A 5-YEAR MASTER PLAN

SUB-COMPONENT 2.2 ON TECHNOLOGY AND ENTERPRISE FOR RURAL YOUTH

Prepared by Sub-Component 2.2

April 2021

Table of Contents

List of Abbreviations

- AIMS   Accelerating Inclusive Markets for Smallholders
- ASPIRE   Agriculture Services Program for Innovation, Resilience, and Extension
- App   Application
- CEC   Consultant Evaluation Committee
- CP   Commercial Partner
- CPS   Centre for Policy Studies
- DT   Digital Technology
- EP   Economic Pole
- ICT   Information and Communication Technology
- IFAD   International Fund for Agricultural Development
- iOS   Apple Inc. Operating System
- K   A unit of a 1,000
- KAS-SP   Khmer Agriculture Suite Service Provider
- KAS-DC   Khmer Agriculture Suite for Data Centre
- MEF-PIU   Ministry of Economic-Project Implementation Unit
- MIS   Monitoring Information System
- M&E   Monitoring and Evaluation
- MTR   Mid-term Review
- NGO   Non-Governmental Organization
- PIM   Project Implementation Manual
- Q   Quarter
- RGC   Royal Government of Cambodia
- SAAMBAT Sustainable Asset for Agriculture Markets, Business and Trade
- SC 2.2   Sub-component 2.2
- SOP   Standard Operating Procedure
- SP   Service Provider
- SWOT   Strengths, Weaknesses, Opportunities, and Threats
- TOR   Term of Reference
- TSC   Techo Startup Center
- USD   United State Dollar

List of Figures

List of Tables

Executive summary

The development of a 5-year master plan of Techo Startup Centre (TSC) for implementing Sustainable Asset for Agriculture Markets, Business and Trade (SAAMBAT) project's sub-component 2.2 (SC 2.2) on technology and enterprise for rural value chains actors will be used as a directive roadmap to successfully implement this project. A SWOT analysis was conducted to leverage available resources to match the project requirements as well as to identify benefits and drawbacks. Shortcomings will be analysed then translated into corrective action plan which will be utilized to minimize failure. A road map to mitigate the possibility of occurring risks was raised and various potential risks were projected while counter-measurements against these risks will be discussed and suggested for possible solutions.

According to SAAMBAT's project document, SC 2.2 is designed to be reliant on sub-contracting service providers to operate the field work. This is one of the drawbacks that may lead SC 2.2 to delay in achieving the milestones if Service Provider (SP) were not identified or awarded SP failed to perform the assignments or drop out while implementing assignments half-way through. Likewise, the complexity of the procurement process and COVID-19 pandemic have contributed to the postponement of SAAMBAT's outputs production.

To overcome these, a backup plan was developed such as outsourcing potential SP for replacement, producing a comprehensive Term of Reference (TOR) to recruit SP. TOR must be embedded precautious measurements and the disbursement of fund should be based on outputs produced. Likewise, another possibility to tackle this is to employ a group of consultants to manage the tasks and a research team as well as sub-contract the local non-governmental organizations to execute the fieldwork. With a strong commitment from the Chief of Digital Technology and Enterprise for Rural Value Chain and assistance from the International Fund for Agricultural Development (IFAD) to facilitate and push for the procurement process, it is hoped that the process would be sped up.

One of the important facts of SC 2.2 is that it is rich of highly talented human resources which is capable and able to autonomously administer tasks of SC 2.2 if it is permitted by IFAD.

An annual fund disbursement in the budget line and an annual work plan were developed. However, due to the deferment of field implementation in year 1, SC 2.2 is expected to be fully operationalized in 2021 if the COVID 19 were successfully controlled. Hence, the financial expenses are pushed to 2021 budget line and the amount of allocated fund will correspond to the burden of outputs to be attained in each year of the field works.

Overall, it could be concluded that SC 2.2 would be able to manage the assigned tasks successfully through its proactive action plan.

1) Introduction

The advancement of information and communication technology (ICT) was emerged long ago and became intensified in the 4th industrial revolution, which is one of the push factor catalysts that require unskilled labourers to prepare themselves to be ready in a skilful working environment to catch up the unstoppable ICT advancement.

