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Report of the Workshop on "Digitalisation as a lever for agricultural productivity" to share and study good practices

13-17 March 2023 | Dakar, Senegal

F acilitated by
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Acronyms and abbreviations

Introduction

This workshop, initiated by Enabel and Oxfam, on the theme of "**digitalisation as a lever for agricultural productivity**", was held from 14 to 16 March 2023 at the Café de Rome Hotel in Dakar. The terms of reference, in the annex, describe the general context and content of the meeting ([see Annex 1](#)). The objectives of the workshop were to enable the stakeholders of the programme to :

- Understanding how digitalization can impact agricultural productivity;
- Discovering new digitalization tools with proven impact;
- To have a strategy to contribute to the dissemination (notably through the project) of these new tools in the respective countries of intervention.

To this end, group work, panels followed by presentations of start-up solutions were the main activities of the workshop. Field visits to the regions of Thiès and Dakar provided an opportunity to meet and exchange with a cross-section of the various players in the Senegalese entrepreneurial ecosystem.

Participants

The workshop brought together the various collaborators of the DIRECCT project, namely the partners Expertise France and Oxfam and the delegation of the Management and Coordination Unit (MCU). But above all the representatives of the different chambers of commerce of Côte d'Ivoire, Benin and Ghana and the representative of Caribbean Export of Barbados (Caribbean) who are the direct executors of the programme's vision in these countries. The workshop also welcomed speakers representative of Senegal's digital dynamism such as startups and support structures of the system. Participants also met with other actors in the field ([see Annex 3](#)).

NB= Participants from the Togo Chamber of Commerce were unable to attend.

How the workshop was run

Day 1 | 14 March 2023

Opening of the workshop

The workshop was opened by Mrs. Emilie Griffiths of Expertise France, ACP- DIGI Project Manager, who welcomed the participants and recalled the objectives of the meeting.

Mr. Stefano Amekoudi, Enabel/DIRECCT Intervention Officer, then summarised the programme for the three (03) days of the workshop ([see Annex 2](#)).

The floor was given to Mr Mandiaye Ndao, facilitator of the workshop, to lead the activities. After introducing himself, he set the scene for the debate and asked the participants to go round the table, which allowed an initial contact to be made and an overall view to be taken of the profiles gathered in the room.

The participants then shared their impressions of the workshop. They all expressed the hope that these exchanges would lead to a better understanding of the digital mechanisms that would lead to an increase in agricultural productivity in their respective countries. We note here a few interventions:

Stakeholders	Expectations
Christophe BERNES, UCG	To know the results obtained by the different projects
Adia Sanogo Koffi, CCI	To have the tools and ideas to support the of the agricultural chain in terms of digitalisation.
Ousseynou Soumaré, ORSE	Learn more about digitisation, share and capitalise on experiences.
Julius Lamptey, GNCCI	Finding innovative ways to boost the digitalisation of agriculture.
Malick Ndome, Oxfam	Exchange on experiences of digitisation in the process of wealth creation.
Stéfano Amekoudi, Enabel	Identify digital solutions to accompany MPMEs from the green economy and sustainable agriculture towards achieving higher yields.
Mathieu Vergez, Oxfam	Discover solutions from different contexts but also the challenges/challenges encountered.
Médoune Ndiaye	To be able to take advantage of the new strategies and opportunities of the digital support for agripreneurs.

Having outlined the participants' expectations, Mr Ndao then began the first activity of the workshop.

Activity 1: Working groups and presentations: "Issues related to agricultural productivity that could be solved through digitalisation"

This introductory session consisted of reflections and sharing of ideas organised using design thinking methods. The participants were asked to fill in an interactive platform for all of them:

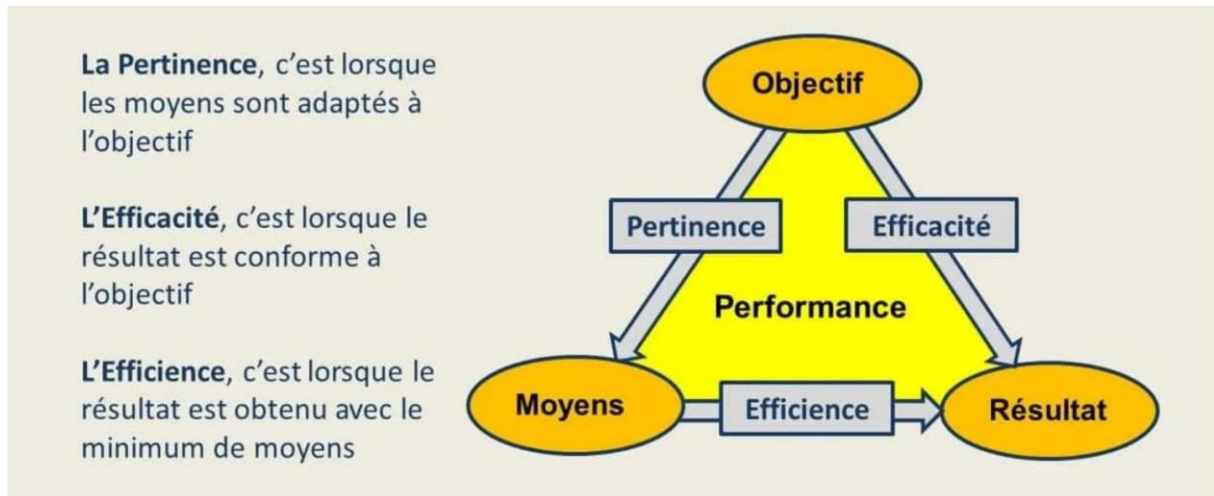
(i) **Define agricultural productivity, its components and performance indicators.**

The participants gave a set of words that inspired them *to think* about **productivity agricultural**. This resulted in the following word cloud as output:



The definitions obtained from the meeting all refer to the notion of agricultural performance. Some points of attention were noted, such as the difference between agricultural productivity and commercial productivity and the fact that the notion of productivity implies several concepts that go beyond yield.

The facilitator reinforced this by incorporating the performance factors he identified.



