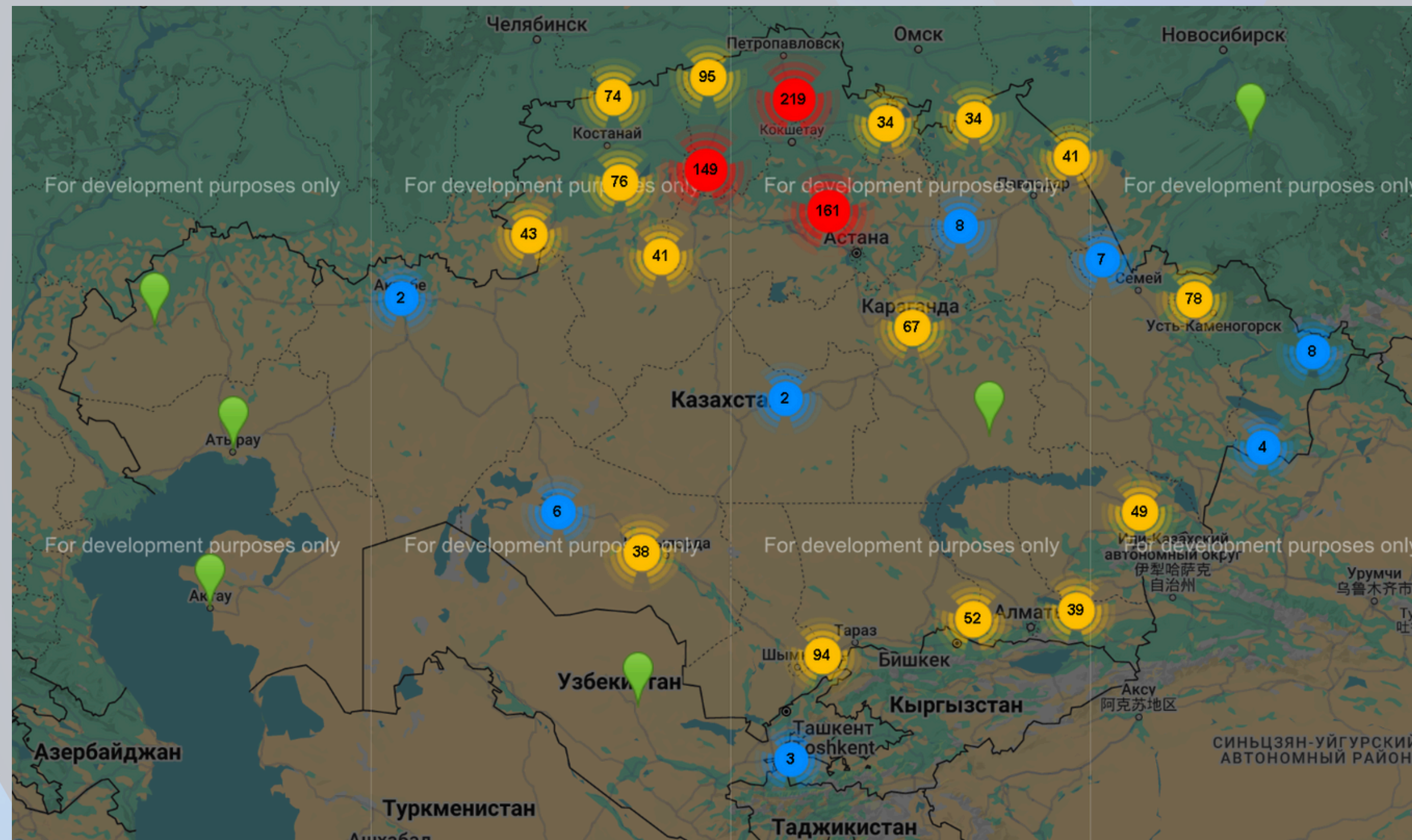


DEVELOPMENT OF ECONOMIC MECHANISMS FOR AGRICULTURAL E-COMMERCE IN KAZAKHSTAN

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Platform of Kazakhstani farmers



- With over 170 advanced farms and more than 20 digital farms currently operational, Kazakhstan has digitized nearly 100% of its sown areas, creating an electronic map covering approximately 24 million hectares
- Looking ahead to 2025–2026, Kazakhstan plans to introduce AI-driven solutions that could increase crop yields by 10–15% while reducing water consumption by up to 25%

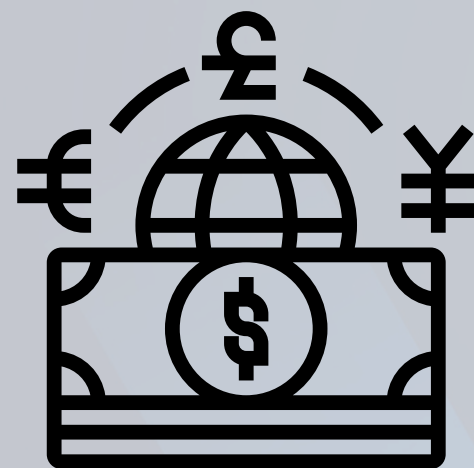
CHALLENGES AND CONSIDERATIONS

Infrastructure Development: Implementing blockchain solutions requires robust digital infrastructure and internet connectivity in rural areas.

