

unravel™



Big Query  
Google Cloud

DATASHEET

# UNRAVEL FOR BIGQUERY

AI-Powered Data  
Actionability + FinOps  
Platform

Optimize BigQuery costs, accelerate performance, and ensure data reliability with intelligent automation

## Overview

Unravel for BigQuery is the first AI-powered data observability and FinOps platform purpose-built for Google Cloud BigQuery environments. Leveraging advanced machine learning and predictive analytics, Unravel provides comprehensive cost visibility, recommendations on query tuning, reservation sizing, pricing model selection, storage cleanup, and intelligent governance to help organizations maximize their BigQuery investment while accelerating data-driven insights.

# 35%

**MORE WORKLOADS**

- Automatically optimize code, compute, and data by eliminating inefficiencies
- Achieve  $\pm 10\%$  budget forecast accuracy with predictive spend modeling

# 50%

**ENHANCED QUERY PERFORMANCE**

- Accelerate time-to-market for new AI initiatives
- Prevent pipeline bottlenecks before they impact production
- Streamline development with embedded CI/CD performance insights

# 90%

**LESS FIREFIGHTING TIME**

- Automated anomaly detection across data pipelines
- AI-enabled root cause analysis for rapid issue resolution
- Proactive alerts and auto-remediation capabilities

# 99%

**SLA ACHIEVEMENT**

- Predictive performance monitoring
- Automated cluster optimization and capacity planning
- Real-time resource contention detection

## Use Cases

### FinOps & Cost Optimization

- Real-time cost monitoring and optimization across all BigQuery resources
- Automated budget management and overage prevention
- Cross-team cost allocation and chargeback reporting
- Strategic pricing plan selection and reservation management

### Performance Engineering

- SQL query optimization for faster results and reduced resource consumption
- Workload performance tuning and capacity planning
- Bottleneck identification and resolution automation
- Service level agreement (SLA) monitoring and enforcement

### Data Operations

- End-to-end data pipeline observability and quality assurance
- Proactive issue detection and automated remediation
- Data governance and compliance monitoring
- Operational efficiency improvement through automation

### Cloud Migration

- Legacy data warehouse migration planning and execution
- Post-migration optimization and performance validation
- Hybrid environment management during transition periods
- ROI measurement and business case validation

## Customer Successes

"Unravel cut our cloud data costs by 70% in six months—and kept them down."

- Financial Services Company

"Unravel helped us improve the platform resiliency and availability multiple fold."

- Retail company

"Equifax receives over 12 million online inquiries per day. Unravel has accelerated data product innovation and delivery."

- Equifax

"Unravel helped us reduce the time to identify and optimize top inefficient queries, cutting compute by 24%"

- Fortune Healthcare company

### Fortune Global 500 Bank

Implemented Unravel for developer pipeline evaluation, ensuring code performance before production release.

