

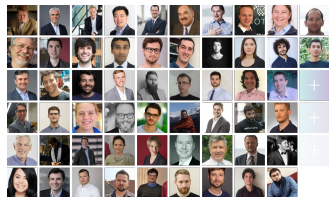
Enabling the Smart City

February 2019

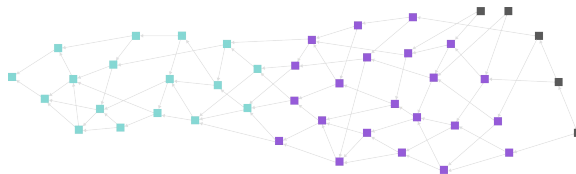
About IOTA



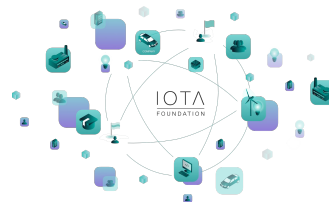
A Global Team



Open-source Permissionless DLT For The Internet of (Every)Thing



A global, cross-industry co-creation ecosystem



Non-Profit Foundation registered in Berlin

90+ employees in more than 15 countries

To research, develop and grow real-world
market adoption of the IOTA Tangle and
accelerate the ecosystem



Highly
Scalable



Zero-fee
transactions



Low resource
requirements



Secure data
transfer



Offline
transactions



Quantum
resistant

Open-source Tech & Modules

Blueprints & Reference use cases

Matchmaking and talent sourcing

A Global community developers,
innovators & thought leaders

Smart Cities is the fastest growing innovation area in the IOTA ecosystem



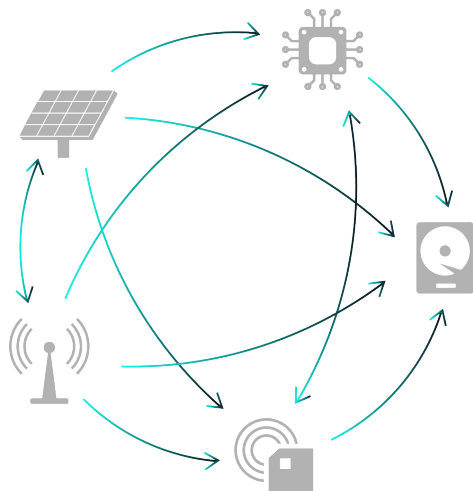
Natural Environment									
Infrastructure (Non ICT-based)									
Infrastructure (ICT-based)									
Services	Smart Buildings	Education & Tourism	Smart Energy	Smart Healthcare	e-business	Waste Management	Smart Transportation	Smart Water	e-government
Citizen Experience									

The world is becoming more and more urbanized. By 2040, 65 percent of the world's population will be living in cities. 1.3 million people move into cities every day. Ubiquitous connectivity, big data and analytics are enabling Smart City initiatives all over the world.

IOT-M2M platforms will reduce the time, cost, and risk to connect multiple systems in a city, improving infrastructure, creating more efficient and cost effective municipal services, enhancing public transportation, reducing congestion and keeping citizens safe and more engaged in the community.

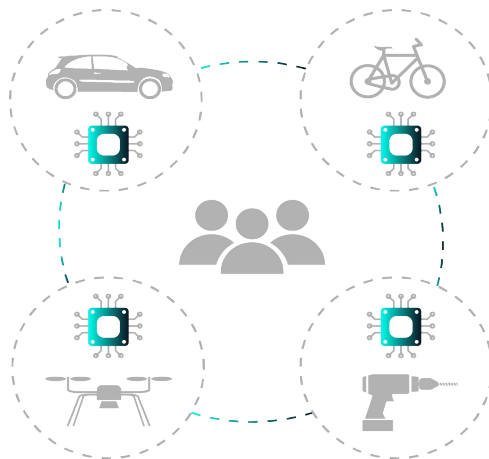
IOTA opens up a new IoT/M2M innovation landscape

