GSMA mAgri Webinar
28th March 2019

How to prioritise agricultural value chains for digital interventions
Webinar Agenda

1. What is the GSMA mAgri Value Chain Assessment Tool?
2. How can you identify priority value chains for agricultural payment digitisation?
3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?
4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?
5. Q&A
## The GSMA mAgri programme

<table>
<thead>
<tr>
<th><strong>Who is GSMA M4D?</strong></th>
<th>GSMA Mobile for Development (M4D) works with the mobile industry to identify opportunities and deliver innovations with <strong>socio-economic impact</strong>.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is mAgri’s mission?</strong></td>
<td>The mission of M4D’s mobile agriculture programme (mAgri) is to advance the <strong>productivity, profitability</strong> and <strong>financial inclusion</strong> of <strong>smallholder farmers</strong> through scalable and <strong>commercial mobile services</strong>.</td>
</tr>
<tr>
<td><strong>What have we achieved?</strong></td>
<td>Since 2009, the mAgri programme has supported <strong>12 projects</strong> which have reached over <strong>10 million</strong> smallholder farmers across <strong>Asia &amp; Africa</strong> with mobile information services.</td>
</tr>
</tbody>
</table>
| **Plans for 2019/2020** | • **Convene** the industry to share experiences and learnings on mobile agriculture.  
• **Identify** best practices for service design, business models, go-to-market.  
• **Launch** an Innovation Fund in June 2019 to support B2B2C agribusiness digitisation services in Africa and Asia. |
Focusing on the opportunity to digitise the agricultural last mile

Last mile systems and processes
- Procurement
- Payments
- Certification
- Traceability
- Training delivery
- Communication
- Inputs distribution
- Factory scheduling
- Operations monitoring
Digital tools address pain points of farmers and businesses in the agricultural last mile

<table>
<thead>
<tr>
<th>Business challenges</th>
<th>Digital solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information</strong></td>
<td>Information services via mobile</td>
</tr>
<tr>
<td>Farmers do not follow best practices, lack skills and information</td>
<td>Mobile money</td>
</tr>
<tr>
<td><strong>Payments</strong></td>
<td>Digital profiles</td>
</tr>
<tr>
<td>Cash payments are risky and costly No access to credit, savings and insurance</td>
<td>Track and trace systems</td>
</tr>
<tr>
<td><strong>Identity</strong></td>
<td>IoT applications for agriculture</td>
</tr>
<tr>
<td>Farmers do not possess formal and/or economic identities</td>
<td>Agribusiness analytics</td>
</tr>
<tr>
<td><strong>Traceability</strong></td>
<td></td>
</tr>
<tr>
<td>Agribusinesses need full and real time visibility in the last mile</td>
<td></td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
<td></td>
</tr>
<tr>
<td>Agribusinesses need to monitor operations and assets</td>
<td></td>
</tr>
<tr>
<td><strong>Analytics</strong></td>
<td></td>
</tr>
<tr>
<td>Agribusinesses need business data to inform decision making in real time</td>
<td></td>
</tr>
</tbody>
</table>
Webinar Agenda

1. What is the GSMA mAgri Value Chain Assessment Tool?

2. How can you identify priority value chains for agricultural payment digitisation?

3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?

4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?

5. Q&A
The GSMA mAgri VCAT provides a framework for analysing value chains

A framework for analysing value chains and supporting digital interventions in agriculture, particularly the digitisation of agricultural procurement payments. The focus of the tool is providing instructions, recommendations and examples to help analyse value chains for poverty reduction.

Primarily aimed at providers of digital financial services seeking to develop a better rural growth strategy, including mobile operators and other non-MNO mobile money providers. The tool would also be useful for AgTech companies and other digital agriculture implementers working to digitise the last mile.

Employs a step-by-step approach used by the GSMA in engagement countries to identify suitable value chains and build a pipeline of agricultural organisations for digitising agricultural procurement payments. The approach can be adjusted as necessary to align with your research objectives.
The VCAT is a 3-step guide to understanding agricultural value chains

**STEP 1. VALUE CHAIN PRIORITISATION**
In any given country, identify priority value chains suitable for further analysis and follow-up activities.

List of priority value chains ranked by a set of indicators.

**STEP 2. VALUE CHAIN SELECTION AND MAPPING**
Develop a basic understanding of value chain structures. Identify the top three value chains and agricultural organisations operating in those value chains.

