# CASE STUDY

## INCREASING MARKETING ROI BY 10% ENABLED WITH AI/ML-DRIVEN INSIGHTS

BUILDING A MARKETING DATA LAKE TO DERIVE POWERFUL CUSTOMER AND CHANNEL INSIGHTS FOR A GLOBAL HEALTHCARE COMPANY

The absence of data standardization is a roadblock to deriving accurate insights, making it difficult to measure success of each promotional channel and the overall marketing return on investment (ROI).

## INTRODUCTION

The digital marketing data collected today, such as click-through rates, browsing behavior, social media interactions, and mobile device usage come at different granularity levels. Managing this volume of data presumably has challenges. In the absence of standardization in how data is collected and made available for insights, measuring the success of each promotional channel and the overall marketing return on investment (ROI) is a difficult task for marketing leaders. To add, it is imperative that the constant inflow of such complex data be captured and available on-demand.

How does then an organization store and utilize this variety of complex data without investing in a data management system?

A Data Lake brings in the necessary enterprise-grade agility, scalability, and flexibility needed to manage these diverse datasets with a robust data governance framework.

The following illustration describes how Axtria built a marketing Data Lake leveraging Artificial Intelligence and Machine Learning (AI/ML). This Data Lake empowered business users to analyze and explore the data, discover new perspectives, insights, and accelerate innovation and business growth. As a result, the business users were able to derive actionable insights to plan their marketing strategy at speed and global scale.

## BUSINESS SCENARIO

Axtria's client, a global healthcare company, worked with several marketing agencies to design and execute multiple marketing campaigns, across personal and non-personal channels. This scale of the marketing activity led to the generation of large volumes and variety of data.

The client wanted to:

- Streamline the process of collecting this data and store it as master data
- Make only the relevant data available for specific stakeholders
- Derive intelligent and actionable insights for the marketing team to enable informed decision making

AXTRIA
INGENIOUS INSIGHTS

Through standardization, Axtria significantly improved processing of the most complex data sources, with an increase in accuracy, reducing time to onboard new data sources and brands.

## CHALLENGES

The challenges were three-fold:

**01 INADEQUATE DATA INFRASTRUCTURE**
The existing infrastructure was not designed for storage, rapid access, and analysis of unstructured data.

**02 DATA COMPLEXITY**
The variety and volume of data impeded the analytics process rather than enabling it.

**03 POOR DATA QUALITY**
Despite the data being comprehensive, poor quality of the input data led to a high-rate of data rejection rendering it unusable.

## AXTRIA'S APPROACH

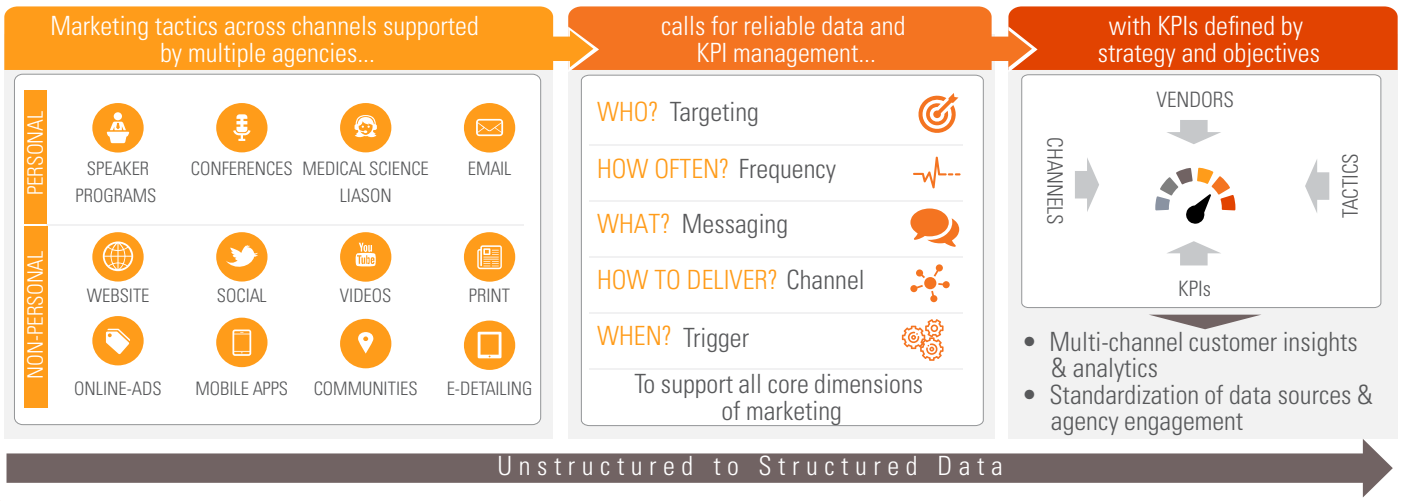
Below is the step-by-step breakdown of the approach:

### A. INFORMATION GATHERING WITH AXTRIA DATAMAX™

1. **Pre-built libraries for data quality issues** with gaps in the source data reported back to the vendors.
2. **Automated source data ingestion process with pre-configured rules** extracted data from sources like Google Analytics, Facebook, etc.
3. **Pre-built API connectors for efficient data collection** automated reminders for delayed datasets.

