IOTA

What is IOTA?

A non-profit open-source technology organization and inventor of the Tangle, a distributed ledger and protocol for the Internet of Things.

How is it different from blockchain?

IOTA solves Blockchain's problems of scalability, energy requirements, data security, and transaction fees.

The technology advantage

The Tangle is a directed acyclic graph (DAG), meaning no blocks, no miners, and no fees!

MOBILITY

ABI Research predicts 8 million consumer vehicles with self-driving capabilities shipping in 2025.

Cars can Communicate

Car data can be securely transmitted via the Tangle to other cars or machines.

Cars can Pay

Autonomously for parking, battery charging, tolls, and other services.

Over-the-Air Update

Cars are safer/more reliable via real-time software updates.

Car Digital Twins

Tracks vehicle usage and ownership enabling fraud prevention, pay-per-use and usage-based insurances.

Cars can Earn

Transacting data about potholes, traffic congestion, weather conditions and more.
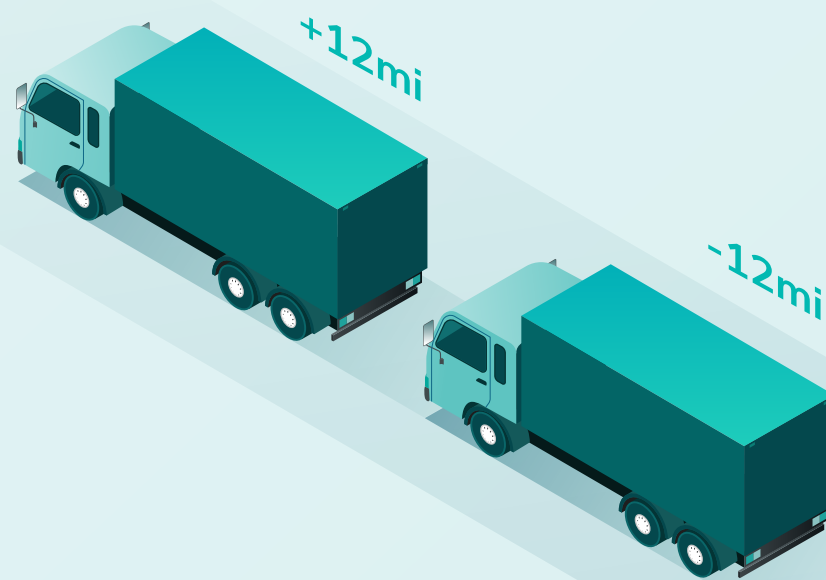
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Earn as you drive with Jaguar Land Rover

PLATOONING

Allows trucks to drive semi-autonomously, reducing distance between each other, creating improved fuel efficiency and safety. With IOTA, trucks can compensate each other for the differences in fuel savings.

+12mi

-12mi

SUPPLY CHAIN & GLOBAL TRADE

Roughly 10% of supply chain goods are fraudulent.
The supply chain lacks traceability, transparency and trust.

Immutable audit trail keeps encrypted hash of logistical updates.

Data integrity: Original documents and events reported to authorized actors provide process transparency and access.

Track & trace: Includes geo-location, transfer of ownership/custody, and real-time data about conditions such as temperature, humidity, etc.

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How IOTA tangle technology will impact the future of supply chain

EHEALTH

Granting the power to share and creating a new model of healthcare. IOTA secures patient data & democratizes access.

Research Data Integrity

IOTA ledger can prove the integrity of research data.

