BLACKBIRD FOR TRAINING

# Power BI for Insurance Analytics

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Düsseldorf (Germany)



# Power BI for Insurance Analytics

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## Introduction

The Power BI for Insurance Analytics course is designed to help insurance professionals turn complex insurance data into clear, interactive, and decision-ready reports. Insurance organizations rely on large volumes of data from policies, claims, underwriting, customers, finance, risk, operations, and fraud monitoring. Without structured analysis and effective dashboards, this data can be difficult to interpret and use for timely decision-making.

This course focuses on the practical use of Power BI in insurance analytics, including data integration, claims analysis, underwriting and risk analytics, fraud detection dashboards, customer and policy analysis, insurance key performance indicator monitoring, executive dashboards, financial and operational reporting, forecasting, trend analysis, and interactive data visualization. The content is built around the required topic of Power BI for Insurance Analytics and the related insurance analytics areas provided in the course brief.

The course follows a clear and progressive structure. It begins with an introduction to Power BI in insurance, then moves into insurance data sources and integration, claims reporting, underwriting and risk analysis, fraud detection, customer analytics, dashboard design, forecasting, and real case studies. By the end of the course, participants will be able to build practical Power BI reports and dashboards that support better decisions across insurance operations.

## Course Objectives

By the end of this course, participants will be able to:

- Understand the role of Power BI in insurance analytics and decision-making.
- Identify common insurance data sources used in policies, claims, customers, underwriting, and finance.
- Integrate insurance data from multiple sources into a structured reporting model.
- Build claims analysis reports that show claim frequency, severity, cost, status, and settlement trends.
- Analyze underwriting data to support risk assessment and pricing decisions.
- Develop fraud detection dashboards using indicators, trends, exceptions, and unusual patterns.
- Analyze policy and customer data to understand retention, renewals, segmentation, and customer behavior.
- Monitor insurance key performance indicators through clear and interactive dashboards.
- Design executive insurance dashboards for senior management and decision-makers.
- Prepare financial and operational reports for insurance performance monitoring.
- Use forecasting and trend analysis to identify future claims, policy, and risk patterns.
- Apply interactive data visualization techniques to present insights clearly.
- Work on real insurance case studies to connect Power BI reporting with business decisions.



# Course Outlines

## Day 1: Introduction to Power BI in Insurance and Data Integration

- Introduction to Power BI in insurance and its role in analytics and reporting.
- Overview of insurance business areas: policies, claims, underwriting, risk, finance, and customers.
- Understanding insurance data sources and the challenges of data quality and consistency.
- Connecting Power BI to insurance data sources such as spreadsheets, databases, and operational systems.
- Cleaning, transforming, and preparing insurance data for analysis.
- Building a basic insurance data model for reporting and dashboard development.

## Day 2: Claims Analysis and Insurance Performance Reporting

- Understanding claims data structure and key claims reporting requirements.
- Building claims analysis reports by claim type, status, cost, location, and period.
- Measuring claim frequency, claim severity, average claim cost, and settlement time.
- Creating reports for open claims, closed claims, delayed claims, and high-value claims.
- Using interactive filters and drill-down features for claims investigation.
- Practical application on building a claims analysis and reporting dashboard.

## Day 3: Underwriting, Risk Analytics, and Fraud Detection Dashboards

- Understanding underwriting data and its role in risk evaluation.
- Analyzing risk exposure by customer segment, product, region, and policy type.
- Building underwriting and risk analytics reports to support better pricing and approval decisions.
- Identifying fraud indicators through unusual claim patterns, repeated claims, and abnormal values.
- Designing fraud detection dashboards that highlight exceptions and suspicious activities.
- Practical application on creating an underwriting risk and fraud detection dashboard.

## Day 4: Policy, Customer Analytics, and Insurance KPI Monitoring

- Analyzing policy data, renewals, cancellations, active policies, and expired policies.
- Building customer analytics reports for segmentation, retention, and customer behavior.
- Monitoring insurance key performance indicators such as loss ratio, claim ratio, renewal rate, retention rate, and premium growth.
- Designing dashboards that connect policy performance with customer and claims data.
- Creating interactive data visualization pages for operational and management users.
- Practical application on building an insurance key performance indicator monitoring dashboard.



### Day 5: Executive Dashboards, Forecasting, and Real Insurance Case Studies

- Designing executive insurance dashboards for senior management.
- Preparing financial and operational reporting pages for insurance performance review.
- Applying forecasting and trend analysis to claims, premiums, policies, and risk patterns.
- Using interactive visuals to compare actual results, targets, and historical trends.
- Reviewing dashboard usability, layout, data accuracy, and decision relevance.
- Integrated case study on building a complete Power BI insurance analytics dashboard covering claims, underwriting, fraud, policies, customers, and key performance indicators.

## Why Attend this Course: Wins & Losses!

- Gain practical knowledge of using Power BI for insurance analytics.
- Improve the ability to connect and organize insurance data from multiple sources.
- Build stronger claims analysis and reporting capabilities.
- Support underwriting and risk decisions through data-driven dashboards.
- Develop fraud detection dashboards that highlight exceptions and suspicious patterns.
- Improve customer and policy analysis through segmentation and performance tracking.
- Monitor insurance key performance indicators in a clear and interactive format.
- Prepare executive dashboards that support faster and better management decisions.
- Strengthen financial and operational reporting for insurance performance.
- Use forecasting and trend analysis to understand future business patterns.
- Improve the quality of data visualization and dashboard storytelling.
- Apply learning through real case studies in insurance.

## Conclusion

The Power BI for Insurance Analytics course provides a practical framework for building insurance dashboards and reports that support decision-making across claims, underwriting, risk, fraud detection, policies, customers, finance, and operations. It focuses on transforming insurance data into clear insights through data integration, interactive visualization, key performance indicator monitoring, and structured reporting.

The course follows a logical one-week sequence. It begins with Power BI fundamentals in the insurance context and insurance data integration. It then moves into claims analysis and reporting, followed by underwriting, risk analytics, and fraud detection dashboards. The fourth day focuses on policy analytics, customer analytics, and insurance key performance indicator monitoring. The final day brings the content together through executive dashboards, forecasting, trend analysis, financial and operational reporting, and real insurance case studies.

**By the end of the course, participants will have a practical understanding of how to build Power BI dashboards that reflect real insurance business needs. The course supports better reporting accuracy, clearer performance monitoring, stronger operational visibility, improved fraud detection, and better management decisions based on reliable insurance analytics.**

