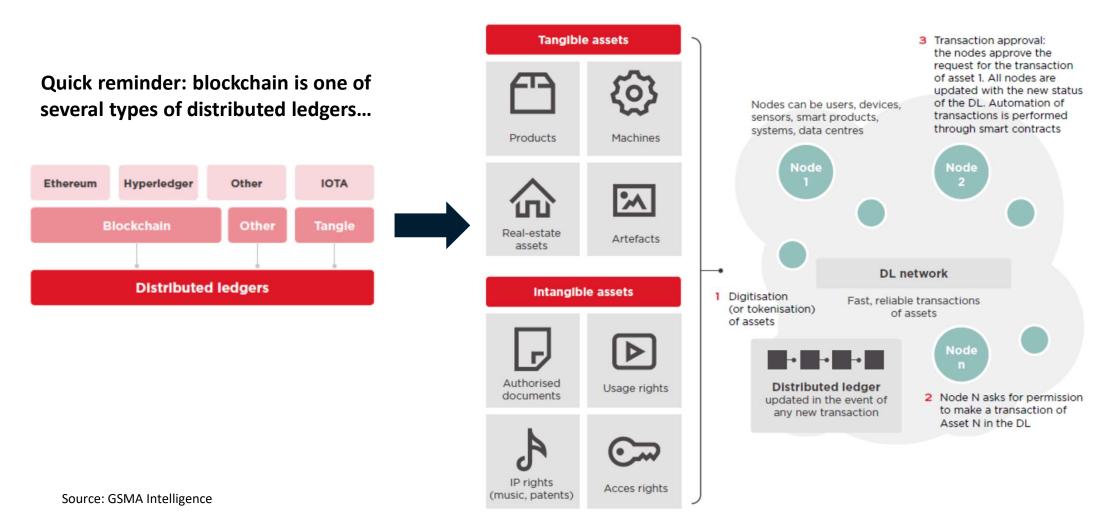






### Blockchain can work on many types of assets

#### ...and functions in a decentralized fashion



### In a word, it's about trust

#### **Benefit**

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)