Performance

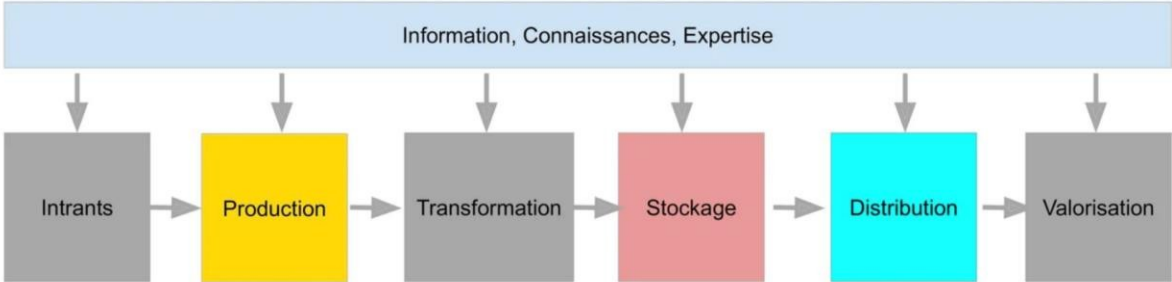
Agricultural productivity is therefore the result of all the means used to achieve a high yield in an effective and efficient manner. In this sense, Mr. Stefano Amekoudi stressed the importance of investing as intelligently in the factors of production, namely capital, land and human resources.

To continue this exercise of clarifying the theme of the workshop, Mr Ndao asked each participant to fill in the platform with the *links that make up an agricultural value chain*. The following output was obtained:



This includes input suppliers, producers, distributors and other actors up to the final consumer. The facilitator validated the answers given and proposed the following scheme

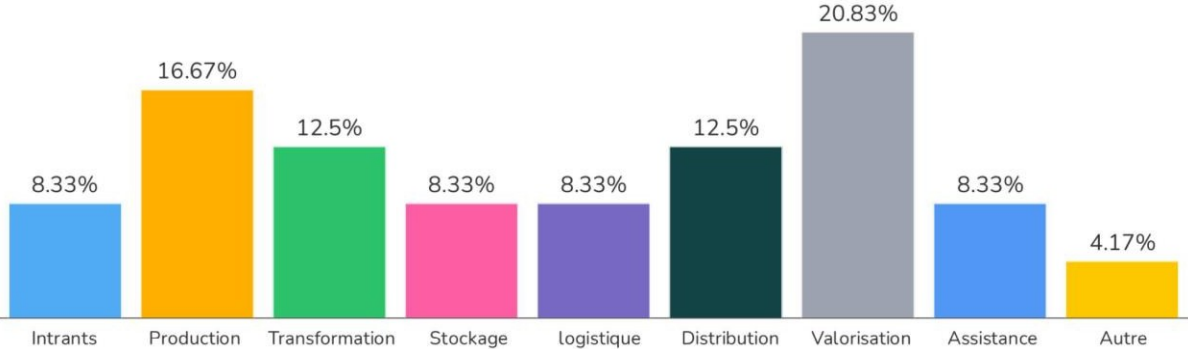
below as a simplified representation of the different steps in the chain.



Contexte & Environnement Extérieur

On the basis of this diagram, Mr Ndao asked the question: *on which stage of the chain should digitalisation be applied to obtain good agricultural productivity?*

The participants rated each component of the proposed value chain, the figure below shows the trends obtained:



Valorisation (20.83%), production (16.67%), distribution and transformation (12.50%) are the most important stages for an investment in digitalisation. This was the view of the participants at the beginning of the workshop. For Ms. Marame Diop, the results of the survey show where the participants identify the major problems and not where to prioritise digitalisation. The exchanges in plenary showed the various opinions on the issue:

Stakeholders	Opinions
Adia Sanogo Koffi, CCI	Invest in inputs and production.
Ousseynou Soumaré, ORSE	Distribution is the link to exploit.
Christophe Bernes, UC	The whole system.
Malick Ndome, Oxfam	The whole system.

For Bernes the whole system needs to be digitised according to the particular situation in question. There is no single lever. Mr Ndome gave an illustration of a wrestler who is off balance by muscling only one part of his body to show the importance of digitalisation over the whole range.

Ms Elisabetta Dermatis said that she did not share this opinion, for her, a strategy and studies are needed to know where to act in particular.

Mr Ndao understood from his different interventions that participants analyse either from a holistic or a surgical point of view. However, it was generally agreed that information is the key.

(ii) Discuss the constraints that limit its expansion

Mr Médoune Ndiaye of the Safari group (Senegal) mentioned the lack of infrastructure, network, means and adequate training as major constraints. For Mr Philip of Export Group (Caribbean), in the banana sector in his country, the price competition from Latin Americans in his country does not allow small farmers to compete, especially in logistics. This hinders the profitability of their production effort.

The constraints identified by the actors present include (see figure)

- Lack of organisation ;
- Lack of capacity building for digitisation;
- Public policies not favourable to small farmers who represent almost all the producers in our countries;
- Low profit/investment ratio ;
- Lack of adequate storage facilities, poorly controlled storage.



In sum, industrialisation 4.0 is an opportunity for Africa. However, to take full advantage of it, the above-mentioned fundamentals must be addressed.

(iii) Specifically identify which ones could be solved through digitalisation (e.g. market access and selling price of production, purchase price of agricultural inputs, access to knowledge, etc.) and how.

For this point, the facilitator focused on the topic of digitalisation by drawing attention to the nature of today's VICA world. It is therefore necessary to rely on agility and reactivity in order to be continually updated. India and China are leaders in the field of digitalisation. Digitalisation is ***the modification of processes with digital tools towards increasing digitalisation of processes.***

To talk about digitalisation, we must necessarily talk about the industrial revolution which has enabled man to evolve over time towards greater ease in his activities.

On this subject, participants were keen to stress the particular case of Africa, whose 4.0 industrialisation scheme must be different from that of Europe. Its less intensive operations could adapt by skipping steps and strategically targeting interventions. For example, capacity building, distribution are key levers for MSMEs.

On the other hand, digital can create a new specific market, stabilise this market and create added value

Activity 2: Cross-views of the impact of digitalisation on agricultural productivity

It consisted of a session of presentations ([see Annex 4](#)) followed by exchanges between the speakers (panel) and with the participants of the workshop on the theme "Impact of digitalisation on agricultural productivity" with :

• ***A first online presentation by Mr. Ken Lohento, Digital Agriculture Specialist at FAO with a "macro view".***

Mr Ken Lohento presented FAO's strategy in guiding the digital support of African agriculture. He began by highlighting the difficulties in Africa with famine exacerbated by the crisis in Covid-19 and the war in Ukraine. These factors increase the vulnerability of producers and therefore the agricultural productivity of farms.

We therefore understand the importance of digitalisation, which allows for better control of resources and tools. All of this in order to achieve the African (Agenda 2063) and global (MDG) objectives. Africa is at 30% of digitalization, which is too low to achieve its goals. According to him, it is necessary to increase the life span of projects to

more impact. But also to adapt the solutions to the means of the producers and for this there are a number of opportunities.

