The Promise of Digital Platforms for Agriculture – *Learnings from the Region*

Christabell Makokha – Director Strategic Learning
Technology is transforming how we live

DIGITAL PLATFORMS: PROMISE FOR AGRICULTURE
At the same time, we are facing unprecedented challenges in the world.

By 2050, we will be more than 9 billion humans on Earth. And we will need to produce 60% more food.
Can digital platforms revolutionize smallholder agriculture?
What is a Digital Platform?

Technology has revolutionized the go to market strategy of modern businesses. According to a recent Accenture report “While it used to take Fortune 500 companies an average of 20 years to reach a billion-dollar valuation, today’s digital start-ups can get there in four years. Digital platforms are largely responsible for this shift.”

a few examples:
- **Google search engine**: “advertising” business model.
- **Social platforms**: Facebook, Twitter, Instagram, LinkedIn – “advertising” business model.
- **Knowledge platforms** aka forums such as StackOverflow – “advertising” business model.
- **Application stores**: Apple/Google Play – “digital good” business model.
- **Market places**: Amazon market place, shopping engines: “ecommerce” business model.
- **Media platforms**: Spotify, Deezer – “subscription” business model.
- **Crowd-sourcing platforms**: Uber, BlablaCar, AirBnB – “pay as you go” business model.
So, what is a **platform**?

“A platform is a plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other and create and exchange value.”
Cracking the platform code

What Could a Digital Platform Look Like For Agriculture?

Can Digital Platforms Help:
- Smallholder farmers access a full range of services?
- Service providers reach farmers at scale?
- Transcend weak rural infrastructure?
- Businesses along agricultural value chains become profitable?
- Establish more stable markets?
- Establish more transparent markets?
- Increase income for farmers?
- Drive higher productivity rates?
- Drive financial inclusion?
- Promote food safety?
- Support climate-smart agriculture?
- Enable government to support and manage policy for agriculture?
- Build rural economies?
- Drive job creation?
Launched in 2017, DigiFarm is Safaricom’s integrated mobile platform of digital services for farmers. DigiFarm, accessible on a basic feature phone and smartphone, provides farmers with access to products and services enabling them to conveniently source, transact, learn, and grow their farms. Over time, additional services are added onto the platform to make DigiFarm a one-stop shop for Kenyan farmers, including the recent introduction of DigiSoko, an open marketplace for agricultural produce.

<table>
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<tr>
<th>Current services</th>
<th>Planned services</th>
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<tbody>
<tr>
<td>1. Order inputs</td>
<td>4. Connect with buyer</td>
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<tr>
<td>DigiFarm allows farmers to purchase inputs through selected vendors</td>
<td>DigiSoko connects farmers to buyers in specific value chains</td>
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<td>2. Engage in Learning</td>
<td>5. Soil / farm testing</td>
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<tr>
<td>DigiFarm provides access to educational content for best farming practices and financial literacy</td>
<td>DigiSoko tests soil to understand required inputs and suitability for value chain production</td>
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<tr>
<td>3. Order inputs</td>
<td>6. Aggregate produce</td>
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<tr>
<td>DigiFarm provides digital credit products based on alternative credit scoring</td>
<td>DigiSoko will facilitate aggregation of produce / Masoko may deliver produce</td>
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DigiFarm is owned and led by Safaricom, drawing on a wide range of capabilities from other partners.

The integrated nature of the platform and its intensive use of digital data seeks to leverage each partner’s strengths, reduce risk for each partner, and drive higher revenues across the partnership.