Regulatory Framework: Clear legal guidelines are necessary to govern the use of smart contracts and ensure their enforceability.

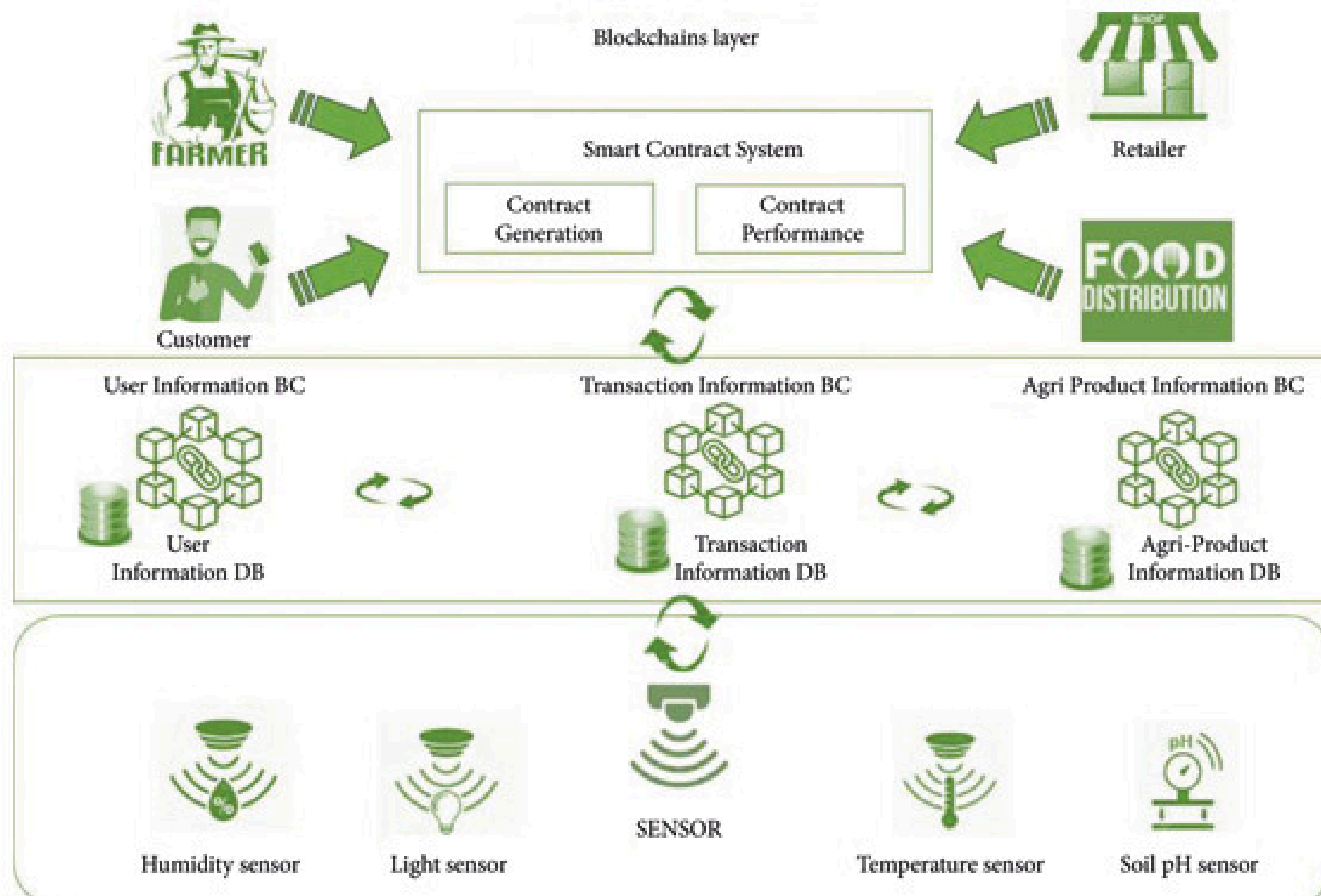
Education and Training: Farmers and stakeholders need training to effectively utilize and trust blockchain technologies.

