Agronomy POC Feedback from TECHWARE

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To: Agronomy Team

Team Members:

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Introduction

We would like to express our appreciation to the Agronomy team for their valuable support during the Proof of Concept (POC) project. This collaborative effort has allowed us to assess the feasibility and functionality of the newly implemented technology and processes. This document outlines the key aspects of the POC, including the devices installed, the purpose of the POC, challenges encountered, solutions implemented, and additional points for discussion.

Devices Installed

The following devices were installed as part of the POC:

Dahua ASI6214J-MFW Facial Recognition Device

TP Link 4G Modem 4 port

Securiprod 3.2a 12v Power supply with 7ah Battery backup

9U IP65 outdoor Cabinet with cooling

420p Web Cam

Purpose of the POC

The primary objectives of the POC were as follows:

Check Device Specifications: Compare the newly installed Dahua device with the existing ZKTECO legacy device to evaluate their specifications and features.

Farmers' Enrollment Process: Assess the process of enrolling farmers into the system, paying special attention to ease of use and accuracy.

Device Sync to Cloud Server: Verify the ability of the devices to synchronize data with the cloud server seamlessly.

Farmer Recognition: Test the accuracy and reliability of farmer recognition on the devices.

Overall Device Performance: Evaluate all aspects of the project concerning the physical devices.

Challenges and Solutions

Day 1

Challenges:

Syncing of Farmers: Initial syncing issues were encountered.

Quality of Pictures and Lighting: The quality of pictures taken and lighting conditions posed challenges.

Solutions:

Syncing Issues: Syncing issues were resolved through parameter adjustments.

Picture Quality: Picture quality was improved by changing the location and method of capturing photos.

Overview:

Successfully enrolled and tested 100 farmers with a 100% success rate and zero false positives.

Day 2

Challenges:

Test Antispoofing: The first three tests for antispoofing failed, suggesting that pictures could potentially trick the device.

Check Network and Ports on MLT NKHAME1: Network and port issues on MLT NKHAME1 were identified.

Solutions:

Anti-spoofing: The anti-spoofing threshold was increased, resulting in zero spoofing incidents.

Network and Ports: Network ports on MLT NKHAME1 were opened for device communication.

Overview:

Successfully enrolled 150 farmers with a 100% success rate and zero false positives.

Additional Comments

It was noted that there is inconsistency in farmer information, with names spelled incorrectly, and surnames not captured in TOIS (where we received the LFC info for the POC).

Device Comparison

In conclusion, the Dahua device although more cost effective, compared to the ZKteco device, presents more challenges during setup. Many security features that are standard with ZKteco need to be carefully managed with Dahua. Ensuring good quality images are taken is essential for the software to recognize farmers accurately.

Additional Add-Ons for Discussion

Red and Green Light Confirmation: Consider implementing red and green lights for confirmation of farmers to operators.

LCD Screen: Add an LCD screen for operators to note LFC or printing of barcodes as per the presentation.

Integration to TOIS: Explore the possibility of integrating the system with TOIS for automated data population.

Mobile App Registration: Consider a mobile app for quicker enrollment.