Machine to Machine Economy of Things



Devices trade resources
among each other with
P2P IoT Data Marketplaces

Smart Sharing Economy



Anything with a chip
can be leased

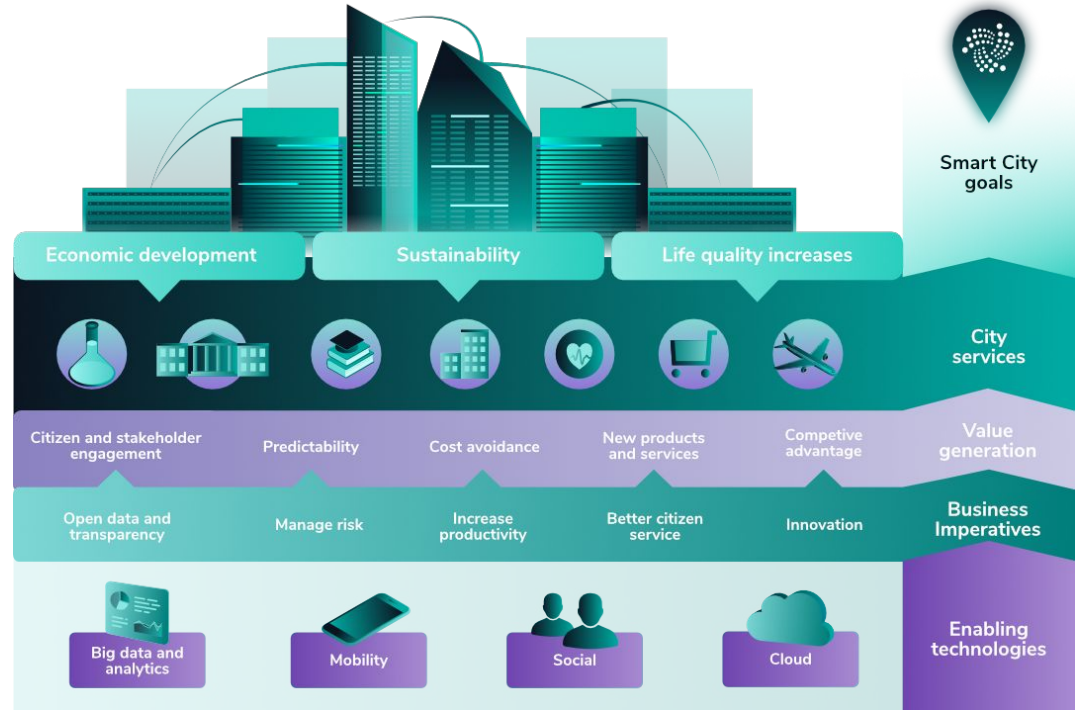
Citizen Centric Innovation *“GDPR as an opportunity”*



Citizens can control and share
their personal and user data
securely & privately

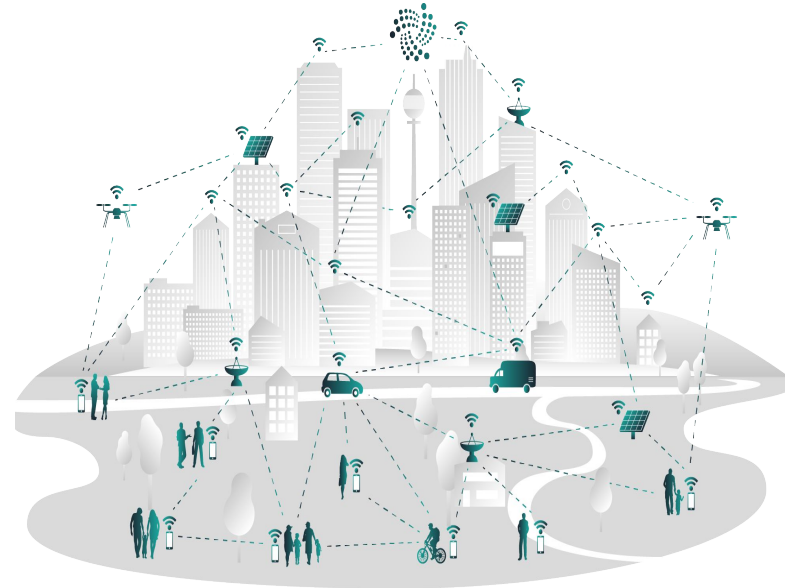
IOTA - Enabling Smart City Services

IOTA enables trusted and secure data transfer and auditing capabilities, fostering interoperability to accomplish smart city goals through collaboration.



