TRIGENT
OVERCOMING LIMITS

A cloud based mobile enabled field force solution

Mobile First Cloud First

An infrastructure civil engineering company furthers its emphasis on quality and commitment to clients using a cloud-enabled mobile solution to augment operations and provide transparency.

Technology used

Mobile Platforms

android   iOS

Mobile Programming

Swift   Java

Web Application

node   ANGULAR

Mobile APIs

express   node

Google Cloud Platform(GCP)

App Engine   Cloud SQL   Cloud Storage   Cloud IAM

GPS

samsara

About the client
A customer centric road infrastructure service provider powers digital transformation across the organization to rigorously serve all its customers.

The infrastructure company is recognized for its commitment to quality and road safety. Their business enables municipalities, federal, and state governing bodies and contractors across the United States to achieve top-quality road infrastructure that serves the public's dual purposes of safety and convenience. Their work scope encompasses vital components of road safety, including pavement markings and signage, traffic control operations, and sweeping services. These services are carried out by trained and certified personnel.

Business need
The company wanted to further its commitment to quality and raise the bar through transparent updates to its customers. With customers at the core of their digital transformation initiative, automation of business processes was a key enabler.

The company wanted to strengthen clients' trust who collaborate with their business to carry out infrastructural work across locations by providing unparalleled quality. Superior quality is one of the eminent reasons why the client has been a favorite among federal, state bodies, and contractors giving repeat business.

The client wanted to address and resolve hindrances that could pose a challenge to its growth and business objectives. It looked to streamline its processes with automation, to better control workforce and physical resources and deliver enhanced efficiency across projects.

Trigent solution
Persona centered Customer Experience is at the heart of Trigent's solution approach. The business need and the UX vary for the construction worker, foreman, project supervisor, senior management or the customer. An integrated, automated Cloud Application coupled with a multi-screen mobile experience was designed to suit each persona.

Trigent's engagement with the client developed through an initial phase of advisory services that laid out an end to end plan for a cloud based mobile solution. The comprehensive solution has proposed and implemented the following:

- Application modernization - Convert the legacy app to a cloud based web app
- Make all the workflows as complete paperless
- Follow mobile first, cloud first approach
- Zeroed maintenance work by going with serverless technologies

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![Trigent - Overcoming Limits]

The solution sought to address some of the pressing challenges such as:

● Problems due to manual end of day updates by foreman or manager

● Pilferage of material, difficulty in tracking worker productivity

● Inability to provide customers with regular updates

Trigent developed an application for both Android and iOS platforms for the fieldforce and a web application for the managers to remotely manage.

On the move efficiency, through mobility
The developers created a multi platform native application for Android and iOS for maximum reach. Special emphasis was laid on the UX/UI of the application to ensure it was easy to use for all employee personas in the organization. The applications' features:

● Enables management and customers to access regular updates during the day

● Drive efficiency in the workforce through a customized human resource management system

● Helps track the use of resources for optimal utilization reducing pilferage

● Monitors the movement of vehicles carrying material to and fro to different locations in real-time

● Digitally capture and store images of all vehicles on duty with a timestamp for insurance purposes

The applications' image capturing feature is used to capture the work order progress and shared with customers as updates. Legacy desktop applications were replaced with a cloud based web application that is accessible anytime anywhere.

A comprehensive fieldforce management application, the product perfectly aligns with the business's commitment to enhance procedures and functioning to deliver the best quality infrastructural work.

Plugged to the cloud
Trigent's Cloud Services Practice implemented a serverless solution on a public cloud infrastructure for the client.

The shift to Cloud infrastructure unlocked new capabilities for the client:

● Workers and foremen accessed the job roster from their mobile devices, thereby avoiding the office commute

● Foremen tagged/marked completed jobs and updated material usage details instantly

● Project supervisors switched between Web access on the desktop and Mobile App based on the work detail required

● Managers and Foremen alike had access to resource usage and inventory availability across all the projects and customer locations

● Real time accurate weather forecast to plan and comprehend scope of work

● Multi vendor integration available on call to minimize disruption

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- Customers got progress updates with pictures from the site, that minimized the need for site visits
- Digital signatures from police and governing officials updated regularly   project approvals and completion

Overview of the solution
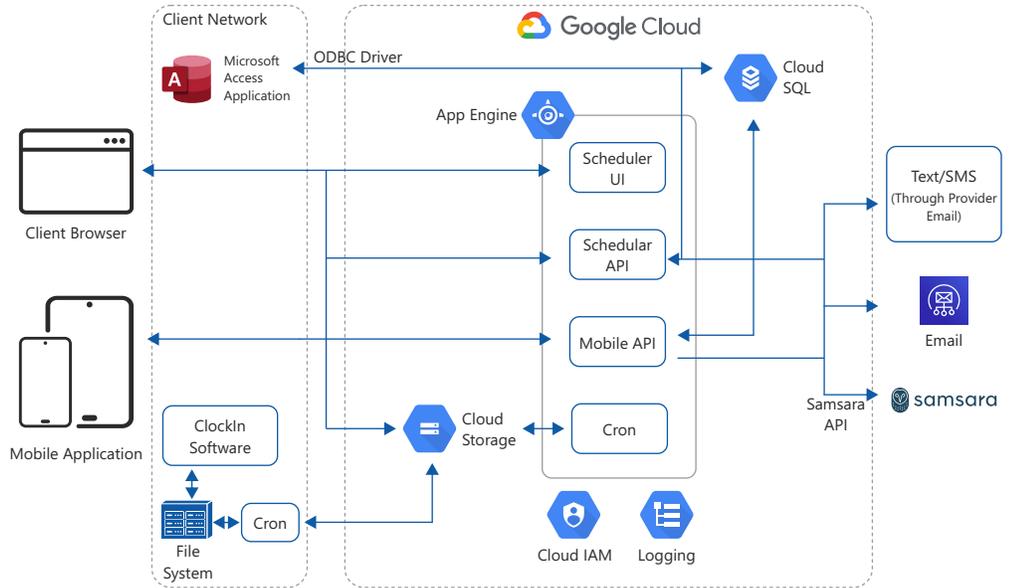
Client Benefits

The clients timely move with cloud enabled mobility solution resulted in significant positive returns for the organization and benefits for their customers.

- Completely paperless workflows
- Presence on both Apple and Google Play stores
- Applications on Google cloud built on serverless technologies with minimal maintenance
- A 360 degree view of all the work orders underway, work accomplished, resources exhausted and in stock
- Optimal use of man and material resources
- In built daily expenses and liability tracker to avoid oversight or misuse
- More transparency for the customer

About Trigent

Trigent is an early pioneer in IT outsourcing and offshore software development business. We enable organizations to adopt digital processes and customer engagement models to achieve outstanding results and end-user experience. We help clients achieve this through enterprise-wide digital transformation, modernization, and optimization of their IT environment. Our decades of experience, deep domain knowledge, and technology expertise delivers transformational solutions to ISVs, enterprises, and SMBs.

We offer end to end consulting services, design, development and managed services across Infrastructure, Cloud, Mobility, BI, Analytics, Product Engineering, QA & Testing, IoT, Big Data, and Artificial Intelligence.