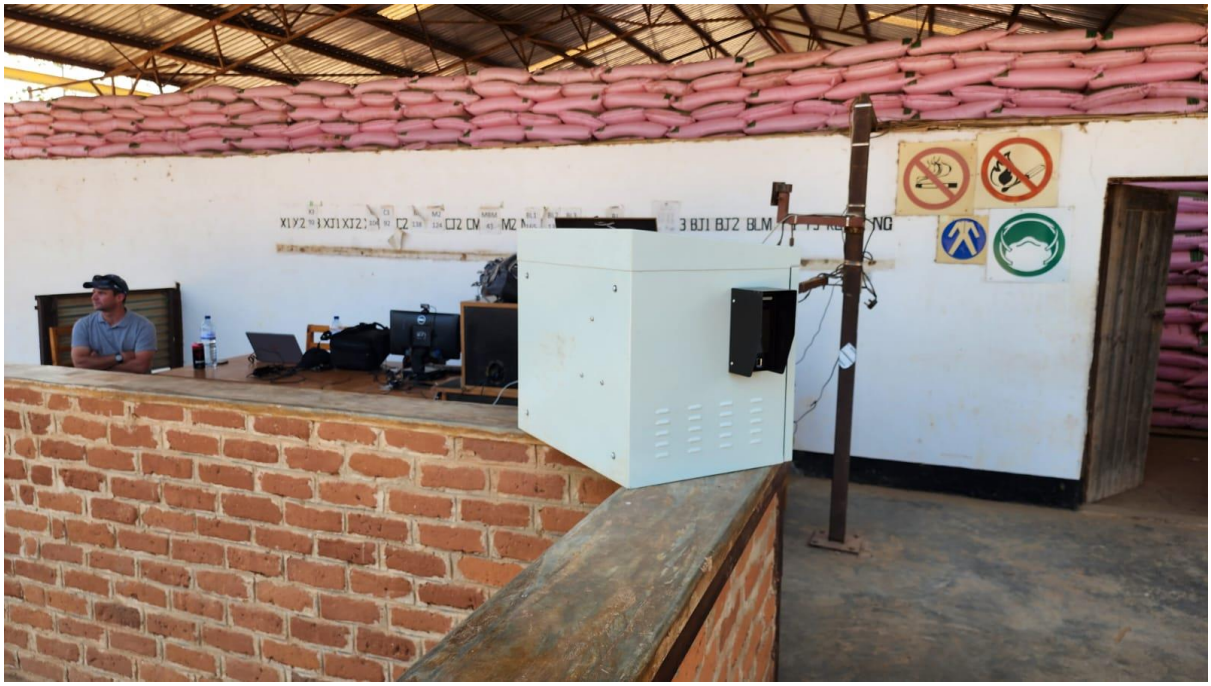
QR Code Scanning: Implement QR code scanning of IDs to populate and update farmer information.

Future Project Requirements

We believe that the system has the potential to accommodate additional features in the future. These requirements can be added to the project roadmap as needed.

Conclusion

We are confident in the current state of the project, and we look forward to its progression. We are committed to the project and MLT and will keep the equipment onsite for further testing. Additionally, discussions are underway for a second trip at the end of October or beginning of November to test the mobile app and an additional facial recognition device.



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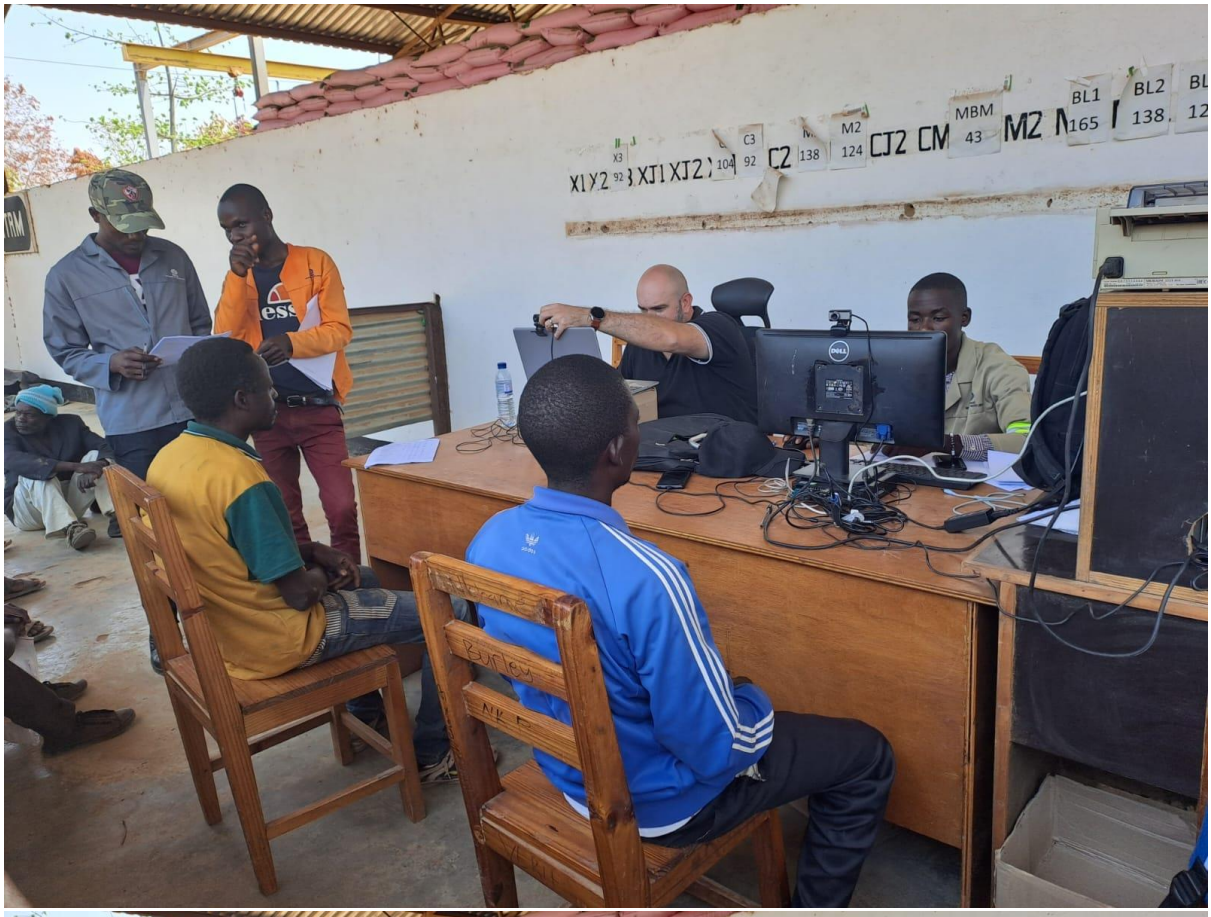

