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The Business Benefits of **Data Transformation**

Enterprise success stories from data professionals and business leaders



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Your business has data. Now what?

It's one thing to have data across your business. Everyone does. What makes a difference is whether or not you can translate it into tangible business value and competitive advantage: better customer service, more efficient operations, the ability to predict outcomes, and, of course, reduced costs and increased revenue.

In order to achieve those critical goals, you must be equipped to mine your data for insight. In today's rapidly evolving business climate, you don't just need data. You need "analytics-ready" data. This means that data transformation – the ability to join together siloed data, denormalize and, enrich it, and apply business logic– is crucial to revealing the insights that your organization needs in order to pull ahead. But it isn't easy. More than 90 percent of enterprises say that making data available for insights is a key challenge in their analytics programs.

With Matillion ETL, our customers and partners are able to make analytics-ready data available across their organizations in a fraction of the time it took before, allowing them to spend more time using data for business innovation. Read on to find out how cloud-native data transformation can help you reduce costs, centralize data sources for easier reporting, scale ETL workflows and processes, and prepare data for machine learning models.

slack

Faster data delivery for up-to-date analytics and reporting

Providing actionable, accurate business metrics with data transformation

What Slack needed to achieve:

Faster time to insights: To share business-dependent metrics, the team was spending up to six hours creating reports with already-outdated information.

Scalable data infrastructure: The existing data warehouse didn't support incremental loads, so loading data was too time-consuming. Teams were writing Airflow and Python scripts for ETL, but scripting required too much development time and was not scalable.

Data democratization: Business-critical metrics for executives and various departments, including sales, marketing, finance, and recruiting, were not easily accessible.

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The Business Benefits of Data Transformation

More than 90% of data professionals said it is challenging to make data available in a format usable for analytics (Source)

With the explosion of data sources inside large enterprises, how do you move fast? How do you keep data from becoming stale? New and varied forms of data are constantly streaming into your business. This can be a huge obstacle for companies that have older data architectures unprepared for this variety and scale.

As Slack looked to improve its data-driven culture, the need for fast and modern data integration was paramount. The company's Business Systems Data team wanted to give everyone in the organization access to accurate, timely data. But the existing data infrastructure couldn't support this via incremental data loading. Their ingestion process was far too time-consuming, and data was often 30 hours old by the time it was ready for analysis.

The plan of attack:

The Slack team chose Matillion ETL for Snowflake as their data transformation engine. Matillion ETL is designed to take advantage of Snowflake's unique architecture, allowing them to complete a proof of concept in just two weeks.

Using Matillion ETL's pre-built connectors, Slack loaded data from Salesforce and Workday, alongside marketing applications such as Pardot, Google Analytics, and Facebook. The API Query feature was used to load even more data sources from other external systems to centralize data.

Slack created reusable components and frameworks to extract data from these sources, reducing their ingestion process from as many as 10 workflows down to just one.

What they achieved:

Empowered employees with timely data that allows them to innovate faster.

Reduced the need for custom code, lessening the burden on valuable development resources.

Decreased time required to create critical revenue metrics from up to 6 hours to just 30 minutes.

Enabled the data team to meet its service level agreements for timely data delivery to the executive team

Reduced data warehouse and ETL administration down to a level that a team of just 2 people can manage.

CISCO

Getting more insights, spending less money with modern data transformation

Replacing an aging data architecture with cloud-native solutions for faster time to value and lower costs

What Cisco needed to achieve:

Modernized storage and reporting solutions: The entire infrastructure was becoming too costly and resource-intensive to support, and the system engineering team was beginning to withdraw support for it.

Better reporting: Because the business unit lacked a well-modeled, centralized data repository, each team had to create and maintain its own reporting processes, resulting in fragmented and limited reporting.

Lower TCO: The team needed to find a more scalable, flexible, and affordable solution that would meet its increasing data storage and reporting needs.

Data democratization: The Business Intelligence Unit wanted to provide automated systems and analytical content to help democratize data to allow people to make better decisions on how to run the business.

