CASE STUDY

UNLOCKING 33% PERFORMANCE GAINS WITH COMMERCIAL DATA MANAGEMENT

BUILDING A CLOUD-BASED COMMERCIAL DATA WAREHOUSE (CDW) PLATFORM WITH NEXT GENERATION TECHNOLOGY TO INCREASE BUSINESS VALUE

INTRODUCTION

With the explosion of data in the healthcare ecosystem, the opportunities to derive actionable insights from a plethora of datasets is increasing rapidly. Pharma companies are stepping up their data management and advanced analytics game to get a deeper understanding of the changing patient behavior and evolving stakeholder preferences and drive go-to-market operations to achieve desired business outcomes.

The commercial healthcare data collected today such as prescription (Rx), claims, field sales, chargeback/ rebate data comes at different granularity levels. Managing this volume of data comes with its own set of challenges. In the absence of an agile, nimble, and robust platform to integrate, process, and analyzes this data, business growth and transformation gets severely delayed. Companies often have to compromise on their ambitious, innovative strategies as their stiff legacy data warehousing platforms are not able to meet the evolving technological needs.

The following illustration describes how Axtria built and implemented a data processing platform with next-generation cloud technology to meet a client's transformational goals. This was done by lowering the total cost of ownership (TCO), providing elasticity and scalability for the client's future needs, and faster onboarding, processing, and analysis of new datasets.

BUSINESS SCENARIO

The client, a leading innovative pharmaceutical company, was planning to upscale its business with novel treatment products for new therapeutic areas. The anticipated growth in scale would have needed new ways to share data between business units and faster insight generation from complex datasets. The existing on-premise Enterprise Data Warehouse platform introduced several challenges due to its legacy characteristics.

DATA CHALLENGES

1. Data processing
   - The existing EDW would take 7-8 business days to process the retail and non-retail sales data.
2. New Data Sources
   - The existing EDW would take 12-16 weeks to onboard new data sources due to multiple disconnected systems, manual steps, and longer cycle time.

AXTRIA
INGENIOUS INSIGHTS

3. Data Quality
   - Manual data validation by business teams, causing delayed processing, errors causing re-work, and productivity loss.
4. Information Processing, Storage & Consumption
   - The end-to-end process execution was lengthy and rigid, with 70 disjointed downstream applications with over 7000 views.

BUSINESS CHALLENGES

1. Process Documentation
   - The existing system was complex, without any detailed design document available to pass on the process knowledge.
2. Business Insights
   - Business insights were insufficient and delayed because of unorganized information from offline reports.
3. Scalability
   - IT and business capacity were being consumed mostly for redundant and operational work due to outdated and unscalable legacy technology.

BUSINESS NEED

To address all the current challenges, the client's global platform team and commercial business organization had the following requirements.

SEAMLESS INTEGRATION
Faster execution of the end-to-end processes, better-governed data, improved data access for internal & external partners, and seamless connectivity with the company hosted applications.

DATA QUALITY
Fully automated data validation process to identify and resolve data anomalies, trend breaks, etc.

SCALABILITY
Nimble cloud-based platform with the elasticity and scalability for future needs and faster onboarding of new datasets.
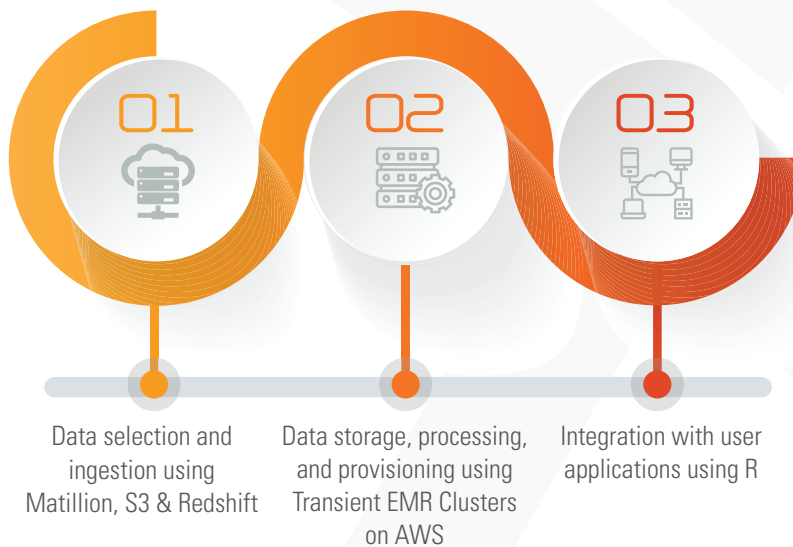
TRAINING
There was a need for more training for faster user onboarding and higher adoption.

AXTRIA'S APPROACH

As a solution, Axtria implemented a next generation cloud-based Commercial Data Warehouse (CDW) platform, powered by Amazon Web Services (AWS). Along with modern cloud architecture, sophisticated cloud data management capabilities, and a governance framework, the platform delivered actionable insights driven by Axtria's Data Science team.

The solution approach consisted of the following steps:

01 — Data selection and ingestion using Matillion, S3 & Redshift

02 — Data storage, processing, and provisioning using Transient EMR Clusters on AWS

03 — Integration with user applications using R

DATA SELECTION AND INGESTION

1. **Matillion:** To ingest data from external sources, transactional systems, and master data sources, which came in via Teradata, Veeva, and flat files.