Principles of an IOTA enabled Smart City

- Enable a great presence of Information and Communication Technologies (ICT) in critical infrastructure components and services; accessed through **IOTA Secure Storage in a Decentralised Ledger**.
- Incorporate a wide range of devices, interconnected on a single network, and used for transmitting personal, financial, and business data perpetually moving freely. Achievable with the **IOTA Data Marketplace using MAM enabling the storage, exchange and Trade of Data securely**.
- Create an ensured system of smartly coordinated devices (public transportation, traffic lights, optimized use of electricity, water, etc.) will result in the reduction of acute global problems that we are facing today; **Done with the IOTA Tangle for opening up Silo's of Data for a Community Driven System**.
- Foster a growing presence of public participation in the city government ('public power') by enabling **Citizen Sovereignty driving Data ownership and curation via Data marketplaces and public infrastructure connections**.
- Facilitate the growing importance and value of local economies, run by local communities, contributing to local priorities.



SMART CITY STARTS WITH A SMART COMMUNITY



Making IoT & Machine to Machine Citizen Centric



*Self Sovereign
Digital Identity*

*Personal Data
Management*

*Cross Border
Verifiable
Credentials*

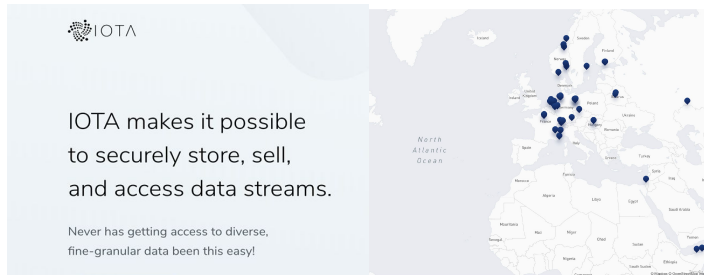
**IOTA AND USER-CENTRIC
DATA INNOVATION**

An IoT Data Marketplace platform



An Open Source Proof of Concept

80+ participants across industries and regions



The Data Marketplace PoC

Connected devices and sensors can now get paid through zero fee micropayment for sharing securely their data streams