In today's fast-paced world, the country needs to stay relevant in order to survive as this becomes increasingly more significant for the country to prioritize digital innovation. In the past, everyone could walk into the store and examine the product by themselves. Today, that is not always possible – even before the pandemic, many of the shopping activities have been transitioning from in-store to online.

The innovative technology progression plays a significant role in poverty reduction by offering economic opportunities to rural populations. In particular, digital technology has the ability to empower rural farmers through a cluster of software programs that enable them to get access to agriculture information as well as a platform for rural enterprises to trade their products. Consequently, this promising technology and digital literacy solution will contribute to the rural community development (Sununta, S. 2016).

Applying digital technology, such as mobile application (app), in agriculture value chain will mitigate existing loopholes, minimize transaction cost, and time wastage. For instance, farmers do not have to go directly to input supplier outlets, but they just press on a pre-installed agriculture app and add information of agri-inputs specifications then the information will alert the seller and the ordered products will be transported to farmers' location.

The basic capacity development in ICT is the best-suited solution to lift farmers out of the poverty trap by creating economic sound opportunities resulting in rural economic growth. It leads farmers to become more productive, get better access to the market information, financing, and other facilities and services (Arun, R. 2017).

Sustainable Assets for Agriculture Markets, Business and Trade (SAAMBAT) is a joint project between the Royal Government of Cambodia (RGC), the International Fund for Agricultural Development (IFAD), the European Investment Bank (EIB), and the EU grant. The project has started in late 2019 and will be ended by the end of 2025. It has 2 main components, Component 1 implemented by the Ministry of Rural Development (MRD) focusing on value chain infrastructure and Component 2 executed by the Ministry of Economy and Finance (MEF) working on skills, technology for rural enterprises, and agriculture value chain policy framework. Under the Component 2, there are 3 sub-components implemented by

3 counterparts, Skills Development Fund (SDF) for Sub-Component 2.1, Techo Startup Center (TSC) for Sub-Component 2.2 and the Center for Policy Studies (CPS) for Sub-Component 2.3. TSC together with SC 2.2's consultants are tasked in digital technology and enterprise for rural value chain actors.

This document will propose the development of a 5-year master plan for SC 2.2 which focuses on solving loopholes of miscommunications and linking all fragmented rural actors in agriculture value chains through digital technology.

The goal of SC 2.2 is to become the first-ever national platform that will resolve the problem of miscommunication and fragmentation amongst agriculture value chain actors through collective actions which harness digital technology as a mean of solutions. In response to the target goal, 4 objectives were identified including (1) to facilitate and support the extension of innovative digital services to smallholder agriculture and the rural economy, (2) to improve digital literacy for rural value chain actors, (3) to raise awareness and adoption of digital technology empowering rural economy, and (4) to provide access to information and marketplaces for rural value chain actors through digital application.

2) Digital Technology in Agriculture Value Chains in Cambodia

A study conducted by Konrad Adenaeur Stiftung in 2019 revealed that many soft and hard skills are required to transition labour workforce into a competitive digital technology labour market (Heng, P. 2019). These skills will be one of the catalysts to contribute to RGC's vision to become an upper-middle-income country in 2030.

The findings also reported that lack of content skills, for instance, ICT literacy, cognitive ability, critical thinking, and social skills such as persuasion and emotional intelligence, mentoring colleagues, are very much needed in technology-driven economy era.

The current skill gaps such as foreign language, technical and practical skills, communication, problem solving, and teamwork were identified (Heng, P. 2018). Some prioritized technical skill sets that are contemporary required to meet the market demand are managing online information, online collaboration, and analytics. In the contrary, digital technology in agriculture sector was merely recognized.

There are a few existing digital applications aiming to fill out the fragmented agriculture value chain gaps, which mostly concentrate on agriculture productivity increment. These initiatives, however, are not comprehensive and do not cover all segmented agriculture value chain information including private sectors, development partner funded projects and the government institutions. For instance, Tonle Sap app, which is owned and operated by a private

sector namely Angkor Mohakreach Kredit (AMK) microfinance, provides agricultural production advice to farmers with the main focuses on agricultural production and market linkage with an anticipated of agricultural loan expansion.

