Telecom Asset Movement on Blockchain

Enhancing Visibility and Trust in Telecom Asset Billing

Targeted Challenges

Telco asset deployment – Key challenges today

Asset Deployment Lifecycle (New assets and modifications)

	Service Order	Site Finalisation	Receive	Transfer	Return	Billing
Process (Telco(s))	Raise Service order (SO) with asset details	Prepare for asset dispatch as per RFAI	Asset dispatch from warehouse to towerco site	Issue change request for asset movement between sites	Issue change request for asset uninstallation	Reconciles the assets and settles invoices
Process (Towerco)	SO receipt acknowledgement	Prepare site for installation and issue Ready for installation (RFAI)	Issue right to permit and install asset	Issue right to permit, uninstall and install at the new site	Issue right to permit, uninstall and return to telco warehouse	Billing as per asset at site report from towerco system

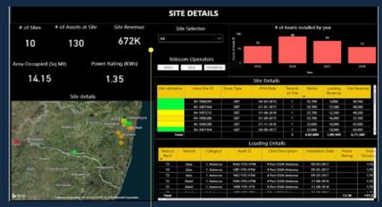
Key challenges

- Multi-party environment with multiple disparate systems, leading to lack of trust and no single source of truth
- Revenue leakage on Towerco's part due to inaccurate billing, on account of mismatch between physical asset on site vs. towerco system data
- Inflated cost and wastage of time and effort in post-facto reconciliation of records with physical network deployment
- Lack of asset traceability and visibility to the entire distributed asset base for the Opco, leading to high risk of loss, theft, damage and service disruption
- Disputes over key billing factors (RFAI, RFS etc.) and lack of an efficient resolution mechanism
- Delay in update of accurate asset movement details in participant systems
- Lack of controls and validations and inability of parties to efficiently confirm the physical deployment of assets on site

Our Solution

Our Solution - A Shared Data Platform for Key Stakeholders

- A shared blockchain-powered site asset repository that is accessible to all stakeholders on desktop and mobile interfaces
- Asset movement data is updated and auto-reconciled in near real-time, creating an immutable and trusted single source of truth for all stakeholders
- Source of validated and readily verifiable data from site, which can be leveraged for Towerco's billing systems and for Opco's asset tracking and spend management objectives



Near real-time updated data of assets on site can be filtered by site ID and operator

Asset movement details verified by both opco and towerco via mobile app interface and visible to both parties through a dynamic dashboard with asset owner, movement type and time-based filters to uncover business insights from validated data

Why Blockchain & What are the Benefits?

How does blockchain address those challenges?

Traceable and reliable single source of truth

- **Connects siloed systems** across telcos and towerco
- History of transactions enables **single, consolidated and validated source of truth**
- Accelerated identification of **the source of asset mismatch** between telco and towerco

Automation and two-factor authentication

- Asset movement (receive, transfer, return) **events recorded with time stamps**
- **Validation of actual assets deployment at site through a convenient mobile app interface**
- **Auto reconciliation** of physical asset movement with SO records and near **real time flagging of mismatches**

Reliable and secure data

- **Immutable transactions** with no single entity having access to alter asset data
- **Attempts to tamper asset data** immediately identified
- **Heightened cybersecurity**

Increased transparency and assurance

- Availability of **asset traceability** for towerco and telco
- Audit node to provide **real time assurance on the asset controls**
- **Validated data to feed into billing systems and analytics engines** for improved revenue realisation and advanced business insights

Enabled through

Distributed shared ledgers → Increased stakeholder confidence in asset inventory accuracy

