

# Using GenAI to Eliminate Equipment Cost Discrepancies for a National Construction Company

ARTISAN STUDIOS

## EXECUTIVE SUMMARY

A leading commercial construction firm partnered with Artisan Studios to improve profitability tracking and eliminate discrepancies in equipment usage reporting. By building a GenAI-powered reconciliation engine between manual timesheets and GPS sensor data, Artisan helped the client reduce manual effort, increase data accuracy, and make better-informed project bids.

## THE CHALLENGE

The client struggled with inefficiencies in their job cost reporting process:

- **Manual Data Errors:** Project managers often under-reported equipment usage in timesheets.
- **Labor-Intensive Reconciliation:** Comparing timesheets with GPS data required manual intervention.
- **Inaccurate Bids:** Incomplete usage data skewed cost estimation on future jobs.
- **Siloed Information:** Data sources were not connected, limiting operational visibility.

## PLATFORM

AWS

### Services Implemented

- GenAI-Powered Discrepancy Detection
- Amazon Bedrock Integration
- EKS and QuickSight Architecture
- Equipment Telemetry Ingestion
- Timesheet/ERP Data Normalization
- Unified Data Dashboard Development
- Post-Launch Support and Training

### Director of Construction Operations, National Construction Firm

"Through the help of Artisan's work in building out this new solution, we were able to identify discrepancies in equipment cost reporting much more effectively with about a fraction of the effort. This helped us increase profitability both by making our cost reporting process more efficient and by being able to cost out our bids on future jobs more accurately."

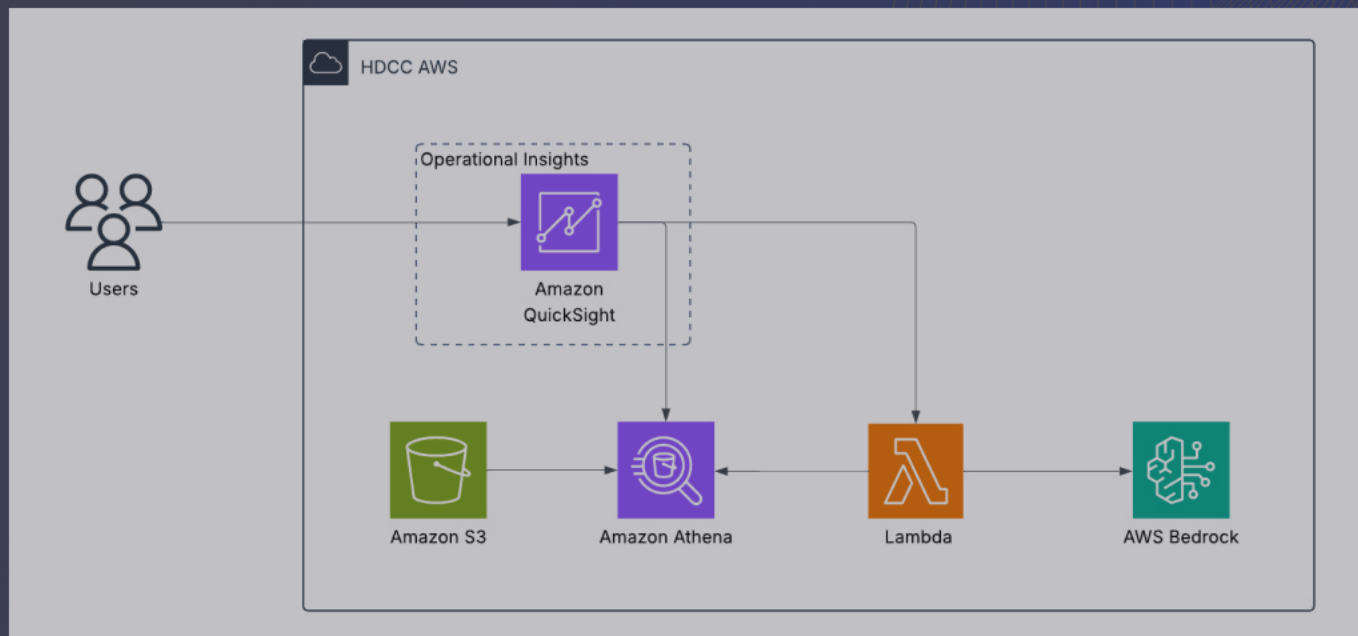


## THE SOLUTION

Artisan Studios developed a GenAI-powered platform to reconcile manual and sensor data for usage reporting, with real-time dashboards in Amazon QuickSight.

Core solution components:

- **AWS Services:** Amazon Bedrock, Amazon EKS, Amazon QuickSight
- **Data Correlation:** GenAI reconciles timesheet data and GPS sensor logs
- **Dashboarding:** Visuals surface discrepancies with minimal human review
- **Security and Integration:** Direct data access enabled clean, secure ingestion



## IMPLEMENTATION APPROACH

- **ERP + Telematics Ingestion:** Pulled and prepared data from timesheets and GPS sensors.
- **Normalization and Analysis:** Merged datasets and applied GenAI for smart discrepancy detection.
- **QuickSight Visualization:** Delivered actionable dashboards to reporting teams.
- **Iterative Discovery:** Worked closely with the client to ensure accuracy and value.

## RESULTS

- **Improved Accuracy:** Discrepancies were flagged in near real-time.
- **Operational Efficiency:** Manual review time was cut dramatically.
- **Smarter Bidding:** Enabled cost teams to make more accurate future estimates.

## By the Numbers

- **3 AWS Services Integrated**
- **200+ Equipment Units Tracked**
- **>75% Reduction in Manual Review Time**
- **1 Unified Dashboard for Equipment Tracking**

3

AWS Services Integrated

200+

Equipment Units Tracked



## WHY ARTISAN STUDIOS

Artisan Studios partners with forward-thinking brands to solve hard problems with strategy, technology, and design. Our teams bring deep expertise in user experience, cloud-native architecture, and AI-driven transformation.

### High Quality Solutions:

Fully responsive, highly available, and beautifully designed applications at scale.

### Customer-Centric Expertise:

We focus on user behavior, product-market fit, and digital performance, not just features.

### Trusted Advisors:

We align technology with measurable business goals.

