Blockchain in telecoms
Focusing minds

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Blockchain can work on many types of assets and functions in a decentralized fashion.

Quick reminder: blockchain is one of several types of distributed ledgers...

Source: GSMA Intelligence
In a word, it’s about trust

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Implication</th>
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</table>
| 1 The network bypasses the need for a central authority in charge of verifying transactions | • Faster new device and user registrations (e.g. SIM provisioning)  
• Faster microtransactions for device management (e.g. connectivity and maintenance costs)  
• Faster payments in payment-intensive apps, (e.g. smart parking, tolls, EV charging) |
| 2 Decentralised nature of DL networks | • No single point of failure in the network of devices  
• Microtransactions for SW/FW updates, track record of updates and SW versioning |
| 3 All participants share the same view of the network, and of completed and pending transactions | • Resolving disputes in applications where multiple stakeholders participate is easier  
• Increased transparency on the state of the network |
| 4 Participants have to record any interaction and any transfer of assets in a way that is visible to anyone in the network | • Increased trust among devices manufacturers, platform vendors, operators and end users  
• Known history of assets (e.g. smart products, software versions, devices) and fraud prevention |

Source: GSMA Intelligence
IoT will be 37bn ‘things’ by 2030

Enterprise deployments are driving the increase in the IoT connections base

Source: GSMA Intelligence
So, in theory, applicability is almost anywhere

**Industry-level potential blockchain uses**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Uses</th>
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<tbody>
<tr>
<td>Transportation</td>
<td>• Car-sharing and ride-hailing: customised mobility experience; driver information management</td>
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<td>• Electric vehicles: charging stations</td>
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<td>• Drones: landing pad management</td>
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<td>Supply-chain management</td>
<td>• Fast, reliable recording and execution of transactions</td>
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<td>• Order processing: real-time information on products</td>
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<td>Public administration</td>
<td>• Citizen ID and personal attribute management</td>
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<td>• E-voting</td>
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<td>• Authorisation of citizen documents</td>
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<tr>
<td>Telecoms and networks</td>
<td>• Core network operations: provisioning of SIMs; authentication of users</td>
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<td>• Digital services: user identity management</td>
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<td>• Cross-platform transactions</td>
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<td>Health and pharma</td>
<td>• Patient data management</td>
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<td>• Drug tracking</td>
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<td>• Drug monitoring across the supply chain</td>
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<tr>
<td>Energy and utilities</td>
<td>• Decentralised energy production and storage</td>
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<td>• Energy trading: facilitating peer-to-peer transactions</td>
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<tr>
<td>Real estate</td>
<td>• Real-estate asset management</td>
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<td></td>
<td>• Contract and transaction management</td>
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<tr>
<td>Manufacturing</td>
<td>• Industrial robotics</td>
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<td>• Traceability of parts</td>
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<td>• Regulations and quality standards compliance</td>
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</tbody>
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Source: GSMA Intelligence
In reality, minds are focusing on fewer bets

**IoT verticals**
- Home and wholesale energy
- Automotive and logistics
- EV charging

**Identity and Roaming**
- SIM verification
- Roaming settlement platform
- Network capacity provisioning (e.g. slicing)
- Smart contracts

**Media**
- NFT
- Content security
- Ad tech

**Fintech**
- Settlement platform
- Crypto payments
Roaming example

Business models play to scale + speed to mkt

What would MOST make roaming simpler?

- Consolidating key roaming business operations (e.g. invoicing, settlement) at Group Level: 28%
- Work with roaming hubbing provider: 27%
- eSIM: 19%
- Decommissioning 2G and 3G networks: 13%

Hub providers get closer to a ‘one stop shop’

Source: GSMA Intelligence survey of GSMA WAS group (August/September 2021). See Radar: roaming in a post Covid world (October 2021)
GSMA Intelligence
Who are we? What do we know?

Serves 800 organisations
40,000 users worldwide

Data
1,400 Mobile operators
80 Operators groups
5,000 Networks
30M Data points updated daily

Research
130+ Reports annually
1M Report downloads in 2019
100+ Global, Regional & Topical Research, Deep Dives & Analysis

Pinpoint accuracy
Five-year forecast consistently accurate within +/- 2.5% of reported data, updated quarterly

50+ Analysts & industry experts
Supporting the business strategy of our subscribers and the wider ecosystem
Thank you

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