



Tech  
Mahindra

# OUTBOUND LOGISTICS ON AMAZON MANAGED BLOCKCHAIN



Connected World  
Connected Experiences

Telecom operators around the world are challenged by shrinking profit margins and rising operating costs. They are strategically outsourcing supply chain operations to third-party vendors with the intent of minimizing their overall spend while focusing only on the strategic parts of their business. However, outsourcing alone can not be the sole answer, as the solution requires technology intervention to help address critical gaps.

According to a recent report released by Markets and Markets (2020), the supply chain market is expected to grow from USD 3 Billion to USD 39.7 Billion at an impressive compound annual growth rate of 67.3% from 2020-2025. With the increasing need for enhanced supply chain visibility, effective track and trace of telecom equipment and dispute-free invoice reconciliation, telecom operators need access to a cutting edge technology like blockchain to address the opportunity and enhance business profitability.

Tech Mahindra has built a robust solution on Amazon Managed Blockchain (AMB) for the telecom industry that will help its customers to implement Blockchain networks in their end-to-end supply chain ecosystem, by enhancing transparency and enabling real-time tracking and tracing of goods from one stakeholder to another. Each stakeholder can be a member of this distributed and decentralized ledger with real-time tracking of all information from source to the destination.

## Case-Study: Netherlands-based Telecom Operator

Our client is a Netherlands-based telecom operator with a need to ascertain Expected Time of Arrival (ETA) of the shipped products (Telecom equipment and SIM cards) to end customers. Key stakeholders in the ecosystem include the client, warehouse (third party), and logistics service provider (third party). As per the process, when a customer places a sales order, it is logged into the CRM system, where the order is either accepted or rejected. From here, the order details of the accepted orders are passed on to the Oracle EBS system for assigning the shipments to various distribution partners (warehouses and LSPs). The order is packed and dispatched from warehouse to the LSPs and finally to the end customer. All the three (3) stakeholders have different systems operating in silos and hence none have real-time status updates on the precise location of the order while in transit.

## Amazon Managed Blockchain for Our Telco Clients

Tech Mahindra leverages Amazon Managed Blockchain to eliminate the overhead required to create a network connecting enterprise systems of multiple stakeholders. Amazon Managed Blockchain helps the network to fetch all information from the shared ledger and displays real-time information to all the stakeholders. Dynamic smart contracts are developed to provide alerts and notifications on breach of contract or mismatch of documentation. The Amazon Managed Blockchain ordering service has been enhanced over open source blockchain frameworks.

### Key Challenges



#### ***Lack of Visibility***

Disparate enterprise systems with multiple stakeholders results in lack of visibility on the ETA of the product



#### ***No Real-Time Audit Trail***

No real-time audit leads to process inefficiencies and lag in the supply chain operations



#### ***Lack of Forecasting***

Current system lacks forecasting which leads to an inability to plan for manufacturing and procurement of inventory



#### ***Inefficient Track and Trace***

No real-time audit-trail to track the exact location of the product



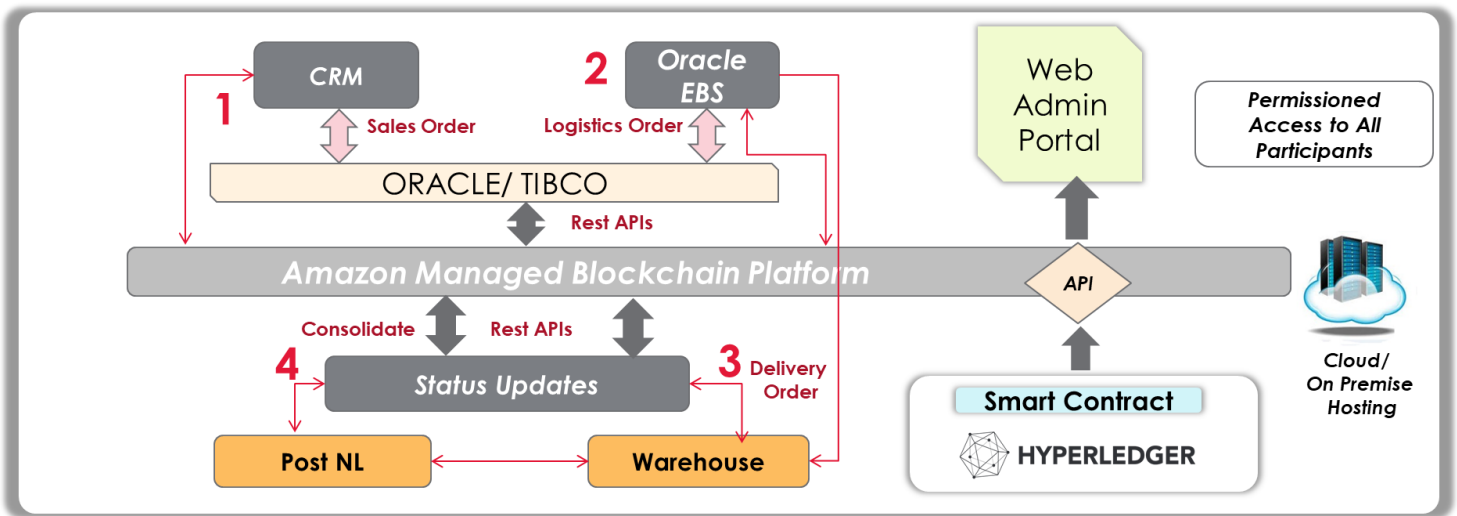
#### ***No Single Source of Truth***

No real-time information on the status of the product



#### ***Customer dissatisfaction***

Untimely delivery of products due to time delays in order delivery results in customer dissatisfaction



Indicative Architecture Overview

## Benefits



Better monitoring across telecom logistics systems - CRM, Oracle EBS, LSPs, and Carriers



Eventually, improves customer experience via flawless timely delivery of orders



Improves transparency and traceability across supply chains



No additional control and reporting due to the intrinsic architecture of blockchain



Creates a real-time tracker of the Order statuses in the Logistics chain



Real time reports and reconciliations

## Other Use Cases

### Network Planning & Settlement

Trusted shared ledger among an operator and its contractors for network planning, work orders, and settlements through smart contracts leading to automation

### End to End Asset Management

Enabling the telco to track its asset improving revenue assurance, streamlining order logistics operations, and minimizing asset loss

### Retail Sensor

Enabling the telco to act as a platform service provider for retailers to gather customer consent and insights for effective promotions

### Reverse Order Logistics

Providing inventory visibility and control thereby streamlining forward & reverse operations among the value chain stakeholders

### Asset Track & Trace

Asset Track and Trace among multiple enterprise systems to enhance customer experience by tracking the asset till the last mile delivery

### Customer Premise Equipment

End to end process definition of the supply chain of Customer Premise Equipment (CPE): From Vendor to Customers including handling of rejections at Customer premises

### Tax Dispute Avoidance

Managing dispute resolution with other telecom companies concerning record keeping and invoice accuracy

### Unsolicited Commercial Communication

Resolving several hitherto unresolved issues by proactively registering customer preferences and mapping the location details leading to multi-billion dollar worth of savings

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