- DSP/SAID (2022) : East and West Africa. Training in digitalisation, introduction of the smartphone in product marketing activities;
- In Senegal, agricultural activities supported by digitisation in villages (Niayes/tolbi/ANCAR);
- Sen Louma, sales platform in the middle of COVID (FAO-ANCAR);
- D4Ag strategy: innovation & entrepreneurship, inclusion, using services, training, environmental facilitation.
- Starlink, SpaceX's satellite internet provider, is active in Africa for the first time (2023).

Questions & Answers

Stakeholders	Opinions
<p>Malick Ndome (Oxfam)</p> <p>What is the expected impact of digital through these projects</p>	<p>Digital technology provides data and solutions</p> <p>The state can do the same, and the FAO is helping to map the data. The State can do the same and the FAO helps to map the data, which makes it possible to serve each category of actor. Today, synergy is being sought through the establishment of an interactive platform that all actors can fill in and use simultaneously.</p>
<p>Stefano Amekoudi (Enable)</p> <p>What level of analysis is applied for the monitoring of digital strategies in countries concerned?</p>	<p>Digitalisation strategy developed since 2012 at Burkina. But the update on country developments is not yet done. Of the 10 countries, the East African states are the most dynamic.</p>

• A second face-to-face intervention with a field view by Mr Abdoulaye Kante, a specialist in digital innovation and solutions, based on data drawn from experimentation and monitoring of the integration of digitalization in agriculture.

Mr. Kante, from the FAO's Feed the Future programme, implemented two projects in Senegal namely "Naatal Mbay" followed by "Doolel Mbay" (May 2022 - May 2027). The objective of these

projects

The aim of the project is to increase the income of women and young people in 08 agricultural value chains. Doolel Mbay covers several regions and more than 100 producers with a potential to use ICTs: access to climate information, D4ag solutions, technical advice and training. It is also an introduction to the digitalisation of advice through a digital financial service and precision agriculture and data-driven management. According to Mr. Kante, Feed the Future places great importance on data, especially post-project continuity. In this sense, it encourages the appropriation of data by beneficiaries and the improvement of their capacity for rehabilitation. He states that there has been a clear improvement in the procedures from "Naatal Mbay" to "Doolel Mbay" through the co-creation of concepts with the beneficiaries (producers) to ensure the transfer of knowledge.

Questions & Answers

Speakers/Questions	Answers
Kevin Kossi (AFD)	
1. When did the "Naatal Mbay" project end?	"Naatal Mbay" was closed during 2014-2018.
2. What is the budget for the programme?	Financing of US\$ 38,000,000.
<hr/>	
Elisabetta Dermatis (Enabel)	
1. Are the digital solutions developed suitable for the targeted SMEs?	They are co-constructed with them, which guarantees their involvement throughout the project.
2. Is the project willing to share the data?	The data are the property of the producers and are available on the USAID website.
<hr/>	
Malick Ndome (Oxfam)	
What is the business model in place?	Storage and backup throughout the project life cycle. The climate data is It is an input.
<hr/>	

From these discussions, some recommendations emerged, including the following:

- Capitalise on the projects previously implemented in implemented and formulaterecommendations that can positively influence agricultural policies
- Supporting the development of sustainable financial products
- Improving the implementation of digital credit (PAMECAS)
- Promoting the use of data for agricultural sector governance
- Helping the State to map agricultural activities and actors (FAO)
- Promote the aggregation of data from producers and stakeholders
- Working with cooperatives to better impact producers
- Teach cooperatives to collect, store and reuse data and to monetise data at low cost
- Promote economic models that allow producers to pay for agricultural services
- Work on models that allow data interoperability (between actors, between projects)
- Monetising credit solutions
- Tailor crediting / Adapt costing
- Promoting sustainable platforms (that transcend projects)
- Establish processes and facilitate farmers' empowerment in managing the processes

Activity 3: Presentation(s) of digitisation tools

Participants were exposed to some of the technological tools and solutions for the agricultural sector through presentations ([see Annex 4](#)) by their developers and by Senegalese startups invited to the workshop. The facilitator proceeded to choose the passages for the presentations in a random way using a free wheel. Annexes 5&6 describe the startups and their distribution in the agricultural value chain.

1. FAYMA

Role	Support to SCOOP and OP.
Objective	Improve the quality and availability of information on value chains, credit security. Enable the collection of information at the production areas, storage facilities and markets.

History	Nafoore Warsaaji project, following the specific needs of SODEFITEX.
Beneficiaries	LBA, ARM aggregators, traders, producers (ASPRODEB).
Operation	Fill in the data: identity of the operator, area, equipment, consignment note, etc. FAYMA platform, 4 profiles: adm, ges, group and umbrella. SYSSTOCK platform: marketplace aspect.

Questions & Answers

Speakers/Questions	Answers
Babacar Faye (Oxfam) Is Fayma a credit payment platform?	Sodefitex had a problem paying the cotton farmers. Transporting large sums of money over long distances was risky. Fayma was a way to facilitate this payment. The team identified a mutual insurance company close to the population and traders to collaborate with. The producers were just sent a code by message to get paid. However, there was a concern about calculating the subsidies to be deducted from the production payment. Some producers were giving more land than they actually owned. This led to excess input subsidies and therefore wastage, among other problems.

2. ORSRE

Role	Management of warehouse receipts.
Objective	Financial inclusion, market structuring, product quality.

History	The ORSRE body was set up in 2020 by the State and the World Bank. Funding of 4.6 billion.
Beneficiaries	4 actors : warehouse approved, receipt warehouse receipt, depositor, storage professional.
Operation	807 jobs-13,200 tonnes of products.

Questions & Answers

Speakers/Questions	Answers
Adia Sanogo (CCI)	
What is the % that goes to the ERSRO?	There is no membership fee, the only condition is the quality and good calibration of the products. However, the beneficiary pays for the storage.

3. SORE ET UL

Role	E-commerce platform exclusively dedicated to the sale of 100% natural and 100% local food products.
Objective	To promote agri-food and cosmetic products processed in Senegal by women.
History	2014, 24% internet penetration rate. Digital opportunity in the face of marketing problems. Fiara and fair not sufficient to market the production of its women who live in remote areas of the capital.
Beneficiaries	30 SMEs in 7 regions of Senegal. + 23 groups of women processors trained and supported.
Operation	Online sales service - Catering service - Digital training - Physical shop.

Questions & Answers

Speakers/Questions	Answers (Awa Kaba)
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Adia Sanogo (CCI)/ Maramé Diop (Oxfam)

What is the % of SORETOUL?

