

DON'T JUST EMBRACE TECHNOLOGY - RIDE THE DIGITAL DISRUPTION WAVE

Accelerated global IoT deployments with
Tata Communications MOVE™

Unlocking IoT's Full Potential with MOVE

Maritime and logistics firms recognise the significant value of IoT in automating operations and enhancing supply chain agility. However, they face numerous challenges in adopting IoT, primarily related to integration and management complexity. These industries often work with fragmented systems and siloed data, which hinder their ability to fully harness IoT's potential. Furthermore, connectivity has frequently been treated as an afterthought in IoT systems design, resulting in rigid, single-purpose systems that are difficult to adapt to evolving use-cases. Consequently, firms experience slower revenue realisation, higher costs, and delayed implementations.

To address these issues, "MOVE" provides a comprehensive and flexible solution that bridges the gaps between enabling technologies. By seamlessly integrating disparate systems, MOVE accelerates IoT deployment and simplifies device-to-data management without the need for costly infrastructure overhaul. It also fills critical service and security gaps, empowering smarter, more efficient supply chain systems. With next-generation connectivity orchestration, MOVE introduces features such as multi-access connectivity, vendor-agnostic eIM, zero-touch provisioning, SIM pooling and more, resulting in an IoT system that is effortless, cost-effective, and capable of scaling as your needs evolve.



Multi-X for the long haul

A proliferated connected device estate that requires multimodal connectivity is managed by logistics firms today. Moreover this is with the volumes below is without considering other access types such as Satellite and Private 5G and only for top four use-cases among the active ~150+. With the above point in mind we see why IoT in logistics and maritime is complex to execute and even harder to manage.



