Use of **open pharmaceutical data** for **competitive intelligence** in the form of **automated reporting**

VSE / FAKULTA INFORMATIKY A STATISTIKY

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Motivation

Government bodies, like the Czech State Institute for Drug Control (SÚKL), publish vast amounts of open data on medicine prescriptions and dispensations. This data is a valuable resource for market analysis.

Goal: To develop a fully automated reporting solution that transforms raw, open pharmaceutical data into strategic insights for competitive intelligence (CI), demonstrating a practical link between public data and business strategy.

Methods & Architecture

The solution leverages publicly available open data from SÚKL, primarily using the history of prescribed and dispensed medicines from the "eRecept" system.

Architecture:
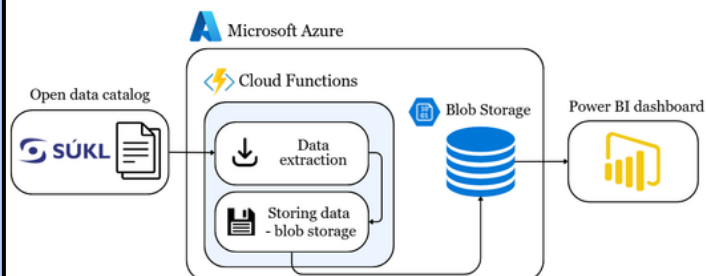
Results

The primary result is a dynamic, multi-page Power BI dashboard that allows users to explore prescription and dispensation trends across various dimensions.

Dashboard Sections:

- **General Overview:** High-level metrics on total prescriptions, dispensations, and the ratio between them, including trend lines and predictive forecasts.
- **Regional Analysis:** Geographic breakdown by district.
- **Medicine Analysis:** Detailed view of specific drugs or therapeutic groups (ATC) to track their performance over time.
- **Competitor Analysis:** A market overview showing the dominant pharmaceutical companies based on prescription and dispensation volume.

General Overview page:
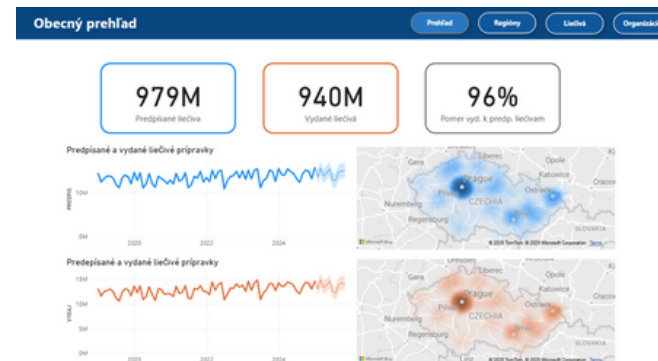
Key Findings & Applications

The tool successfully answered the initial Key Intelligence Questions (KIQs) and revealed actionable insights.

One of the answered KIQs quantified the market leadership of companies like Zentiva and Krka, which significantly outperform other competitors in prescription volume.

Prescriptions and dispensations of companies:

Conclusion

This work demonstrates that open data can be transformed into a powerful competitive intelligence tool. The automated reporting provides actionable insights into the Czech pharmaceutical market and establishes a versatile framework applicable also to other industries. The outcomes highlight the potential of combining BI principles with public data to foster innovation and enhance strategic decision-making.