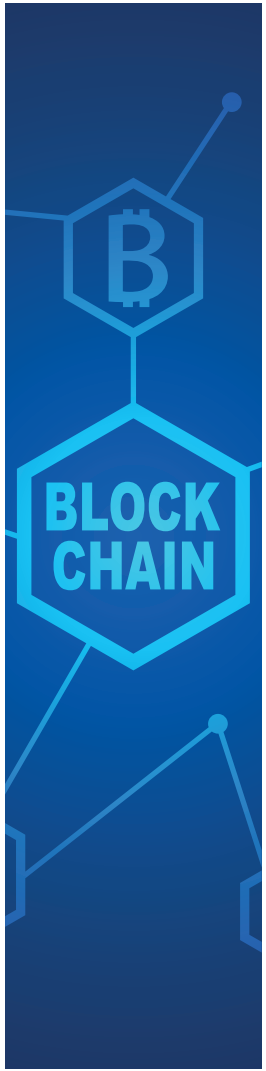

BLOCKCHAIN FOR BRINGING TELCOS INTO THE 5G ERA

What started purely as a peer-to-peer version of electronic cash, known as Bitcoin, has laid the foundations for a technology with the potential to advance, and in some cases, even disrupt industries – blockchain. Despite the technology's still mysterious origins, blockchain has captured popular imagination, with its potential being discussed for a range of industries. First in line among those, arguably, is the telecom and communication service providers (CSPs) sector. The onset of the fifth-generation of network technology, or 5G, is poised to be the catalyst for the next wave of telecom disruption with a host of cross-industry applications.

Blockchain is expected to offer benefits to the telecom and CSP industry in the form of simplified processes, cost savings, new revenue streams, improved collaboration, and real-time transparency. Besides these, blockchain is also expected to help resolve industry challenges including delay in dispute resolution, maintenance of complex agreements, concerns about digital identity, data privacy and GDPR regulations and roaming fraud, among others.

Infosys®
Navigate your next

While the value from blockchain is now well understood by most CSPs, questions on the exact use cases, what can be expected, and where to get started are often discussed. A recent study by Greyhound Research, a leading global analyst firm, found that nearly 50% of all CSPs globally are either actively discussing the use of blockchain or have already started implementing it for select use cases. The study highlights three key areas where CSP executives expect immediate value from blockchain - helping safeguard consumer data and ensuring privacy, play catalyst to newer digital business models, and help revive growth in the form of newer products and services.

BLOCKCHAIN USE CASES IN TELECOM

We at Infosys believe that the value of blockchain for telecom lies in the **security, transparency, data immutability, and control** it provides across the ecosystem at every point of a transaction. Based on our ongoing conversations with CSP executives around the globe, we believe there are five use cases where blockchain can add immediate and tangible value:

#1 Roaming and Settlements - Today, **intermediaries control roaming partner settlements** and timelines for resolving any related issues can be as long as two months. This structure lends itself to **human errors, frauds, lack of transparency** and most importantly, a **poor customer experience**. Smart Contracts on blockchain can reduce/eliminate the role of intermediaries by automating the SLA agreements, which will provide a real-time view to all the stakeholders as well as make threshold breaches visible to all the involved parties immediately. In addition to the r**eduction in roaming fraud, cost savings and instant settlements**, blockchain-based Smart Contracts can help telecom players with quick dispute resolution through tamper-proof verifiable transactions and **real-time usage updates** to the end consumer.

#2 Identity Management- Today, the submission of identity documents like passport or driving license for processes like **Know Your Customer (KYC) is handled by multiple third-party agents.** While this is a critical process for telcos and the broader CSP ecosystem, it is fraught with **misuse and leakage risk** and is far from being simple and secure.

Blockchain solutions can allow for **decentralized storage** of these documents, with control remaining completely with the individual on who to share the documents with. The ability to record such events in an immutable manner will not only help **reduce instances of forgery** but also **curb the submission of fraudulent documents.** With telecom players adapting products and services for the world of Digital and 5G, blockchain solutions will be key to offering **Identity as a Service (IDaaS)** and act as the channel between the end consumers and digital services at large.

#3 SLA Monitoring – While many organizations are investing in automation, it's not unusual to see manual processes causing **vendor disputes and delay in settlements** due to difference in interpretation of SLAs. Blockchain-powered Smart Contracts can help limit such disputes by creating '**one version of the truth',** and offer transparency with real-time data. SLA data and KPI rules will be managed by smart contracts on the blockchain, and once a service is complete, a smart contract will decide the SLA status as 'good' or 'bad'. Based on the SLA status, the smart contract will then calculate charges or incentives, and payment can be issued accordingly.

#4 Prevention of Phone Theft - Currently, in case of phone theft, the process of blocking a phone is manual and can only be done by the mobile phone or network operator. Telecom operators today have limited capabilities to detect a stolen device and are reliant on a Global Operator Database, which requires periodic updation.

A blockchain solution can allow telecom service providers to **store unique device/SIM data on the blockchain** along with customer profile, **block a stolen device instantaneously** and also keep third parties informed of any change of status of a device. In case of theft, customer's home country operator can lodge a complaint (FIR) and put it on the blockchain, which would also enable telecom operators in other countries to detect the stolen device.

#5 Mobile Number Portability (MNP) – While most telecom operators aspire to deliver world-class customer experience, MNP service is particularly riddled with **high processing time and delays**, caused by various reasons including data mismatch between operators and periodic updation required of the local database from the central database.

This **process can be streamlined** with a blockchain solution that will act as one network where all service providers can review and action requests for MNP. With the availability of real-time, transparent, and immutable data on blockchain, telecom operators can **create a single source of truth** on the network. The solution's distributed ledger will also help **eliminate the possibility of single-point failure** as all service providers have access to the same data.

Other use cases for blockchain in telecom are emerging as industry participants prepare for 5G, including: a **telecom infrastructure marketplace** underpinned by blockchain for creating more agile, flexible, and on-demand business and procurement models, **payments through mobile wallet** with blockchain, **device identity and security management** as more IoT and edge devices enter the network; **managing new infrastructure sharing models** for lease management of 5G network between telco and network partners.

BLOCKCHAIN FOR BRINGING TELCOS INTO THE 5G ERA - THE FIVE KEY TAKEAWAYS

1. **Roaming and Settlements** fraud, human error, lack of transparency can be eliminated with smart contracts on blockchain.
2. **Identity Management** can be taken from multiple third-party agents and placed securely with Blockchain solutions which give greater control to the individual
3. **SLA Monitoring** can be made easier with blockchain-powered smart contracts which create 'one version of the truth'
4. **Prevention of Phone Theft** by storing unique device/SIM data on the blockchain, which will help identify and block stolen devices instantaneously
5. **Mobile Number Portability** can be streamlined with a blockchain solution that will act as one network where all service providers can review and action requests

BIG LEARNING:

While it's still early days for blockchain, the technology's relevance for telecom operators and CSPs has moved beyond being a concept, with use cases being identified every day and excitement about its application to solve some of the long-standing industry challenges. However, like with any new technology, blockchain is fighting its own set of problems with the telecom and CSP industry who either fear a dramatic change in ways of doing business or worse still, their extinction. However, the ecosystem needs to take a long term view of the current forces around Digital Transformation and explore Blockchain as a way to solve age-old industry issues, drive growth, launch new products and services and better still, evolve to fit the new world of digital.

WE DID THIS FOR THEM. WE CAN DO IT FOR YOU.

To learn more about blockchain use cases for your industry, reach out to us at askus@infosys.com

For more information, contact askus@infosys.com

Infosys®
Navigate your next