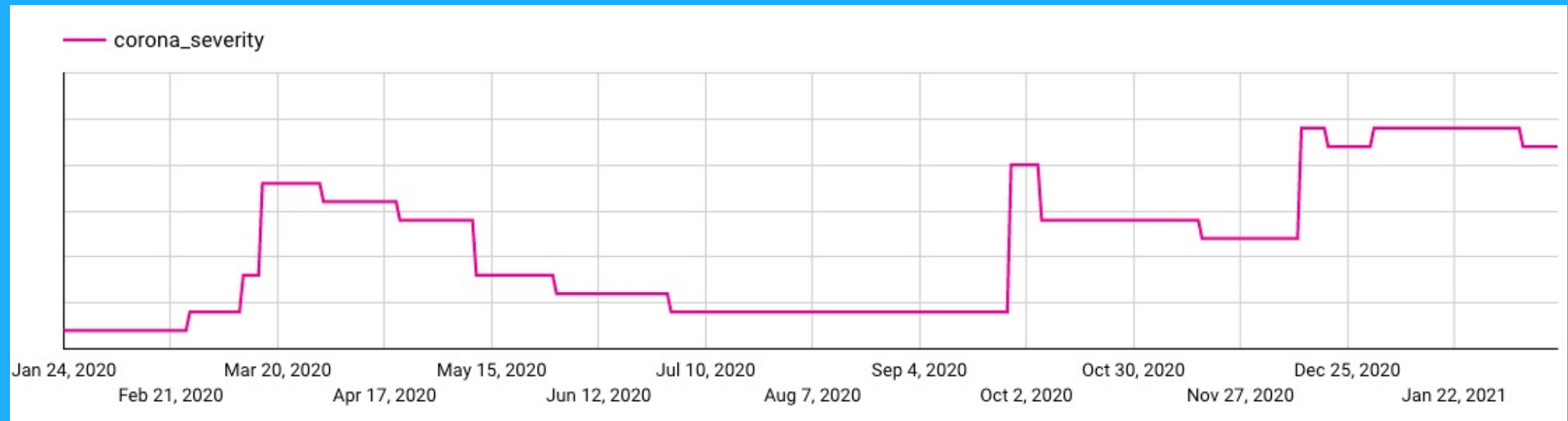
Corona severity feature

After extensive data analysis and reading (a lot of reading)



Corona severity feature

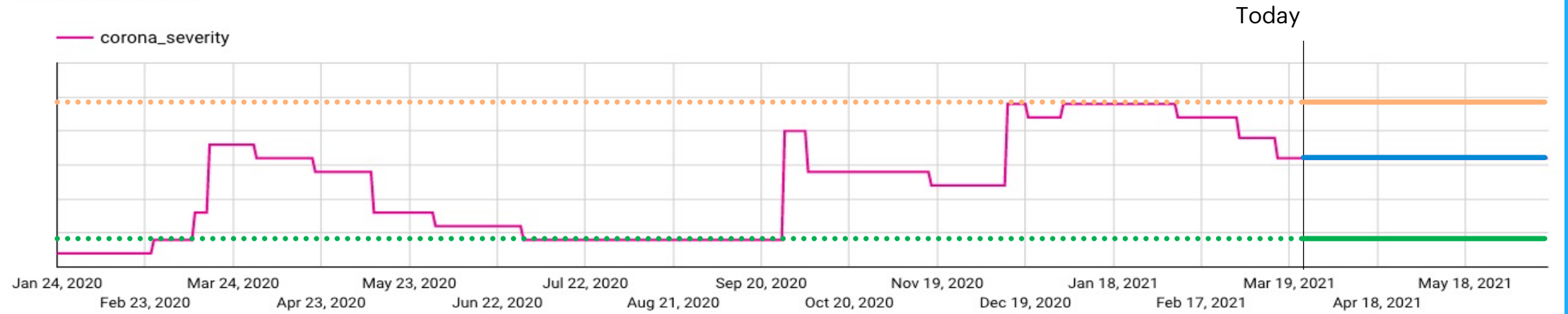
After extensive data analysis and reading (a lot of reading)



