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Partner of choice for solutions at
the intersection of cloud and AI

Terracon

Cloud data architecture establishes readiness for advanced analytics and AI/ML applications at Terracon

CloudMoyo devised a modern data architecture for engineering consulting company Terracon with Snowflake data warehouse, leveraging Azure and Power BI technologies

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As enterprises grow and expand their market footprint, they try to gather data from a variety of sources with the objective to leverage it for insights and make data-driven decisions. With robust, cloud data warehousing, cutting-edge extract, transform, load (ETL) technology, big data analytics, and advanced data visualization tools, organizations have empowered their self-service business intelligence programs more than ever before. These technologies also serve one very important need—eliminating data silos.

One-enterprise view of data

With data coming in from different sources and functional data silos creating a lack of transparency, it can become challenging to justify which numbers to focus on. Based on different numbers, the stakeholders will have mismatched priorities and they face alignment issues with business goals.

Let's dive into how a modern data architecture provides one-enterprise view of data:

Flexible data storage

Advanced cloud data warehousing solution is a harmony of technologies and components used to gather, store, and manage data from a number of data sources. It acts as a secure, central repository for data.

Advanced analytics

Diverse and complex data sets can be analyzed efficiently and shared with various teams across an organization for increased transparency.

Powerful data visualization

Enterprise data has valuable patterns, trends, and insights which are not explicit until visualized. These tools capture real-time data, allow collaboration on projects, and easy sharing of results with increased efficiency.

About Terracon

Leading consulting engineering firm specializing in environmental, facilities, geotechnical, and materials services.

> Currently has a workforce of more than 5,000 working in 150 locations in the U.S.

> Serves a diverse portfolio of private and public clients

> Operates in all 50 states nation-wide

❓ Why CloudMoyo

CloudMoyo is a Microsoft Gold Partner with over 11 years of experience with Azure.

Leading technology partner to provide a roadmap for enterprise modernization for data migration.

Provided a short and long-term analytics strategy, and plan for data strategy and data governance.

Business objectives

Agile, scalable data storage solution

Ability to capture insights

Central repository

Single version of truth

Terracon was embarking on an exciting journey to the cloud. They were looking to modernize their data architecture, eliminate data silos, implement a data-driven culture through self-service BI, and align data priorities with business goals.

Terracon knew that to take the next step forward, they needed to upgrade their technology infrastructure. On-premises data storage needed to be equipped to handle the variety of unstructured and semi-structured data coming from diverse sources.

Terracon selected CloudMoyo to act as a leading technology advisor to provide a roadmap for enterprise modernization for data migration, a short and long-term analytics strategy, and plan for data strategy and data governance. We identified a solution that would solve for the challenges Terracon was facing:

Lack of an agile, scalable data storage solution

The current data storage solution was neither flexible to accommodate the growing variety of data nor scalable to sustain future growth.

Missing valuable insights

Terracon wanted to gain the ability to store and analyze unstructured data, so that they wouldn't miss out on insights from enterprise data. Static, traditional analytics and reporting tools limited access to insights. In absence of faster and advanced analytics, capturing and visualizing real-time data was impossible. As a result, Terracon couldn't leverage new trends and assess performance in real-time.

Absence of central repository

Departments needed to access datasets coming from various sources, but were facing functional and data silos, which hindered collaboration. In addition, the reporting hierarchy was complex and required complex access controls for role, region, or department.

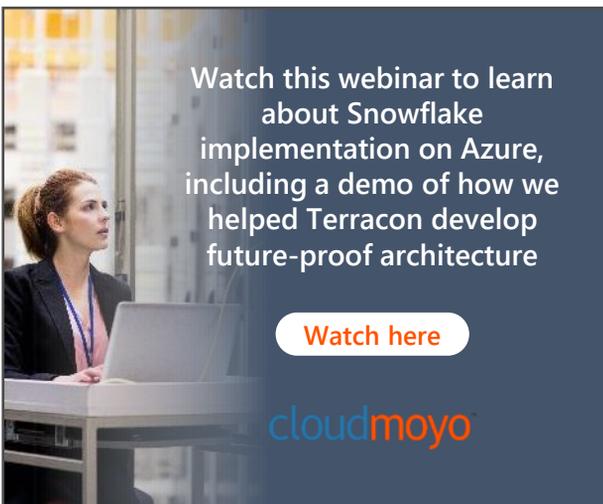### No single version of truth

This can be described as one view of data that everyone in the organization trusts and utilizes for decision-making. Since Terracon was facing data silos, it was challenging to find a trusted version of datasets for specific business objectives.