Marketing possible if women have FRA authorisation, otherwise they are supported in formalising. SORETOUL has the 21% taken from the women's turnover. Women do not pay for the digital service set up to accompany women transformers. It is supported by collaborations with USAID-RA, institutions and universities.

Kévin Kossi (AFD)

What is the diagnosis of the condition of women transformers?

There is a great deal of state support but a The paradox persists that the long wait for funding means that these women, after 25 years in their field, do not make it. State institutions (ITA) are not decentralised enough. There are no local structures in the rural world. Awa advocates local services because Dakar is far from the localities.

4. ML OUMA

Role	Digital solutions across all agricultural value chains. Providing quality climate information, training and awareness.
Objective	Contribute to agricultural productivity.
History	10 years of existence, 90 producer groups.
Beneficiaries	Agricultural producers.
Operation	meteo mbay, louma Mbay, Louma du savoir, Louma force, ma ferme (management), ACAT (credit).

Questions & Answers

Speakers/Questions	Answers (Pape Leyti Ndiaye)
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Babacar Faye (Oxfam)

Are there any payment problems?

Sometimes there are problems, but the business model is revisited as beneficiaries demand it.

Malick Ndome (Oxfam)

1. What is the business plan?
2. What activities in outside agricultural campaigns?

NGOs, POs and partners enable producers to access the service. E-learning during non-production periods. Training of a leader who trains others producers

5. ILIMITIS / MOBI AGRI

Role	Mobile application for agricultural performance.
Objective	Provide reliable digital data in real time, even without an internet connection. Facilitate the monitoring of agricultural plots and the collection of data.
History	Previously applied to cotton cultivation in Burkina.
Beneficiaries	Agricultural producers.
Operation	Application used by more than 120 users.

6. GEDE

Role	Solution to the difficulties of sustainable water management in rural areas
Objective	Install meters in the fields to facilitate management and avoid conflicts between producers.
History	Created in 2009 in collaboration with the youth of Kayaar, in the Niayes.

Beneficiaries	Agricultural producers
Operation	Installation on 1500 to 3000 boreholes between 2013 and today

Questions & Answers

Stakeholders	Suggestions
Malick Ndome (Oxfam)	Exploit the possibilities of collaboration between solution providers.
Christophe Bernes (UCG)	Focus on the human and environmental aspect.
Christian Ferraris (AFD)	Assessment of inclusiveness in projects.

Day 2 | 15 March 2023

Activity 4: Visit Yeesal Agri Hub

The workshop participants travelled to the Thiès region to discover the first Agri Tech Hub in Senegal. The delegation was welcomed by the regional coordinator, Cheikh Ahmadou Bamba Fall, at the Hub's premises. The participants met in front of the Café de Rome hotel where a bus was waiting for the departure at 8am. Arriving in Thiès around 10am, the delegation met Cheikh Bamba Fall, coordinator of the AgriHub Yessal. The structure, created in 2017, is the first of its kind in Senegal. It is a support space for innovative entrepreneurship in Agribusiness, Agritech and Green Economy. It is an accelerator that tends to specialise in the provision of funds.

The visit began in Notto, 8 km from Thiès. On site, the delegation met with Mr. Boubacar Koné who is the Focal Point in charge of collecting and communicating climatic data that feeds the Mlouma (Mbay weather) platform supported by Yeesal in its deployment. Producers in the area are organised within the Réseau des Organisations Paysannes et Pastorales (RESOP) which has 1258 members. In 2021, 421 voluntarily registered members received free climate information by message or USSD system. In 2022, the service became chargeable for a fee of 1000 FCFA per year.

Through the training received, the provision of equipment including two rain gauges (in Notto Diobass and Tasset), the Meteo Mbay platform and their local database, the coordinator and his team are able to relay local climatic information to local producers

s network to enable them to make all the necessary arrangements.

Questions & Answers

Speakers/Questions	Answers (Boubacar Konté)
Eric Mounier (AFD)	
Is the weather forecast daily? ?	Yes, the data is collected each day in the morning and sent to the registrants.
Does it rain a lot in Senegal?	3 to 4 months. The quantity and distribution are variable.
Malick Ndome (Oxfam)	
How many rain gauges does the application have?	There are 02 of them, one in each area covered (Notto and Tasset). The distance between them exceeds the normative coverage distance.
Adia Sanogo (CCI)	
What is the impact of this climate information on the performance of beneficiaries?	Forecasts for an entire season allow producers to adjust their crop calendar and anticipate bad weather. Most of them have also taken out insurance.
Christian Ferraris (AFD)	
Is the national weather agency (ANACIM) showing an interest in collaboration?	No, but local institutions, other partners and academics are asking for the data.
Philip Jackson (Export group)	
Do producers in the area collect water from the rains?	No.
Ousseynou Soumare (ORSRE)	
Is there any marketing of quality certified seed?	Yes, with Mlouma, the players are always pushing to find suppliers who have the best offers with a satisfactory price/quality ratio.

Back at the Yeesal premises, the coordinator presented some of the activities of the hub and its mission to create an ecosystem and a portfolio of services that support the economic development of young people aged 18 to 40, returning migrants, Sunday farmers interested or already active in agriculture, and rural community initiatives and also to develop talent and skills while reducing traditional barriers to entry to opportunities in agribusiness, agritech and the green economy. He also gave a brief mapping of Senegalese agritech companies and startups. These include MLouma, Soreetul, MSA, Geomatica, Jokalanté, Suqali Mbaymi, Tolbi, ASC, BaySeedo, Aywa Jeun, Afri kamart, Proxalys, Dictaf, Volkeno, SenFarmers, Sama Toll and Agro tech.

It was also an opportunity to discover the presentation of the startup Tolbi, which was unable to participate in the previous day.

7. TOL BI

Role	Tolbi is a digital platform for real-time decision making that includes mobile farming and digital profiling of farmers.
Objective	Making satellite images available for more efficient agricultural decision-making. Advise on irrigation, fertilisation and phytosanitary treatment practices. Contribute to the development of precision agriculture.
History	Created in 2018 by a group of engineering students from the Ecole Supérieure Polytechnique de Dakar.
Beneficiaries	Agricultural producers, POs, agribusiness.
Operation	Digital platform, written and voice message reminder of planned technical itineraries. Offline use under development

Questions & Answers

Speakers/Questions	Answers
Malick Ndome (Oxfam)	
How much does the service cost?	The beneficiaries pay 8.000 FCFA/ha/month to access the service.
Philip Jackson (Export group)	
Is the service based on the country's cadastral map?	At present, there is no digital cadastral map system in the country. But the procedure is underway.

Eric Mounier (AFD)

What is the business model of the startup ?

Services are most often offered to beneficiaries through corporate CSR, agribusiness or the work of agricultural institutions.

