# Enhancing BI Data Quality & Security with Power BI for a Nationwide Life Insurance Company

### Location
USA

### Client
Nationwide life insurance service provider

### Solution
Xylity Technologies employed Microsoft's Power BI and SQL Server to design, install, and setup the client's BI environment, improving their data analytics, quality, and security.
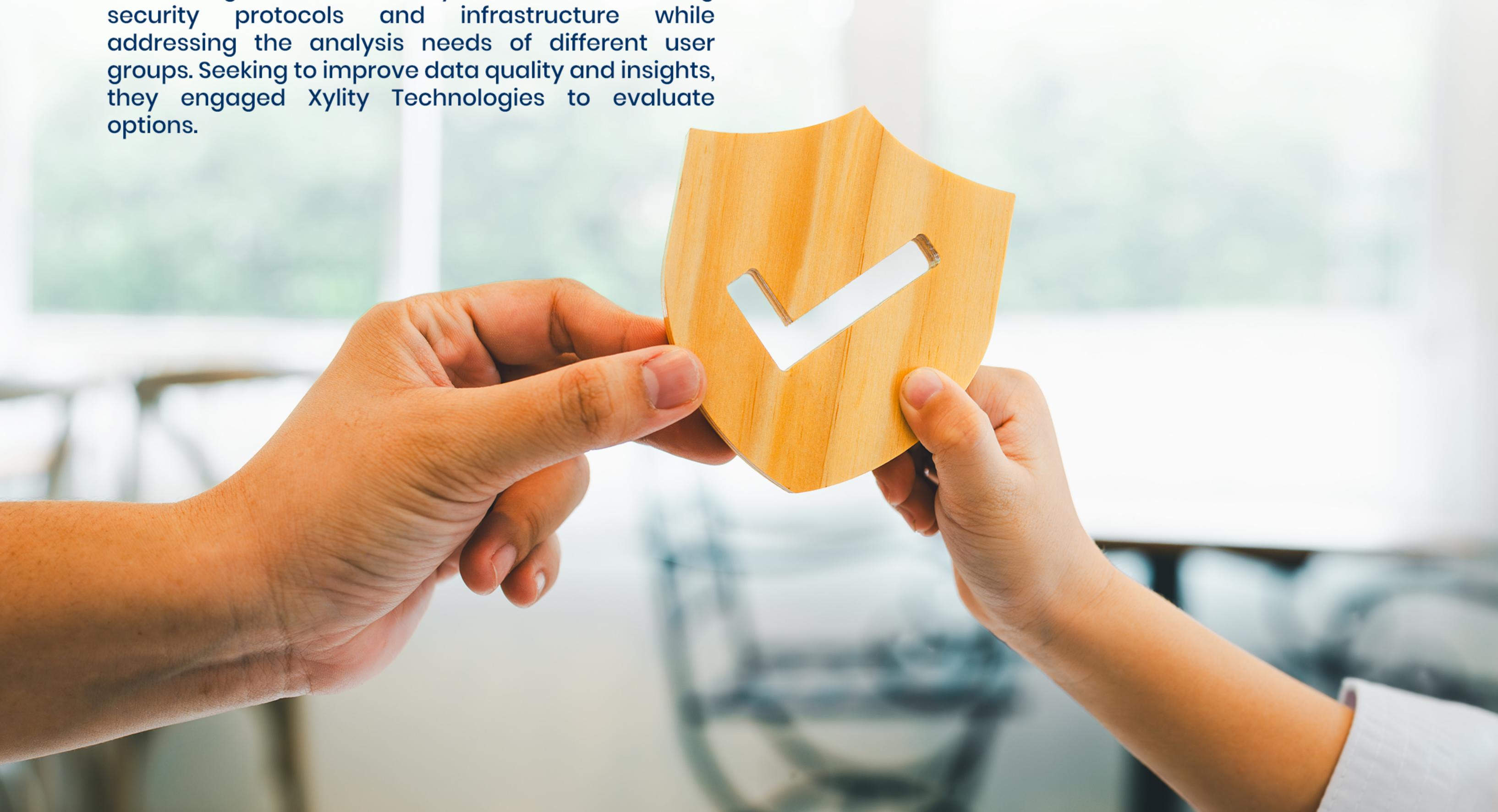
### Result
The solution led to substantial time and cost savings, with the client receiving demonstrations just a week after the initial engagement.