**Core activities**
- Manage platform and provide payment services, communications,
- M-Pesa transaction fees
- Interest income
- Market access trading fees
- Provide low cost inputs to farmers through input depots
- Fees on input sales
- Manage loan book, including application, credit scoring, approval, and repayment
- Interest income and late penalties
- Content development
- Fees per active learner
- Credit scoring and loan approval
- Loan management and administration
- Customer service
- Tech platform
- Data analytics
- Customer service
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- Customer service
- Tech platform
- Data analytics
- Customer service
- Digital and video learning content
- Web-based budgeting tool
- Call centre support
- Content development
- Fees per active learner
- Content development
- Fees per active learner

**Revenues**
- Customer acquisition
- ATL/BTL marketing
- Tech development / maintenance
- Software licensing / hardware
- Customer service
- Content development
- Fees per active learner
- Credit scoring and loan approval
- Loan management and administration
- Customer service
- Tech platform
- Data analytics
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- Data analytics
- Customer service
- Content development
- Fees per active learner

**Costs**
- Cost of goods sold
- Warehousing/delivery vehicles and logistics
- Tech platform
- Customer service
- BTL marketing
- Tech platform
- Data analytics
- Customer service
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- Fees per active learner

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**DIGITAL PLATFORMS: PROMISE FOR AGRICULTURE**
AFA has provided product innovation support in a phased approach across more than 25 engagements

1. Farmer needs and ecosystem mapping
2. Platform development and partner strategy
3. Business modelling and go-to-market strategy
4. Digital input loan product
5. Rapid iteration, product prototyping & UX
6. Impact and data analytics
7. Mapping partner roles / governance structures
8. Field force development
9. DigiSoko: E-commerce and access to market
10. Data strategy
11. Expand suite of credit products
12. Develop Precision Ag and Digital Field Force
13. Development of lay-away savings product
14. Loan Irrigation, Mechanization and Post-Harvest Loss Services

**DigiFarm** augments use of dynamic agri-data to improve credit scoring and expand loan portfolio. Issued just over 15,000 loans between December 2017 and July 2018.

**DigiSoko**, a digital marketplace that provides market linkages with major buyers in Kenya, as well as tailored input and harvest credit products.

MVP launch with input ordering (iProcure) and learning services (Arifu) - 74,000 farmers are registered and 19,000 are active within the first 3 months.

* This slide is not an exhaustive list of support provided by AFA to Safaricom and its partners on DigiFarm
DigiFarm’s journey in building an innovative digital platform provides key lessons to inform future replication of digital offerings for farmers (1 of 3)

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<th>Offering bundled services reduces costs and risk, and drives uptake and loyalty</th>
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<td>From the start, DigiFarm intended to build a bundled service offering, layering on new services one by one. These services included learning info, discounted inputs, and direct distribution channels for future sales. Including diverse and “end to end” services helped attract more customers and expanded the pool of individuals that could potentially benefit from the DigiFarm platform. Moreover, by offering a more holistic solution the efficacy and impact of each of the individual tools is reinforced, creating a more sustainable and resilient system.</td>
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<th>A platform approach can reduce development costs and crowds in diverse capabilities</th>
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<td>Safaricom did not want to build out new service capabilities from scratch and instead made a “platform play” to leverage other service providers. For example, the time and costs associated with building out logistics and infrastructure for distribution of inputs were high and would have taken Safaricom away from their core business. Instead, Safaricom has developed a versatile platform which diverse service providers can plug into and reach new markets with their products and services.</td>
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<th>A farmer-centric / user experience approach is crucial to ensuring product-market fit</th>
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<td>Designing a product with farmer value proposition front and center ensures product is tailored to farmer needs. This is the case across HCD, pilot launch, UX design, rapid iteration and customer feedback loops. A responsive and knowledgeable tech team that can properly analyse and respond to feedback from the field is an instrumental part of building and maintaining a farmer-centric approach.</td>
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DigiFarm’s journey in building an innovative digital platform provides key lessons to inform future replication of digital offerings for farmers (2 of 3)

**Trusted, high-touch channels can drive customer uptake and improve stickiness**

Farmers respond best to trusted channels – in particular other farmers. Also, having reliable physical touchpoints for in-person engagement makes a difference.

Enlisting farmers of group leaders is most effective for successful marketing and registration. iProcure’s network of depots enabled DigiFarm to take its product to more people. In-person interaction at the depots provided a forum for engagement with farmers to explain how the system worked. This allowed DigiFarm to establish trust and credibility in its platform with its customers.

