



TCS Connected Universe Platform

Research & Innovation



The digital age has provided organizations with tools that are revolutionizing the way they operate and deliver services. Technologies such as the IoT are allowing enterprises to consolidate core processes and establishing data as a key enabler for meeting Industry 4.0 requirements. Across industries such as manufacturing, utilities, energy, healthcare, and CPG, industrial IoT (IIoT) is paving the way for achieving operational excellence and embracing new business models. The key to gaining competitive advantage in the current environment is to unify disparate legacy systems by developing a platform that is scalable, cloud-ready, and can be extensively customized.

Keeping these objectives in mind, the TCS Connected Universe Platform (TCUP) has been designed to accelerate product roll-out and service delivery while complying with evolving regulations.

Overview

The adoption of IoT on a commercial scale has resulted in a complex, fragmented, and non-standardized ecosystem. In order to harness the full potential of IoT-enabled capabilities such as process automation and predictive maintenance, organizations need a foundational platform that is extensively customizable and can be easily deployed in any environment.

While organizations are already using cloud-based solutions and PaaS offerings to drive their digital transformation initiatives, off-the-shelf platforms don't have the flexibility to integrate data from disparate sources and provide industry-specific insights. Most of these are built to fulfill generic requirements and do not offer the scope to add new functionalities. Even if they do, majority of businesses still lack the prerequisite skills for building and deploying IoT-ready solutions that comply with emerging data privacy regulations, while still rapidly rolling out new services.

TCS Connected Universe Platform (TCUP) is a unified platform that businesses can leverage to simplify the development, deployment, and management of IoT applications.

Our Solution

As a modular and truly cloud-agnostic enterprise-grade IoT platform, TCUP is a core solution that can be used to rapidly deploy and support IoT-enabled products and services. Our platform is designed for the end-to-end management of connected devices and is capable of seamlessly managing sensor data and software upgrades. Its edge processing and edge analytics features empower companies with real-time reporting and visualization capabilities. Our platform also supports:

- Data stream processing
- Rule-based event processing
- Data pipelines and batch analytics
- Data lake management
- Asset modelling and tracking
- Connected data libraries



Benefits

TCUP provides a wide range of industry-specific advantages. The platform:



Provides technology leaders and architects with a fully scalable foundation for developing and deploying IoT-enabled applications



Reduces time, effort, and investment required by providing application developers with a broad set of ready-to-use pre-built components such as microservices and application programming interfaces (APIs) that enable process automation and simplify the IoT ecosystem lifecycle management



Allows data scientists to explore – and experiment with – device and sensor data in order to develop, evaluate, and share enterprise-specific analytics models



Supports operations teams with a comprehensive set of tools and portals that simplifies management and monitoring of connected devices, applications, and services

The TCS Advantage

- **Flexible solution:** Cloud-agnostic and microservices-based architecture makes it a flexible solution that can be leveraged to create different variants and service extensions tailored to suit industry-specific needs.
- **Ease of deployment:** Our agile methodology enables rapid deployment of IoT-enabled applications with end-to-end services – from administration to DevOps lifecycle management.

Awards & Recognition



To know more

Visit the [TCS Connected Universe Platform](#) page on [tcs.com](#)

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