Cargo freight tracking

10M+

LTE NB-IOT LoRa Sigfox

5M+



Cold chain monitoring

~6.5M

0.3M

LPWAN

Wi-Fi

8M+



Connected heavy truck

0.6M

-

LPWAN

Wi-Fi

11M+



Warehouse tracking and automation

~ 0.4M

4M

LPWAN

Wi-Fi

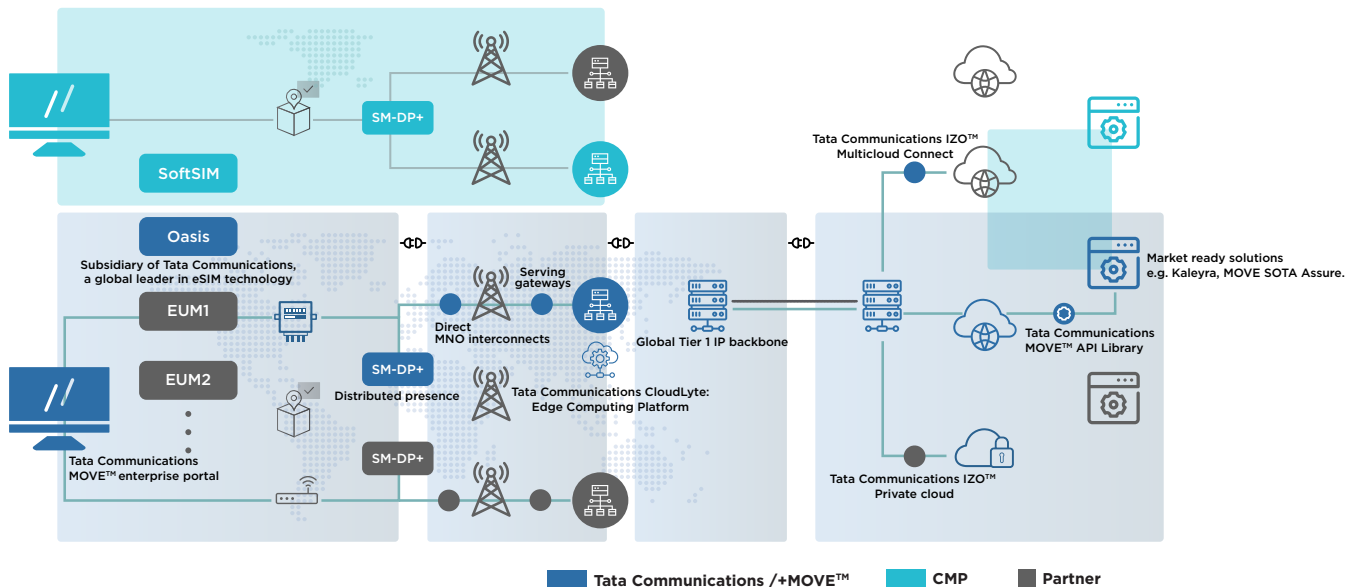
~ 0.7M



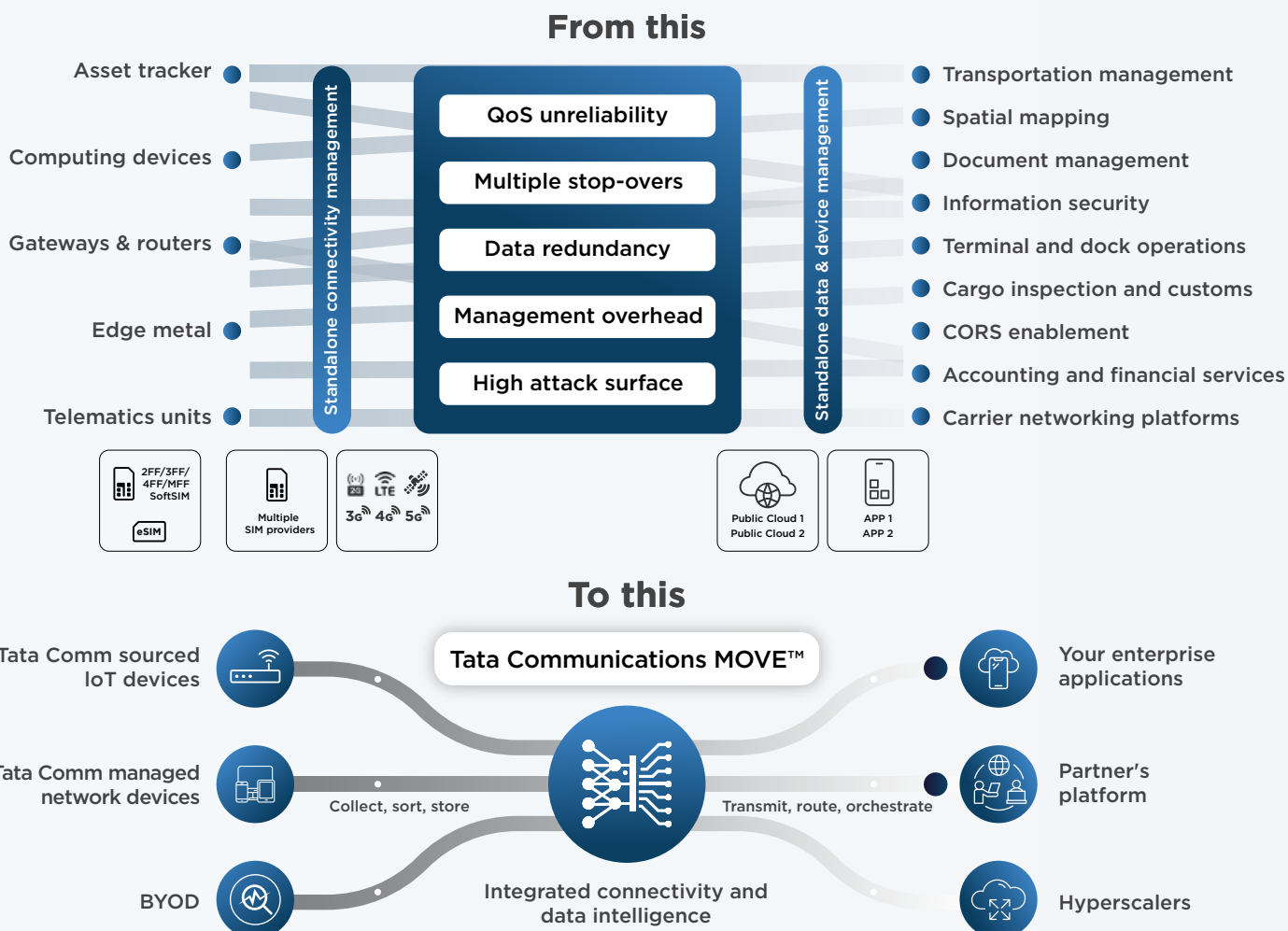
(Number of IoT end-points by 2025 predicted by Gartner)

Tackling key IoT challenges with MOVE

1. Connectivity management alone, does not solve for the need of visibility and control across all layers of IoT CommTech.