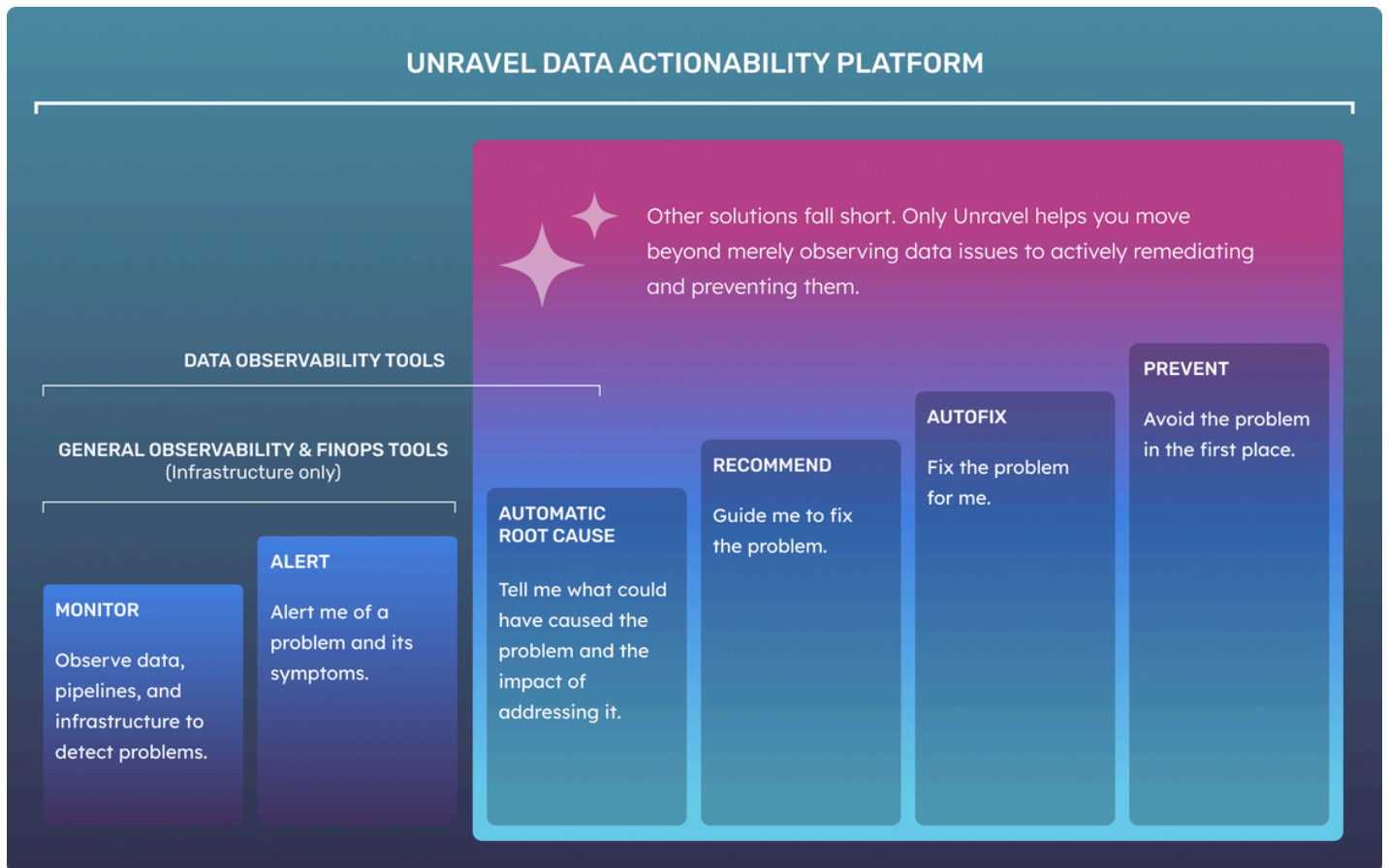
### Major Health Insurance Provider

Achieved optimal performance, reliability, and cost for business-critical data applications in development environments.

### Global Logistics Company

Used Unravel to upskill data teams at scale through CI/CD integration, ensuring quality and efficiency standards.





## Key Differentiators

### Comprehensive Visibility

Unlike traditional monitoring tools that provide basic metrics, Unravel delivers deep insights into cost drivers, performance bottlenecks, and optimization opportunities specific to BigQuery's architecture.

### AI-Powered Actionability

Goes beyond showing what happened to explain why it happened and how to fix it, with AI-driven recommendations for slots, SQL queries, slot provisioning, query duration, and autoscaling efficiencies

### Business Context Integration

Provides cost allocation and performance insights with business context, enabling better decision-making across technical and financial stakeholders.

### Proactive Optimization

Prevents issues before they impact production through predictive analytics and automated guardrails.

## Deployment Options

### Google Cloud Marketplace

Native deployment through GCP marketplace

### SaaS Platform

Fully managed cloud service with automatic updates

### Custom Configuration

Tailored setup for specific organizational requirements

### Security & Compliance

- SOC 2 Type II certification
- Enterprise-grade data protection
- Role-based access control
- Audit logging and compliance reporting

# Core Capabilities

## Advanced Cost Management

- **Multi-Dimensional Cost Visibility:** Complete breakdown of BigQuery expenses including compute, storage, and services by pricing tier, project, job, and user
- **Slot Optimization:** Intelligent recommendations for minimum and maximum slot settings, reservation baselines, and autoscaling configurations
- **Budget Management:** Granular budget creation and tracking with automated alerts and guardrails

## Query Performance Optimization

- **SQL Query Tuning:** AI-powered recommendations to improve query efficiency, including better use of partition and cluster keys, inefficient joins, and avoidance of anti-patterns like SELECT \* on wide tables. SQL query rewrite with cost and semantic validation.
- **Pre-checking queries:** for cost and performance inefficiencies before running them on BigQuery for real.
- **Resource Efficiency:** Reservation right-sizing, pricing model and storage type recommendation
- **Performance Monitoring:** Identify running queries that are rogue, providing policy-based actions such as notifying the owners and stopping the queries.
- **Best Practice Enforcement:** Automated detection and suggestions for SQL best practices