SOLUTION



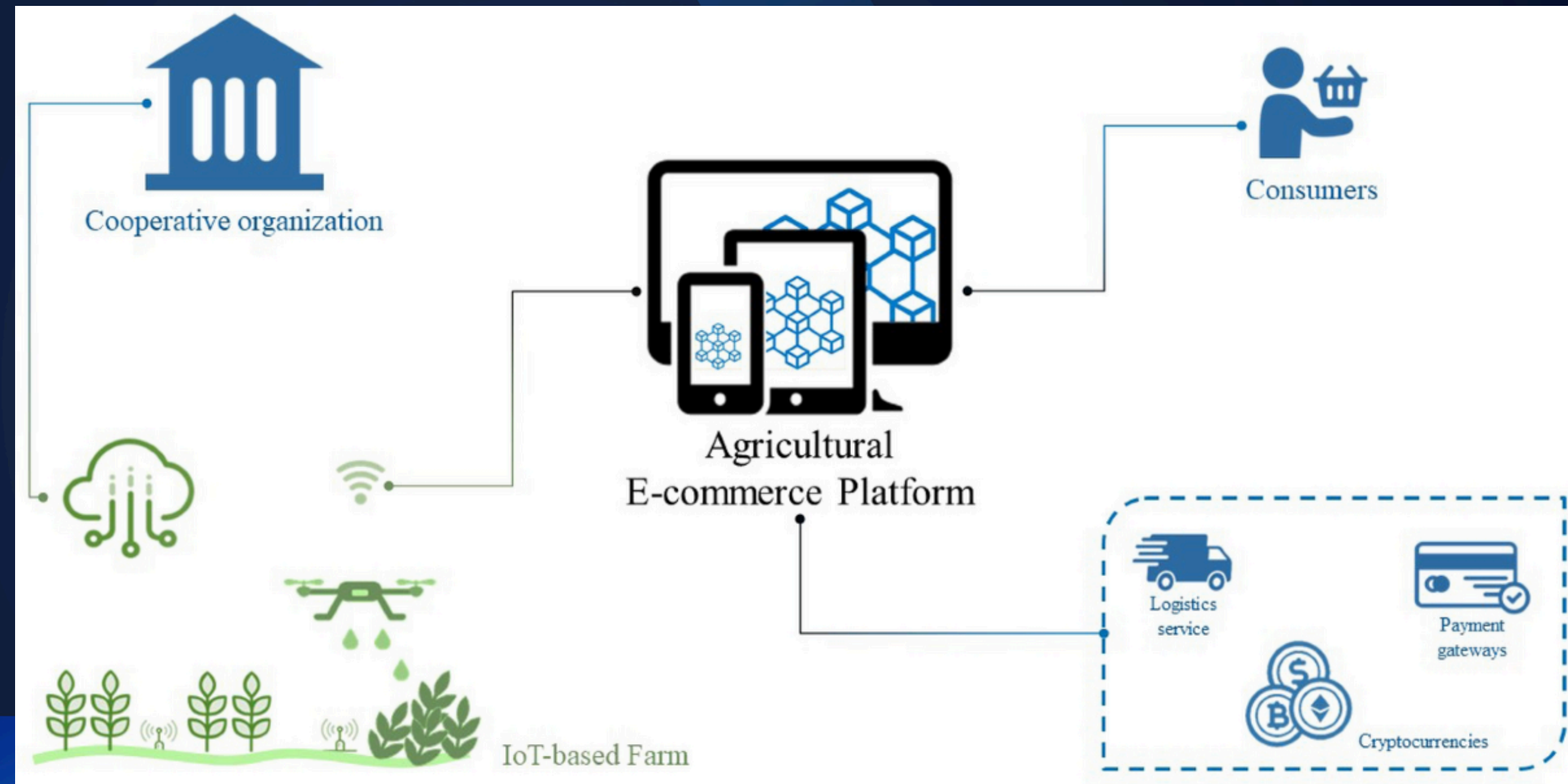
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Smart contracts are emerging as a transformative tool in Kazakhstan's agricultural sector, offering enhanced transparency, efficiency, and trust across the supply chain. Built on blockchain technology, these self-executing contracts automatically enforce agreements when predefined conditions are met, reducing the need for intermediaries and minimizing disputes.

E-COMMERCE IN AGRICULTURE WITH AI AND SMART-CONTRACTS



APPLICATIONS OF SMART CONTRACTS IN KAZAKHSTAN'S AGRICULTURE

Livestock Ownership and Investment Schemes

Innovative projects in Kazakhstan are utilizing blockchain-based smart contracts to provide legal guarantees of cattle ownership. For instance, individuals can acquire certificates representing livestock investments, ensuring transparency and trust in livestock farming ventures.

Supply Chain Transparency and Traceability

Smart contracts facilitate end-to-end traceability of agricultural products, from farm to table. By recording each transaction on a blockchain, stakeholders can verify the origin, quality, and handling of produce, enhancing food safety and consumer confidence.

Automated Payments and Crop Insurance

Integrating smart contracts with IoT devices allows for real-time monitoring of agricultural conditions. In the event of adverse weather affecting crops, smart contracts can automatically trigger insurance payouts, expediting the claims process and providing timely support to farmers.

BENEFITS FOR KAZAKHSTAN'S AGRICULTURAL SECTOR

- **Enhanced Efficiency:** Automation reduces administrative burdens and accelerates transaction processes.
- **Improved Trust:** Immutable records on the blockchain foster trust among farmers, suppliers, and consumers.
- **Financial Inclusion:** Smart contracts can lower barriers to entry for smallholder farmers by simplifying access to markets and financial services.



THANK YOU

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