

# Bosch Research

## Economy of Things – Contributions to the community

### **Tokenomics: incentive and remuneration systems make global digital cooperation platforms economically efficient**

When Catena-X Automotive Network e.V. officially starts its work this September, the big question will be how to successfully build up Catena-X as a rapidly scalable ecosystem in which everyone involved in the automotive value chain can participate equally, and do so cost-effectively despite the complexity of this ambitious project. The aim is to create an ecosystem for the establishment, operation and collaborative use of end-to-end data chains along the entire automotive value chain in Europe – and beyond. The principles of GAIA-X are also to apply to applications in the automotive industry, meaning the exchange of data and information should be simple, efficient, self-determined, and secure, all at the same time.

“For digital cooperation platforms to realistically be successful, everyone involved has to be fully aware, before the first line of code is even written, of what they are contributing to the success of the platform and how they will be involved in its overall success,” says Dr. Tanja Rückert, Chief Digital Officer (CDO) of the Bosch Group. “In the case of Catena-X, GAIA-X, and other digital projects for trading digital goods, we as a team should clearly specify the conditions under which contributions to the development and use of the platforms can be made, what co-determination rights each individual party has today and will have in the future, and how a system as a whole can develop cost-effectively and in line with European values.” When these usage rights are mapped out digitally, they are referred to as crypto tokens, and the overall approach is called tokenomics.

Bosch sees potential in principle – also in the context of GAIA-X and Catena-X – in the introduction of tokens and tokenomics as mechanisms for implementing digital participation and co-determination. “Previous large-scale cooperation projects involving data platforms have shown that conventional organizational structures are not conducive to working efficiently in the long term. At the same time, we also know that a fully decentralized digital platform cannot replace an organization. For that reason, we aim to combine technical decentralization and central management bodies to ensure the best possible economic system,” explains Dr. Nik Scharmann, Project Director of the “Economy of Things” strategic advance engineering project at Bosch Research.

“Anyone working with AIoT like Bosch is, i.e. combining networking and artificial intelligence, has to fundamentally rethink their understanding of interactions in the digital space. We all rely on an incredible number of contributions from within the community – from supplying data to train an AI system, to deriving knowledge and operating a technical infrastructure that works efficiently, while also meeting our stringent data protection and privacy standards. That is why incentive and remuneration systems such as tokenomics are essential to ensuring global digital cooperation is successful for everyone,” says Tanja Rückert.



***More about tokenomics and the principles of an efficient digital platform economy:***

Lamberty, R.; de Waard, D; Poddey, A. (2020): Leading Digital Socio-Economy to Efficiency – A Primer on Tokenomics. Available online at <https://arxiv.org/abs/2008.02538>.

Lamberty, R.: (2021): What does tokenomics mean for the Internet of Things? Available online at <https://www.bosch.com/stories/research-tokenomics/>.

Poddey, A.; Scharmann, N. (2019): On the importance of system-view centric validation for the design and operation of a crypto-based digital economy. Available online at <https://arxiv.org/abs/1908.08675>.

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