Value chain maps, basic profiles of agricultural organisations using relevant indicators, preliminary value chain analysis and ranking.

**STEP 3. IN-DEPTH VALUE CHAIN RESEARCH**
Validate preliminary findings of the value chain analysis through in-depth field research of the top three value chains.

Detailed profiles of agricultural organisations, maps of user journeys and use cases for digital interventions.

Use insights from the field to update the list of priority value chains in each country.
Webinar Agenda

1. What is the GSMA mAgri Value Chain Assessment Tool?

2. How can you identify priority value chains for agricultural payment digitisation?

3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?

4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?

5. Q&A
The GSMA has developed a model for identifying priority value chains for digital payments.

- **Formal Procurement Score**: Based on value of agricultural formal sector procurement by value chain ($). Weight: 10%.

- **Growth Potential Score**: Based on volume of production by value chain (tonnes). Weight: 25%.

- **Transaction Data Score**: Based on average size of transactions by value chain ($). Weight: 10%.

- **Interlinkages**: Based on frequency of transactions by value chain. Weight: 30%.

- **Value Chains with Higher Growth Potential** are more likely to offer mobile money providers opportunities to digitise procurement payments, which can be a pathway to financial inclusion for farmers.

- **Value Chains with Higher Growth Potential** are sustainable over the long term and help larger farmer groups scale and become more resilient.

- Mobile money services are best suited to small ticket transactions due to the transaction and wallet size limits for customers and the liquidity challenges of agents. Large payments may require farmers to upgrade their mobile money account through an often complex customer due diligence process.

- Value chains that score high in interlinkages with other value chains are more likely to offer opportunities for services to scale.

- How is this relevant?

---

10% 25% 10% 10% 5% 30% 10% 100%
Output example: Oil crops and cocoa top list of priority value chains for payments digitisation in Ghana

<table>
<thead>
<tr>
<th>SCORING INDICATORS</th>
<th>FORMAL PROCUREMENT SCORE</th>
<th>GROWTH POTENTIAL SCORE</th>
<th>TRANSACTION DATA SCORE</th>
<th>INTERLINKAGES</th>
<th>FINAL SCORE (WEIGHTED AVERAGE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VALUE OF AGRICULTURAL FORMAL SECTOR PROCUREMENT BY VALUE CHAIN ($)</td>
<td>VOLUME OF PRODUCTION BY VALUE CHAIN (TONNES)</td>
<td>VALUE CHAIN GROWTH POTENTIAL</td>
<td>AVERAGE SIZE OF TRANSACTIONS BY VALUE CHAIN ($)</td>
<td>FREQUENCY OF TRANSACTIONS BY VALUE CHAIN</td>
</tr>
<tr>
<td>OIL CROPS</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>COCOA</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>TROPICAL FRUITS</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>NUTS</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>PALM OIL</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>RUBBER</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>EGGS</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>SPICES</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>MILK</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ROOTS AND TUBERS</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Final scores range from 3.5 to 4.2, with oil crops and cocoa leading.
1. What is the GSMA mAgri Value Chain Assessment Tool?

2. How can you identify priority value chains for agricultural payment digitisation?

3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?

4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?

5. Q&A
Value Chain Selection improves stakeholders’ understanding of agricultural procurement

If you are a mobile money provider:

- create basic profiles of agricultural organisations that include insights from semi-structured interviews with stakeholders in these organisations;

- select agricultural organisations for profiling using criteria such as direct procurement, large supplier base and high transaction frequency;

- in these profiles, include key procurement data and information on activities in the last mile that help you understand the potential to digitise particular value chains;

- to evaluate this potential, run an assessment of the foundational issues (prerequisites) that allow the digitisation of agricultural payments.
Output example: profile of an agricultural organisation and its procurement activities

<table>
<thead>
<tr>
<th>Organisation Details</th>
<th>Organisation name</th>
<th>Organisation type</th>
<th>Contact details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Chain Details</td>
<td>Primary value chain</td>
<td>Location and number of farmers in direct procurement</td>
<td>Crop seasonality</td>
</tr>
<tr>
<td>Procurement Activities</td>
<td>Number of direct payments to individual farmers</td>
<td>Single transaction value</td>
<td>Current payment method</td>
</tr>
<tr>
<td>Key Value Chain Activities</td>
<td>Details of contract farming</td>
<td>Description of farmer profiling process</td>
<td>Participation in certification or export schemes</td>
</tr>
</tbody>
</table>
Use Value Chain Mapping to develop a basic understanding of value chain structures

Output example: map of Sri Lanka’s tea value chain
Webinar Agenda

1. What is the GSMA mAgri Value Chain Assessment Tool?

2. How can you identify priority value chains for agricultural payment digitisation?

3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?