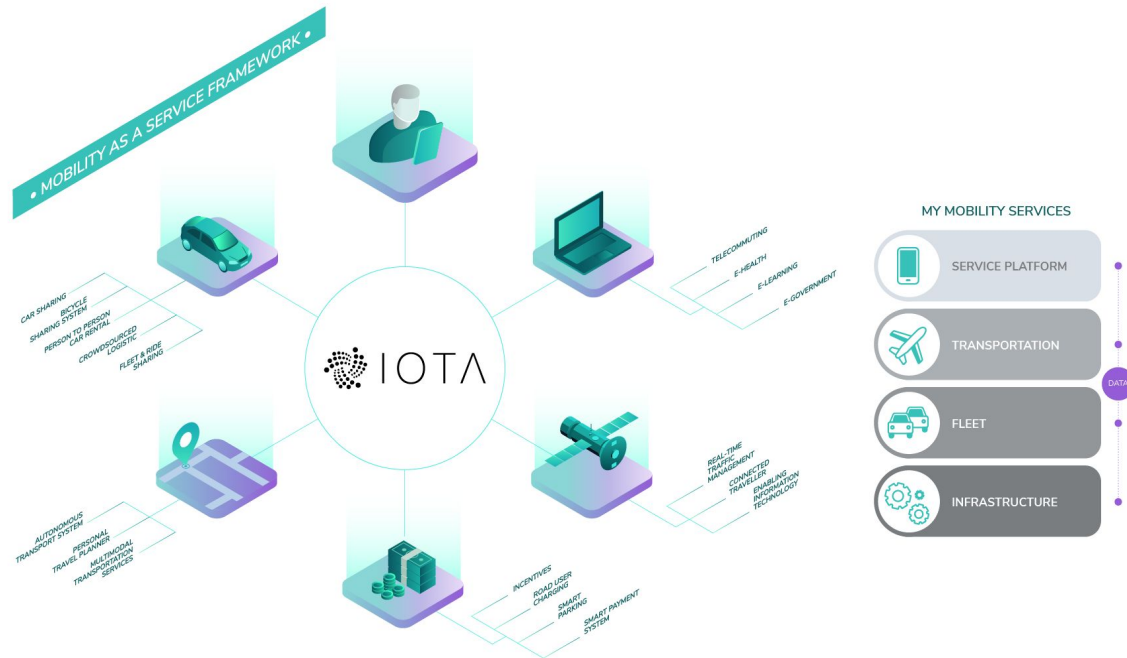


Since Nov 17, IOTA develops a Data Marketplace PoC

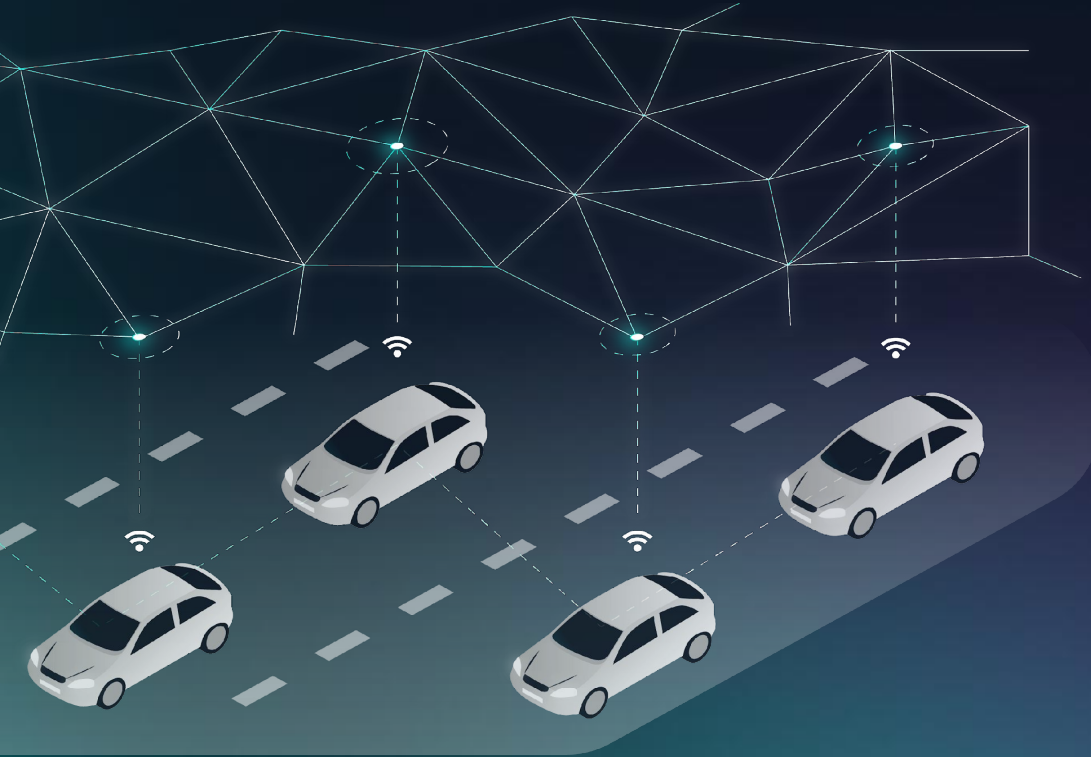
Mobility as a service - User Centric and Tailored to Individuals

“Get me from point A to point B”