2. **S3/ Redshift:** To host the landing/ staging layer.

DATA STORAGE, PROCESSING AND PROVISIONING

1. **Transient EMR Clusters on AWS:** To store data. These clusters were intended to operate only during the lifecycle of specific tasks to optimize cost.

2. **Redshift:** To store quality data objects and host operations data for further exploration by data scientists.

3. **S3:** To store historical data. This layer could be quickly loaded for any analysis requirements.

4. **Aqua Data Studio:** To create and maintain the Data Maintenance Model.
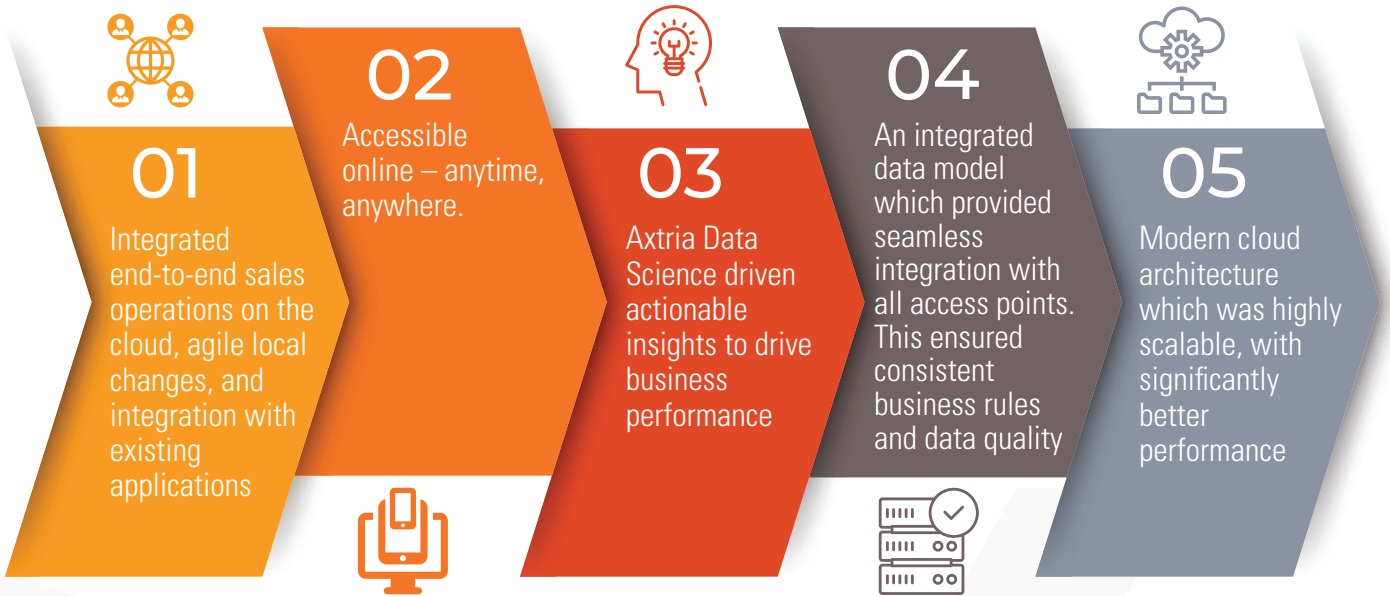
INTEGRATION WITH USER APPLICATIONS

1. **Athena:** To extract data from either the confirmed data objects or the raw data.

2. **R:** To provide actionable insights.

3. **Workload Automation:** To schedule batch data loads, which were to be integrated with user applications for reporting and analytics.

RESULT

This project was initiated in a pilot phase and was completed in 12 weeks. As a result, the client received a next-generation cloud-based Commercial Data Warehouse (CDW).

The key features of this platform were:

01 Integrated end-to-end sales operations on the cloud, agile local changes, and integration with existing applications

02 Accessible online – anytime, anywhere.

03 Axtria Data Science driven actionable insights to drive business performance

04 An integrated data model which provided seamless integration with all access points. This ensured consistent business rules and data quality

05 Modern cloud architecture which was highly scalable, with significantly better performance

The client received properly defined training material and sessions for faster user onboarding and higher adoption. *(Read more on the best practices which impact the success of such an MDM implementation).*

CLIENT BENEFIT

Implementing the next generation cloud-based CDW benefited the client through direct business benefits, such as a lower total cost of ownership and scalability for future growth needs. More specifically, the platformed helped the client in the following ways.

BETTER PERFORMANCE
- ~15% increase in field productivity.
- ~30% increase in Home Office productivity.

FASTER PERFORMANCE
- ~33% reduction in data management process cycle time.

EFFICIENT PERFORMANCE
- ~20% reduction in cost.

The global pharmaceutical giant realized ~1.1% increase in topline just by implementing Axtria's next generation cloud-based CDW. The downstream benefits like rep productivity enhancement, better targeting, faster go-to-market, data science-based guided execution, etc. are still being experienced.

CONCLUSION

Pharma companies are often faced with the inevitable need to overhaul their legacy data management systems by replacing them with technologically advanced platforms, which are better suited for future growth plans. It is crucial that the pharma companies recognize this requirement and take the necessary steps in the right direction to upgrade to the next generation technology.

By implementing sophisticated cloud-based data warehouse platforms, pharma companies can ensure continued business benefits in the form of process agility, flexibility, quality, and scale. These downstream productivity benefits directly translate into topline growth by unlocking business performance potential.

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