Corona severity scenarios



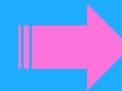
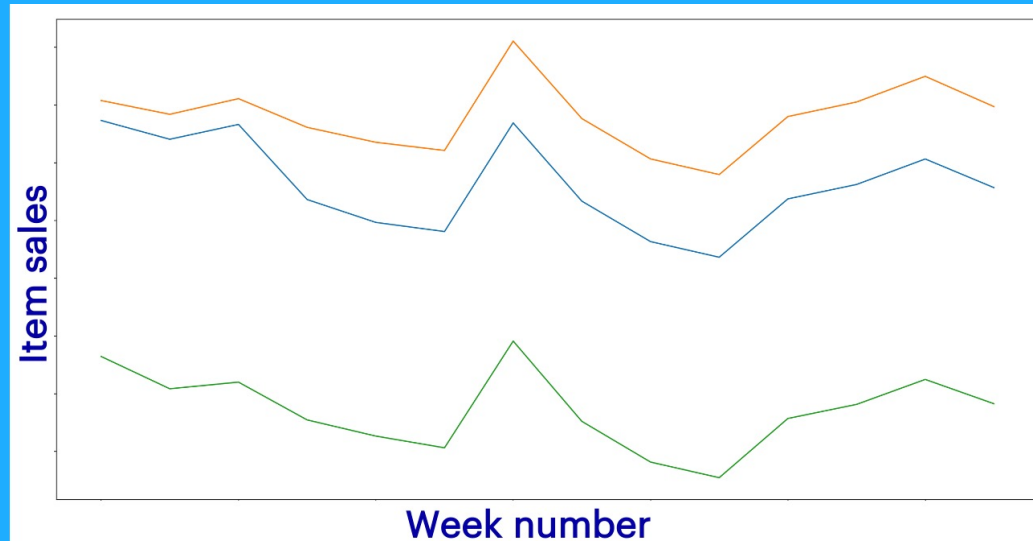
Corona feature



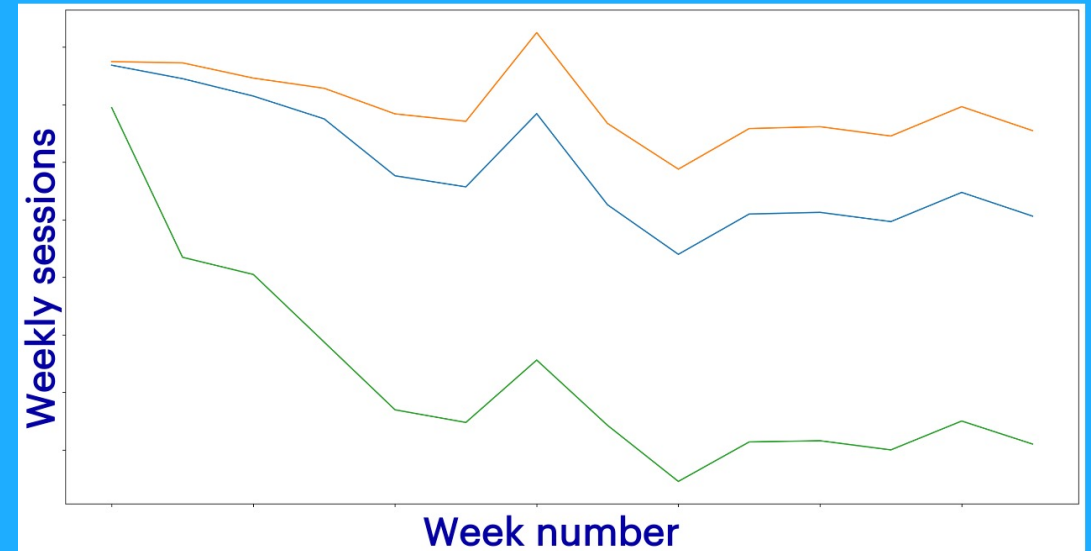
Scenario forecasting



Sales forecast



CS sessions forecast



In summary

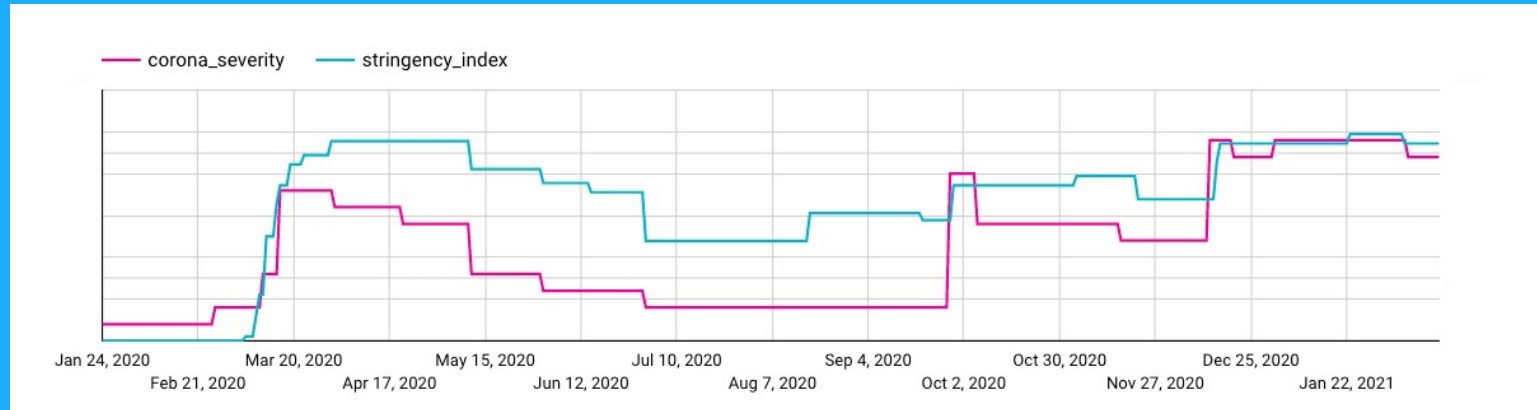
- Incorporate **Corona restrictions** into models
- **Use the press conferences** to predict demand
- **Generate scenarios** based on different measures
- **Explainable and understood** by users