**Patient capital and a process of trial and adjustment is crucial in underserved markets**

Patient capital enables immature markets to be developed, a process that takes time and requires iteration.

DigiFarm used its platform to first develop buy-in and trust from farmers through its educational services and input purchases and only moved forward to lending in the second phase of the project. Thereafter different lending approaches were trailed to identify the best way to successfully lend to smallholder farmers. This process provided time to adjust the platform and identify further additions that would be needed to potentially de-risk lending in the future.

**Establishing the value of data upfront is critical to expanding financial access**

Putting data at the forefront is essential for digital finance services in agriculture. DigiFarm has the potential to be a major data platform but the intricacies of data sharing continue to be a challenge.

DigiFarm’s data platform has the potential to provide lenders with new insights and information on farmer businesses, which provides an alternative credit score to use in assessing lending viability. DigiFarm aims to further expand the quantity and quality of data collected in order to expand loan sizes for smallholder farmers.
DigiFarm’s journey in building an innovative digital platform provides key lessons to inform future replication of digital offerings for farmers (3 of 3)

Building a robust and transparent partnership structure is key for success

*DigiFarm’s* partnership was based on a clearly mapped out set of required inputs and expected returns, which helped partners move forward in trust and with an awareness of each partner’s responsibility.

All partners had clear value propositions for the solution, and MoUs were signed to ensure roles/responsibilities were outlined and each partner could identify a separate commercial revenue stream within the solution. This transparency was critical to enable each partner to achieve individual goals while still working towards the longer-term shared goal of the platform itself.

Credit scoring for smallholders can benefit from diverse mobile and farm-level data

*DigiFarm* can leverage Safaricom’s extensive mobile transaction data as well as purchase / sales history with partners on the DigiFarm platform. Traditional banks are reluctant to leverage this data, while specialist digital lenders are filling the gap.

A digital data trail of crop input purchases and/or sales objectively verifies a farmer’s track record working with a given crop. A history of purchases and sales with other actors in a given value chain indicates the ability to honor agreements. Such digital transactional data, as well as other digital data that is directly relevant to farming (i.e. satellite and weather, e-learning, etc.), can be used for digital credit scoring.

Loan product structure is critical given farmer income is lumpy and volatile

Loans require longer tenors and flexible repayment structures to match crop cycles. Appropriate structuring can significantly increase repayment rates.

*DigiFarm* found that farmers were often falling behind on its 30 day loan product. However, actual defaults were quite low, as many farmers would pay in later months when they harvested their crops. *DigiSoko* is currently piloting a three-part loan product, with a cash loan at planting (to cover labor and other costs), as well as a later cash loan at harvest to ensure farmer have cashflow to get their produce to market.
The AgriFin Accelerate Program worked with the ZANACO team to identify the opportunities to drive transactional volumes and long term client acquisition for its digital customers in smallholder farming.

1. Offering a holistic suite of financial services – full value chain financing

How can Zanaco leverage its digital platform to extend digital financial services (DFS: credit, savings, insurance, and payments) to smallholder & emerging farmers?

Includes both farmer accounts (digital banking dept.) and corporate accounts (commercial and agriculture banking dept.)

2. Empowering farmers to grow

How can Zanaco work with partners to extend access to information and markets in order to enable smallholder and emerging farmers to improve their overall income and productivity? This increases customer “stickiness” to Zanaco

3. Expanding Zanaco’s agent footprint

How can Zanaco leverage the agrodealer network in to deepen its reach in peri-urban and rural Zambia?
AFA has provided product innovation support in a phased approach across more than 10 engagements over the past 2 years, leading to the design and launch of AgriPay