- Routing, travel mode
- Booking, ticketing, payment
- Digital ID
- Loyalty, rewarding
- Shared mobility instead of privately owned
- Autonomous & economic agents



Over the Air (OTA) Secure Software updates

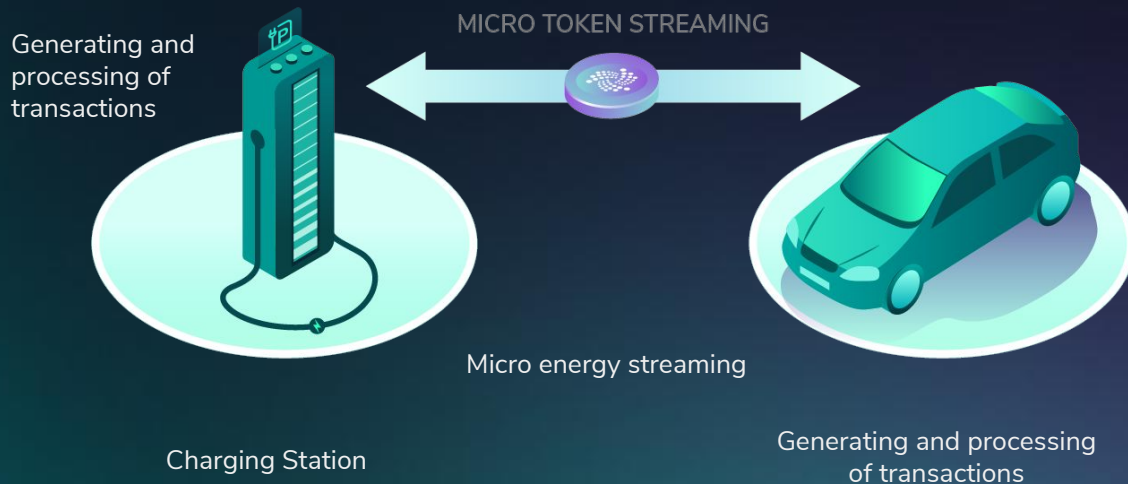


- Authenticity and Security of OTA Updates
- Secure audit trail of the software history
- Fleet management security

