

Creating a Data Infrastructure for a Scaling Energy Provider

A clean energy innovator asked us to build the scalable infrastructure, centralized data, and flexible reporting they needed to keep up with their rapid growth.

Energy companies need to provide exceptional product delivery and customer service 24/7. Today, that means migrating to a modern data cloud environment to drive efficiency and scale for growth while keeping customers happy.

The Challenge: Modernizing Data to Support Growth

A leading US residential solar company was scaling rapidly to meet surging demand for clean, sustainable energy. To ensure that they could continue to provide exceptional customer service as they grew, they needed a better way to manage growing volumes of data across installation operations, provider performance, customer operations, and sales.

Their legacy Oracle data stack required IT and data team support for almost every data request, draining time and resources. The resulting backlog led some employees to create their own data tools, which led to conflicting data sets and silos across the organization. To keep up with their growth, they needed a scalable infrastructure, centralized data, and reporting that was flexible and readily available.

Our Solution: Cloud Migration without Business Disruption

Our team worked with internal stakeholders to identify their use cases, and advised on and implemented a migration to Google Cloud's analytics platform—including Looker and BigQuery. We then worked with their data engineering teams to streamline their data warehouse migration and modernize their analytics without business disruption.

Rather than build complicated data pipelines with complex ETL processes, we loaded most data directly into BigQuery without transformation. We leveraged the power of BigQuery and Cloud Dataflow to transform approximately 20 percent of the data available in BigQuery. But a majority of data transformation occurred at query time through a combination of Looker's Git-versioned data modeling layer, LookML, and the BigQuery query engine. This allowed the company to avoid complicated, brittle, and expensive ETL processes, and simplified the data pipeline.

How Did It Work Out?

Since our client's migration from their on-premises legacy Oracle data stack to a modern cloud environment, they've created infrastructure and business-wide efficiencies to help them meet the growing demand for solar power. They've reduced ETL complexity, enabled fast queries, and made data accessible and trusted throughout the organization.

Google BigQuery and Looker together resulted in significant efficiency gains, reducing the overall data lifecycle by at least 50%. With 100% of their data now migrated from on-premise to the Cloud, they are making data-driven decisions to best serve their customers, as well as meet their growth metrics. And by leveraging LookML, Looker's modeling layer, to unify metric definitions throughout the company, everyone can now be confident that they're using the same metrics when they use data to guide strategy and decision making.

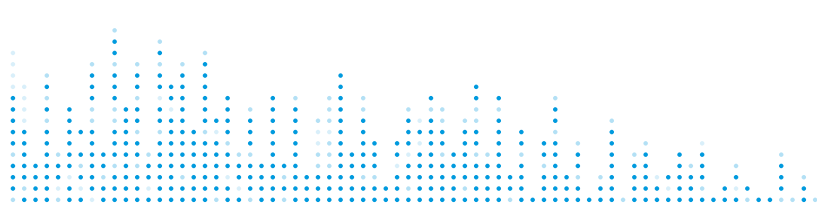
To power organization-wide access to their data, the client implemented a hub-and-spoke model for self-service analytics. At the center, they have the core BI team that creates a single source of truth, and then provides data and dashboards across every level and department via curated BigQuery tables and LookML schema. The governed hub accounts for approximately 60% of queries across the organization, with the remainder being satisfied with models maintained by analysts who work in functional spokes like marketing, customer operations, or project operations.

About

DAS42 provides cloud-based data analytics consulting to help executives and managers reduce the time to actionable insights and empower them to make better decisions, faster.

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