

Leveraging automation and analytics to **unleash the power of data**

CASE STUDY



About Client

India's leading
general insurance provider



Industry

General Insurance



Service

Data analytics

Business **Need**

The client's manual data processing and reporting using Microsoft Access and Microsoft Excel were effort-intensive, time-consuming, and prone to human errors. In addition, the manual and complex computations and processing of cumbersome data from various registers every month would take 5-6 working days, leading to delays in crucial

decision-making and business planning. The client wanted a solution to reduce the manual effort and time required for data processing and reporting, gain meaningful insights and a comprehensive view of the business, and facilitate timely decision-making.

Business **Challenge**

As digitalization and usage of digital technologies grows across all business processes, it has become imperative to focus on enhanced data processing and analytics. Insurance is a data-driven sector. Today, more than ever, insurance companies are focusing on reimagining technology's role, reinventing the delivery of technology, and future-proofing the core technology's foundation.

The client, India's leading private general insurance provider with over 130 branches and a customer base of over 10 crores, was performing manual, tedious, and time-consuming data handling and processing. Further, complex calculations and computations done manually led to error-prone reporting and delayed decision-making and business planning.

The client's challenges included the following:

- Manual handling and processing of cumbersome data (50GB data every month) from various registers (like premium, claims, etc.) using Microsoft Access and Microsoft Excel was effort and time-consuming.

- Manual calculations to generate monthly reports on 100+ Key Performance Indicators (KPIs) (like Gross Earning Premium (GEP), Net Earning Premium (NEP), etc.) through complex formulas was error-prone and time-consuming (5-6 days).
- Generation of only monthly reporting on the KPIs with no provision for analytics, budget v/s actual reporting, and so on.

The data and KPI reports generated were sent manually over email to the leadership and were inadequate to facilitate taking decisions critical to the business.

The client wanted an efficient and automated solution to with the following features:

- Automate handling and processing of data and enhance the computational efficiency
- Ease data ingestion and reporting
- Enhance end-user experience
- Increase the turnaround time with accuracy
- Be scalable and future-ready

Business **Solution**

Empowered with our technology and domain expertise, we at NSEIT designed a modular, scalable, and comprehensive data processing platform. The hybrid platform is built using the robust and advanced SQL computational engine (Microsoft SQL tech stack) and Power BI on the cloud to provide seamless financial MIS reports' access, including the client's profit and loss (P&L) statements.

We conducted a one-time data migration activity to migrate 10-year Premium data from various sources (MS Access, Excel, and SQL database) to the new SQL database using SSAS, SSIS packages

and created a holistic, centralized repository of critical financial information.

The background engine, developed by the NSEIT team, performs complex monthly computations and calculations on the huge dataset (2+ TB) within 20 hours. It computes information and performs analytics on critical key performance indicators (KPIs), such as GEP, NEP, GWP, revenue, Policy earnings, and so on. Along with these reports, the platform also generates the client's P&L. This enables the client to take timely business decisions for business planning.

The platform provides a single source of truth through its intuitive UI that visually represents all the analytics and reports in dashboards and charts that can be further drilled down to filter information. The platform provides the following:

- ▶ Crucial business insights to the Business Heads of Departments, Regional Heads, Channel Heads, and other leadership and management.
- ▶ Organization-wide analytics for the organization's leadership team (Managing Director (MD), Directors, and so on).

NSEIT's analytics platform also provides budget v/s actual YoY performance, month-on-month performance, and other analytics that can be sliced or diced based on channels, regions, zones, etc. In short, it gives the Sales department a 360-degree perspective on P&L. Further, the reports can be shared directly from the platform UI or downloaded as PDF or Excel files.

The platform has the following features:

- ▶ **Track vital KPIs:** Computes KPIs across different premiums, claims, commissions and expenses, such as GWP, NEP, NWP, LR, NIC, Gross commissions, COA, etc.
- ▶ **Customizable dashboards:** Interactive dashboards for premiums, claims, commission, expenses, and monthly financials with data slicers across multiple dimensions (month, line of business (LOB), channel, branch, and make-wise).

- ▶ **Drill through:** Allows users to dig deeper into the details of a specific type of data or a specific type of value generated or displayed.
- ▶ **Self-service analytics:** Enables users to create or modify dashboards from new fields available in the existing DataMart (cube) with ease.
- ▶ **Tabular reports:** Provides detailed tabular reports for different categories (LOB, branch, channel, product, monthly financials, and others).
- ▶ **Group by feature:** Summarizes data based on one or more aggregate functions like channel: EBL –Digital, IA, Rural, or SBI JV.
- ▶ **View value in different display units:** Provides an option to view numbers across all reports and dashboards in lakhs and crores.

The future-ready platform has the capability to perform premium forecasting based on existing policy data.

The modular and scalable platform is database, business intelligence (BI) technology, and cloud agnostic.

Tech Stack



Business **Impact**

Provided one central place - one holistic view of organization-wide financial data



Reduced computation time from manual processing which took 5-6 days to system computing which now takes 20 hours



Scalable, modular, and layered architecture that is easy to understand and implement



Interactive dashboards and charts to visualize crucial business data



Fast turnaround and enhanced accuracy of Monthly Processing and KPIs



A platform for insurance supervisors in identifying risk, poor performance and potential solvency issues on monthly basis



User-friendly, intuitive UI



About **NSEIT**

NSEIT Limited is a digital native technology company that engineers world-class solutions to help our global customers accelerate their digital transformation journeys. Our key service pillars are Application Modernization, Business Transformation, Data Analytics, Infrastructure &

Cloud Services, and Cybersecurity, through which we create intuitive digital experiences and tangible business impact. For over two decades, our innate drive for excellence has made us the partner of choice for global organizations. At NSEIT, we fuel digital progress.

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