HCL DEFINES IoT DEVICE ONBOARDING AND REFERENCE FRAMEWORK FOR AN EU AUTOMOBILE GIANT

Customer Profile

The customer is a pioneer in production, distribution and sales of trucks, buses and construction equipment since 1927. It has production facilities in 18 countries and sells its products in more than 190 markets. It is the world's second largest manufacturer of heavy-duty trucks. The customer wants to drive prosperity through transport solutions and aims to be the most desired and successful transport solutions provider in the world. It operates on values of customer success, trust, passion, change and performance.

Customer Challenges

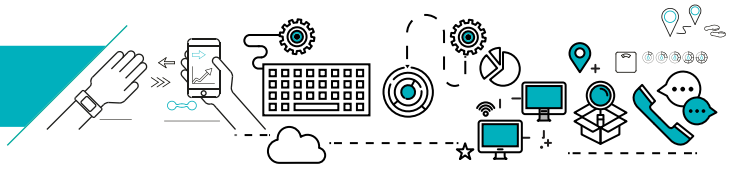
Customer's IT department observed that there was a sudden spurt in IoT devices (like CCTV, Access Control Mac, Vending Machine) being procured by the facility. Connecting these devices to the customer's corporate network was non-compliant with respect to standard network and security policies as these policies have been designed for IT and not for IoT devices.

As a result of this, the procedure of onboarding (registration & authentication) of IoT devices used to bypass the Policies & Guidelines and required an exceptional approval which was time-consuming, complicated and non-standard. Also, obtaining this exceptional approval for every IoT device to be onboarded was rapidly becoming impractical as count of such IoT devices was expected to increase significantly and thus there was a critical requirement to reduce exceptional approvals.

- **Network Security concerns over increasing facility IoT devices:** The customer's IT department found it challenging to connect the newly onboarded devices to the corporate network. The non-compliant ways of doing so posed threats to the network security, since the process involved bypassing of IT policies & guidelines.

- **Absence of lifecycle management process for newly onboarded IoT devices:** Because of the sudden spurt in the IoT devices being onboarded, the customer's IT department wanted to have a streamlined device onboarding and lifecycle management process in place.
- **Concerns regarding secure connection between IoT devices and external supplier applications:** Various supplier applications were hosted on the internet. The customer wanted to establish secure ways to connect with such externally hosted applications, without compromising on the security front.

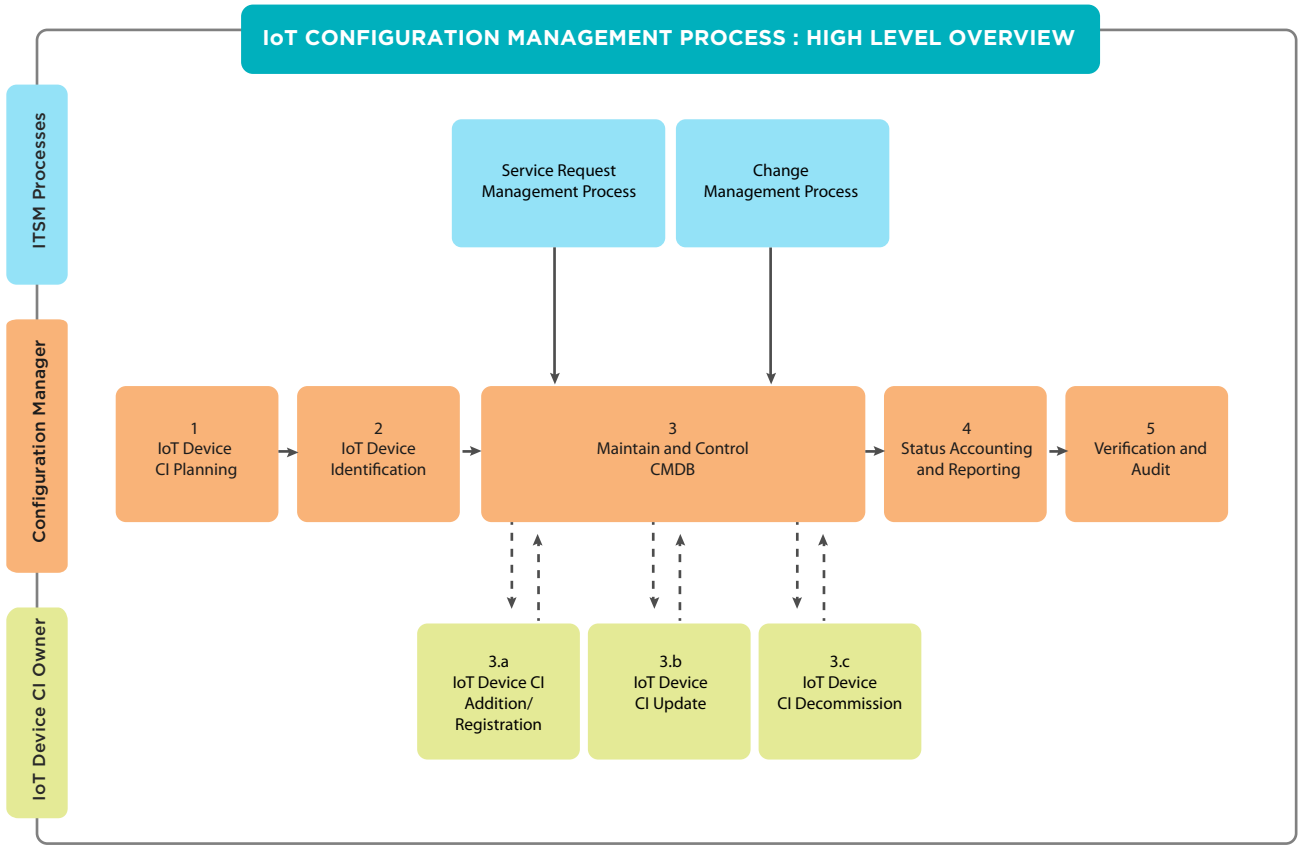
Our Solution



HCL brought in strong business understanding coupled with deep technical expertise to work with the customer to understand and assess existing IT infrastructure. HCL conducted survey of two physical sites identified by the customer where most of the facility equipment/devices were available.