4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?

5. Q&A
In-Depth Value Chain Research can identify suitable mobile use cases

Use semi-structured interviews with key stakeholders in the value chain to generate the following outputs:

✓ **detailed profiles** of selected agricultural organisations;

✓ **description of key activities** with an emphasis on those involving farmers and buyers;

✓ **mapping of key pain points** for farmers and agricultural organisations against these activities;

✓ **assessment of** agricultural organisations’ **readiness** to adopt last mile digital tools;

✓ **identification of mobile use cases** for digital interventions, for example, digitising last mile payments.
Output example: a map of activities and pain points in the tea farmer journey unlocks opportunities for digitisation beyond mobile money

<table>
<thead>
<tr>
<th>HARVEST</th>
<th>CROP HANOVER</th>
<th>QUALITY CONTROL AT FACTORY</th>
<th>PAYMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity description</td>
<td>Farmer stores plucked green tea leaf in 22-kilo natural fibre sacks</td>
<td>Farmer hands over leaves to collector at field edge</td>
<td>Farmer receives advances and balance payments based on recent supply history</td>
</tr>
<tr>
<td>Pain points</td>
<td>Unpredictable weather patterns affecting harvest and yield</td>
<td>Farmer unaware of collection time (farmer must be physically present all afternoon while truck is collecting from farmers)</td>
<td>Farmer is required to <strong>travel to factory</strong> to receive cash advances or <strong>to bank</strong> to cash out</td>
</tr>
<tr>
<td>Opportunity areas</td>
<td>Weather forecast tool</td>
<td>Farmer does not know how much is being deducted at factory; only discovers upon receipt of remittance advice</td>
<td>Individual <strong>factory policies</strong> limit how much they are prepared to pay in cash</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Latest green leaf price</strong> only known via word of mouth / if visited factory</td>
<td>Farmer potentially carries a large amount of cash (cash-handling risks)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instant push notifications to farmers</td>
<td><strong>Mobile money solution as the entry point to last mile digitisation</strong></td>
</tr>
</tbody>
</table>
Highlights of the Value Chain Assessment Tool

Value Chain Prioritisation

- The GSMA’s model scores value chains against key indicators affecting the digitisation of agricultural procurement payments and ranks them in order of priority.

- The potential to digitise agricultural procurement payments is greater in formal value chains experiencing high transaction frequency and transaction values that are compatible with mobile money transaction and wallet size limits.
Value Chain Selection and Mapping

- Creating profiles of agricultural organisations based on key procurement indicators and last mile activities gives mobile money providers a basic understanding of value chain structures and allows them to assess the suitability of particular value chains for digital payments.

- To maximise benefits for farmers, mobile money providers should profile and seek partnership opportunities with agricultural organisations involved in direct procurement from a significant number of farmers.
In-Depth Value Chain Research

- In-depth field research helps to create detailed agricultural organisation profiles, map user journeys and identify use cases for digital interventions that extend beyond digital payments.

- Field observations and semi-structured interviews with value chain stakeholders help digital agriculture implementers to recognise inefficiencies in agricultural value chains that can be addressed with holistic digital solutions.
Contact us!

If you are a mobile money provider, email us at magri@gsma.com to request:

1. estimates of the potential direct revenue opportunity in selected countries from digitising business-to-person payments and government-to-person transfers in agriculture; and

2. a list of priority value chains in selected countries that are likely to be suitable for further analysis and follow-up activities

3. joining the GSMA mAgri Priority Learning Partners (PLP) group
Webinar Agenda

1. What is the GSMA mAgri Value Chain Assessment Tool?

2. How can you identify priority value chains for agricultural payment digitisation?

3. What tools can you use to improve DFS providers’ understanding of agricultural procurement?

4. How in-depth value chain research can help you identify suitable mobile use cases and agribusiness partners?

5. Q&A
Thank you for joining

For more information reach out to us via magri@gsma.com