





Digitalisation and Blockchain – moving into implementation for climate action

The Liechtenstein Blockchain Act - Token economy for climate action?

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Outline

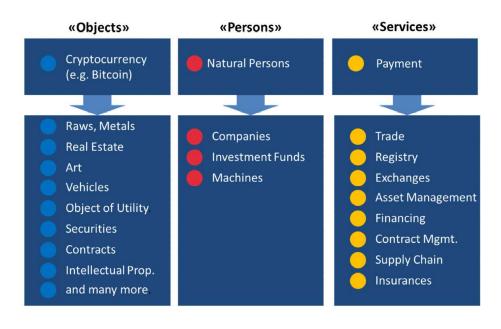
- What is a token?
- Token Economy for Climate Action What are potential applications?
- Token Economy and the Liechtenstein (Draft) Law for Trusted Technologies
- Outlook



What is a token?

A token is:

- a network vehicle which contains a specific information (a container);
- clearly attributable to one person and can be securely transferred to another person (peer2peer).
- unique, since it cannot be copied. It fulfils the ideal conditions for digitalising money, assets and intellectual property.



Source: Government Consultation Report and the Draft-Law on Transaction Systems Based on Trustworthy Technologies (Liechtenstein Blockchain Act), 2018





Token Economy for Climate Action – potential applications

Tokens can represent	a small share in a company, for example, one m ³ wood from sustainable forests, one ton of CO2e reduction, 1 kWh of solar energy; an insurance policy against drought or flooding; the confirmation of the use of specific GHG measurement devices, the proof of the use of public transportation
Tokens can be used as	ownership titles, means of payment for certain services, vouchers to use specific services (public transportation)

or benefits (tax reductions), digital keys for electric cars, quality certificates, or proof for earmarked payments

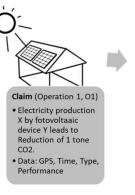
Source: CLI Navigating Report 2018





Token Economy for Climate Action – potential applications

Creating token value by assembling unique information based on a sequence of events.





Verification of Claim (Operation 2, O2) • Application of the relevant grid emission factor to electricity produced • Calculation of the the amount of CO2



Generation of a Climate Action Token

• One ton of CO2 reduction • Token contains information on O1 and O2



Claim (Operation 1, O1) • Purchase of e-car • Ownership title • Data: GPS, Time, Type, Performance



Verification of Claim (Operation 2, O2) • Confirmation of e-car purchase • Confirmation of e-car registration • e-cars (growing) and cars with combustion engine (declining)



token
Token contains information on O1 and O2
Valid as long as car is registered



Claim (Operation 1, 01) • Deployment of one Biogas installation • Promotion of renewable energy – supporting biogas installations • Data: GPS, Time, Type, Performance



Verification of Claim (Operation 2, O2) • Confirmation of installation purchase • Confirmation of installation deployment • Increase of share of



Increase of biogas



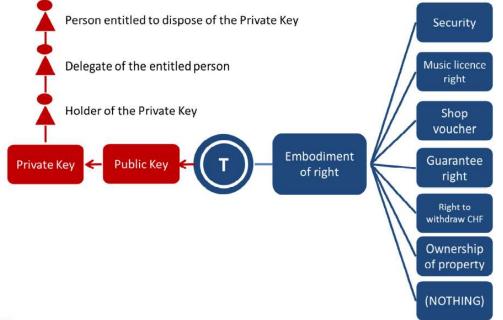
Generation of a Climate Action Token

 Deployment of one biogas installation

• Token contains information on O1 and O2



Token Economy and the Liechtenstein (Draft) Act for Trusted Technologies



With the "TOKEN" the TT Act introduces a new legal element which represents rights of all types on a TT system.

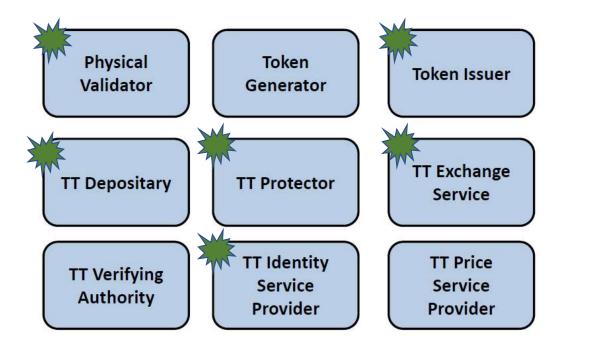
CLIMATE LEDGER

Source: Government Consultation Report and the Draft-Law on Transaction Systems Based on Trustworthy Technologies (Liechtenstein TT Act), 2018

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Token Economy and the Liechtenstein (Draft) Act for Trusted Technologies



TT Act introduces

basic roles of token economy (e.g. new service providers),

CLIMATE

- Due diligence obligations (AML/KYC provisions) and obligation to public registration for TT service providers, *
- Provisions for user protections (compulsory publication of basic information on token issuance, including liability clause.

Source: Government Consultation Report and the Draft-Law on Transaction Systems Based on Trustworthy Technologies (Liechtenstein TT Act), 2018





Outlook

- TT Act of Liechtenstein establishes a promising framework to support the evolvement of the token economy.
- The framework provides legal certainty for users and service providers.
- The introduction of AML/KYC provisions as well as user protection clauses may facilitate the tokenization of climate outcomes for result based finance).
- Challenges remain in terms of
 - cross boarder operations (no unified legal treatment of token transfers yet, neither on EU nor UN / WTO level);
 - lack of international standards.





Thank You!