Remote Patient Monitoring

IOTA (MAM) protocol secures data streams from remote sensors using healthcare interoperability standards.
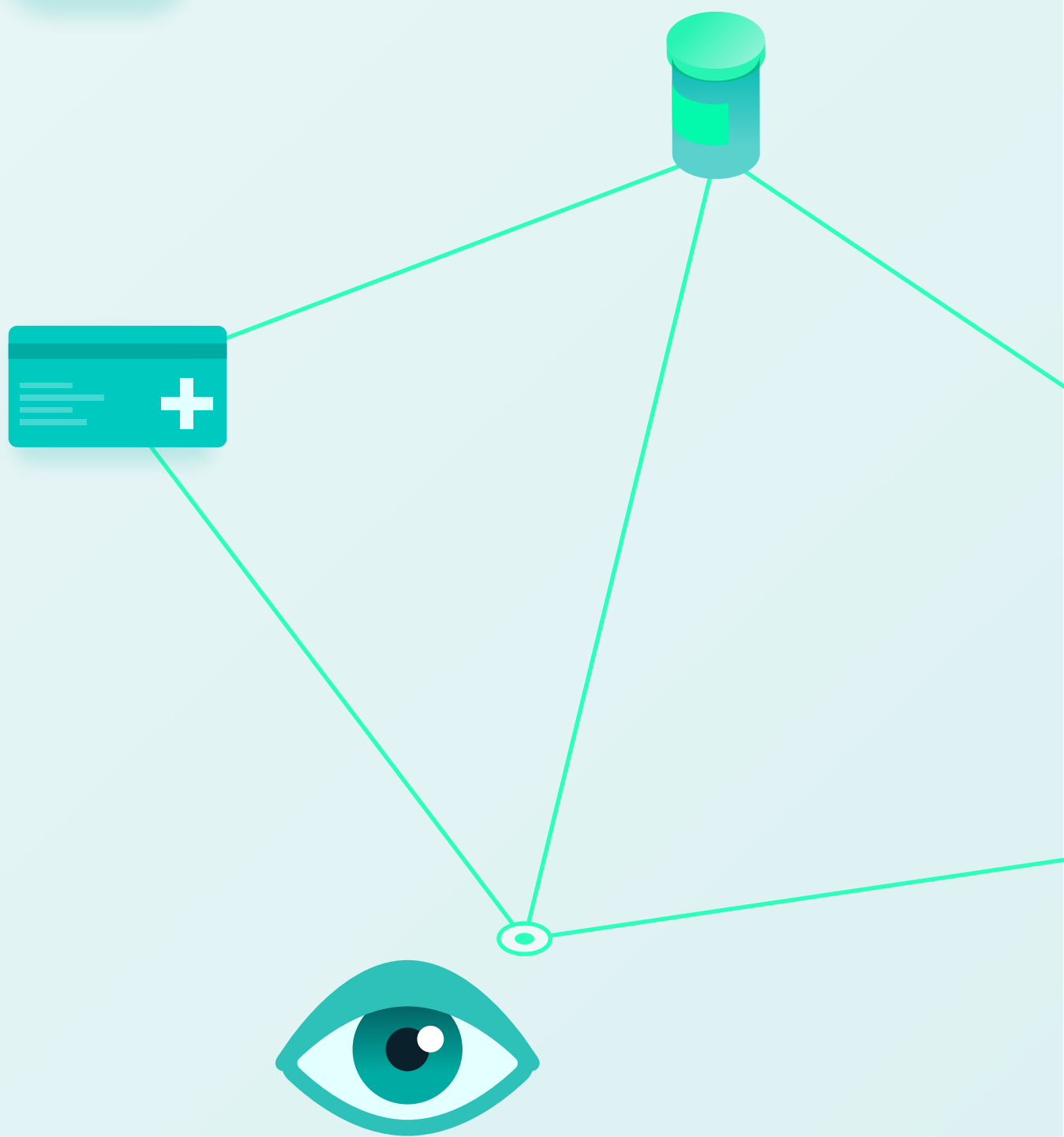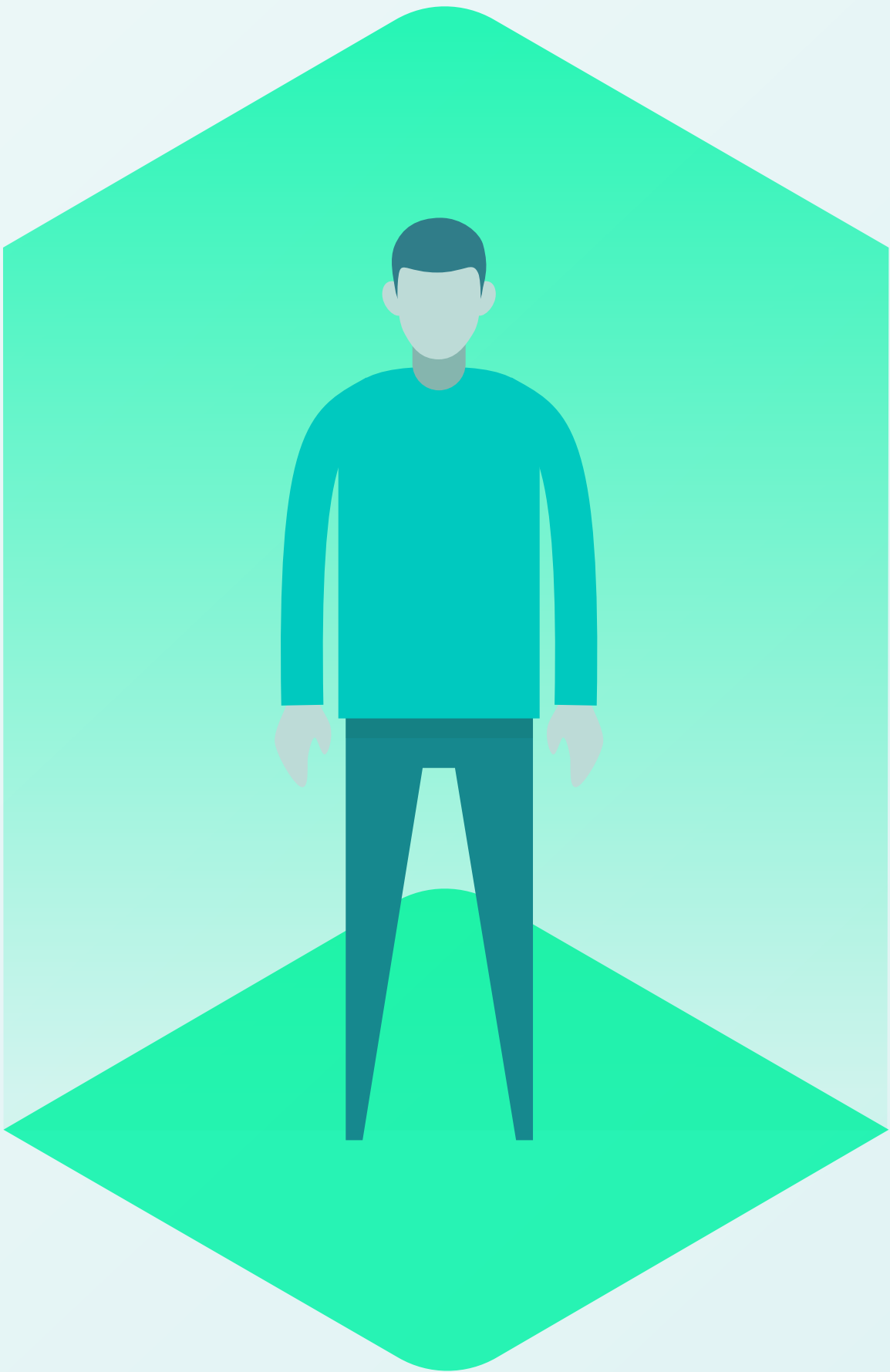
Pharmaceutical Trials