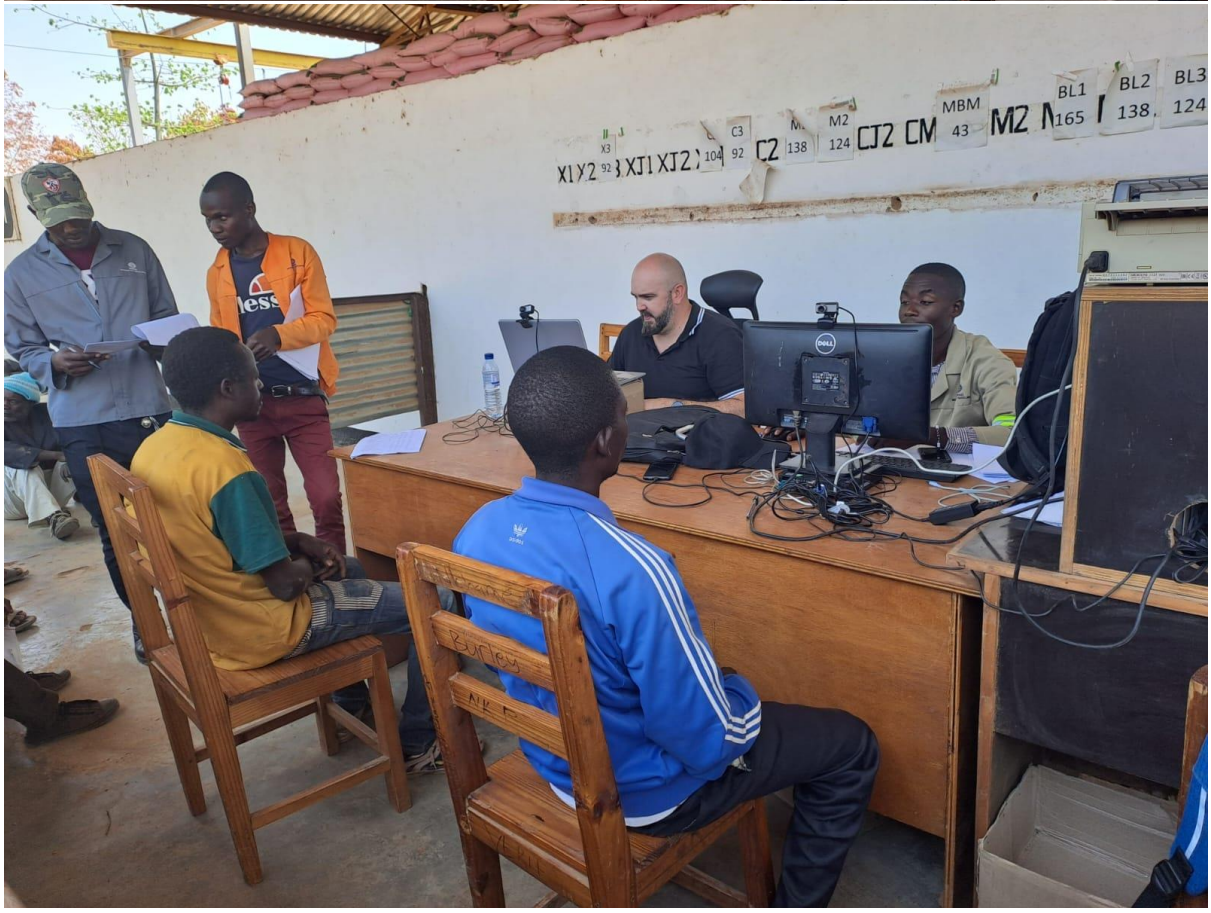