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The Business Benefits of Data Transformation

Data portability (45%) and scalability (46%) top the list of perceived benefits of a modern approach to data transformation (Source)

A modern data architecture is both cost-effective and scalable. A data warehouse that is procured and provisioned in the cloud can solve some of the most difficult challenges plaguing on-premises data stacks: poor performance and high costs when dealing with increased volumes of data, and proliferating siloes across the organization. With a modern data architecture that includes cloud-native data integration and transformation solutions, enterprises can be proactive, competitive, and agile in light of new data insights. And they can save a lot of money.

Tim McDonough, business intelligence manager, works in the Business Intelligence Unit within Cisco Cloud Security. The team had outgrown its legacy data storage and reporting solution. It needed a centralized data repository for streamlined and faster analytics reporting, and a data warehouse that could integrate with external data visualization tools.

The plan of attack:

With Matillion ETL for Snowflake's modular and intuitive graphical user interface tool for ETL processes, the team eliminated the need for hand-coding (versus Python and Airflow)

Pre-built connectors inside Matillion ETL for Snowflake integrated with Cisco's primary data source systems, including RDS, SFDC, Zuora, and S3, for easy data consolidation.

Matillion ETL for Snowflake allowed the team to automate its data transformation workflows, reducing the amount of technical support required and allowing the Business Intelligence Unit to focus on its core competencies.

What they achieved:

Reduced ETL application spend by ~84% by switching from their legacy ETL vendor, Informatica, to Matillion ETL.

Created a data warehouse environment that integrates with numerous data visualization solutions, opening up greater possibilities for extracting insights.

Accelerated onboarding processes for new employees, because data processes are now standardized in a single data warehouse.

Unified previously fragmented reporting processes into one single, centralized data warehouse environment.

Paciolan

Modern, flexible data modeling with Matillion ETL improves operational analytics

Using repeatable ETL workflows to improve reporting and increase data insights for internal teams and clients

What Paciolan needed to achieve:

Flexible modeling for operational data: To better support reporting and client services, the team needed to model out virtualized data views in a high-speed development environment.

Faster data ingestion: Continuous data integration between their source systems and a cloud data platform would provide faster access to data for both internal and external client stakeholders

Other pipeline tools: Pipeline tools didn't support modern data formats, forcing them to flatten their NoSQL documents before loading them into Snowflake.

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The Business Benefits of Data Transformation

Improving operations can result in a $117 billion increase in profitability for global organizations (Source)

The constantly changing trends and demands of many industries require a steady stream of consistent, accurate data to generate strategic insight that can accelerate the decision-making process. Operational analytics is the specific analysis of data to improve efficiency in operations. Focusing on operational analytics can improve business processes, enhance customer experience, speed up decision-making, and help enterprises take advantage of real-time data. However, for many organizations, this important data lives in different silos and formats across the company.

The data team at Paciolan, a leading provider of ticketing, fundraising, marketing, analytics, and technology solutions, was familiar with this issue. The team needed to bring semi-structured documents from a modern NoSQL back end into their operational analytics.

The plan of attack:

Paciolan implemented a flexible architecture within Snowflake's cloud data platform that uses data vault methodology to easily store semi-structured JSON data as a variant data type while centralizing it in the cloud at high speed.

The team selected Matillion ETL for Snowflake to help create reusable data ingestion pipelines to get faster refreshes of operational data into Snowflake, allowing them to provide near-real-time dashboards across their business. Within days, the team was modeling out virtualized data views.

Using reporting and error-handling rules, Matillion can use Slack to push out near-real-time updates for any errors in data coming from their production database. The team then uses the Matillion ETL's low-code interface and live data sampling to quickly diagnose and fix issues. Then they can leverage the native features of Snowflake to adjust the processing flow and restart the pipeline.