Securing an immutable record and process of drug trials by logging every step and test result onto the Tangle.

Health Data Exchange

The MAM protocol allows for granular and secure data exchange between healthcare providers, citizens and caregivers.
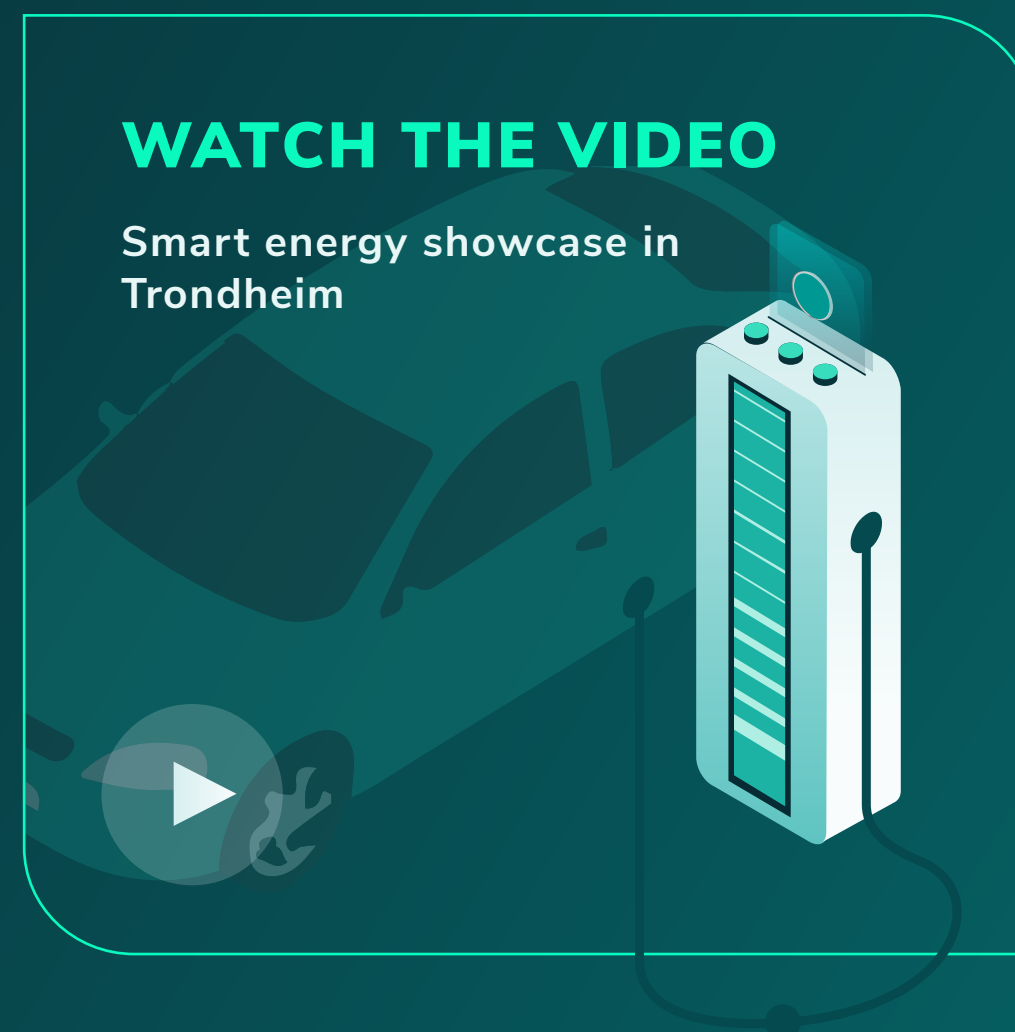
SMART ENERGY

The nature of the IOTA Tangle – scalable and zero-fee secure communication and transaction protocol, which has disruptive potential in the energy industry.

Decentralised **Peer-to-Peer energy trading** and autonomous "flexibility" markets can shape self-sufficient positive energy communities

Seamless **EV Smart Charging** based on Plug & Charge / M2M micro-payments

Sustainable energy traceability and REC tradeable certificate provenance

Remote control of energy assets and demand Response system for grid stability / peak shaving

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Smart energy showcase in Trondheim

INDUSTRIAL IOT

An IOTA-enabled smart factory logs commands & an encrypted hash is securely stored in the Tangle. Only the hash is stored in the Tangle, creating a tamper-proof audit trail.

An integrated dashboard gives authorized users an overview of the machines' audit trail, with automated data integrity checks and remote machine control.

Finished products leaving the factory seamlessly become part of the smart supply chain; all actors can access relevant information based on the digital twin concept.

Machine owners can lease out the production line to the highest bidder. Manufacturers can use them as-needed without ownership overhead.

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IOTA industry 4.0

ENVIRONMENTAL HUMANITARIAN IMPACT

50K+ Species Go Extinct Every Year from Rainforest Deforestation

Carbon credits are used to track environment-friendly purchases/investments, but are hard to track and easy to forge. Now simple sensors can detect and monitor fires or trees being cut. CO_2 emissions can be precisely measured and evaluated. The data stored in the Tangle allows real-time action

Identity for Refugees

1.2B people don't have a government acknowledged identity. People can be trapped in refugee camps for years, simply due to missing paperwork. "Unified Identity" requires only your own body to ensure the human right to a personal identity. Through a palm vein scan, retinal scan, or other biometric identification, people can be identified quickly and easily. IOTA's distributed ledger technology allows records of health and identity, work performed in camps, & educational credentials to be securely validated, providing an immutable audit trail, never to be manipulated and only seen by those granted access.

Empowering Local Communities

Indigenous people living in the Amazon reduced from 10M to 200.000 in 50 years The globalizing world forces these populations to sell their land for agricultural purposes or even escape with no reimbursement. IOTA's tamper-proof technology enables communities to earn and sell carbon credits directly to those interested in proving the authenticity of their efforts to secure a future for life on the planet.

IOTA

THE FUTURE OF IOT

EXPLORE MORE AT
www.IOTA.org