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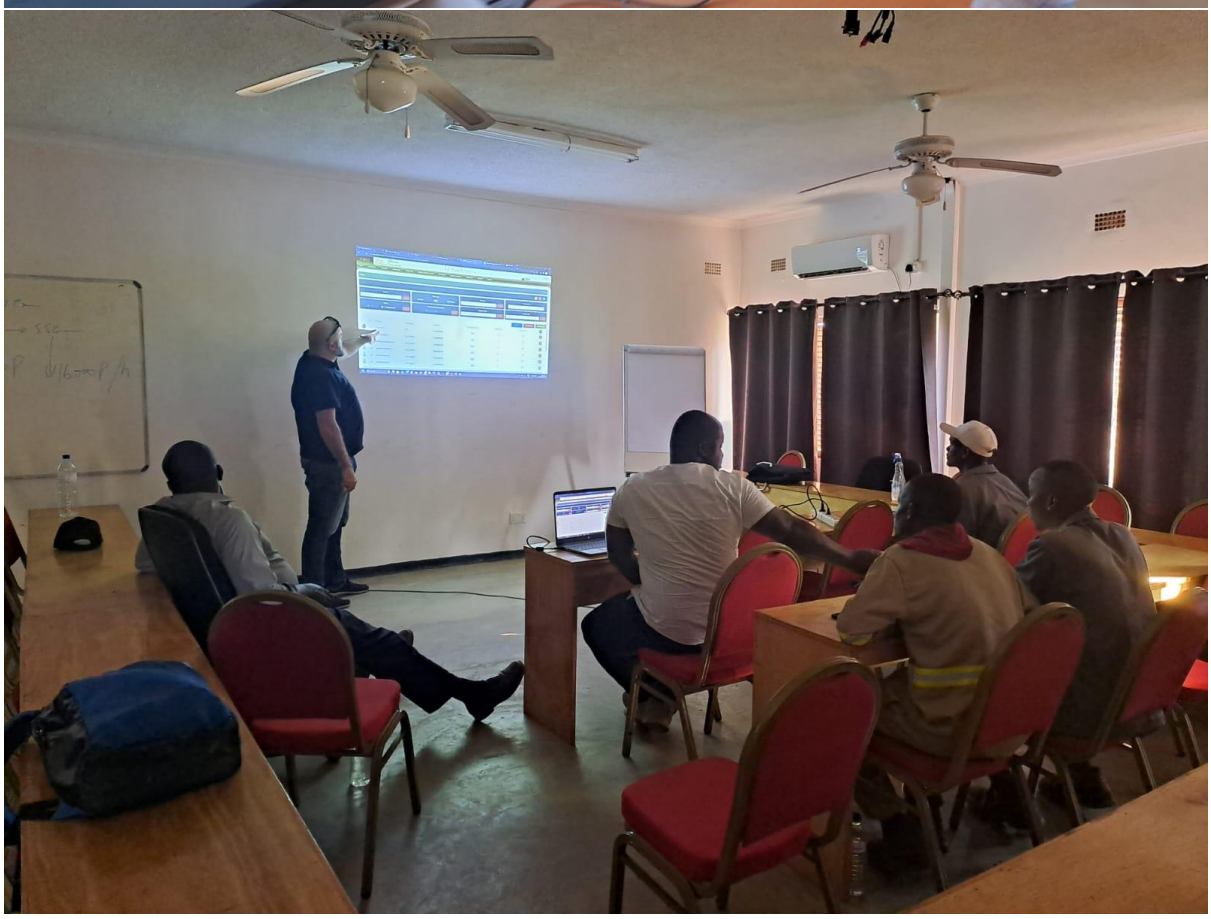