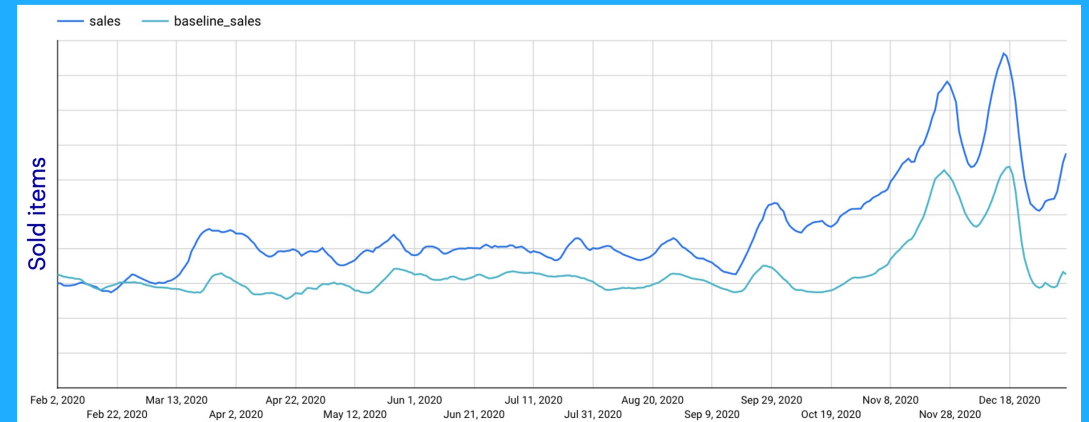


Back-up material

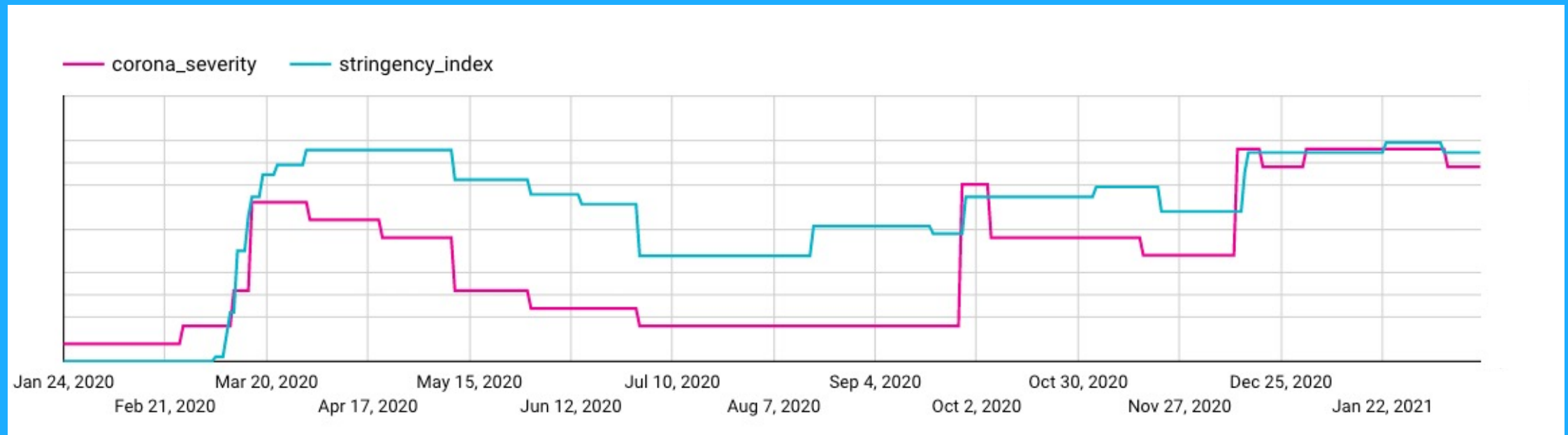
Corona severity feature



Corona severity feature is tailored to the impact of NL and BE restrictions on bol.com sales



Corona severity feature



Note: The stringency index is publicly available at <https://ourworldindata.org/grapher/covid-stringency-index>