Once all the data adhered to the quality standards, it was segmented into logical data channels for better analytics.

**FIGURE 1: ENSURING PROPER SEGMENTATION AND PROCESSING OF DATA**



## B. TRANSFORMATION AND INGESTION TO MARKETING DATA ON CLOUD

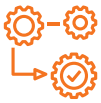
A three-step approach was used to process the data received from various sources and agencies:

**1 Validation**

Multiple business rules were applied on the datasets to 'reject' or 'pass' the records, and only the correct records were processed and used for reporting, lowering the data rejection rate and increasing the data quality.

**2 Industrialized analytics for improving data quality**

Python codes automatically converted the files into usable formats enabling an enriched dataset for better analytics, powering marketing mix models to ensure minimal data rejection.



**3 Standardization of structured and unstructured data**

Unstructured data was structured to match with the client's customer master by applying specific standardizations to brand names, designated marketing area names, ZIPs, and time periods. Axtria DataMAx™ powered the text analytics engine to reduce the run-time of the modeling process.

## C. OPERATIONS SUPPORT

Due to dynamic marketing vendors and promotional tactics, data needed to be stored and made available on an ongoing basis for regular campaign performance assessment. Axtria DataMAx™ deployed the following built-in features to manage requirements:

1. **Operational Dashboard** tracked the status of ongoing tactics, checked timely receipt and processing of data, and streamlined operations to deliver extracts to the analytics team on time.
2. **Data Quality Dashboard** analyzed the processed data across brands.
3. **Exception Dashboard** aided data stewards to identify pieces of data that didn't conform to the data quality standards.

The following were the implementation outcomes:

1. A big data framework replaced the existing archaic data environment.
2. Axtria DataMAx™ deployment enabled cloud migration and rapid onboarding, management, and governance of new commercial data sources using its AI/ML capabilities. The 1,000 in-built data quality KPIs and business rules ensured high data quality, lowering the data rejection rate.
3. Python-based Natural Language Processing (NLP) improved data quality through fuzzy matching and layout conversions.
4. A Marketing Analytics Center of Excellence (MACOE) enabled marketing analytics for insights on metrics like campaign effectiveness, channel summary, and vendor assessment.

## CLIENT BENEFITS

| | |
|---|---|
| **Reduced onboarding time for new vendors and tactics from months to weeks** | This made vendor management easier for the marketing team, allowing the marketing teams to focus on campaign management. |
| **A single version of truth for all business users throughout the organization** | The master-data enabled consistent and better insights across segments, tactics, and agencies. |
| **Industrialized analytics for the brand teams to run marketing mix models four times a year.** | The insights enabled the team to identify channels that drove marketing effectiveness, resulting in a marketing ROI lift by 10%. |
| **The ontology setup for the marketing team to tailor marketing campaigns by identifying high-value customer segments** | The configuration provided an 85% improvement in the data match rate as compared to the customer master. |

## CONCLUSION

As ongoing support, Axtria extends vendor management and advanced analytics services to the client. Vendor management services include gathering KPIs to evaluate tactics, timely delivery of quality datasets, and smooth onboarding of new datasets using Axtria DataMAx™. Advanced analytics services include the automation of test scripts to ensure data quality and identify data anomalies to report back to the data vendors.

By migrating the existing data management framework to the cloud, the client benefited from on-demand data for real-time analytics and intelligent insights, enabling informed decisions. With a Data Lake, the client unlocked agility, scalability, and flexibility needed to manage and govern the diverse datasets. With a Big Data framework, the client was able to rapidly acquire, ingest, process, and analyze large datasets with increased efficiency and data accuracy. These were the stepping stones towards unleashing the true marketing ROI potential that the client desired, and in the absence of which, any company would struggle to sustain their strategic and operational efforts.

Founded in 2010, Axtria is a global provider of cloud software and data analytics to the Life Sciences industry. We help Life Sciences companies transform the product commercialization journey to drive sales growth and improve healthcare outcomes for patients. We continue to leapfrog competition with platforms that deploy Artificial Intelligence and Machine Learning. Our cloud-based platforms – Axtria DataMAx™, Axtria InsightsMAx™, Axtria SalesIQ™, and Axtria CustomerIQ™ – enable customers to efficiently manage data, leverage data science to deliver insights for sales and marketing planning, and manage end-to-end commercial operations. We help customers in the complete journey from Data to Insights to Operations.

For more information, visit www.axtria.com

Follow Axtria on Twitter, Facebook and LinkedIn

Copyright © Axtria Inc. 2019. All Right Reserved