The international funded projects such as Angkor Salad app which is implemented by the World Vegetable and Khmer Smart Farming app which is operated by Danish Church Aid offers both agricultural technical production and geographical market platform to rural community, however, these 2 apps are still in developing phase.

At the moment, there are 2 main IFAD financed projects namely Agriculture Services Programme for Innovation, Resilience, and Extension (ASPIRE) and Accelerate Inclusive Market for Smallholders (AIMS). ASPIRE, which has been executed by the Ministry of Agriculture, Forestry, and Fishery (MAFF), aims at increasing agricultural productivity in the climate change environment and solving smallholder farmers problem in accessing to marketplaces. The project delivers agricultural knowledge through KhmerAgri web portal and a mobile phone app "CHAMKAR". This app is partially financed by the Korean aide with an intention to link the project's beneficiaries to a virtual market platform.

The second project, AIMS has been operated by the Ministry of Commerce, is intended to accelerate the inclusive of market and highly value agricultural products for smallholder farmers.

To complement to ASPIRE and AIMS works, by overcoming gaps that occurred in agriculture value chain, SAAMBAT will build the rural infrastructure to ease smallholder farmers in transporting their agricultural products to the neighbouring or local markets and provide vocational and entrepreneurship skills training to rural youth including female beneficiaries.

SC 2.2 under the SAAMBAT project will provide foundation of digital technology literacy training to the project's beneficiaries in response to the fast-paced of digital technology. It will set up the data centre and Khmer Agriculture Suite otherwise known as KAS core platform that will enable all kinds of agricultural data to plug into an open platform with a hope that all collected agricultural and market data will be as of useful and alive after each financed project phases out. It is anticipated that SC 2.2 will address agriculture value chains gaps via key applications of the KAS core platform.

3) Digital Technology Challenges

Cambodia is immature in term of the use of digital technology readiness according to the ranking conducted by the world economic forum in 2018. They reported that Cambodia scored 3.4 out of 7 which stands at 109 places in digital index readiness. There are 10 categories to process this evaluation such as (1) political and regulatory environment, (2) business and innovation, (3) infrastructure and digital content, (4) affordability, (5) skills, (6) individual usage, (7) business usage, (8) government usage, (9) economic impacts, and (10) social impacts. In term of ICT application, Cambodia stands at 117 among 193 countries. This shows that Cambodia is not ready to tackle the incoming highly required digital technology skills. This requires Cambodia to improve its existing digital infrastructure, boosting digital literacy, promoting entrepreneurship and innovation, building trust and security in the application of ICT, and demonstrating digital leadership (Heng, P. 2018).

One of the current challenges that observed was, on the one hand, the perception of the elder generation tends to be conservative resisting to adopt new technologies whereas the younger generation is apt to take risks by exploring contemporary digital technology (Rattanakthida, K. 2019).

On the other hand, looking at the factual situation on agriculture value chain in the country, smallholder farmers are encountering several challenges such as higher production cost, uncompetitive produce quality due to lack of post-harvest technology practices, lack of access to market information such as market price which is based on intermediaries/middlemen and/or traders, and limited channels of linkages among the value chain actors (Arun, R. 2017).

The current trend of smartphone price keeps declining from time-to-time becoming more affordable due to the upsurge of the Chinese mobile companies as well as the broadband service providers continue to cover the nation-wide with a reasonable fee charge. A research studied by Hootsuite in 2020, indicates that a number of mobile phone subscription in Cambodia has reached 21.24 million and the internet user arrived at 9.7 million (Simon, K.2020). As part of SAAMBAT's project, SC 2.2 aims at providing capacity building on digital technology to rural value chains actors to capture rural economy development opportunity. Promoting awareness and illustrating the benefits of ICT are, therefore, a central prerequisite to the successful adoption of new technology which in turn contribute to the poverty reduction.