Smart contracts → Reduced reconciliations and invoicing disputes

Cryptographic security → Secure processes minimising asset irregularities/ fraud

Nodes (Access Management) → Faster and cost effective processes

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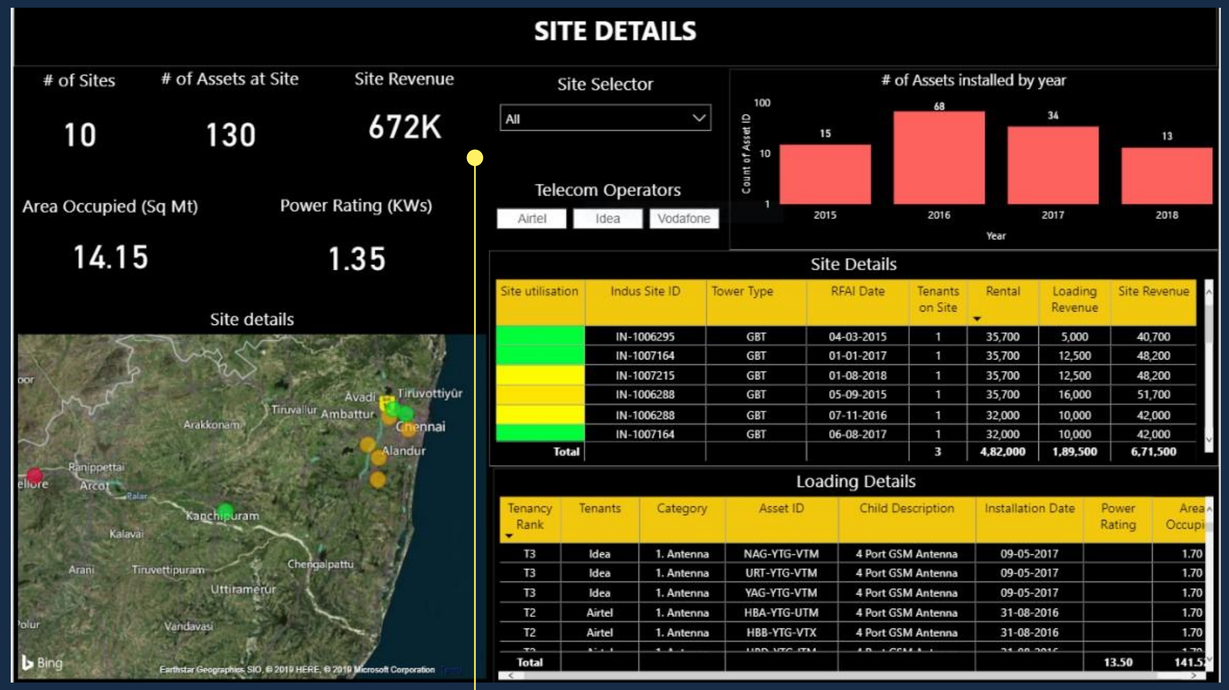

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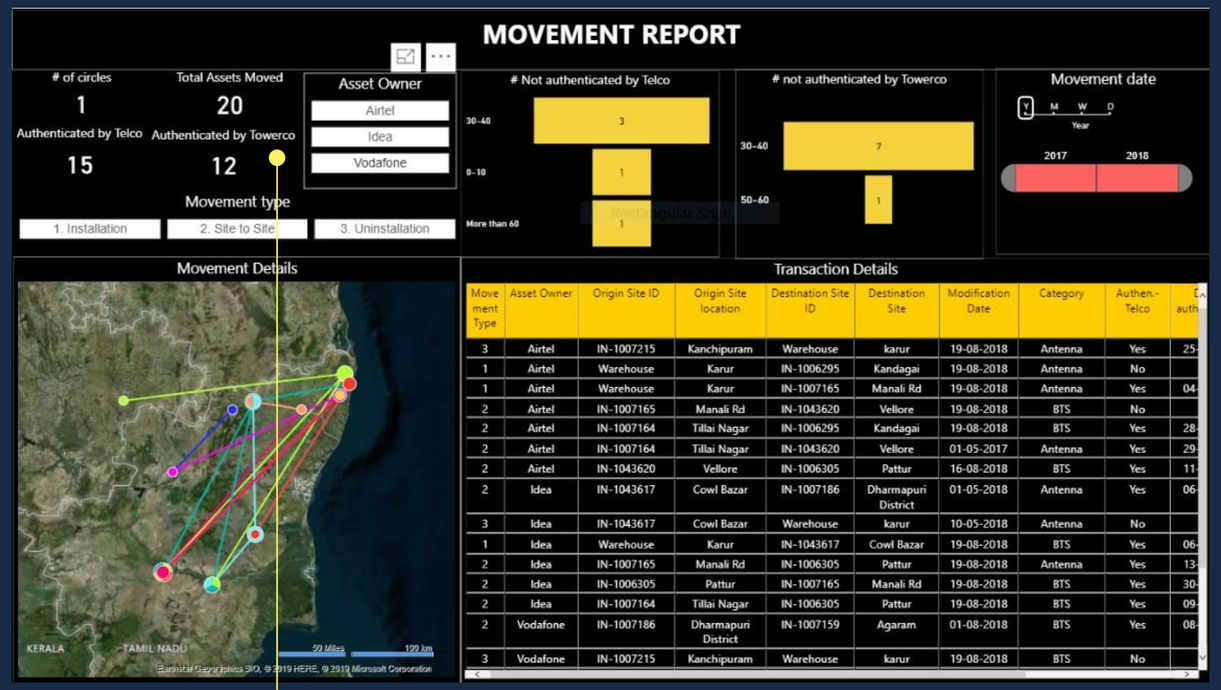

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Distributed shared ledgers

	Dr	Cr
Distributor	5.00	5.00
Publisher	15.00	15.00
Developer	3.00	3.00

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