# PvX Partners

Case study on how KeyValue built a financial services platform providing non-dilutive capital to support user acquisition strategies for gaming companies

Report type :
Case study

Domain :
Investment

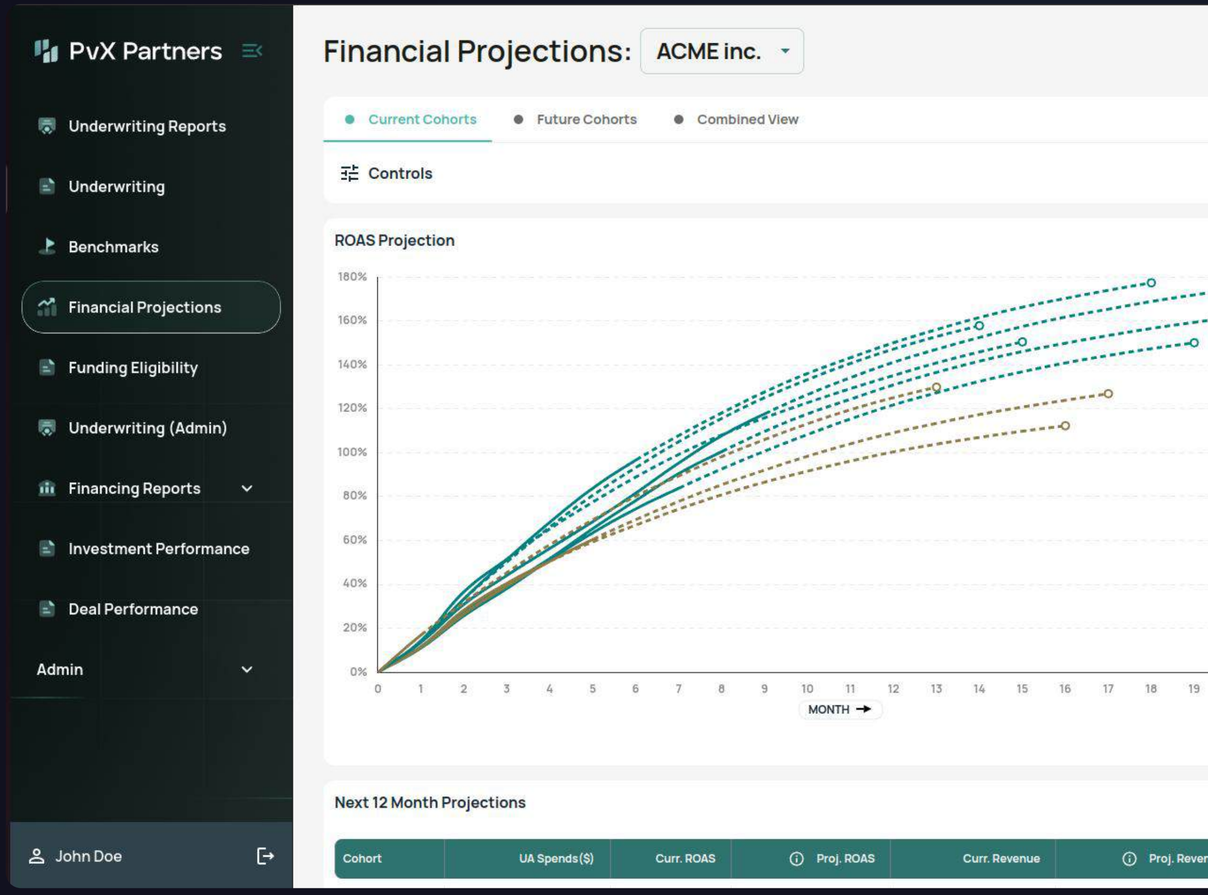
Market :
Singapore

KEYVALUE
Let's build your idea

# Problem statement

Build an intelligence & insights platform to understand the performance of all invested companies on a daily basis. This should enable PVX to monitor everything from marketing performance, revenue, and all other KPIs & business metrics of the invested companies that really matter. The platform uses predictive modelling and advanced machine learning models to forecast future performances, aiding proactive decision-making for PVX.

Underwriting | Benchmarking | Visualisation | Monitoring | Financial projections



# Key metrics

**50+**
Different games

**350+** charts to visualise data

**800GB**
processed in 20 minutes.

**2M+**
Transactions per game

**60+**
Data pipelines

**10+** Data sources

# Business impact

## Improved investment decisions

Enabled PvX Partners to make data-driven underwriting and monitoring decisions, reducing risk and enhancing investment outcomes.

## Predictive capabilities

Established a robust data foundation for machine learning models to forecast future performances, aiding proactive decision-making.

## Operational efficiency

Automated data workflows with minimal manual intervention – lowering operational costs and errors.

## Competitive insights

Provided companies with benchmarking tools to gauge performance against industry peers, fostering strategic growth.

# Challenges

### Scalable infrastructure

Build a system capable of handling growing data volumes without compromising performance.

### Optimised query performance

Enhance query speeds on BigQuery external tables using Parquet files.

### Enhanced data security

Ensure compliance with data privacy laws, safeguard sensitive information, and build trust with partner companies.

### Secure data visualization

Visualize data per business needs without cross-company data exposure.

### Complex requirements

Understand and implement a large, distributed system.

# Implementation

### Orchestration

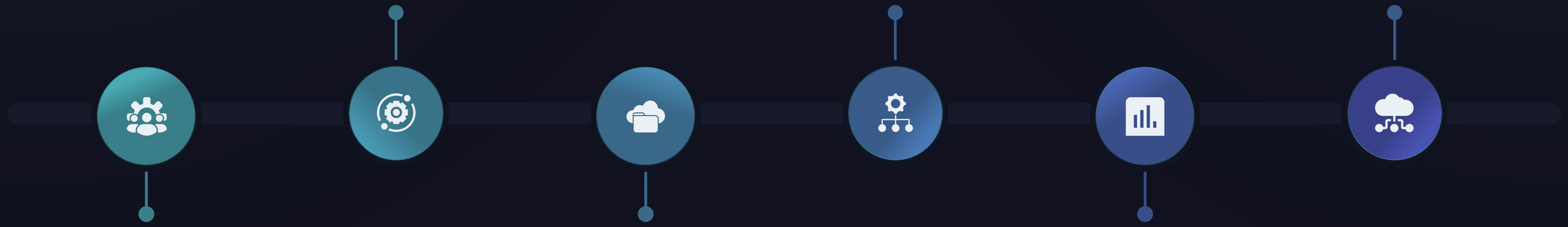
Implemented Apache Airflow (self-hosted) for job scheduling to reduce costs.

### Query optimization

Partitioned Parquet files on frequently filtered columns to minimize data scanning.

### Cloud platform

Chose Google Cloud Platform (GCP) for its services like Dataproc, GCS, BigQuery, and Vertex AI.



### Spark job management

Employed Dataproc batches for serverless, auto-scaling Spark jobs triggered as needed.

### Data storage format

Used Parquet format in Google Cloud Storage (GCS) and added as external tables in BigQuery for querying.

### Data visualization

Adopted Apache Superset (self-hosted) for its extensive chart options and ability to handle data security with roles, permissions, and row-level security.

# Technology stack