



Digital Media & Advertising



USA

Reach & Frequency Dashboard Optimization Prevents BigQuery Shutdowns for a Leading Social Media Platform

From product strategy and marketing to executive reporting, the largest online community platform depends heavily on data for every decision. Thousands of internal users depend on the team's executive dashboards for performance monitoring, campaign analysis, and ROI measurement. These dashboards also inform C-suite decision-making by tracking real-time revenue growth and operational efficiency. However, the team's most widely used sales analytics dashboard was putting extraordinary strain on the company's data infrastructure, leading to system-wide slowdowns and temporary resource shutdowns.

Highlights

- High-demand, high-payload dashboards repeatedly triggered BigQuery shutdowns, halting analytics operations across teams.
- iOPEX optimized backend queries, implemented access controls, and introduced a FIFO mechanism to balance concurrent dashboard loads.
- Within 24 hours, iOPEX delivered a stable R&F 2.0 dashboard — providing faster insights, zero system disruptions, and complete operational stability.

Business Challenges

The organization's Reach & Frequency (R&F) dashboard, a key tool used by thousands of global sales and business users, had become a major operational risk. Its high processing load repeatedly triggered BigQuery shutdowns, halting essential reporting and data access across the company.

System Overload

Excessive backend query load overwhelmed BigQuery infrastructure, causing recurrent shutdowns that disrupted analytics functions organization-wide.

Revenue and Reporting Impact

Each outage delayed campaign performance evaluation and post-campaign reporting, preventing timely delivery of insights to advertisers.

Leadership Visibility Gap

Executives lost access to critical real-time data, affecting revenue forecasting, decision-making, and operational confidence.

iOPEX Solution

iOPEX deployed a **rapid-response optimization program**, combining deep data engineering expertise with a focus on business continuity. The solution was conceptualized, designed, and deployed within a single day, addressing both short-term stabilization and long-term scalability.

Backend Optimization

iOPEX re-engineered the dashboard's backend queries, streamlining processing logic to drastically reduce the load on BigQuery. This ensured resource consumption was efficient while maintaining the accuracy and comprehensiveness of post-campaign analysis across thousands of sales users worldwide.



Access Control Mechanism

To prevent system overuse, iOPEX introduced a First-In, First-Out (FIFO) mechanism to manage concurrent users. By limiting the number of simultaneous dashboard runs, the solution safeguarded system stability and ensured fair access without affecting other mission-critical applications.



Enhanced User Experience

iOPEX introduced functionality that allowed users to selectively run specific sections of the dashboard instead of the full load. This significantly reduced processing times, enabling users to extract focused insights within minutes, enhancing both speed and usability.



Rapid Delivery

Recognizing the urgency, iOPEX delivered the optimized R&F 2.0 dashboard within just one day. This quick turnaround eliminated ongoing disruptions and restored confidence in the analytics environment for both frontline sales teams and leadership stakeholders.



The Impact

The R&F 2.0 optimization marked a turning point for the organization's analytics stability and speed:

Zero Incidents

Post-launch, there were no BigQuery-related shutdowns, ensuring operational stability across the organization.

Improved Performance

Reduced dashboard run times from 10–20 minutes to 2–5 minutes, with selective loads delivering even faster results.

Stable Business Operations

Implemented access controls that prevented resource clogging, protecting other critical systems.

Empowered Sales Teams

Sales teams gained uninterrupted access to campaign insights, enabling timely reporting and faster decision-making.



About iOPEX

iOPEX Technologies is a new-generation agentic AI and automation-led enterprise transformation partner headquartered in San Jose, California. At the intersection of enterprise operations, agentic AI, and intelligent automation, we deliver Intelligence as a Service, helping organizations embed intelligence directly into workflows for measurable impact. Over 70 global brands trust iOPEX to transform operations, accelerate revenue growth, and unlock value at scale. Contact us at marketing@iopex.com.

