**SUPPLY2U PROJECT ABSTRACT FORM**

**Problem Statement and Motivation.**

Globally and especially in East Africa,  agricultural supply chains, small-scale farmers, agro-dealers, and urban retailers face significant challenges in ensuring food products' efficient, sustainable distribution.

Consumers increasingly demand to know the origins of their food, and retailers require precise information to manage inventory and meet consumer demand. Inefficiencies in the agricultural supply chain lead to high post-harvest losses, inconsistent quality and availability of produce, and inflated prices due to multiple layers of intermediaries.

These issues compromise farming's economic viability, restrict consumer access to fresh produce, and hinder fair value distribution. Despite growing demands for transparency and efficiency, existing solutions need more comprehensive integration for all stakeholders, including farmers, agro-dealers, retailers, and logistics providers.

There is a critical need for a transformative platform that seamlessly connects these stakeholders, prioritizing efficiency, sustainability, and profitability throughout the supply chain.

Below, we try to enlist concrete examples to motivate the need for a transformative platform that addresses these inefficiencies;

1. **High Post-Harvest Losses:**

Many farmers in East Africa face significant losses after harvest due to inadequate storage, processing facilities, and poor logistics. This results in a substantial percentage of crops never reaching the market.

As highlighted by a study in the Agriculture & Food Security journal, extensive post-harvest losses are experienced in Ethiopia, where an average of 25.81% of all crops are lost annually, with fruits and vegetables experiencing the highest losses at 33.38%. This reflects a broader regional issue, as a World Bank report notes similar challenges across Sub-Saharan Africa,

1. **Inconsistent Quality and Availability:**

 The quality and availability of agricultural products can vary dramatically, which affects pricing and consumer satisfaction. This inconsistency is often due to uncoordinated supply chains and varying standards among small-scale producers.

As highlighted by The World Bank in Uganda and Kenya, up to 40% of tomatoes and other perishable produce are lost due to inefficiencies in transport and inadequate storage, leading to spoilage before reaching consumers. These losses not only signify a gap in the supply

chain but also result in fluctuating quality and availability that impacts consumer satisfaction and retailer reliability

A retailer in Nairobi may receive high-quality avocados one week and very poor-quality ones the next, making it difficult to maintain customer loyalty and manage inventory effectively.

1. **Lack of Transparency and traceability**:

Consumers globally and in East Africa are increasingly demanding transparency in the origins and handling of their food. Lack of such information can affect consumer trust and decision-making.

Consumers in urban areas like Kampala are starting to prefer organically grown vegetables but have no way to verify the claims of retailers, leading to skepticism and reduced sales.