SC 2.2 will employ digital technology outreach campaign service provider (SP), which is known as SP3, to deliver full package of digital literacy training courses to rural value chain

actors. The SP3 will be responsible for conducting research on digital technology needs and skills gap in the rural economy; training entrepreneurs and direct beneficiaries to use digital technology; developing and implementing sub-projects to increase the usage of digital technology; facilitating market research by digital innovators; supporting the testing and rolling-out of innovative digital applications; and monitoring uptake of digital technology in the rural value chain etc. However, the first year of SAAMBAT implementation was stagnant due to the impact of COVID-19 pandemic and a delay in the procurement process for hiring service providers (SPs).

The main challenge that SC 2.2 has encountered is, according to the project design, implementing 6 output indicators are dependent on several service providers through each activity sub-contractor. If there were no qualified SP applied for the call for tenders or awarded or if SP fails to comply with the TOR, SC 2.2 would be in a big trouble since a preventative measurement was not in place in project design.

4) Implementation Framework

a. SAAMBAT at a glance

RGC and IFAD have agreed to design SAAMBAT project through a pipeline of a concept note dated on 23rd October 2018 and the Aide Memoire dated on 14th December 2018. SAAMBAT aims to stimulate agricultural productivity and enterprise development at the rural areas by creating an environment where poor rural people can benefit from the increase of productivity and enabling the market participation.

SAAMBAT plans to deliver its impact through two components: (1) Value Chain Infrastructure and (2) Skills, Technology and Enterprise. While the first component focuses on a physical infrastructure serving as means to access to the market, the second component deals with intangible values in terms of (2.1) rural youth capacity development, (2.2) technologically enhanced value chain to boost the participation of the poor rural people, and (2.3) policy study on agricultural value chain intervention.

TSC is a public administration organization under the supervision of MEF. TSC roles are (1) to conduct research related to startups and innovative economy and to advise on policies and strategic plans on startups development and its ecosystem, (2) to develop and execute innovation foundation platform and supporting infrastructure to enable digital economy development and incubate startups, (3) to provide internship and skill training to enhance capacity building and promote practical research in search of innovation in new business

training, (4) to provide services to support startups as part of startup establishment such as business registration services, certification and /or licensing and consultation services, and (5) to cooperate with national and international organizations in developing, incubating, investing in startups etc.

TSC works collaboratively with SAAMBAT to implement an open digital platform for agriculture value chain towards inclusive growth by breaking the barrier of limited communication between different stakeholders such as suppliers, farmers, traders, retailers, consumers, etc. The digital platform is proposed to particularly address the concerns raised by SAAMBAT in SC 2.2 Technology and Enterprise for Rural Value Chain. In addition, TSC is assigned to oversee and manage this sub-component by employing various service providers to perform the tasks.

SC 2.2 will recruit a SP to develop KAS core platform which is an open platform and data resource for web-based and mobile applications for all interested innovative applicants who would voluntarily allow their apps to integrate into the platform with an intention to increase rural economy. It will also develop 5 key applications in addition to KAS core platform. Besides the key applications, 10 innovative applications will also be established via challenge fund support packages to increase rural productivity. It is intended to provide grant to support start-ups and innovation working in agriculture digital value chain and agribusiness on the development and testing of innovative digital applications for utilization to contribute to the rural economy, through a 12 to 18-month project. Additionally, in order to understand the barriers to the rural digital technology literacy and adoption as well as to overcome these obstacles, 3 feasibility studies including a research on digital outreach, agriculture value chain digitalization, and digital technology ecosystem development will be conducted. However, SC 2.2 is not assigned to perform these tasks by itself, it has to be implemented through sub-contracting service providers. Therefore, several comprehensive TORs will be developed.

The total fund for SC 2.2 to implement field activities via SPs is USD 6,849,370 (the total expenses exclude budget to be spent on SC 2.2's goods which is USD 329,220). To successfully implement SAAMBAT's SC 2.2 of Technology and Enterprise for Rural Value Chain, a 5-year strategic master plan is developed to guide the implementation and to develop a plan to mitigate the risks. It is forecasted that the operation of this sub-component will be fully operationalized in 2021 due to the complexity of the procurement process which has to follow MEF's standard operating procedure (SOP) resulting in a delay in getting budget approval to proceed field-implementation activities.

