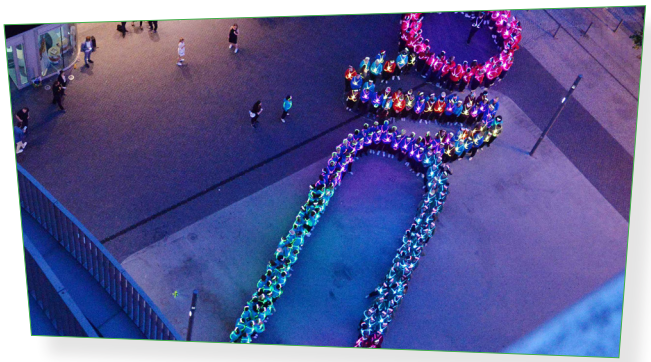
innogy's Digital Product Memory - "Every Product Has a Story"



innogy's project the Genesis of Things leads to a future where we know the exact provenance and authenticity of everything we touch, see, feel and taste, thus solving many of the problems in today's global supply chains.

KEY DETAILS

- innogy, a large, multi-faceted energy company based dominantly in Europe, focuses on renewables, grids, infrastructure and retail.
- Blockchain technology is utilized by innogy for, among other things: the logging of so-called "smart meter data"; the creation peer-to-peer energy cooperatives; energy wholesaling; confirmation, settlement and billing; "blockchainifying" micro-grids and energy flexibilities, such as batteries.
- As part of the Genesis of Things project, a trusted, encrypted and open platform for the entire 3D printing supply chain is being built on blockchain technology. This approach allows intellectual property to scale globally and stay protected; each printed product has its own ID and digital product memory.

MAIN PROBLEM THEY ARE ADDRESSING

- Current supply chain management is lacking efficiencies due to disparate component parts with no provenance, traceability or interoperability.

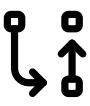
HOW THEY ARE ADDRESSING THE PROBLEM

- By adding digital product memory to the component parts of items in the supply chain, a host of benefits emerge. For instance, each product receives a cryptographically secure ID and a digital product memory, which enables:

Proof authenticity and ownership,

Back-to-birth traceability of a product

The ability to "talk" with each other



The optimization of the entire product life cycle

Future reproduction

- Additionally, with the transparency the digital product memory is providing via immutable data records stored in BigchainDB, the "trust tax" in supply chains can be radically reduced.

HOW BIGCHAINDB IS HELPING

- ID numbers are written on to BigchainDB, giving physical pieces a digital product memory. Storing digital product memory in BigchainDB also allows for querying.
- BigchainDB allows for the blockchainifying of other databases and has no single native language, meaning existing query languages and legacy systems can be used.
- Scalable infrastructure enables authenticated IoT data from their smart meters and batteries to be stored into the database to put their algorithms into the database.

LOOKING AHEAD

- The Genesis of Things project envisions a future where everyone has access to manufacturing assets, open designs and supply chain data. The next step is to scale and market the digital product memory which leads to interoperability of trusted data records along the supply chain.

"BigchainDB powers the machine economy."

Dr. Carsten Stöcker is the Machine Economy Innovation Lighthouse Lead at innogy SE, and a co-founder of Genesis of Things. He is a physicist by training with a PhD from University of Aachen. He also serves as a Council Member of Global Future Network for the World Economic Forum. Prior to joining innogy SE, Dr. Stöcker worked for the German Aerospace Center (DLR) and Accenture GmbH.

innogy

innogy SE is an European energy company. With its three business areas of renewables, grid & infrastructure as well as retail, it addresses the requirements of a modern, decarbonized, decentralized and digital world. The focus of innogy SE's activities is on offering existing and potential customers innovative and sustainable products and services which enable them to use energy more efficiently and improve their quality of life. *www.innogy.com*