2. Tech longevity is dependent on an integrated multi-X solution and helps make IoT cost-effective.



3. Logistics firms are highly susceptible to cyber threats on multiple fronts and require unified security for IoT.

Malware (Canada)

Mirai botnet, one of the biggest botnets ever, used DDoS attacks to infect over 600,000 IoT devices with malware also infected an internet-facing DVR Camera owned by a logistics firm during exposing the wide area of risk enterprises are exposed to with IoT.

DDoS Attack (Lithuania)

No Name DDOS Attack in Lithuania started with its first target as a Lithuanian Maritime Industry operator spreading to two other logistics firms with a barrage of traffic overwhelmed their servers, causing severe disruptions to their operations.

Misc./ Others (UK)

In Nov 2024, a UK based a telematics and tracking service provider for major global and local transportation and logistics companies fell victim to an undisclosed type of cyberattack exposing 1.3Tb disrupting operations of numerous customers.

Ransomware Attack (France)

France based shipping giant in 2020 reported a \$50M cost of ransomware attack using a data encryption malware that originated in their shipping subsidiary and disabled the entire core IT system for over a week.

APT Attacks (South Africa)

A North Korea-backed hacking group used a new malware with backdoor named Vyveva and targeted a freight and logistics company in South Africa. The attacks were aimed at strategic information gathering.

900%

Tata Communications MOVETM Unified Security Offering
Customers need to take comprehensive measures to address IoT Security across Devices, Cloud Infra, Applications including Network and Transport layer

2

Transportation and logistics rank by number of publicly reported cyber-attacks between 1st July 2023 and 30 July 2024, [Wisdium](#).

75%

Companies suffered from supply chain disruptions in last decade due to cyber-attacks with [McKinsey](#) estimating this to 1 month per 3.7 years per firm.

MOVE Unified Security Offering helps in addressing following IoT security concerns for customers:

Secure storage and management of credentials on device side for establishing secure end to end connection to the cloud

Threat detection and alerting at the network and transport level through traffic monitoring from device to the cloud, application-level threat detection and alerting at the customer request

End-to-End zero trust security from device to the cloud or from MOVE PoP to the cloud to protect application access and secure transport of data

Solution highlights

Tata Communications MOVE™ empowers Tata Communications' IoT Fabric. Part of its larger Digital Fabric, MOVE provides an ecosystem for IoT orchestration, designed to transform the chaos of fragmented IoT systems into seamless, profitable outcomes for global enterprises.

Today's IoT systems are often slowed down by isolated connectivity, application, and device management platforms, creating costly and complex integrations. MOVE unifies these systems into one cohesive fabric, boosting efficiency and unlocking new business opportunities. With its intelligent connectivity management, multimodal support and data enablement capabilities for Industrial IoT and consumer devices, MOVE accelerates design-to-deployment journey.

Flexible hardware

2FF, 3FF, 4FF, MFF2, eUICC, UICC, iSIM*, CloudSIM*.

Global coverage

600+ MNOs and local agreements for global and regional compliance.

API integrations

Easy-to-use portal OR easy-to-integrate API Library, as needed.



Enhanced data

Enriched analytics through real-time, packet-level and cross-provider data.

Smart Outcomes

Network-linked, scenario-based switching through Business Rules Engine.

Commtech mastery

Breadth and depth of expertise with active cross-industry deployments.



Use-cases

1. Tracking a shipment from sale to sail



Problem

A shipment on it's journey, is most likely to change several hands and depend on multimodal transport from land, air to sea.

