About Tata Consultancy Services Ltd (TCS)
Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India’s largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at www.tcs.com
In response to the digital disruption in the industry, manufacturers are connecting to their products in the field but are unable to obtain significant insights and gains from the data in these intelligent products. Responding to changing customer preferences, they need to shift from traditional service models to new business models with service level agreements (SLAs) on value delivered. This not only increases customer satisfaction and stickiness but also helps organizations realize the transformational growth in service revenue. The new business models come with several risks, ranging from the customer’s operational patterns to product reliability in adverse environmental conditions, which impact the profitability of service contracts.

Equiptix from Tata Consultancy Services (TCS) can help manufacturers address the risks of the new business models by building wallet share and partnerships in their customers’ business through performance contracts and increasing connectivity to their installed base. The solution also helps manufacturers derive value from intelligently connected assets by providing them actionable insights.

All these aspects of Equiptix are core to Neural Manufacturing, a thought leadership framework that enables an organization and its ecosystems to become connected, cognitive, and collaborative. It drives agility and exponential growth, providing an intelligent edge.

**Overview**

Over the years, leading manufacturing enterprises and asset intensive businesses have ramped up their digital quotient with increasing deployment of software-embedded products, operations, and assets. However, deriving value from intelligently connected assets means creating and designing a services portfolio that improves the reliability, availability, and profitability of the assets and monetizes the asset data to develop new revenue streams. Equiptix (see figure 1), an internet of things (IoT)-based solution, helps manufacturers build intelligence around equipment operations. It supports several personas including service managers, field managers, and reliability engineers who run servitization programs and improve contract profitability, equipment reliability, and installed base availability.

Encompassing the entire contract management cycle, Equiptix enables real-time condition monitoring, predictive health score computation, service order planning, and monthly invoicing based on the contracted service level agreements (SLAs). With platform agnostic features, the solution can be configured—from the edge to the mobile app— for rapid deployment in just six weeks. Powered by TCS’ machine learning models for health score computation and profitability simulation, it accelerates predictive health score computation, service order planning, and execution.

*Role support:* Persona-based dashboard and analytics for key roles such as field manager, reliability engineer, and technicians. The solution also supports role-based analytics for three personas for new business models.

*Improved asset management:* Detailed map view of installed base and hierarchical view of subsystems for effectively managing assets.

*Analytical model support:* Analytics workbench for product engineers helps support self-service analytical models.

*Deployment-ready health score:* Custom health score models for a burgeoning list of products.

*Profitability simulation:* Calculating the winning price for new contracts and monitoring potential risks for existing contracts.

*Real-time asset health monitoring:* Real-time predictive alarms based on health scores of assets using deep learning techniques.

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**Our Solution**

Below are the key features of Equiptix:

- Real-time asset health monitoring: Real-time predictive alarms based on health scores of assets using deep learning techniques.
- Deployment-ready health score: Custom health score models for a burgeoning list of products.
- Profitability simulation: Calculating the winning price for new contracts and monitoring potential risks for existing contracts.
- Improved asset management: Detailed map view of installed base and hierarchical view of subsystems for effectively managing assets.
- Analytical model support: Analytics workbench for product engineers helps support self-service analytical models.
- Simplified service order planning: Integration with asset management system for service order planning and execution.
- Billing transparency: Integration with customer relationship management platforms, enabling usage, outcome, and efficiency-based billing.
- Role support: Persona-based dashboard and analytics for key roles such as field manager, reliability engineer, and technicians.

**The TCS Advantage**

- **TCS Neural Manufacturing solution suite:** Intelligence, cognition, adaptability, resilience, automation, and personalization capabilities woven together into an information fabric to help customers transform their business.
- **Innovation excellence in IoT:** TCS has 20 global labs for IoT solutions and rapid translation of ideas to value, encompassing artificial intelligence, robotics, advanced analytics, and cybersecurity led solutions, accelerating the realization of business value for customers.
- **Deep domain expertise:** Offering customers value with deep contextual knowledge and experience across manufacturing including the aerospace, automotive, process, and industrial segments.
- **Easy, scalable, and flexible deployment of TCUP:** TCS Connected Universe Platform (TCUP) can be easily deployed on the cloud, on a manufacturer’s premise, or in their assets, based on their preference and infrastructure availability.
- **System integration services:** Our expertise in delivering complex IoT projects and working with several platforms enables us to seamlessly integrate the Equiptix solution with customer back-end systems.

**Benefits**

- Improved connectivity to the installed base
- Reduced cost to serve
- Increased profitability
- Higher service revenue with performance contracts
- Ability to win more contracts using optimal pricing

**Figure 1: Functional view of Equiptix**

- Fault Prediction Model Linking Failure and Lead Indicators
- New Fleet/Installed Base Contracts
- Health Score Computation on Streaming Heartbeat Data
- Alarm for Field Manager Review Correlations
- Model Updates
- Analytics Workbench with Data Harmonization & Correlation Capabilities
- Field Manager (KPI-Managing Availability)
- Product Engineer (KPI-Managing Reliability)
- Service Manager (KPI-Managing Profitability)
- Key Features
- Role support: Persona-based dashboard and analytics for key roles such as field manager, reliability engineer, and technicians.
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Figure 1: Functional view of Equiptix

**Key Features**

- **Fault Prediction Model Linking Failure and Lead Indicators**
- **New Fleet/Installed Base Contracts**
- **Role-Based Analytics for Three Personas for New Business Models**
- **Health Score Computation on Streaming Heartbeat Data**
- **Alarm for Field Manager Review Correlations**
- **Integration with Enterprise Systems – ERP/CRM**
- **Guided Technician Inspection**
- **Invoice Based on SLA**
- **Analytics Workbench with Data Harmonization & Correlation Capabilities**
- **Data Exploration**
- **Product Engineer (KPI-Managing Reliability)**
- **Field Manager (KPI-Managing Availability)**
- **Service Manager (KPI-Managing Profitability)**
- **Detailed map view**
- **Request**
- **Invoice**
- **Health Score Computation on Streaming Heartbeat Data**
- **Model Updates**
- **Alarm for Field Manager Review Correlations**
- **Integration with Enterprise Systems – ERP/CRM**
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- **Invoice Based on SLA**

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