



CYIENT HELPS A LEADING MEDICAL DEVICE MANUFACTURER DEPLOY IOT-ENABLED SOLUTIONS TO PROACTIVELY DETECT FAILURE OF LAB EQUIPMENT

The Client

The client is a leading medical device manufacturer, engaged in the production of laboratory equipment.

The Need

Enabling consistency in predicting equipment failure to compress maintenance and warranty costs.

Maintaining the integrity of laboratory samples requires deep freezing and careful handling. The client's equipment lacked the functionality to capture temperature data from the freezer, making it difficult for laboratory staff to track and maintain optimal temperature required to protect the integrity of the samples. Moreover, lack of consistency in detecting failure rates of the freezer, not only resulted in increased maintenance costs but also negatively impacted service delivery and end user experience. To add to the complexity, the client lacked a standard operating procedure to evaluate equipment warranty claims for their authenticity, leading to escalating warranty costs.

The Transformation

Developing a predictive model leveraging real-time product data.

Leveraging its extensive expertise in seamlessly deploying end-to-end connected device solutions, Cyient developed an IoT box that enabled real-time capturing and monitoring of sensor data from the freezer. Utilizing advanced analytical techniques, we built a predictive model that was capable of accurately predicting the risk of freezer failure and sending alerts to service technicians ahead of the actual event. This proved to be a game changer for the client in terms of boosting product reliability and usage while reducing service, maintenance, and warranty costs. The IoT solution also significantly improved end user experience due to improved asset availability and fewer disruptions.

The Outcome

Improved asset health and availability.

Underpinned by mature IoT and analytics processes, Cyient's IoT-based solution leveraged industry best practices to enable the following key benefits for the client:

- Ability to predict asset failure 10 weeks ahead of the actual risk and generate advance alerts. This helped the client ensure timely dispatch of service technicians to the asset sites requiring assistance, thereby enabling uninterrupted business continuity and sample integrity
- Improved asset availability by 10-15%, thereby reducing service, maintenance, and warranty costs
- Ensured 70-75% confidence level in the prediction of asset failure risk

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, network and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With nearly 14,000 employees in 21 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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