- **1. Farmer needs and ecosystem mapping** [co-funded with FSDZ WIN]
- **2. Research to identify models to expand rural agent networks** [in partnership with UNCDF]
- **3. Bulk payments pilot** with MTN and Alliance Ginneries
- **4. Lima Credit Scheme Diagnostic**
- **5. ZANACO’s Kenya Learning Visit** to Safaricom, Equity, Arifu, FarmDrive, Eclectics, KCB, Co-operative Bank, eProd
- **6. Digitized agronomy content** for farmers with VITALITE and FtMA
- **7. Zanaco Farmers’ Account product design, development, business modelling, GTM, and internal stakeholder management** to facilitate product approval
- **8. Partnership facilitation** between ZANACO CAZ, Alliance Ginneries, VITALITE, iDE, DAZ, WFP, and Musika
- **9. Branding research** to select product name
- **10. Developing innovative rural agent networks**
- **11. Developing savings product**
- **12. Developing learning content for dairy through Arifu**

**FSDZ WIN:** Financial Sector Deepening Zambia, Women’s Financial Inclusion Programme  
**UNCDF MM4P:** United Nations’ Capital Development Fund, Making Markets Work for the Poor  
**WFP:** World Food Program  
**FtMA:** Farm to Market Alliance  
**CAZ:** Cotton Association of Zambia  
**GTM:** Go to Market Strategy  
**DAZ:** Dairy Association of Zambia
AgriPay is a holistic customer value proposition that includes account opening, access to markets, access to agronomic information, and suite of digital financial products for farmers.

**Minimum Viable Product (MVP)**

1. My account
   - This is a zero-cost transactional account that allows offtakers to pay farmers; there is no maintenance fee.

2. Save / layby
   - This is an interest-earning account that allows farmers to save towards an identified goal (inputs, school fees, asset purchase etc.).

3. Learn
   - Zanaco will partner with Arifu to provide easy access to educational informational content for smallholder farmers, via SMS.

4. Borrow
   - Based on transactional history with the bank and other partners, ZANACO will be able to extend general micro-credit to smallholder farmers.

5. Xpress Agent
   - ZANACO is recruiting agribusinesses, aggregators, cooperatives, agrodealers, distributors, savings groups and farmer groups as agents to expand rural footprint. Growing the agent network is critical for successful uptake and use of the product.
Use of TV and social media channels for farmer capability building

Don’t Lose the Plot (DLTP) was a pilot agricultural support platform built around a weekly television program that followed the lives of select youth farmers. DLTP aimed to increase youth interest and participation in agriculture as a viable business in Kenya, Tanzania, and Uganda. DLPT was complemented by an online budgeting tool “Budget Mkononi”
DIGITAL PLATFORMS: PROMISE FOR AGRICULTURE

**Significant reach and impact on farmer productivity**

- **4.1M** high-intensity viewers (>6 episodes);
- **1.7 million** viewers in Kenya;
- **2.4 million** viewers in Tanzania

- **15,000** downloads of the budgeting tool
- **80%** viewers considered farming as a viable source of income after watching DLTP

“It actually **made me think that farming can be a great source of employment** if you work hard. It can give good products and profits. Considering that those are young people who have decided to venture into it and considering what they did there, **it is not actually for the low class.**”

- James, Nairobi, Kenya

“I am used to doing one type of farming where I depended on the rain. Through watching the program “Don’t Lose the Plot”, **I saw you can also start doing irrigation farming** and life will continue.”

- Ondieki, Morogoro, Tanzania
Key takeaways

Business case for platforms:

- Platforms mitigate the inherent risk in smallholder financing by allowing multiple players to plug-and-play into an ecosystem
- Platforms drive scale

Go-to-market strategies:

- Technology is an enabler but human interface is still critical; create product awareness and interest through trusted channels e.g., village agents
- Trusted & high-touch channels such as farmer associations and outgrower schemes can play a significant role in drive product uptake e.g., in farmer organising, sensitisation, training and driving general product uptake
- Sensitisation is key to ensure farmers are ready to adopt digital products.

Product design:

- Customer-centric research is important to inform the product design process, defining the business case, and selecting the right go-to-market strategy for products targeting smallholder farmers, a segment that is often de-prioritized by commercial entities
- Adopting an agile approach allows for the provide to address the end-user’s needs, hence delivering business value which drives adoption
Thank You!