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CloudMoyo recommended a unique solution for Terracon: Migration of Terracon data from an on-premises Oracle data warehouse into Snowflake Data Warehouse run on Microsoft Azure platform. We opted for this solution since it was futuristic, scalable, and configurable—able to accommodate new data sources for analytics. going forward.

First, CloudMoyo experts assessed Terracon's data landscape. A roadmap of data migration from on-premises to the cloud was created to align with current and future business goals, including a comprehensive analytics strategy for long and short term.

Azure Data Factory V2 was used to extract data from the core areas like HR, finance, and administration. Structured and unstructured data was staged in Azure Blob Storage. With custom-build connectors, data was integrated from Azure Blob Storage to Snowflake Data Warehouse.

Data was combined using advanced mashup and modeling features into a tabular semantic data model using Azure Analysis Services. Power BI was deeply integrated with Snowflake Data Warehouse for a seamless working experience with advanced BI tools. Data security was prioritized at every step of the entire process.

> *Terracon's vision is to empower its employees with an intuitive self-service data framework that allows them to utilize analytics and data science applications, CloudMoyo is a strategic partner in our innovation journey. Successful implementation of Snowflake data architecture on the Microsoft Azure platform has created centralized access for all structured and semi-structured data and allows us to leverage BI and AI capabilities for better business decisions.*
>
> **- Jason Kephart,** CIO, Terracon

Watch this webinar to learn about Snowflake implementation on Azure, including a demo of how we helped Terracon develop future-proof architecture

Watch here

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Modern data architecture

Robust and secure Snowflake Data Warehouse with cutting-edge ETL and deep integrations with Azure Data Factory and Azure Blob Storage using custom connectors.

Hierarchical distribution of data

A central data repository with hierarchical distribution of data for getting the right data to the right professionals for efficient and secure processes.

Intuitive dashboard designs

Reports were migrated from SSRS to Power BI, where executive dashboards serve the purpose of legacy dashboards, and enables project and department managers to track project progress in real time.

Empowered cloud analytics

Leveraging high-end analytics in the cloud with Azure Analysis Service allows users to quickly browse through sizable amounts of data and use predictive modeling, data science applications, and advanced analytics.

Powerful data visualization

Powerful data visualizations empower users to make time-sensitive decisions. and uncover hidden relationships between activities and processes.

CloudMoyo implemented and provided an end-to-end solution for migrating data from on-premises to Snowflake Data Warehouse leveraging Azure technologies. This formed the foundation of a modern data architecture for Terracon and met all their enterprise data needs with a scalable, affordable, and agile solution.

Terracon has been able to scale up usage, supporting over 2,000 users compared to the previous 670 users. Power BI Premium has provided interactive data visualization capabilities and tabular data models, driving a 20-30% increase in improvements. Advanced analytical modelling features are allowing users to easily combine data from multiple sources and transform complex datasets quickly.

One-enterprise view of data

This solution has provided a single source or truth and to view of enterprise data and business performance, eliminating data silos and avoiding competing versions of truth.

Intuitive dashboards for faster time-to-insights

Interactive Power BI dashboards visualize insights from data, capture trends, and track project status.

Self-service analytics capabilities

Advanced analytics modelling features combine data from multiple sources and transform complex datasets quickly.

Scalable, sustainable data solution

To support growing business needs and meet objectives in the future, the cloud architecture provides a sustainable and scalable solution.

With Snowflake Data Warehouse on Azure Terracon can rely on a resilient, cloud data warehousing solution. The next step is to leverage the powerful analytics capabilities of Azure to provide customizable, self-service analytics to various business users. The organization can now effectively eliminate data silos and make data-driven decisions.

Through seamless integration with Power BI, Terracon decision-makers can now leverage insights from data and stay ahead of the competition.

The advanced, modern data architecture is providing a strong, foundational support for future artificial intelligence and machine learning initiatives.

Build a modern data organization with Snowflake on Azure

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COMPLIMENTARY WORKSHOP ≫

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About Us

CloudMoyo is the global partner of choice for digital solutions at the intersection of cloud and AI. We empower customers to transform with resilience by innovating at lightspeed, democratizing data, and infusing artificial intelligence in business operations. Our solutions are delivered across a variety of flexible engagement models to drive customer value. Our FastTracktoValue customer-focused methodology is proven to accelerate vision-to-value.

Headquartered in Bellevue, WA, with an innovation center in Pune, India and a presence in Kansas City, MO, CloudMoyo has a proven track record of developing enterprise solutions for Fortune 1000 companies such as Microsoft and Kansas City Southern.

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Microsoft Partner | Gold Data Analytics, Gold Cloud Platform