This paper is intended (1) to develop a 5-year strategic master plan which will be utilized as a directive roadmap to measure project planning output indicators to be attained within the project timeframe from 2020 to 2025 and (2) to conduct risk assessment then translate it into risk mitigation strategy. It also helps monitor, gauge, and provide feedback to the project milestones on achievements and barriers. The feedback will be synthesized then interpret into a tool to find best-suited solutions to the problems. It is anticipated that SAAMBAT's SC 2.2 will raise awareness of rural smallholder farmers, youths, and woman-headed households on digital technology and particularly to encourage them to adopt and apply digital technology as a way of daily interactions with other actors in agriculture value chain in order to fill out fragmented value chain gaps. It is hoped that 25,000 rural agriculture value chain actors will use digital technology as a means of daily communications, 5,000 trainees will be trained on digital literacy, and 5,000 users will adopt digital technology.

b. Vision

To become a national platform and a favourable ecosystem of agriculture value chain to drive innovation and enterprises through digital technology.

c. Mission

- To build networks with public, private, and development partners enabling adoption of digital technology in agriculture
- To improve digital literacy and adoption among rural value chain actors
- To build digital platform to connect stakeholders in agriculture value chains
- To promote innovation and startups through challenge funds

d. Goal

To become the first ever national platform that disrupts the problem of miscommunication and fragmentation amongst agriculture value chain actors through collective actions which harnesses digital technology as a mean of solution.

e. Objectives

➢ To facilitate and support the extension of innovative digital services to smallholder agriculture and the rural economy

➢ To improve digital literacy of rural value chain actors

➢ To raise awareness and adoption of digital technology empowering rural economy

➢ To provide access to information and marketplaces for rural value chain actors through digital applications

All activities and results under SC 2.2 will be recorded in the internal Management Information System (MIS). This system will be developed by SC 2.2, with support from MEF-PIU's M&E consultant and PMU's M&E specialist It is expected that all of the SP recorded data entries will be able to migrate and extractable to IFAD's MIS system, to monitor SP field implementation against planned activity milestones. Likewise, it is obligated that all contracted SPs have to enter all relevant data into SC 2.2's MIS as well as SAAMBAT's MIS. The format of the field report will be provided and required all awarded SPs to submit field reports of the previous month to SC 2.2 on a monthly basis at every Wednesday of the first week of the new

f. Activities under sub-component 2.2

Under SC 2.2 numerous activities have to be developed and studied which could be interpreted to the mission accomplishment. They are data center installation, KAS core platform development, 5 key applications establishment, 10 commercial partnerships formation, 10 applications support by the challenge fund, digital marketing production, and 3 feasibility studies. When these output indicators are successfully achieved, it will correspond to SC 2.2's objectives. SC 2.2 activities or output indicators are summarised in table 1 bases on mid-term review (MTR) and final assessment.

Table 1: SC 2.2 disaggregated activities or output indicators base on the mid-term review and the final assessment

Type of activities/output indicators	Planned Quantity	
	By Mid-Term (Q3 of 2022)	**Final (2025)**
Installation of KAS Data Centre	1	1
Development of KAS Core Platform	1	1
Establishment of KAS 5 Key Applications	2	5
Users of the 5 Key Applications	5,000	12,500
Production of Digital Marketing	1	1
Applications supported by Challenge Fund	3	10
Users of Challenge Fund Applications	5,000	12,500
Formation of private sector partnerships	4	10
Digital Technology Outreach (50% female value chain actor)		
- Number of sub-projects formed	40	100
- Number of persons trained in digital literacy and assisted to adopt existing digital technology	1,500	5,000
- Number of persons participating in technology adoption of sub-projects	1,500	5,000
Feasibility studies		
1. Agriculture value chain digitalization	1	1
2. Development of digital ecosystem for agriculture value chain	1	1

Type of activities/output indicators	Planned Quantity	
	By Mid-Term (Q3 of 2022)	Final (2025)
3. Digital technology outreach campaign	1	1

5) Sub-component 2.2's annual budget plan and workplan

a. Annual budget plan

The annual budget plan for each output indicator expenditure will be examined on a yearly basis. A proper budget allocation for the annual expense is desired to leverage available resources in accordance with the assigned annual budget expenditure to prevent SC 2.2 from over- or under-expensed. Likewise, the planned milestones to be achieved, have to be paralleled and corresponded to the annual allocated disbursement. It is significant to adhere to the planned annual budget expenses to ensure that budget would not be disbursed wrongly which leads to resource depletion and consequently results in SC 2.2 failing to implement the project.

