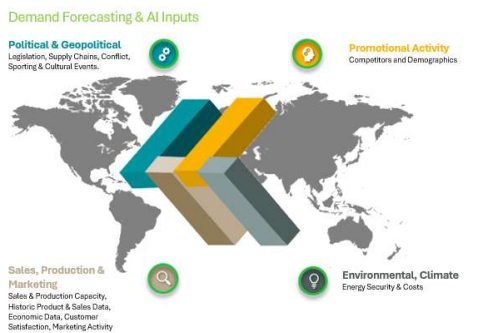
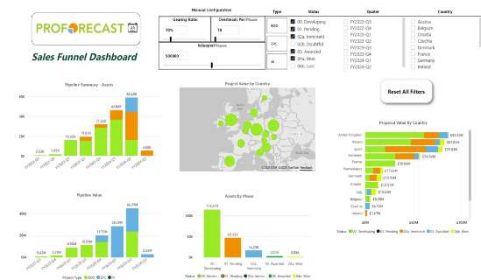
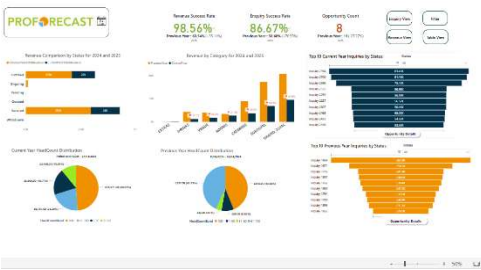


## Case Study

Demand  
Forecasting



### Introduction

- The client is a global manufacturer and distributor of industrial chemicals, operating across 25+ countries.
- They use SAP S4 Hana as their ERP system but relied on Excel for budgeting and forecasting.
- As the business scaled—with hundreds of products and a large customer base—Excel became a bottleneck, creating inefficiencies and undermining forecast accuracy.
- Demand forecasting errors reached margins of over 50%, prompting the search for an AI-driven solution to reduce variance and improve planning.

### Pain Points

- Excel-related issues included:
  - File sharing and version control breakdowns.
  - Formula errors and system hangs.
  - Lack of transparency and collaboration.
- Sales forecasts from commercial teams were often unreliable, affecting budget integrity.
- Poor demand forecasting led to:
  - Overstocking and increased working capital requirements.
  - Waste from excess inventory.
  - Stockouts resulting in lost sales and customer dissatisfaction.

### Implementation Strategy

- ProForecast appointed a dedicated Project Manager to scope the existing system and design a two-phase rollout:
  - Phase 1: Financial system integration and reporting overhaul.
  - Phase 2: Deployment of Rapier (AI demand forecasting) and trial of ProPilot (GPT-4 Turbo-powered LLM).

### Benefits Realized

- **ERP Integration:**
  - API polled data multiple times daily on a client-defined schedule.
  - Rolling and variance reports were auto generated.
  - GL structure mirrored existing divisions and cost centres.
- **Collaboration & Privacy:**
  - Multiple users contributed to budgeting with permission-based access controls.
  - Payroll data remained secure and isolated.
- **Modelling Flexibility:**
  - Templates allowed dynamic module creation.
  - Overhead and direct cost calculations tailored to real business drivers.

# Case Study

Demand

Forecasting



ProForecast offers Mid-market Businesses' flexible, cost effective and comprehensive forecasting and strategic planning capability incorporating AI and Machine Learning.

ProForecast fully integrates into the core accounting system, providing businesses with a powerful and transformational tool to enable management to make informed decisions quickly and accurately.

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- **Reporting & BI:**
  - BI developers customized the reporting suite for maximum impact.
  - Month-end reporting was simplified.
  - “What If” tools enabled rapid scenario testing.

## Demand Forecasting

- **Rapier AI:**
  - Uses historic data to generate predictive insights.
  - Ignores external macro factors in its base model.
  - Delivered 98% accuracy in most forecasts, with some outliers.
- **ProPilot GPT-4 Turbo:**
  - Trialled to improve outlier forecasts using prompt engineering.
  - Prompts included:
    - Environmental: Net Zero, climate risk, regulation.
    - Political: Geopolitics, trade policy, regulatory divergence.
    - Economic: Growth trends, feedstock pricing, overcapacity, investment cycles.
  - Early results showed improved accuracy in outlier cases; further quantification is underway.

## Demand Forecasting Strengths

- The Rapier AI system resulted in an immediate and significant improvement in the forecasting of many products.
- Where there were outliers the ProPilot system was deployed, and several initial prompts were created which were fine-tuned and started to further improve the accuracy of forecasts.
- To quantify the extent of those improvements it needs more time to measure the improvements, but management believe that the results justify use of the system and will lead to long term improvements

## Demand Forecasting Dislikes

- There is no transparency about how the values have been calculated so ultimately the user has to either accept them or discard them and use the historic methods

## Conclusion

- The client was happy that ProPilot & Rapier had made significant improvements to the quality and accuracy of the businesses demand forecasting.