INDIUM

From Legacy to Legendary: Modernizing Homegrown Customer Experience Platform for A Top-Tier Management Consulting Firm

SUCCESS STORY

Client Overview

The client is a globally recognized leader in management, strategy, and technology consulting, offering expertise in operations, analytics, mergers and acquisitions, private equity, sustainability, marketing strategy, and more. As a pioneer in customer experience (CX), the firm empowers businesses to craft transformative customer journeys through its proprietary CX benchmarking platform.

Bottlenecks & Breakdowns:
What Stood in the Way of a ScalableCX Solution?

Customer Experience (CX) has become a pivotal force driving sales, loyalty, and employee engagement, with global C-Suite executives now viewing it as their top growth strategy. However, the client was facing significant challenges in its efforts to enhance customer experience.

Slow & Cumbersome Client Onboarding

Manual data retrieval from online survey platforms extended the time required to set up and onboard new clients, delaying their CX transformation journey.

Inefficient Data Processing & Quality Management

The custom data engineering code, combined with the absence of standardized business logic implementation and a lack of a consistent approach to handling data quality errors, led to longer turnaround times for generating curated data.

Lagging Tableau Performance

Reading massive flat files strained Tableau's efficiency, resulting in sluggish dashboard performance and sub-optimal data visualization experiences.

Indium's Strategic Solution for Overcoming Data and CX Challenges

Indium thoroughly analyzed the client's CX Benchmarking platform and identified key data processing, retrieval, and integration challenges. With a deep understanding of the issues, we recommended and implemented a robust, AWS-based solution to automate and optimize the entire data flow for seamless operations.

A Powerful AWS-Based Data Lake Solution

Indium assessed the client's CX Benchmarking platform and business hurdles, recommending an AWS-based data lake analytics platform. This transformation automated data retrieval via Tableau dashboards and optimized the data flow using Alteryx for ETL processes.

Automating Data Retrieval with Python APIs

We automated the extraction from the Qualtrics online survey platform using custom Python APIs to streamline the data flow. The extracted data was saved into flat files, ready to be processed by Alteryx.

Migrating Historical Data for Future Efficiency

Using Alteryx ETL pipelines, a one-time migration of historical online survey data for US clients ensured the foundation for future scalability.

Turbocharging Data Processing with Alteryx ETL Pipelines

Indium built efficient Alteryx ETL pipelines to process the flat files and ingest the results directly into AWS S3. By harnessing Alteryx's parallel processing engine, the team significantly sped up data loading times.

Ensuring Seamless Integration with Tableau

Any additional business logic was applied, and the refined data was loaded back into the presentation layer in AWS RDS for downstream consumption by Tableau dashboards. To ensure a smooth transition, the tables in the presentation layer were aligned with the existing data format (columns, data types), eliminating the need for changes in the Tableau dashboards.

Validating Accuracy & Repaving Tableau Dashboards

The final step involved repointing the Tableau dashboards to the AWS RDS and rigorously validating the results to ensure that the new data platform delivered accurate, real-time insights with no disruption to the existing workflows.

Designing a Flexible, Scalable Data Model

Indium implemented a generic dimensional data model in AWS RDS (PostgreSQL) that offered schema flexibility to accommodate taxonomies. This model minimizes changes when onboarding new clients or instruments, while the slowly changing dimension (SCD) tracks changes over time for seamless historical data validation.

Applying Instrument-Specific Business Logic

Alteryx ETL pipelines were used to pull data from the AWS S3 bucket, apply instrument-specific business logic, and store the results in AWS RDS. This ensured that data was tailored to meet the client's specific needs.

Reinventing CX with Data That Moves at Lightning Speed

▶ **Accelerated Client Onboarding – 2x Faster:**

By automating data retrieval and implementing a flexible data model, client onboarding time was reduced by 50%, speeding up the entire process.

▶ **5x Performance Boost in Tableau Dashboards:**

With pre-aggregated data stored in the presentation layer of AWS RDS, Tableau dashboard performance saw remarkable improvements, delivering faster insights.

▶ **Early Data Quality Error Detection:**

The dimensional data model, paired with reference/lookup tables and faster dashboards, enabled quicker identification of data quality errors early in the process, ensuring more accurate results.

▶ **Simplified Historical Data Validation:**

The flexible, generic data model allowed easy tracking of product/provider changes over time, significantly reducing the effort required for historical data validation.

▶ **Zero Data Loss – Reliable & Resilient Data Storage:**

The cloud-based data lake analytics platform, with its fault-tolerant architecture, ensured zero loss of online survey data, maintaining data integrity at all times.

Words from Our Happy Customer

"Overall, Indium is a very strong development partner for us. They provide cost-effective resources across a number of skills and capabilities (full-stack, low code, analytics, cloud, etc.) in either a project-based or staff augmentation model. We have used Indium on 4-5 different projects with total Indium resources totalling 50+."

- Sr. Director, Architecture & Engineering, Next Gen Software & Solutions Top U.S Management Consulting Firm

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About Indium

Indium is an AI-driven digital engineering company that helps enterprises build, scale, and innovate with cutting-edge technology. We specialize in custom solutions, ensuring every engagement is tailored to business needs with a relentless customer-first approach. Our expertise spans Generative AI, Product Engineering, Intelligent Automation, Data & AI, Quality Engineering, and Gaming, delivering high-impact solutions that drive real business impact.

With 5000+ associates globally, we partner with Fortune 500, Global 2000, and leading technology firms across Financial Services, Healthcare, Manufacturing, Retail, and Technology—driving impact in North America, India, the UK, Singapore, Australia, and Japan to keep businesses ahead in an AI-first world.

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