MEF-PIU had just handed over the budget line of web development package to SC 2.2 which increases the number of outputs to 7. This budget line will be renamed to Digital Experience Consultant and it is intended to utilize for developing digital public relation tools and materials for both component 2 and SC 2.2. However, when hiring this consultant MEF-PIU will disburse this allocated budget line directly to the consultant. The postponement in the procurement process and impact of global pandemic have led to most of the disbursement line to be occurred in the second year of the project implementation. Budget plan for each project milestone will be highlighted as the following:

- Output 1: It is expected that fund disbursement to Data Center direct SP will be started from year 2 to year 4 in accordance with SC 2.2 project design with a total cost of USD 750,000.
- Output 2: The expenses for the KAS core platform are reliant on an annual basis for the total period of 6 years. The total fund disbursement is USD 2,500,000.
- Output 3: The fund disbursement of the 5 key applications is based on the number of applications produced with the hope that it would happen beginning of year 2 to year 4 with the total budget of USD 850,000.

- Output 4: The expenses for engaging commercial partnerships will commence in year 2 till the project phases out with the expected expenses based on the annual rolling basis. The total budget line is USD 100,000.

- Output 5: The budget line for the Challenge Fund to support 10 applications will kick off in year 2 to year 5 with the total cost of USD 800,000 which excludes fee for the challenge fund service provider of USD 230,000.

- Output 6: The total budget line for output 6 to be disbursed is USD 1,570,000 which is allocated to the following studies. Agriculture value chain digitalization and digital marketing package are budgeted for USD 45,000 and USD 55,000 respectively which will be directly paid by MEF-PIU to the recruited SP as it is not under the budget line of SC 2.2, digital technology outreach SP3 is allotted for USD 900,000 and digital ecosystem study is fixed at USD 570,000.

Table 2 below summarizes all of outputs to be disbursed under SC 2.2

Table 2: Budget allocation for each output indicator on an annual basis in accordance with an approved AWPB 2021

No	Description	Annual Budget Planning (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
1	**Output 1:** Data Centre Establishment **(USD 750,000)**. Fund disbursement depends on SAAMBAT's annual budget plan		750K				
2	**Output 2:** KAS core platform development **(USD 2,500,000).** Fund disbursement relies on an annual basis		450K	512.5K	512.5K	512.5K	512.5K
3	**Output 3:** 5 key applications produced **(USD 850,000)**. Fund-disbursement is based on number of applications produced		144.5K (2 app)	510K	195.5K		
4	**Output 4:** Formation of commercial partnerships **(USD 100,000)**. It hinges on an annual expense submitted to MEF-PIU (4 public relation events to engage at least 2 CPs)		50K	16.66K	16.66K	16.66K	
5	**Output 5:** 10 applications supported by Challenge Fund **(USD 800,000)**		100K (2 Cohorts)	233.33K	233.33K	233.33K	
5.1	**Challenge Fund Service Provider (230,000)**		49.45K	76.65K	76.65K	76.65K	
6	**Output 6:** Feasibility studies and planned fund expenses						
	6.1. Agriculture Value Chain Digitalization **(USD 45,000)**. Disbursement counts on CPS contract signed with MEF-PIU to kick off in October 2020 (An agreed fee is 33.75K and the remaining amount of 11.25K maybe for the consultative workshop and other logistic work.		33.75K				
	6.2. Digital Technology Outreach-SP3 **(USD 900,000)**. Fund disbursement depends on the		135K	191.25K	191.25K	191.25K	191.25K