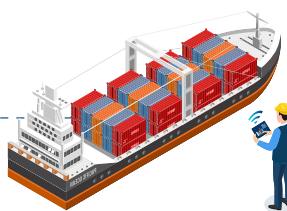


Solution

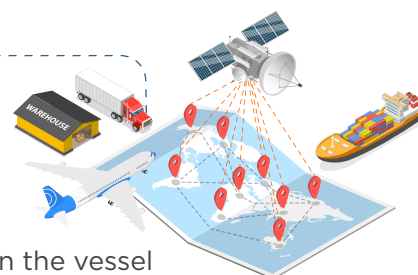
Multimodal connectivity orchestration supporting public and private cellular technologies and interfacing with other access types to provide seamless visibility.



On the road on a hauling truck connected to public cellular



At the port terminal connected to a private network



On the vessel connected to a satellite network with cellular backhaul

2. A global fleet tracking system demands more than data plans



Problem

Due to dynamic trade patterns and unpredictable freight needs, rigid connectivity adds cost, complexity or redundancy.



Solution

Flexible commercials, value add-services and tailored data-plans from shared data pools for OT assets to usage-based billing and application usage tracking for IT assets to assured over-the-air updates for mission critical OT.

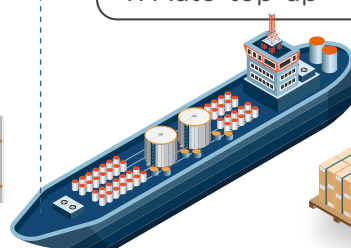
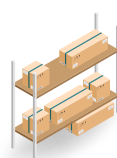
Mobile device that the employee can use for enterprise operations + browsing net.



1. URL Filtering
2. Domain-based billing
3. Fixed-allowance, single profile



4. VPN Security
5. Shared data pool
6. Multi/ On-demand profiles
7. Auto-top-up



A number of asset trackers with variable use but auto-top up feature.

3. IoT security solution isn't one-size-fits-all



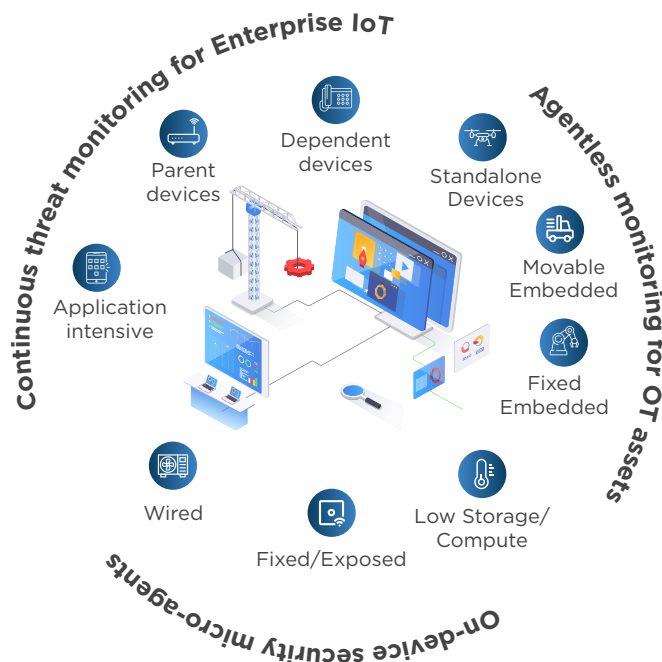
Problem

IoT Assets have varied power, computation ability, protocol and data security needs.



Solution

Soldered eSIM Tamper-proofing, Agentless IoT, OT and Medical Device Security, Network and Cloud Security, Application Threat Monitoring, Unified SASE and more adding up to a full-stack yet modular chip-to-cloud security solution.



Outcomes for you



Zero-touch onboarding

Any connected asset, any BU, any acquisition – Deploy or BYOD, configure, and control from one single pane of glass.



Hierarchical control

Manage security and routing needs for a class of devices, usage controls and more, even post-deployment.



Flexible operational add-ons

Allow all BUs to select the right connectivity plan, right add-ons from a centrally managed, regionally relevant marketplace.



Improved decision making

Network analytics on edge allowing faster decision-making, saving costs of data transfer on cloud.



Revenue from data analytics

Securing data- and insights from chip-to-cloud and monetizing external consumption from own portals.



Fast service experimentation

Easier and faster in-house end-application development and deployment with offloaded management of device and networks.

For more information, visit us at www.tatacommunications.com

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