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PREPARATORY ACTION ON
Smart Rural Areas
in the 21st Century



Stanz Token

*Examining opportunities to combine a digital local
currency with a renewable energy community in Stanz
im Mürztal.*

Final Version

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The current document contains extracts from the report entitled

‘Stanz Token’: Examining opportunities to combine a digital local currency with a renewable energy community in Stanz im Mürztal

Missing pages

9. Conclusion and Outlook

Before proceeding with the project, a decision on the scope and content of the future development needs to be made. Overall, there are several options for future initiatives.

First, it is possible to still focus on a co-development of Stanz Energy Token and Stanz Voucher Token. The discussion in the preceding section clearly shows that a co-development and integration of a fully functional DLC based on energy tokens created within an REC, adds large amounts of complexity to the design process and can lead to challenges due to competing goals, different fundamental design features and practical considerations. While certainly feasible, it doesn't seem advisable considering the current stage of development of both systems.

Another option lies in the parallel development of the Stanz Energy Token and the Stanz Voucher Token. While this is certainly possible, it is not recommended for two reasons. Developing two projects at the same time might strain existing resources in terms of financial as well as personal resources. Furthermore, system development requires making decisions on concrete technical implementations. Once these decisions are made, a certain lock-in is created, reducing the flexibility for a potential future integration of the two systems.

A third option is to focus on the development and implementation of one system. The project team recommends this option with a focus on the development of the Stanz Energy Token. There are several reasons for this. The analog version of the Stanz Voucher Token is a well-established system that is running smoothly with low overhead costs. As the analog version of the system will be continued in any case, a digitalization of this system is expected to add only marginal value. Especially, when considering the costs of system development. In contrast, the REC Stanzertal can immediately benefit from a flexible solution for documenting and managing the assets of the REC and its members.

With regards to the design, technical specification and implementation of the token economic system, it is recommended to follow established procedures. After having gained a clearer picture of the envisaged functioning of the system, next steps consist of a formal specification of the economy and the translation of business requirements into more formal language.

A formal, mathematical specification of the economy allows an analytical analysis as well as an analysis based on simulations. These types of analysis are important for complex, multi-stakeholder systems. Normally, in such systems unexpected behavior emerges leading to unexpected system states. Simulations can help discover and counteract such aberrations. Also, systemwide behavior can be shown and analyzed.

In addition to these analytical aspects, a translation of the business logic of the system into more formal, technical requirements forms the basis for the actual implementation of the system. This includes decision on and prioritization of concrete functional requirements of the system as well as detailed non-functional requirements for the system. Based on this work a first prototype with core functionality can be implemented.

It is strongly recommended that this work has a very narrow focus (e.g. energy flows in connection with the PV-installation on the roof of the primary school) in order to make fast progress and increase learning rates. Once a limited prototypical system is established and deployed this can form the basis for adding further functionality. Furthermore, a system with limited scope can be used to experiment with different mechanism design, parameter values of the system and policy choices without having a negative impact on the larger community in Stanz.

Parallel to the technical design of the system described above, conversations with relevant parties from the legal field should be started. This includes lawyers for a legal evaluation of the system and a translation into concrete legal questions. These questions can be used to initiate a dialogue with relevant regulators such as the Austrian Financial Market Authority (FMA) for information purposes.

Needless to say, the communication with the general public in Stanz is crucial for the adoption and therefore success of the project. Generally, the communication with regards to the project has been exceptionally good. One additional improvement could be to create a dedicated webspace for interested parties to access as well as store information relevant to the project at hand and the topic of sustainable energy in general. This would give the citizens of Stanz an additional touch point and enable everyone to actively participate in the energy transition process.