What they achieved:

97% reduction in hand-coded data processing

Acceleration of data ingestion into Snowflake through parallel loads

Dramatic reduction in pipeline rework needed to support the NoSQL data model

Simplified data modeling through reusable ETL workflows

OROS

Prove marketing ROI with a cloud data analytics platform

Moving marketing analytics to the cloud speeds up reporting for near-real-time results

What OROS needed to achieve:

Improved reporting: The team needed to pull metrics from native ad platforms (such as Facebook or Google Ads) and email service providers to layer them together and provide clean, insightful reports across a variety of disconnected data points.

Data orchestration: OROS provides reporting for over 50 clients from well over 120 robust datasets. They needed orchestration jobs that could handle a large number of varied data sources and APIs.

Data consolidation: The team needed to pull the data in from multiple sources to create a repeatable reporting process and ensure their clients could leverage the insights provided. Previously, they used one dashboard per platform, resulting in large and confusing reports full of repeated metrics. Data easily got lost and it was difficult to pull platform comparisons or reports on campaigns as a whole.

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The Business Benefits of Data Transformation

Marketers who compute their ROI are 1.6x more likely to be awarded higher budgets for their marketing activities. (Source)

The MarTech landscape has exploded with new platforms and data points that inform the buyer journey and customer experience. For marketers to make sense of those insights, they need to build detailed reporting and analyze this information to support, validate, or reinforce their marketing strategies. Businesses also want to see tangible results and quantifiable return on investment for their marketing spend–something that proves elusive for many marketing teams who struggle to connect the dots along the buying journey.

In order to understand if marketing efforts are driving revenue, Jared Miller and Kaci Eckel at OROS Analytics wanted to understand how to provide clients with reports that encompass all of their data sources and the myriad data points that help prove ROI. The team needed a flexible ETL tool that could help them orchestrate data sets specific to each client's particular needs, and iterate with speed over large volumes and varieties of data.

The plan of attack:

Through their partnership with InterWorks, the team built a more scalable and flexible solution allowing them to customize reports and datasets to fit their clients.

Use Matillion ETL for Snowflake to consolidated data from social network APIs, advertising platforms, POS systems, and more into a single source of truth. Matillion ETL provided access to any endpoint needed via API Query. This helped to streamline metrics reporting by channels such as Facebook and Google Analytics so the team could extract fresh data directly from the source.

Using SQL, the team built social datasets that aggregated performance across all social platforms, enabling multiple dashboards in a single view.

What they achieved:

Increased transparency into the data transformation, modeling, and mapping processes, giving them reliable datasets and confidence in reports presented to clients.

With Snowflake and Matillion ETL, OROS centralized data for over 40 clients (with an average of 6 data sources per client). In a single Snowflake instance, they can see data dashboards for each client without needing multiple instances, making infrastructure management and upkeep much easier.

OROS can help clients prove ROI by sharing trends, granular insights, and improvements in marketing campaigns that drive revenue and demonstrate clear value to the business.

GIANTS™

Build data pipelines in the

Leveraging the power of the cloud for reusable ELT processes to expedite analytics

What Data Clymer and the San Francisco Giants needed to achieve:

Data hygiene: The Giants had duplicate fan records in their database because data came from multiple sources.

Data access: Only a few people could actually access the data, and that access took too long. Most data questions went unanswered.

Data consolidation: There was no central data warehouse; data lived in multiple systems around the organization.

Faster analytics: The team needed faster reporting to be data-driven. Due to slow reporting, decisions were made without using data.

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The Business Benefits of Data Transformation

74% of organizations say that it's either "extremely" or "very" important to reduce the amount of time and resources spent on data preparation and pipeline development (Source)

In today's data-driven culture, it's not only important to have insight. You also have to move as quickly as possible. To do so, it's important to have reusable systems that can grow as the variety, velocity, and volume of data sources increase. It's easy to get in the habit of developing "one-off" source-specific ELT flows that, over time, become too large to manage effectively. Building repeatable workflows can cut your time to insight in half, or more.

In 2018, the San Francisco Giants made a strategic decision to be customer-focused with their analytics and look at data sources from ticketing, sales, and marketing. The VP of Ticketing engaged with the data management experts at Data Clymer to figure out how to find these insights using data pipelines and data transformation in the cloud.