Two entrepreneurs supported by Yessal AgriHub also shared their experiences.

Ogo Sall Diop presented Service Agricole (SAE), a start-up company of 12 young people involved in the production and sale of vegetable nurseries and advice to producers.

Through these presentations some challenges were highlighted. These include access to and ownership of land (with a digital land registry system in place in almost all regions), access to good connectivity and digital literacy, but also the need for more inclusive economic models.

Activity 5: Visiting producers/fields and meeting with farmers who apply some of the tools

The delegation also met with local stakeholders and visited a farm in the Thiès region that uses digital solutions and tools to improve productivity. These exchanges allowed the delegation to see in real life the use and challenges of integrating the tools.

Activity 6: General Delegation for Rapid Entrepreneurship of Women and Youth

The day ended with a visit to discover the spaces and programmes of the General Delegation for Rapid Entrepreneurship of Women and Youth (DER/FJ). This is a structure attached to the General Secretariat of the Presidency of the Republic of Senegal for the implementation of strategies for the promotion of self-employment of young people and women, the mobilisation of resources and the financing of business creation projects and income-generating activities and the strengthening of the technical and managerial capacities of the beneficiaries.

This visit allowed participants to discover the Lions Tech Invest programme, the Agri-Tech projects supported by the DER and Lux Dev and the Africa Startup Acceleration Programme

Initiative Program (ASIP) powered by Startupbootcamp AfriTech in collaboration with DER with focus on AgriTech startups among the 11 disruptive startups selected for Cohort 3 of the ASIP Program.

Questions & Answers :

Several issues were discussed, including

- Eligibility criteria? Pre-selection on the basis of scoring / technical and financial evaluation by sector experts
- Indicators of success and job creation? One performance indicator / One monitoring and evaluation service and periodic evaluations by independent evaluators / Each accompanied entity generates an average of 3 jobs
- Interest rate? The credit rate does not exceed 5% / The co-financing rate does not exceed 10%.
- Digitalisation of Nano credit? The credit agent has a dedicated device / 3 to 4 agents in each region / Use of mobile money by users
- The financing mechanism ? More than 80% of nano-loans / Risk management / Scoring on previous loans / A flexible bank without collateral
- The problem of harmonising the funding of state structures? The prospect of setting up a Unique Identification Number.

In conclusion, the participants highly appreciated the second one through several points raised, including the following:

- Entrepreneurial dynamism in Senegal
- The ability to use the realities on the ground to solve problems
- Discovering the local environment
- Fragility due to project dependencies
- The multitude of solutions for local companies and the support of the State
- The field trip to show the importance of digital technology in agriculture
- The Senegalese state has understood that the priority is in the primary sector and the actions maintained will bear fruit.
- The experience of the day will be capitalised on at home
- The day was an opportunity to see how things are structured in reality and to consider how to work with MSMEs

Day 3 | 16 March 2023

Activity 7: Panel presentation of projects that support the development/dissemination of AgriTech

For this session, two panelists shared with the participants the programmes/projects they are implementing to support and accompany AgriTech startups and to develop or disseminate Agritech solutions and tools in Senegal ([see Annex 4](#)).

1. My Agro

Role	Pioneering the use of a mobile savings and payments platform, which allows farmers to invest their own funds step by step, using their mobile phones, in high quality seeds, fertilisers, tools and training to significantly increase their crops and income.
Objective	To help producers increase their daily yields and incomes in order to ensure food security.
History	Senegal/Mali/Tanzania. From 2021 to 2023 collaboration with 888 to 3000 villages (Saint-Louis-Dakar-Kédougou) / 2020 to 2022: 6%, 26%, 28% membership.
Beneficiaries	Agricultural producers.
Operation	Weekly or monthly payment. Delivery of quality inputs. Training on technical itineraries, help with savings, advantage in terms of fertiliser bags.

Questions & Answers

Speakers/Questions	Answers (and Thierno Faye)	AgatheL eroux Mame
Médoune Ndiaye		
What actions (agroecological solutions) does MyAgro undertake to mitigate the effect of fertilisers on soil degradation?	Preliminary research is carried out on the seeds before they are integrated into the system. My Agro commercialises all seeds except groundnuts due to the fungal diseases to which the plant is prone. Collaborations are	

made with the structures already in place such as than Isra, Agrimed. Training on composting is provided as well as on the use of crop residues and good agricultural practices in general.

Christian Ferraris (AFD)

What is the human resource weight of My Agro? My Agro has 500 employees in addition to the producer employees.

Sébastien Otte (Enabel)

What impact does My Agro have on the yields of the producers it supplies with inputs? Sale of inputs more or less at market price. The package is different from the products on the market. The products are a bit more expensive but the yields are considered higher.

2. Concrec

Role	Private organisation with a business model. Incubation and support structure for AgritechPreneurs and solutions/services deployed.
Objective	Make digital products available. Support the entrepreneur in his progress, especially in agriculture but also in other sectors. 30 to 120 entrepreneurs.
Historical	Abidjan/Dakar. Has been in existence for 8 years. Interaction with development actors for digital solutions: Enabel, USAID, AFD with Wash, DIRECT
Beneficiaries	30 to 120 contractors
Operation	Different tools <ul style="list-style-type: none"> - LezGo: an ERM. - Wekomkom: virtual workspace. - Startup ludo: introduces entrepreneurship through play.

- Komkombox: Takes into account spatial, temporal and possibly gender constraints. 2D Agri Digi Box.

Questions & Answers

Speakers/Questions	Answers (Babacar Birane)
Philip Jackson (Export group)	
Is Concree working with the country's major groups?	Concree has worked on Xakatom with Sonatel, but there have also been collaborations with Espresso innovation Hub and BP (British Petroleum) through their CSR. In addition to town halls and institutions such as IRD and AFD
Eric Mounier (AFD)	
1. Is the social context of the entrepreneur taken into account in the development of support tools?	Yes, each beneficiary is calibrated according to his or her environment and literacy level in order to have maximum impact of the support.
2. How does it judge the impact of the investment from the DER ?	The financing period is very long in Senegal because there is no real competition in the ecosystem.
<i>Suggested collaboration between My Agro and Concree.</i>	
Émilie Griffiths (Enabel)	
Is Komkombox a monitoring tool?	Integration of knowledge for evaluation. It is a tracking system with coaches, a barcode for traceability and a dashboard for visibility.

The facilitator, Mr Mandiaye Ndao, closed this session by asking the presenters the relevance of their existence. The latter consider that they complete the value chain and therefore the gap between investment and output, especially as most of the time the information is held by a minority. An enzymatic effect is therefore necessary to contribute to the dynamism of the ecosystem.