HCL approached with its Define, Build & Run services to address customer needs.

HCL proposed the framework-based assessment to deliver recommendations & guidelines, GAP analysis & design. HCL helped customer create separate network layer (Facility Network Layer) for hosting the IoT devices.



- **IoT Device Onboarding Process:** The solution helped to have defined and standard guidelines for registration of devices and their management through the lifecycle management process
- **Defining Security Policies & Process Flow Creation:** Establish standard guidelines for device authentication (using Extensible Authentication Protocol procedure), network connectivity, security policies and processes and creation of supplier registration process flow to standardise the process of onboarding new IoT device suppliers that comply with laid out device, network and security guidelines.
- **Creation of Standard Checklist for Device Procurement:** The solution helped customer with the creation of a standard checklist, to which the dealers/vendors/suppliers could refer to while procuring the new devices. The framework also detailed out on how to select the IoT gateway & device, design and prerequisites in terms of protocols, features & security. On the security front, various checks were involved such as authentication, firewall & encryption support to ensure smoother device onboarding
- **Device and IoT Gateway Configuration:** The devices once onboarded needed to be configured. The solution also provided detailed configuration process for IoT gateway and devices. The configuration rules revolved around defining privilege levels, data access policy, securely managing Public Key Infrastructure (PKI), etc. On the Data Security (at rest and in motion) front, HCL helped the customer to have detailed guidelines around data access, data encryption and data storage.
- **IoT Configuration Management Process & Configuration Management Database:** The Solution helped to map facility devices as CI (Configuration Items) and then to securely integrate these devices with the centralized Configuration Management Database (CMDB).

  This allowed to achieve the following objectives:

  - Devise and apply a consistent approach to handle IoT Device CI registration Activity
  - Plan, Identify, Controlling, Maintaining and Verifying

Customer Benefits

Establishing best practices for IoT device onboarding and management process

Defining a standard guideline framework that can be shared with customer's stakeholders to follow and adhere while procuring and registering new IoT device and IoT gateway in customer's IT network

Limiting threats related to security exemption

Allowing business to use external supplier solution (that are located on the Internet) from their own Buildings (Dealers, Office, Engineering and Factory) in a secure way

Who Are We?

IoT WoRKS™ is a dedicated 'Internet of Things Business Unit' from HCL Technologies that enables organizations to create best-in-class solutions by enabling IoT-led transformation. These solutions maximize effectiveness and returns on asset investments by creating efficient processes, new revenue streams and business models that deliver measurable outcomes. Recognized as a market leader in IoT by leading analyst firms, **IoT WoRKS™** continues to strengthen its leadership position in fast-growing global IoT services and consulting market..

We have a differentiated solution portfolio which aims to enable connected workforce, connected products, connected infrastructure, and connected operations for the Next Gen Enterprises. With end-to-end IoT services for organizations across the three phases – **Define, Build & Run** – **IoT WoRKS™** helps design enterprise IoT strategy, develop and run the IoT systems for realizing real business value. Solving the eminent challenges in the industry today with the research-led approach, **IoT WoRKS™** has launched a platform, **IoT COLLAB™** - the destination for IoT-led business transformation for Next Gen enterprises to co-create transformational IoT roadmap & solutions with customers.

We continue to develop best-in-class IoT frameworks, wider and more mature solution offerings across key IoT business segments, as well as strengthening its IoT ecosystem play with the right partnerships, and engage customers with innovative business models to drive the phenomenal business transformation opportunity.

IoT WoRKS™ by HCL Technologies

Our IPs and Accelerators

DDX

Accelerator for device IoT-ization

PANGEA

Data Analytics platform

IDEA GATEWAY

Reference Design for an intelligent device

PLATFORM ACCELERATION SUITE

Build next generation cloud services

When You Start with a Top-rated Value Proposition, the Ratings Follow

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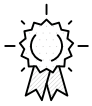
ISG Research Quadrant 2018 on IoT Services, IoT in Healthcare and Connected Cars for US

ISG



WINNER'S CIRCLE

2016 Blueprint Report on IoT

HfS

LEADER

Worldwide IoT consulting & System Integration services 2016

IDC MARKETSCAPE

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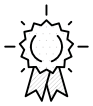
Zinnov Zones 2017 - Global IoT Technology Services consecutively for 2nd year

ZINNOV



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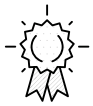
IoT Service PEAK Matrix™ Assessment 2017 consecutively for 2nd year

EVEREST GROUP



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Early Traction in Key Verticals for IoT WoRKS™ portfolio

451 Research

Visit **www.hcltech.com/iot** for more information

To collaborate over a complementary IoT roadmap workshop,
email us at **iotworks@hcl.com**

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