## About the Client

The client is a large nationwide life insurance company that has been in business for over 50 years, providing policies and financial services to customers across the United States. They were using Cognos for business intelligence and data analytics but had grown dissatisfied with its functionality and performance. The client loads vast amounts of policy and customer data daily from various core systems into their data warehouse. They required a BI solution that integrated seamlessly with their existing security protocols and infrastructure while addressing the analysis needs of different user groups. Seeking to improve data quality and insights, they engaged Xylity Technologies to evaluate options.

## Client's Goal

The client aimed to enhance their BI data quality and security while seeking guidance on the appropriate BI tool to fit their unique needs.

## The Challenge

The main challenge for the client was replacing their current inefficient process while meeting internal security standards. They needed a solution that could:

- Integrate with their existing data warehouse and authentication systems
- Address the diverse requirements of various user roles from actuaries to agents

Additionally, the new tool presented some technical difficulties including:

The client loads terabytes of new data daily, so the solution required high performance for:

- Large volume data refresh andqueries
- Supporting thousands of concurrent users during peak periods

Xylity Technologies would need to carefully review all components of the client's environment to recommend and implement a secure BI platform integrating seamlessly with their current infrastructure. The replacement had to balance functionality with maintaining the client's strict compliance protocols.

## Our Solution

Xylity Technologies implemented a full-fledged Power BI and SQL Server based solution to enhance the client's BI capabilities. Power BI provided a centralized platform for self-service analytics and visualization. SQL Server was leveraged as the data warehouse for structured storage and querying of terabytes of insurance data.

The team established enterprise-grade security protocols around authentication, authorization and encryption. Advanced row-level security ensured appropriate access control. Single sign-on integrated Power BI with the client's Active Directory.

Custom dashboards were tailored to various user needs. Actuaries analyzed trends, risks and probabilities. Underwriters gleaned insight into approval patterns. Agents accessed client and renewal metrics. Templates and features like filters, slicers allowed dynamic exploration.

Scheduled data refreshes kept the warehouse continuously synced with core systems. Integration with SQL Server Reporting Services produced sophisticated ad-hoc and static reports.

## Implementation Process

1. **Discovery:** Xylity conducted multi-week interviews and assessments to understand business/technical requirements, use cases, data landscape.

2. **Evaluation:** Leading BI tools were pilot tested considering security, performance, cost factors. Power BI and SQL Server emerged as optimal choices.

3. **Design:** Architects created detailed designs around scalability, authentication, authorization, data integration with data warehouse.

4. **Development:** Developers established secure SSL connections, single sign-on with existing OAuth systems, and deployed workspaces.

5. **Installation:** Infrastructure team installed SQL Server, Analysis Services, Power BI Report Server on Azure VMs for security and HA.

6. **Configuration:** Security permissions were configured for user access levels from read-only to admin. Data sources and imports established.

7. **Dashboard Design:** Custom dashboards indexed by KPIs, metrics were crafted for actuaries, underwriters using templates.

8. **Report Building:** Canned management and agent-facing reports produced aggregated data for sales, renewals, lapses.

9. **Testing:** Rigorous regression testing ensured functionality, authentication, performance under peak loads.

10. **Training:** Comprehensive end-user and admin training on consumption and authoring best practices was provided.

11. **Documentation:** Reference materials were written for ongoing usage and updates to the new BI paradigm.

12. **Knowledge Transfer:** Client's IT staff were equipped to manage, govern, expand the Power BI landscape independently.

The modern BI paradigm improved processes like:

- Near real-time analytics of incoming policies
- Predictive modeling for improved underwriting
- Risk assessments based on latest customer profiles
- Data-driven sales strategies and targeting
- Streamlined report distribution and benchmarking

## Results

The implementation was highly optimized, transitioning the client to the new Power BI platform within a matter of weeks. Users immediately saw improvements in data accessibility and report speeds. Having a single environment cut licensing expenses versus the previous tools. Increased insights accelerated processes like underwriting by 10%. Self-service freed IT for higher strategic tasks. Streamlined data integration saved hours weekly. Faster decision making from the organized, governed solution augmented revenue. Altogether, these changes are projected to save over $1M annually through efficiency and opportunities gained.

## Conclusion

Xylity Technologies successfully enhanced the BI data quality and security of a nationwide life insurance company, leveraging Power BI and SQL Server. The solution led to significant time and cost savings for the client, showcasing the efficiency and effectiveness of Xylity Technologies' services. If you're looking to enhance your BI environment, contact Xylity Technologies today.

## Tech Stack Used

**The implemented solution leveraged:**

- Power BI for data visualization and analytics
- SQL Server for managing and storing data