Activity 8: Presentation of the progress of the 7 DIRECCT MSME projects

During this activity, all 7 projects in support of entrepreneurship implemented under the programme (5 by Expertise France via the CCIs, 1 by Oxfam, 1 by Enabel) had 10 minutes each to present their activities and progress and their major results obtained. This session allowed for an exchange of experience and good practice between the participants ([see Annex 4](#)).

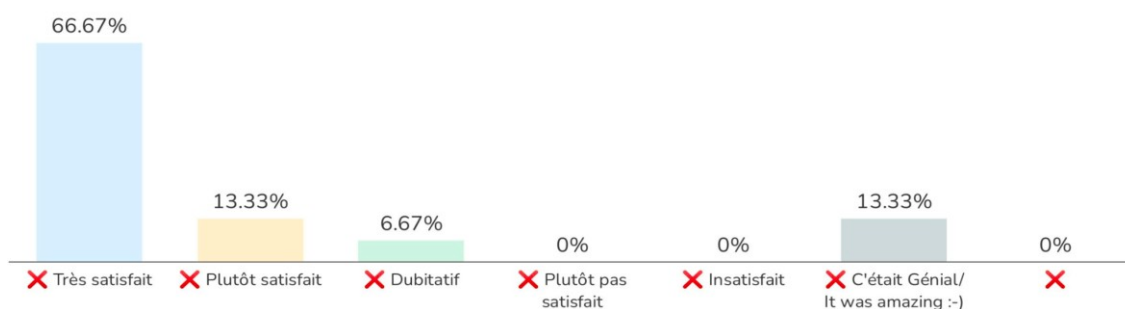
Activity 9: Working groups and presentations/exchanges

The last activity of the workshop concerned the assessment and capitalisation of previous activities, with a view to producing deliverables. It was a question of taking up the issues identified in activity 1 in the light of the observations made during activities 2 to 7, and preparing knowledge summaries (model to be built) on the tools and environments/ecosystems explored. The same platform used for the first activity was used to collect the participants' impressions of the workshop's progress and content. But also to have an overview of what these exchanges have generated in their minds for future capitalisation in their respective countries.

At the end of the 3-day workshop, the participants were globally satisfied with the session (more than 93%) in terms of content, form, facilitation and interactions developed.

Votre satisfaction globale à l'issue des 3 journées?

None of the options is correct!



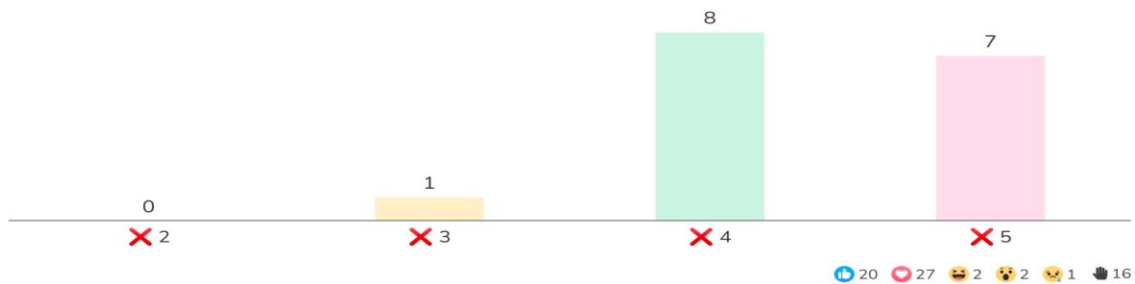
Feedbacks et/ou Points d'attention pour une amélioration continue ...

<p>Organisation extraordinaire et professionnelle</p>	<p>Dual presentation slides (English & French)</p> <p>Lamptey GNCCI</p>	<p>Ne pas changer le facilitateur !</p> <p>C Ferraris</p>
<p>A workshop like this would require a more hands on interaction with the various solutions.</p> <p>Phillip Jackson Caribbean Export Dev</p>	<p>Excepté l'incident avec le chauffeur de bus hier après-midi, l'organisation était parfaite, les informations transmises avant et pendant l'atelier très satisfaisantes, l'animation dynamique facteur du succès de l'atelier et de la participation</p> <p>Christophe Bernes DIRECCT AFD</p>	<p>Belle innovation avec AHASLIDES</p> <p>I enjoyed the use of the interactives slides and real-time feedback</p> <p>Phillip Jackson Caribbean Export Dev</p>

They stated that they have a better understanding of the concept of agricultural productivity and the place and role that digitalisation can play in improving it in the agricultural value chain.

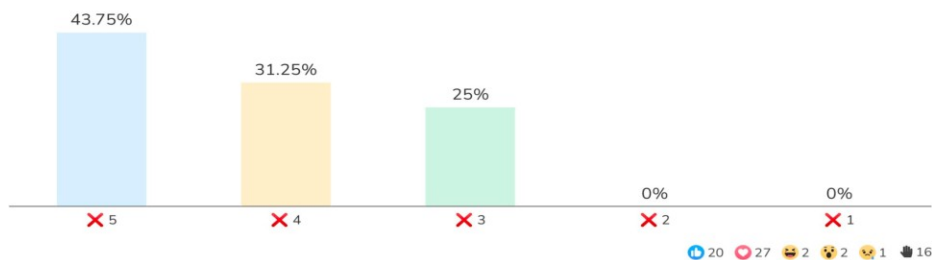
Avez vous une meilleure compréhension de la place et du rôle que peut jouer la digitalisation dans l'amélioration de la productivité de la chaîne de valeur agricole?

None of the options is correct!



Avez-vous une MEILLEURE compréhension des notions d'amélioration de la productivité agricole? (5 étant la meilleure note)

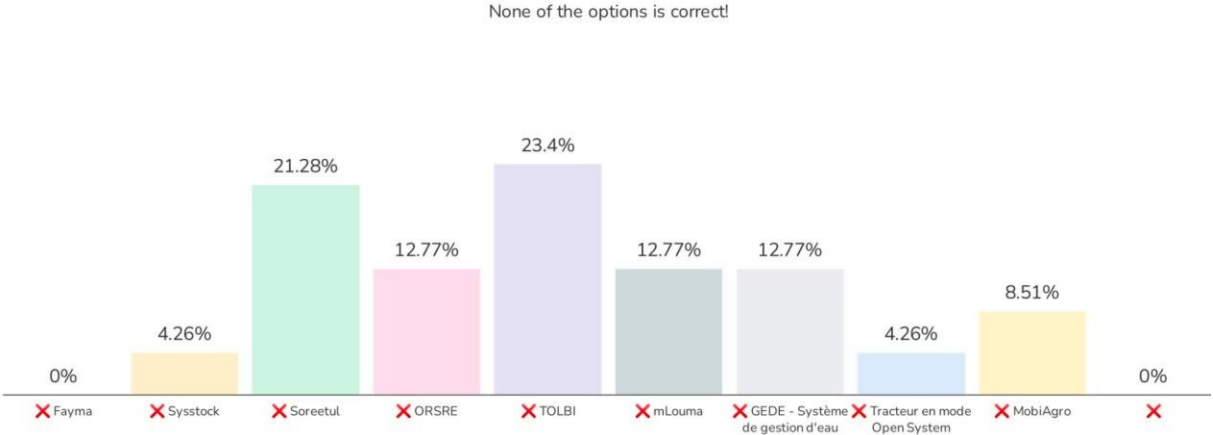
None of the options is correct!



