

## Cloud & Internet of Things

Success Story

# Robust Oil/Gas Supply Chain Solution Delivered

Facilitated live tracking and management of fuel trucks/trailers, thereby boosting overall operational efficiency

Behind the Scenes

Strategy & Objectives

Solution Delivered

Enablers

Digital Capital Delivered





## Behind the Scenes

# Can Cloud & IoT be game-changers?

There has been massive growth in the number of sectors and industries that are implementing Cloud technology and the Internet of Things (IoT). By adopting these technologies, businesses can optimize operations/resources, reduce costs and generate a better return on investments. The client had a device, which was installed in the truck/trailer, but it did not have connectivity. The data could be pulled offline, and therefore, did not facilitate live tracking, assessment, and management. A robust and secure monitoring system was the need of the hour. The solution designed by Happiest Minds combined cloud and IoT technologies to develop a platform and application, which could manage and live track end-to-services.

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## Strategy & Objectives

# Enable Live Tracking

The client wanted us to create a robust asset management system to enable real-time monitoring and tracking of site efficiency, trailer efficiency, and driver

The project deliverable focused on the following areas:

Selection of the IoT platform that can provide scale, cloud enablement, and integrations

Explore devices/technologies to track and manage assets in real-time

Deliver complete supply chain solution for boosting overall operational efficiency, for inventory visibility, for control/ material handling, and to remotely manage site efficiency, trailer efficiency, and driver efficiency

End-to-end IoT security to enable risk-free operations.

Monitor the real-time status of all assets

Take decisions in real-time

Keep the operational cost minimal

Enabling rapid scaling up of business by onboarding new fleets, new drivers, new customers by using online and connected system

Enhancing the customer experience of fleet operators by giving them real-time insights and reports

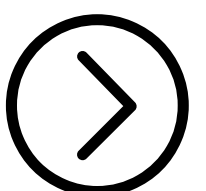
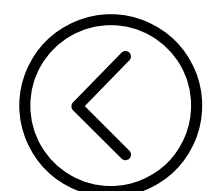
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# Solution Delivered

## Faster response to alerts, quick decision-making

The ability to visualize in real-time the trailer's location, and do live tracking of the number of compartments in a trailer, what kind of fuel is there in each compartment, and the status of each compartment, are crucial to ensure that the client has more control over the services being delivered, which, in turn, will reduce operations costs. The solution was designed keeping these crucial aspects in mind.

The cloud platform developed impacts four key areas, which includes live tracking of trailers and contents, customized management of alerts, faster response to critical alerts, and preventive maintenance alerts.	We identified the best-suited gateway pertaining to the project and wrote the edge software for the gateway.
We connected the off-the-shelf gateway, which collects all the data from the truck and sends it to the cloud.	Each truck can have one or more trailers. Each truck is equipped with sensors, which are connected to the cloud platform. This enables live-monitoring and alerts are issued if there is a breakdown, a GPS fault or any other mechanical failure.
The data generated is transmitted to the cloud, where it is tracked and analyzed online in real-time. The data is integrated with back-end services to provide actionable insights to the management.	The web application designed by Happiest Minds provides administration, live tracking, dashboard, and reports. Each section enables users to effortlessly visualize in real-time the trailers' location and details such as driver name, truck position, and product types.
Details such as the driver's phone number and email id are mentioned, which enable the client to give real-time information to the driver on critical alerts, thereby accelerating response time.	This is a multi-tenant application which supports multiple trailer companies. The data of one trailer company is not visible to other companies.

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## Enablers

# Preventive maintenance's a big takeaway

Integration and management of end-to-end services resulted in reduced time, effort and cost.efficiency.

Supply chain process visibility reduced the opportunity for errors

Harnessed the power of big data to recognize trends, anomalies and improve business practices

Data visualization portal improved monitoring and facilitated better decision-making

Live tracking improved transparency, enabling immediate notifications to appropriate user/driver

Reduced response time & increased process efficiency

Enabled preventive maintenance through non-critical alerts, thereby improving operational efficiency at every step

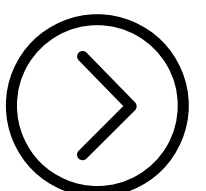
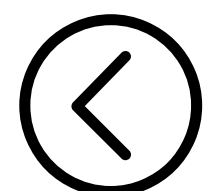
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## Digital Capital Delivered

# Reduced downtime, higher return on investment

The Happiest Minds took complete ownership of the project, from development to deployment, to provide a platform that was powered by IoT. The online management system facilitated 'connected experience' and gave users minute-by-minute clarity on where the truck is, if the driver is active or idle, if the fuel has been loaded, if the truck has left the loading station, which are the stations where loading is getting frequently delayed, and which routes are better, among others. By using the real-time monitoring and status report capabilities, the client can make quick and smarter decisions.

The other important feature this solution provides is preventive maintenance alerts, which allows the trailer companies to undertake many operational issues on time like truck and trailer

expiry, pressure retest inspection, leakage test, preventive maintenance inspection, and internal visual inspection, among others. The cloud application provides a central view of all alerts and incidents, facilitating their follow-up and management, including the ability to escalate cases. When a trailer company admin logs in, the system displays in real-time the number of trailers that have a critical alert/warning/non-critical alert. Therefore, the right information is now available at the right time to the client for making informed decisions. In the long-run, these real-time decisions facilitated by alerts will increase the lifetime of vehicles, boost the productivity of trucks and drivers, reduce downtime, and make significant savings for the company.

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## About Happiest Minds Technologies

Happiest Minds enables digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights through an integrated set of disruptive technologies: big data analytics, AI & cognitive computing, Internet of Things, mobility, cloud, security, unified communications, SDN-NFV, RPA, etc. Happiest Minds offers domain-centric solutions applying skills, IPs and functional expertise in IT services, product engineering, infrastructure management and security. These services have applicability across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

Headquartered in Bangalore, India; Happiest Minds has operations in the US, UK, The Netherlands, Australia and Middle East.

