

Gamifying Sustainable Agriculture Value-Chains

A Koinos-based dApp incentivizes all stakeholders to reduce waste and improve agricultural logistics. By gamifying SLAs and SLOs and providing ReFi options, the dApp supports regenerative farming practices and eco-friendly logistics providers. Moreover, it rewards green initiatives, encouraging the adoption of sustainable technologies and practices, fostering a cleaner and more environmentally responsible supply chain.



by Edward Plata



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Challenges for Sustainable Agriculture

1. **Lack of transparency in supply chains:** Opaque supply chains make it difficult to track the origin of products and verify adherence to sustainable practices. This obscurity can lead to unintentional support for unsustainable methods, as well as mistrust among consumers and stakeholders.
2. **Inefficient logistics:** Poor logistics management can result in delays, increased costs, and food waste, undermining the benefits of sustainable agriculture. Inefficient transportation and storage systems can also contribute to higher carbon emissions, negating the positive environmental impact of sustainable practices.
3. **Need for incentives for regenerative practices:** Transitioning to regenerative farming practices often requires significant investments in time, resources, and education. Without proper incentives, many farmers may be reluctant to adopt these methods, as the potential risks may outweigh the perceived benefits.
4. **Limited access to financing:** Sustainable agriculture projects may struggle to secure funding from traditional financial institutions due to perceived higher risks, longer payback periods, or lack of familiarity with regenerative practices.
5. **Regulatory and policy barriers:** In some cases, existing regulations and policies may not be conducive to the adoption of sustainable practices. Government support and incentives may be lacking, or policies may inadvertently favor conventional, less sustainable methods.

Addressing these challenges is crucial to fostering widespread adoption of sustainable agricultural practices and ensuring a more resilient, environmentally friendly, and equitable food system

Regenerative Finance

• Polkastarter

What is Regenerative Finance

And why should you care?



Regenerative Finance is an innovative approach to financing that focuses on supporting projects and businesses that provide environmental, social, and economic benefits.

- Directs investments towards sustainable initiatives
- Promotes community development and long-term value
- Focuses on people and planet, not just profit

Technical Road-Map

Phase 1: Design and Planning (1 month)

1. Define Smart Contract Templates
 - Gamify SLAs/SLOs, reward early completion to drivers, farmers, and other players in the logistics pipeline
 - Create contracts for green initiatives, implementing solar, wind, other renewable energy sources
2. Design Access Control Smart Contracts
 - Develop contracts for secure access
 - Implement NDA-based access | Public and Private Key management
3. Develop Incentive Structures
 - Define reward mechanisms for SLO/SLA targets
 - Incentivize sustainable farming and eco-friendly logistics

Phase 2: Development and Implementation (2-4 months)

1. Implement Tokenomics
 - Design a token system for rewards
 - Integrate token distribution into contracts
2. Integrate Data Sources
 - Connect to external data providers
 - Incorporate data on sustainable practices
3. Develop Front-end and Back-end Components
 - Create user interfaces for stakeholders
 - Develop services for managing incentives

Phase 3: Testing and Pilot Program (1-2 months)

1. Testing and Quality Assurance
 - Perform unit and integration tests
 - Assess security and compliance
2. Pilot Program and Iterative Improvements
 - Launch a pilot program with stakeholders
 - Gather feedback and improve features

This phased roadmap, with a proposed timeline of 4-7 months, outlines the development process for the Koinos-based application, from initial design and planning through to testing and a pilot program.