In addition, they appreciated almost all of the solutions presented, particularly TOLBI, which is involved in agricultural productivity, and Soreetul, which is involved in distribution and recovery. In addition, the diversity of the players in the ecosystem

In addition, several salient points were highlighted, including the diversity of actors in the entrepreneurial ecosystem, their dynamism and humility in sharing, the entrepreneurial culture, the support system in place, the importance of coaching, but also a certain lack of data policy and a dependence on the projects that are being implemented that hinder sustainability.

Laquelle des solutions présentées vous a le plus marqué?



Globalement, qu'est ce qui vous a le plus marqué?



👍 20 ❤️ 27 😬 2 🤔 2 😞 1 🙌 34

Finally, the participants, beyond all the knowledge, tools and solutions capitalised during the workshop, identified a certain number of solutions that will be transposable to their different environments or ecosystems, the elements of which are shown in the table below.

Quelles solutions vous paraissent transposables dans vos environnement ou écosystèmes locaux?

Le système de récépissé	Les outils de formation proposés par Concree. Emilie Griffiths Expertise France	Those related to connecting actors in the marketplace, record of farm activity and production futures, incubation and acceleration of start-ups Phillip Jackson Caribbean Export Dev
The solution that tracks weather patterns. Since many farmers in Ghana engage in rainfed agriculture, that solution will be very relevant for them. Terry Mante GNCCI/SUKU	système de récépissé ALTINE Malik CCI Bénin	e-Tolbi afin de géoréférencer et monitorer à temps réel les activités des producteurs Job Biao CCI Bénin
Solutions relatives a la prévention ou l atténuation des effets du changement climatique transposables dans les pays du Nord ? C Ferraris	*TOLBI Solution radar pour l'étude des sols pour une meilleure irrigation etc (étant donné que JOOL INTERNATIONAL semble être en train de prendre des actions qui vont dans le même sens) MOUSSOH LOIC CCI CI	

Session closes with officials

Due to the political situation in the country on that day, the officials present at the opening were unable to attend the closing session. For security reasons, they attended the session online. Ms Emily Griffiths welcomed them and then reminded them of the different participants from the different partner countries, donors and guests present in the room. She then gave the floor to Mandiaye for a summary of the activities and capitalisation of the three-day workshop. The facilitator gave each country the opportunity to give their assessment of these three days of exchanges.

- For Ghana, it was three days full of learning about the place of digitalisation in Senegal with dynamic young entrepreneurs. The visits allowed us to see this dynamic on the ground in a practical way.
- For Côte d'Ivoire, a feeling of satisfaction is shared with the specific objective of drawing inspiration from the Senegalese model once back home.
- For Benin it was a question of a better understanding of the importance of digitalisation in agricultural productivity. Some very interesting startups were

In addition to the field visit, which served to see in a practical way and to think about future capitalisation.

- For the Caribbean (Philip), this workshop was beneficial and impressive. He sees it as an interesting way to bring his innovations to the policy level and an opportunity for Caribbean-West African cooperation.
- Finally, for Senegal (Médoune), the sharing workshop was seen as a means of initiating an interesting benchmark in the sector. The activities carried out allow for other perspectives to be opened up.

It was then the turn of the various partners and officials to give their impressions.

Oxfam

Mr Mathieu Vergéz brought greetings from the Oxfam Senegal management and the delegation of representatives (Malick Ndom e, Fadel Diop, Maramé Diop). Oxfam is present in Senegal to reduce inequalities. This workshop allowed a better understanding of the Agritech environment. It also provided the beginnings of how to forge and create a viable ecosystem and a solid business model. What is done in health should be done in agriculture. He concluded by wishing the colleagues a safe journey home.

Enabel

Mrs. Annick Peeters thanked and congratulated the DIRECCT project, which is the only Enabel project focused on digital, for the organisation of this workshop. For her, the territorial divide has been reduced and there are good prospects for adaptation here. She concluded by wishing the colleagues a safe journey home.

AFD

Christophe Bernier strongly thanked and congratulated Enabel and Oxfam for the organisation of this very relevant workshop.

EU Delegation

Mr Simon Vanden Broeke defined the EU's digital vision, which is based on a green and digital transition in line with current trends. For him, this is the beginning of a joint strategy between the EU and Senegal. He concluded by wishing his colleagues a safe journey home.

Mr Mandiaye Ndao thanked all the participants and marked the end of the workshop with these words. Mrs. Emilie Griffiths (Enabel) announced that a next meeting would be scheduled for June 2023 in one of the project member countries.

Conclusion

The workshop was an opportunity for the different actors of the DIRECCT project to exchange on the concepts of agricultural productivity and digitalisation; but above all to expose the achievements and to initiate their capitalisation. The participants expressed their satisfaction after these three days of exchanges. They appreciated the relevance of this workshop which is an opportunity to have an idea of the place of digitalization in agriculture. New notions were learned and it was with pleasure that they listened to the presentations and discovered the start-ups that had to share their innovative path in the digitalisation of Senegalese agriculture. The organisers' initiative was appreciated and deemed useful by all. The assembly greatly appreciated the performance of the facilitator, Mr. Mandiaye Ndao, who brilliantly led the exchanges.

Acknowledgements

Annex 1: Workshop TOR

Annex 2: Workshop agenda Annex 3:

List of participants

Annex 4: Link to the different presentations

- Session 2 - Materials :
https://drive.google.com/drive/folders/1tYYCCv803EFZAcD_Axz1Awc4nKibD_vLd?usp=share_link
- Session 3 - Materials:
https://drive.google.com/drive/folders/1l0N0inifvThrtrSb17N1Hrr0zrXDpnTN?usp=share_link
- Session 7 - Materials:
https://drive.google.com/drive/folders/1-GbitF169111svAsDbxRZGB00-cKP092?usp=share_link
- Session 8 - Materials:
https://drive.google.com/drive/folders/1FDYogfnB2U5V1yUU6yjWgL02smZ4qgzg?usp=share_link

Annex 5: Description of solution providers and support actors

Name : **FAYMA**

Description: Producer payment platform.