## Enterprise-Grade Observability

- **Deep Data Intelligence:** Purpose-built AI delivering insights based on deep observability at the job, user, and code level
- **Custom Dashboards:** Flexible dashboard creation using pre-built components with customizable widgets for spend, performance, and unit economics insights
- **Data Governance:** Table and file usage trends analysis for effective storage and tiering programs
- **Anomaly Detection:** ML-powered identification of unusual spending patterns and performance issues

## Automated Actions & Alerts

- **AutoActions Framework:** Configurable automated responses to common scenarios like resource contention or stuck jobs
- **Custom Alert System:** Flexible alerting with integration to popular communication platforms
- **Proactive Notifications:** Early warning system for resource usage spikes and cost overruns
- **Integration Support:** Seamless connectivity with existing monitoring and ticketing systems

## Advanced AI Features

### Purpose-Built Intelligence

- **BigQuery-Native AI:** AI engine specifically trained to understand BigQuery's architecture, pricing models, and optimization opportunities
- **Continuous Learning:** Self-improving recommendations based on your environment's patterns
- **Contextual Analysis:** Considers workload characteristics, data patterns, and business requirements
- **Predictive Insights:** Forecasting capabilities for capacity planning and cost management

### Real-Time Optimization

- **Live Performance Monitoring:** Continuous tracking of query execution and resource utilization
- **Dynamic Recommendations:** Real-time suggestions based on current workload patterns
- **Automated Tuning:** Self-optimizing configurations for maximum efficiency
- **Preventive Actions:** Proactive identification and prevention of performance issues

## BigQuery-Specific Features

### Comprehensive BigQuery Support

- **All Pricing Models:** Full support for on-demand pricing and all BigQuery Editions with optimization recommendations
- **Multi-Project Management:** Automated setup and configuration for over 100 projects simultaneously
- **Cross-Regional Support:** Cost optimization across all BigQuery regions and multi-regions

### Storage & Data Management

- **Storage Cost Analysis:** Detailed insights into compute and storage spend with cost optimization intelligence
- **Data Lifecycle Management:** Hot/warm/cold table analysis and tiering recommendations
- **Partition & Clustering Optimization:** AI-powered suggestions for data organization efficiency

## Migration & Cloud Transformation Support

### Seamless Migration Assistance

- **Pre-Migration Planning:** Granular insights and recommendations for Spark, Hadoop, and legacy data warehouse migrations to BigQuery
- **Performance Validation:** Comprehensive testing and optimization during migration phases
- **Cost Prediction:** Accurate forecasting of BigQuery costs post-migration
- **Best Practice Implementation:** Automated application of BigQuery optimization patterns

### Hybrid Environment Management

- **Multi-Platform Visibility:** Unified view across BigQuery and other cloud data platforms
- **Migration Progress Tracking:** Real-time monitoring of data transformation initiatives
- **Comparative Analytics:** Performance and cost comparison between legacy and BigQuery workloads

# Technical Specifications

## Compatibility

- All BigQuery regions and multi-regions
- On-demand and capacity pricing models
- All BigQuery Editions (Standard, Enterprise, Enterprise Plus)
- Legacy SQL and Standard SQL support

## Integrations

- **API-First Architecture:** Comprehensive REST APIs for custom integrations
- **Authentication Support:** SAML/SSO integration with existing identity providers
- **Workflow Integration:** Native connectivity with popular CI/CD and monitoring tools
- **Data Export:** Flexible reporting and data export capabilities

## Monitoring Capabilities

- Real-time query and job monitoring
- Historical trend analysis and forecasting
- Custom KPI tracking and reporting
- Automated anomaly detection

## GETTING STARTED

### Free Evaluation

- Comprehensive platform trial with full feature access
- Migration assessment and optimization recommendations
- Custom dashboard configuration and alerting setup

### Rapid Deployment

- Quick integration with existing BigQuery projects
- Automated discovery and configuration
- Minimal setup requirements with immediate value realization

### Professional Services

- Migration planning and execution support
- Custom optimization strategy development
- Training and best practice implementation
- Ongoing optimization consulting

#### About Unravel Data

Unravel Data is a data observability and FinOps platform that provides full-stack visibility, AI-powered recommendations, and actionable automations to help optimize the performance, cost, and reliability of modern data applications.

For more information, visit [unraveldata.com](https://unraveldata.com).