The plan of attack:

Data Clymer built a modern data architecture using Snowflake and Matillion ETL to consolidate data from four critical sources with millions of records.

Matillion ETL was used to ingest data from those sources into Snowflake in a staging environment, transform that data, and integrate it with the master data management solution, Melissa, using an API connector. This enabled rapid development from the source systems with always-on tables that are available to any other system that needs that data, regardless if it was deleted or moved during transformations.

Tables from within Matillion ETL were used to feed into the analytical data model for data visualization within Tableau.

Bringing in hundreds of tables across the four major four sources, the Giants organization realized that it made sense to implement a reusable, table-driven process to simulate a simple replication tool. Simulating data replication with always-on data significantly sped up time to development.

What they achieved:

Implemented a master data management solution that reduced the fan record set by 15%.

Democratized data and made insights accessible to sales and marketing.

Centralized their data using Snowflake enterprise data warehouse.

Improved speed to insights by 50%.

momentum energy

Cut costs and processing time with a modern cloud data architecture

Faster time to insights and less spend are big benefits of a cloud-first data platform

What Momentum Energy needed to achieve:

Faster reporting: The team wanted a cloud-based reporting and business intelligence platform, to get more timely insights from Salesforce data.

Less manual work: The team also needed a fast, flexible ETL system that required much less hand-coding and minimal intervention from developers.

Modern data architecture: With a cloud architecture, the team could shorten the time it took to load data from source systems into a cloud data warehouse and then into the business intelligence platform.

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The Business Benefits of Data Transformation

The #1 reason enterprises migrate their data to cloud platforms is faster time-to-value for implementing analytics projects. (Source)

The power, economics, and performance of the cloud have inspired many enterprises to make the move toward a modern data architecture. Companies with legacy systems and processes are at a disadvantage to act quickly and change course due to the cost and time it takes to manage a legacy infrastructure.

In order to stay agile and innovative, Momentum Energy– a division of Hydro Tasmania, one Australia's leading clean energy business and its largest generator of renewable energy– needed to make a change. The company faced obstacles getting data into its legacy system from Salesforce and needed a better reporting process in order to serve its customers better.

The plan of attack:

Momentum Energy selected Snowflake as its cloud data platform and Matillion ETL for Snowflake to load data into the cloud and transform it for analytics.

Momentum Energy's data team ran a proof of concept using its largest data set, interval meter data, which required a lot of capacity and data crunching.

The team connected Power BI directly to Snowflake and refreshed data nightly using Matillion ETL, significantly improving data freshness and time to insight.

What they achieved:

With Matillion ETL and Snowflake, the team loaded data and delta changes in 2.5 hours - a big reduction from the nine- to 10-hour load times with the legacy ETL system.

Reduced developer resources needed for manual ETL support to just two dedicated data professionals.

Cut licensing costs in half for their data infrastructure.

Decreased data loading and transformation time by 30%..

Transform data to solve today's business challenges

Data transformation, performed in the cloud, can help you rapidly improve data management and existing processes. Analytics-ready data can help you solve critical business problems and ultimately generate revenue. As external factors contribute to pressure on budgets, resources, and roadmaps, transforming data with an ELT solution will help reduce development time and accelerate innovation with new insights.

As these stories show, cloud ELT helps make businesses more scalable and flexible; more cost-efficient; and more prepared to leverage data in advanced use cases involving IoT data, machine learning, and artificial intelligence that can predict what comes next and what to do about it.

Analytic technologies of today and tomorrow have one thing in common: The need to not only move data into the cloud but also to manipulate and transform it to support downstream analytic requirements. Matillion reinvents traditional ETL models into cloud ELT, harnessing the extraordinary scale and speed of cloud data warehouses to power large-scale data transformation in minutes instead of weeks or months. Cloud ELT gives you the ability to operationalize your data today; transforming your organization into a data-driven leader of the future.



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