

## Financial Services

## Harnessing **news media insights** to identify valuable business opportunities

BSG empowered the client management staff of a corporate bank to get **enhanced business insights** from quality news articles on a near real-time basis. These valuable insights cut through the information overload and gave them a **competitive advantage** to capitalise on potential business opportunities, **tailored** and **prioritised** according to market sentiment and sector performance.



### Overview of the client's needs

- Enable client management to consume quality news articles, tailored to their needs
- Empower client management with relevant, near-real-time news at the click of a button
- Reduce the time spent on manually searching, consuming, comprehending and sharing news
- Develop the ability to read market sentiment and generate insights with a view of identifying and capitalising on potential business opportunities
- Link opportunities back to bank-specific customers, sectors and countries of interest



### Objectives of the engagement

- On-board an external news vendor that provides premium quality corporate news for the African continent
- Use Data Science to tag news articles with bank-specific customers, sectors and countries of interest
- Use Data Science techniques to produce a prioritised set of news articles tailored to the client manager's portfolio that identifies potential business opportunities e.g. mergers, acquisitions or partnerships
- Deliver quality output on a near-real-time basis



### Benefits of the change

- Promoted efficiency by reducing time spent by client management manually finding news related to their network of customers, market sentiment and sector performance
- The ability to identify leads and direct attention towards plans and strategies as announced in the news
- The foundations of an in-house ability to process unstructured text information and extract insights from external data sources

BSG assisted a leading corporate bank to predict, in **near-real-time**, whether a premium news article relates to a **potential business opportunity**.

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## Engagement Overview

In our data driven world, having a holistic view of your customer, market sentiment and sector performance results in a competitive advantage. Knowledge is power, but in our information-rich society an overload of information can be a burden. Businesses can differentiate themselves by finding the right insights to focus on. Positioning themselves to optimise resources through directing their attention towards value-adding activities.

BSG closely collaborated with the corporate bank's Data Science team to identify use cases that were of critical importance to business users. A common theme identified across multiple business units was the need to incorporate news data to produce enriched insights. A Proof of Value (PoV) was initiated to determine the feasibility and available options regarding external news as a data source for machine learning purposes.

The project was approached and delivered using Agile methodology to ensure important tasks and requirements can be prioritised along the way, while demonstrating value throughout.

Once the PoV successfully demonstrated the value of using machine learning on external news articles, a minimal viable product (MVP) was planned and implemented. This entailed receiving news in near-real-time with the ability to classify it and deliver an enhanced output - all within a minimum timeframe. With the aim of reading market sentiment and identifying potential business opportunities. Business users were included throughout the journey to collaboratively prioritise current and future requirements.

## Solution

Identifying and finding trusted news data in a world flooded with fake news is a challenging task. A list of potential news providers was identified, and through detailed analysis a comparison was performed to test which of these providers met the extensive criteria of the client. As the majority of available text data derived from news is highly unstructured in nature, significant pre-processing and cleaning was implemented to achieve better insights. Cutting-edge infrastructure was selected to optimally process this data in near-real time.

Once the trial data was received, BSG used advanced Data Science techniques to identify articles related to business opportunities. Using historic data, a classification model was trained on hundreds of thousands of news articles, with the classification accuracy subsequently tested. To improve accuracy, business users were included to provide feedback on the output. The final model is able to prioritise a set of articles that is tailored to the specific client manager portfolio by minimising irrelevant articles.

A major requirement was to link opportunities back to bank-specific customers, sectors and countries of interest. A Data Science model was built to identify organisations within articles. It translated industries to the specific sector-hierarchy the client uses. This allows client managers to focus on their customers, while having a broader picture of their portfolio based on industry sector and country.

BSG combined Data Science with technology infrastructure to develop a news pipeline that delivers enhanced outputs on a near-real-time basis. The pipeline was designed and built using services that ensure minimal data is lost whilst allowing flexibility for future development. A microservice-like architecture was implemented with technologies selected to prioritise fault-tolerance and scaling through replication.

The project delivered a strong foundation to continue future text analytics. The aim is to mature the landscape over time through incorporating multiple algorithms and data sources, be it social media news (e.g. Facebook, Twitter), websites, internal documents, emails or premium news sources.

## BSG making a difference

Having your finger on the pulse of market sentiment and sector performance enables a bank to provide valuable insights to its business users and corporate customers. BSG enabled this by harnessing the power of Data Science to tailor and prioritise external news feeds, a first for this South African corporate bank.

The news delivery pipeline will enable the bank to successfully utilise near-real-time news to enhance the quality of conversation and insights offered to corporate customers, as well as monitor business opportunities relating to their customers, industries and countries of interest.

This first is a foundation for a long-term strategy to use unstructured, external data to enhance internal information and initiatives. This engagement has laid the ground work for incorporating other valuable data sources e.g. social media news data to extract value-adding insights that will competitively position the bank and their customers in the market.

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