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Make Technology Work

Indium Modernizes Homegrown CX Benchmarking Platform For Big Three Strategy Consulting Firm

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CHALLENGE

Customer Experience (CX) has turned into a key driver of sales, loyalty, and employee engagement to the extent that global C-Suite executives rank CX as their greatest avenue of growth . Today, offering great product or service alone doesn't suffice; as customers rife with choice and ability to compare competing offerings expect immediate, seamless, and unique experiences.

Our client – a Big Three Strategy Consulting firm – is a pioneer in the field of CX and helps companies to create game-changing customer experiences through its homegrown CX benchmarking platform. Built on rock solid sampling and vast research experience, the platform helps companies not just to understand how they stack up against competition by discrete interaction touchpoints, part of the customer journey, but also answer the "why" behind benchmarking scores and translate that into prioritized initiatives and actions to drive bottom-line results.

With increasing adoption of the CX benchmarking platform, below challenges impacted business growth.

- **Longer client on-boarding time** – Manual data retrieval from online survey platforms increased time to setup and onboard new clients.
- **Longer data processing time** – Custom data engineering code with lack of standardized implementation of business logic along with absence of standardized way of handling data quality errors increased the turnaround time of the curated data.
- **Degrading tableau performance** – Reading data from huge flat files translated into sub-optimal Tableau dashboard performance.

The client deputed Indium Software to address the above challenges and modernize the homegrown CX benchmarking platform to take advantage of the scalability, cost efficiency and innovative cloud-native features offered by AWS.

SOLUTION

After thorough analysis of the CX Benchmarking platform and business imperatives, Indium recommended an AWS-based data lake analytics platform where the data retrieval through Tableau dashboards were automated end-to-end. It was mutually agreed to build the new platform, Alteryx ETL pipelines and migrate historical survey data and Tableau dashboards for U.S Auto clients first, before moving on to other instruments or clients. Given below are key highlights of the solution designed and delivered.

- Data retrieval from online survey platform (Qualtrics) was automated through custom python APIs. The data retrieved was persisted in flat file that can be consumed by Alteryx .
- Alteryx ETL pipelines were built to process the flat files and ingest results into AWS S3. The parallel processing engine of Alteryx was leveraged to load data faster.
- One time migration of historical online survey data was completed using Alteryx ETL pipelines.
- A generic dimensional data model with schema flexibility to store taxonomies was designed and implemented in AWS RDS (PostgreSQL). The model helps to keep the changes to minimal, when onboarding a new client or instrument. In addition, slowly changing dimension helps to track changes in product / provider over time, which eases historical data validation.
- Alteryx ETL pipelines to retrieve AWS S3 bucket data and apply instrument specific business logic and store the results in AWS RDS were developed.
- Additional business logic, if any, were applied and data was loaded back into presentation layer in AWS RDS for consumption by downstream Tableau dashboards.
- Tables in the presentation layer were aligned with the data format (columns, data types) of the existing files to ensure that no changes are required in the existing Tableau dashboards.
- The Tableau dashboards were repointed to AWS RDS and were validated for accuracy.

> For mass-market auto manufacturers, improving Customer Experience (CX) by one point can drive more than a billion dollars in additional revenue.
>
> - Forrester Research Report
> How Customer Experience Drives Business Growth, 2019

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BENEFITS

- **2x faster client onboarding** – Automated data retrieval and flexible data model helped decrease client on-boarding time by half.
- **5x uplift in Tableau performance** – Pre-aggregated data in presentation layer of AWS RDS translated into 5x uplift in Tableau dashboards performance.
- **Early DQ error Identification** – Dimensional data model with reference / lookup tables and faster dashboards help catch data quality errors very early in the entire process.
- **History validation turns easier** – Flexible and generic data model helps tracks product / provider changes over time. This reduced efforts to validate historical data significantly.
- **Zero data loss** – Cloud-based data lake analytics platform with resilient, fault-tolerant database ensured zero loss of online survey data.

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───── **Client Testimonial** ─────

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

About Indium

Indium is a Digital Engineering Services leader and Full Spectrum Integrator that helps customers embrace and navigate the Cloud-native world with Certainty. With deep expertise across Applications, Data & Analytics, AI, DevOps, Security and Digital Assurance we "Make technology work" and accelerate business value, while adding scale and velocity to customer's digital journey on AWS.

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