Issue	Link in the chain of value addressed	Solution	Business model	Impact	Challenges
Problem of payment of cotton producers who supply SODEFITEX.	Production	FAYMA platform to record debts and production to derive the payment of.	Provision of services on behalf of SODEFITEX.	Improving the quality and availability of information on channels chains value chains, security of credit.	Systematic and reliable information. Coverage

Name: **ORSRE**

Description: stock control system.

Issue	Link in the chain of value addressed	Solution	Business model	Impact	Challenges
Low value of stocks for for better food security.	Storage	Setting in set up of the SRE-SAVE, a system information modern of monitoring and data collection in time real.	Independent body attached to the Ministry of Trade. Created by the law n°2017-29 from 14 July 2017. 4.6 billion in WB funding.	Better organisation of the storage system, data from reliable production, product quality, food safety. 0 SMEs in 7 regions of Senegal. + 23 groups of women processors trained a nd accompanied.	Realities of rural world

Name : **SOREETUL**

Description: Platform for the sale of local processed products, physical shop.

Issue	CV link	Solution	Business model	Impact	Challenges
Difficulties of women processors in accessing the market.	Transformation & Distribution	Digital platform to facilitate marketing.	Percentage (21%) on platform sales. Partnership with POs, NGOs, etc.	Increased income of women processors. Facilitation access to products local.	Low local consumption. Commitment of Women Transformers.

Name : **MLOUMA (Météo mbaye)**

Description: Climate information service.

Issue	CV link	Solution	Business model	Impact	Challenges
Missing reliable information on the weather for agricultural campaigns.	Support for Production via the setting à provision information	Daily weather forecast service by message.	Annual payment 1000f per producer. Partnership with POs, NGOs, etc.	Better control of climate-based decision making.	A more coverage.

Name: **ILIMITIS / MOBI AGRI**

Description: Provides reliable digital data in real time, even without an internet connection.

Issue	CV link	Solution	Business model	Impact	Challenges
Difficulties in Production monitoring and collecting plot data agricultural.		Follow-up digital of agricultural plots.	Service provision / Subscription	Application used by over 120 users	Introduction and appropriation of digital in rural areas

Name : **SOTILMA FARM**

Description: Sotilma Farm is a smart agricultural water meter that allows farmers to better manage their water consumption.

Issue	CV link	Solution	Business model	Impact	Challenges
Overuse of water in agricultural fields Difficulties in adapting to change Climate Change Dependency à the rainfall	Production	A smart agricultural water meter that manages and optimises water consumption for farmers and industry.	Sale of products and services	Reduction of expenses d save on water Management water management Visualisation of real time consumption	Ownership of the solution by farmers an

Name : **TOLBI**

Description: Platform dedicated to intelligent agriculture and precision agriculture

Issue	CV link	Solution	Business model	Impact	Challenges
Difficulty of control and profitability of small producers' crops	Production	Solutions based on artificial intelligence, drones and the Internet of connected things that enable to provide information in real time to better manage water irrigation, the fertilizer inputs and detection plant diseases.	Billing per hectare monitored (8000 Fcfa/ha)	60-80% savings in irrigation water and 30% more yield, if practices are applied at plot level of a field.	Low financial capacity of producers

With a
information
system that
integrates voice and
local languages

Name: **MyAgro**

Description: a non-profit social enterprise based in West Africa, which aims to ensure food security for small-scale farmers farmers and lift them out of poverty

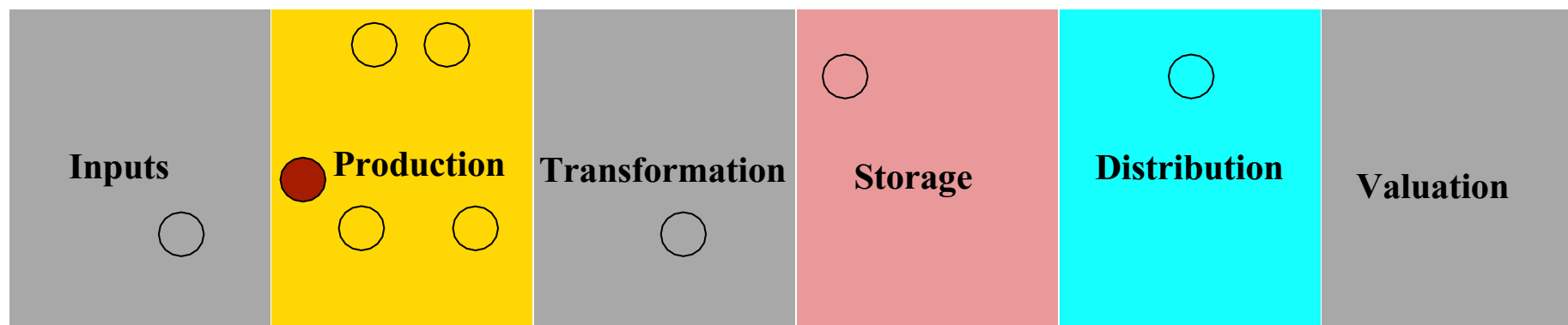
Issue	Link in the CV	Solution	Business model	Impact	Challenges
Difficulty in accessing quality seed and fertiliser	Inputs	a savings model that allows small-scale farmers to invest their own funds in high-quality seed, fertiliser and agricultural training to increase their crops and their income.	Donation, Grant?	150 à 300\$ increase in annual income per farmer 3000 villages served in Senegal	Mistrust of farmers to dematerialised payments Weak existence of cash points in the villages

Name: **CONCREE**

Description: an organisation that supports entrepreneurs from ideation to product market fit

Issue	Link in the chain of value addressed	Solution	Business model	Impact	Challenges
Starting a business sustainable and growing	Support. Cross-cutting in the CV.	From incubation/acceleration services and digital technologies to help startups to progress according to their their context specific.	Incubation and acceleration services Product and programme provision	3000 entrepreneurs supported on digital solutions. 60% of supported startups are actively generating actively generate revenue.	Digital literacy for rural entrepreneurs

Annex 6: List of stakeholders in the simplified agricultural value chain in Senegal



Legend

● FAYMA

● ORSRE

● SOREETUL

● MLOUMA

● MOBI AGRI

● SOLTILMA FARM

● TOLBI

● MY AGRO

● CONCREE (Accompaniment)