

Informing Government Border Policy with Migration Trend Analysis



Butterfly Data collaborated with a government team to enhance their understanding of regional migration application patterns through open-source data.

Challenge

The UK Government observed unexpected fluctuations in asylum applications from several regions in recent years. To respond effectively, they needed a clearer understanding of the underlying causes, including both domestic “push” factors leading individuals to leave their home countries and international “pull” factors attracting them to the UK. Without this insight, policy responses risked being reactive and misaligned with emerging trends.

Solution

Butterfly Data collaborated with the government team to improve understanding of regional migration patterns. The project involved gathering and assessing a wide range of trusted open-source datasets, including asylum applications, conflict indices, fragility scores, economic indicators, census data, and international visa policy changes. These datasets were processed and analysed using Snowflake, and regression modelling techniques were applied to forecast application volumes for 2025.

The cleaned and structured data was visualised through an interactive Power BI dashboard, allowing users to explore trends over time, identify historical tendencies, answer emerging questions, and predict future movements. All data sources were documented in a comprehensive data dictionary, and wherever possible, APIs were noted to automate future data updates, ensuring the dashboard remains dynamic and scalable within the client’s environment.

Impact

The project delivered a proof-of-concept dashboard that consolidated all key datasets, giving the client the ability to compare multiple countries or focus on a single nation’s emigration profile. The final dashboard presented predictions for 2025 applications based on historical trends and region-specific indicators.

By providing clear visualisations and interactive reports, the tool helped identify patterns in asylum applications and potential future trends. These insights equipped the client with a robust foundation to advise decision-makers on relevant policy changes and prepare for potential increases in applications.

Ready to transform your data?

Book your free discovery call and find out how our bespoke data services and solutions could help you uncover untapped potential and maximise ROI.

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