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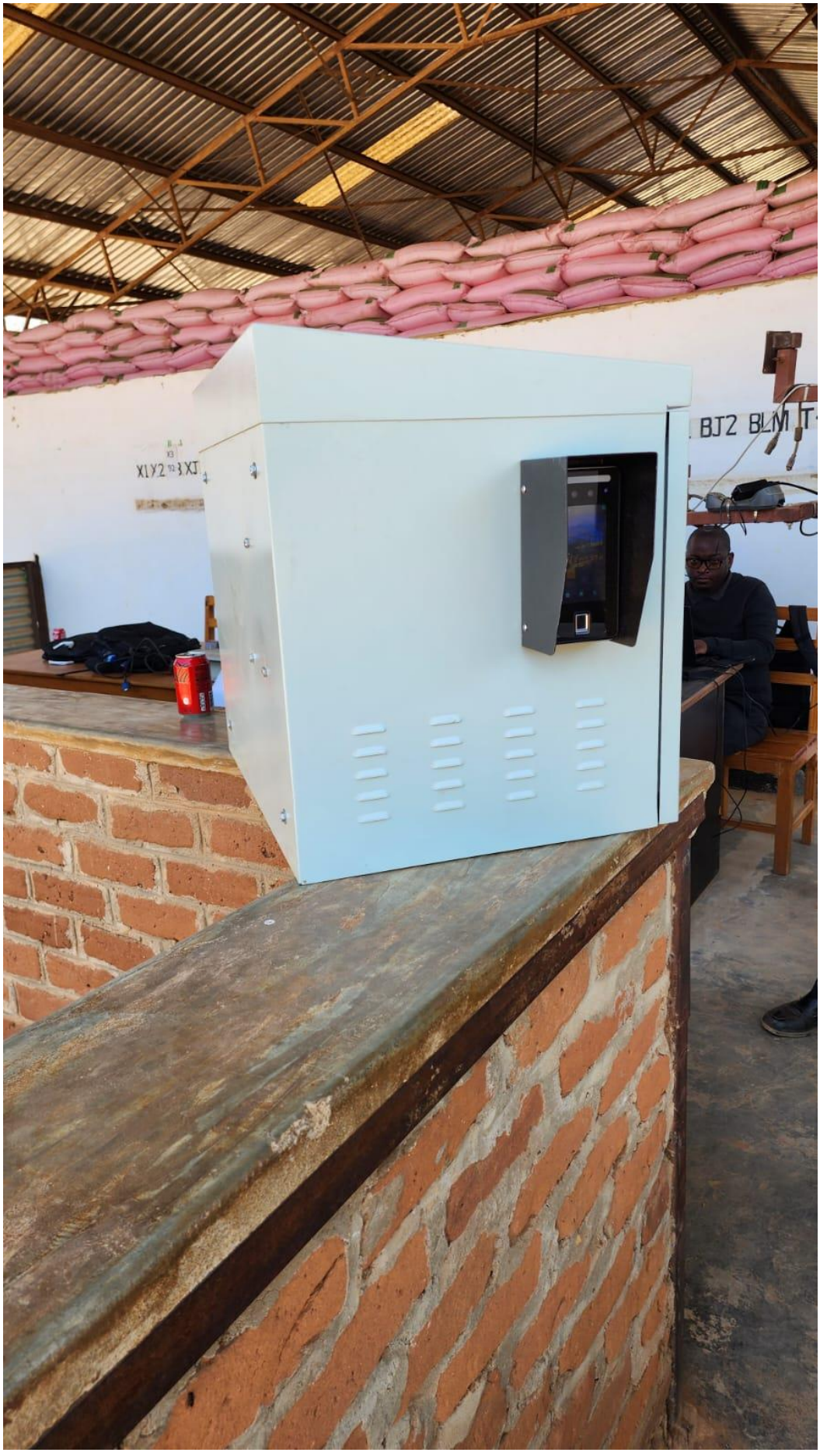

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