Smart Charging infrastructure



REAL TIME TOKEN STREAMING BETWEEN EXCHANGE MODULES



SCALING ABILITY



INSTANTANEOUS VALIDATION OF
NANO-PAYMENTS AT HIGH VOLUME

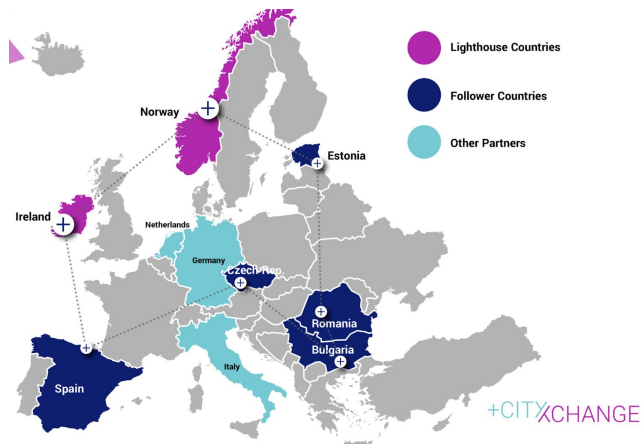


NO NEED FOR SMART CONTRACTS



EXPONENTIAL DECAY OF
TRANSACTION COSTS

Positive Energy Districts towards Green Smart Cities



EU Horizon 2020

7 European smart cities

> 10 Testbeds

Smart decentralised energy
marketplace

32 partners incl authorities,
business and academia

20M EUR Grant

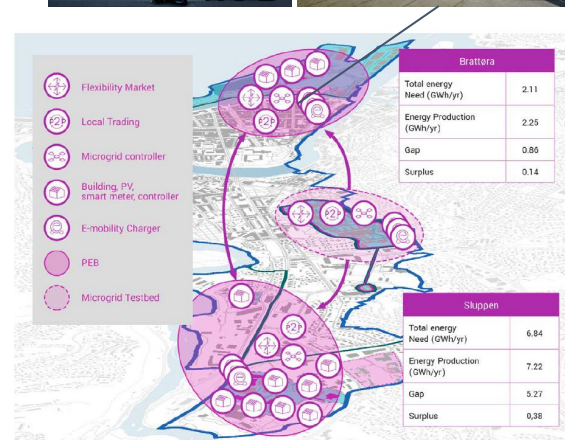
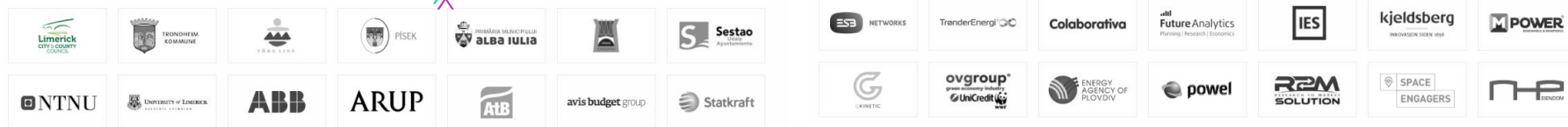
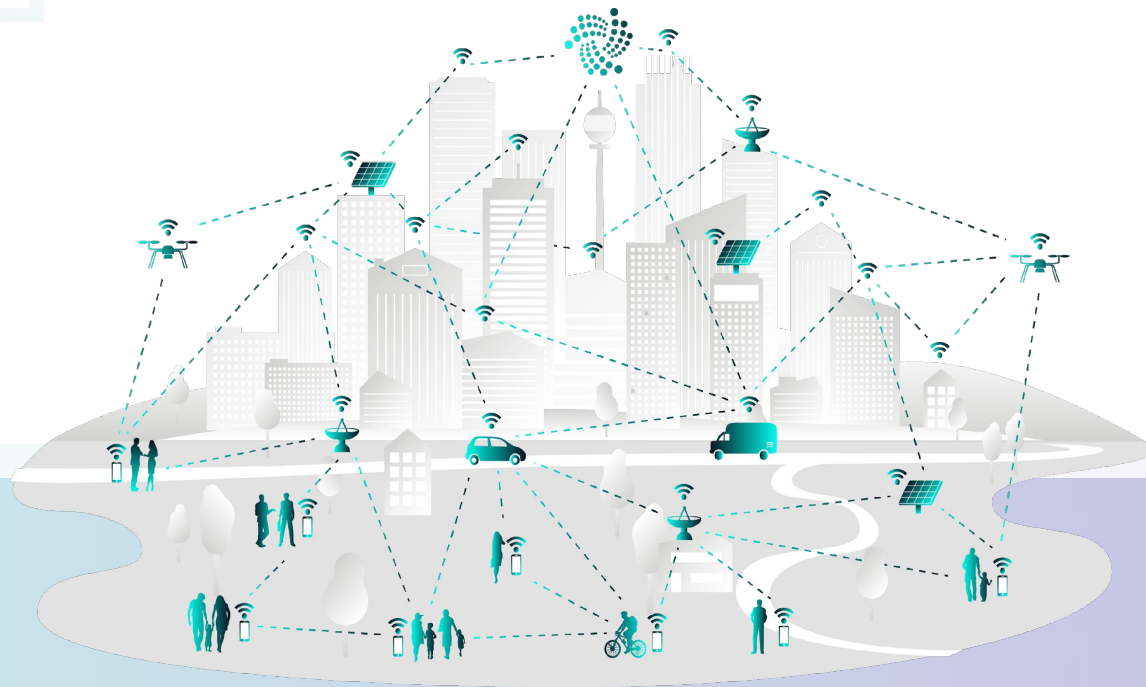


Figure 31: Trondheim DPEBs at Sluppen-Tempe and Brattora



A Global Smart City Alliance



The need for a combined effort of existing initiatives throughout Europe, Southeast Asia and the US.

Get in touch with the IOTA Foundation



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