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

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

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

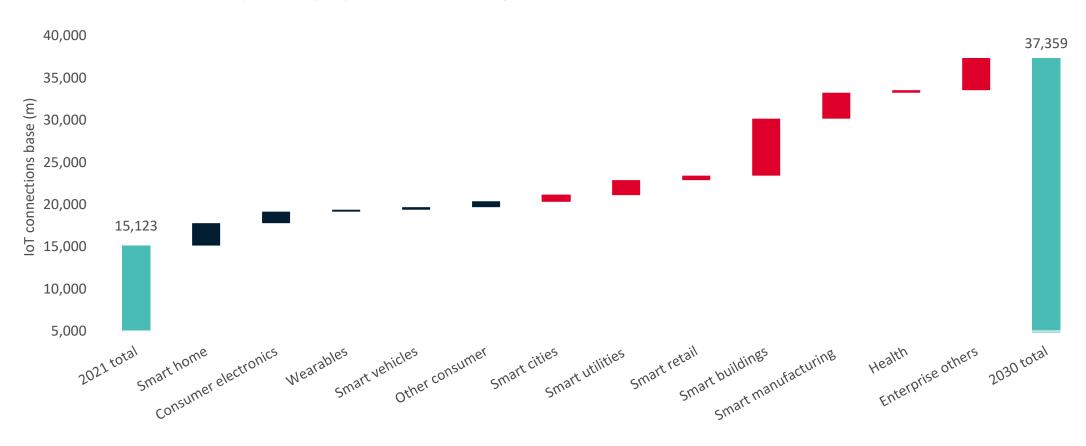
√ Streamline IoT technology

√ Improve IoT vertical value proposition

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**

	Transportation	<ul> <li>Car-sharing and ride-hailing: customised mobility experience; driver information management</li> <li>Electric vehicles: charging stations</li> <li>Drones: landing pad management</li> </ul>
<b>T</b> -3	Supply-chain management	<ul> <li>Fast, reliable recording and execution of transactions</li> <li>Order processing: real-time information on products</li> </ul>
窳	Public administration	<ul> <li>Citizen ID and personal attribute management</li> <li>E-voting</li> <li>Authorisation of citizen documents</li> </ul>
(( <u>A</u> ))	Telecoms and networks	<ul> <li>Core network operations: provisioning of SIMs; authentication of users</li> <li>Digital services: user identity management</li> <li>Cross-platform transactions</li> </ul>
Ų	Health and pharma	<ul> <li>Patient data management</li> <li>Drug tracking</li> <li>Drug monitoring across the supply chain</li> </ul>
4	Energy and utilities	<ul> <li>Decentralised energy production and storage</li> <li>Energy trading: facilitating peer-to-peer transactions</li> </ul>
命	Real estate	Real-estate asset management     Contract and transaction management
<u>~</u> [	Manufacturing	<ul> <li>Industrial robotics</li> <li>Traceability of parts</li> <li>Regulations and quality standards compliance</li> </ul>

Source: GSMA Intelligence

## In reality, minds are focusing on fewer bets

#### IoT verticals

- Home and wholesale energy
- Automotive and logistics
- EV charging

#### Media

- NFT
- Content security
- Ad tech

### **Identity and Roaming**

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

#### **Fintech**

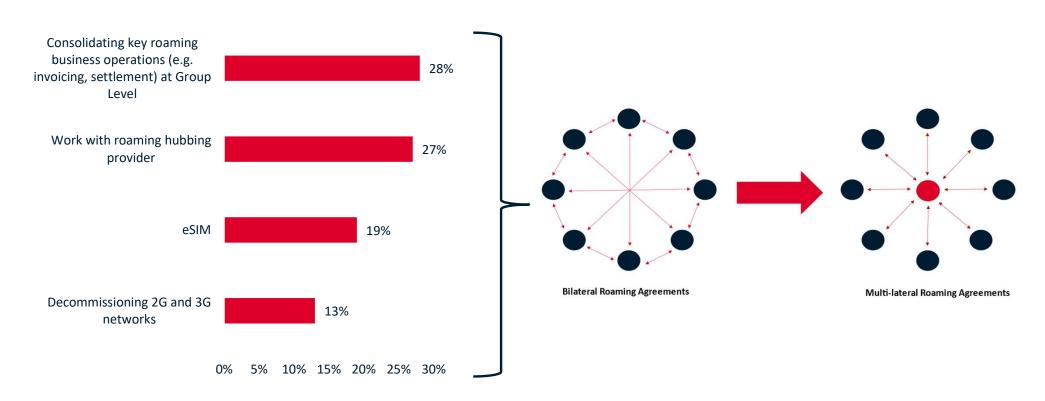
- Settlement platform
- Crypto payments

### Roaming example

Business models play to scale + speed to mkt

#### What would MOST make roaming simpler?

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?



40,000 users worldwide

Data





groups





Research





in 2019



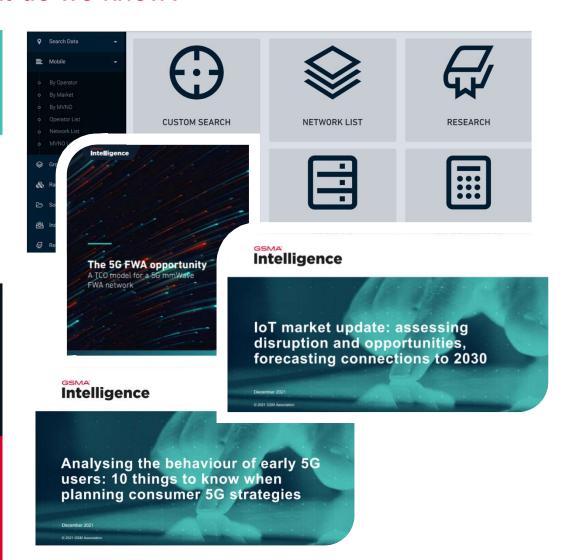
Global, Regional & Topical Research, Deep Dives & Analysis



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



Supporting the business strategy of our subscribers and the wider ecosystem





# Thank you

Tim Hatt, Head of Research and Consulting <a href="mailto:thatt@gsma.com">thatt@gsma.com</a>