	TOR where the number of pre-identified economic poles were suggested to intervene					
	6.3. Digital Technology Ecosystem **(USD 570,000)**. Fund allocation relies on the TOR			142.5K	142.5K	142.5K	142.5K
	6.4 Digital marketing service provider **(USD 55,000).** Fund disbursement depends on output-based deliverables		55K				
7	A summary of the total budget planning **(USD 6,847,370** excludes budget to be spent on goods for **USD 329,220)**		**1,767.7K**	**1,694.14K**	**1,368.39K**	**1,172.89K**	**846.25K**

b. Annual workplan

The annual budget allocation expenditure was discussed above and, in this section, will explain the annual workplan for all output indicators to be accomplished on a yearly basis.

A vigilance of the back-up plan, which is applied to all output indicators, will help mitigate risks and minimize project failure. It is essential to have a reserved list of potential SPs for replacement and well-rounded TOR are ready and well-prepared in advance for (1) recruiting a group of consultants as well as (2) sub-contracting local NGOs partners to take over SC 2.2's assignment in case of whether there was no qualified SP identified or they failed to perform the awarded tasks. This process requires an approval from IFAD. Additionally, a complete set of questionnaire forms should be readily available to evaluate digital technology and literacy uptake by both female and male value chain actors after they have received digital literacy training courses from SP and prior to SP moving to a new geographical area of the economic poles (EP). This will evaluate SP's performance in transferring digital knowledge to the rural value chain actors. Moreover, SC 2.2 should regularly conduct several SPs spot-checks while they are providing training sessions to ensure that SP is working in the right direction. SC 2.2's experts are required to allocate their times to monthly spot check SPs' performance at the first and second year after the contract is awarded.

Year 1 (2020)

- Year 1 could be counted as a year of project initial stage which encounters numerous challenges such as the consultant coming onboard were late, the procurement process which follows MEF's SOP takes enormous time to proceed, lack of SPs' expression of interest in applying for the assignments' fund. As a result, these challenges cause the postponement of all sub-components field execution. Minor activities occurred in output 2 such as the evaluation of KAS core platform SP firms and the commencement of agriculture value chain digitalization in the month of October this year which is under sub-output 6.1 of the output 6.

- One significant observation was made is that the agriculture value chain digitalization feasibility study under output 6 has to be completed by the end of the year by CPS who is the sub-component 2.3 implementer. However, the study remains stagnant probably due to the complexity of the procurement process and/or the misunderstanding between CPS and MEF-PIU in signing the MoU for commencing the study. Additionally, CPS seems to be reluctant and relentlessly unwanted to commence the task. Therefore, SC 2.2 comes up with a reserved plan after foreseeing this problem, SC 2.2 team has begun to collect vegetable data from relevant projects who had completed or are currently executing the project related to vegetable

production. The collected data will be cleaned and analysed to be used as an initial finding. The result will be utilized as inputs for the design of the digital platform called Khmer Agriculture Suite (KAS) and other purposes.

Year 2 (2021)

- Year 2 is hoped to be a flourished year of the project as the planned activity would happen in the field.

- Output 1 of the data center infrastructure establishment ought to be commenced with activities including hiring of SP, purchasing of computational infrastructure, set up and install software, etc. This expected to happen in the second quarter of 2021.

- Output 2 of the KAS core platform SP is hoped to be able to sign the contract and come on board this year which is anticipated in Q2. Several activities expected to occur are the development of the pre-identified KAS-Identification Access Management and KAS-KUMRONG.

- Output 3 of the key applications is expected that SP will be recruited, onboard in Q2, and kick off the development of the applications that will absorb 2,500 users. It is expected that the Traceability system and Contract Farming app will be developed in this year.

- The formation of Commercial Partner (CP) under output 4 is intended to happen with an anticipated of 5 CP will be engaged to the KAS core platform and introduce to ASPIRE & AIMS's beneficiaries. The 5 CPs should has already owned mobile apps. They must be existing businesses which have innovative ideas on product development, keen to improve their operational processes, having the products distribution channels, and voluntarily developing strategic partnerships with suppliers, distributors, and customers. They need to have a plan to expand market share or profit through product and service innovation.

- The Challenge Fund in output 5 is planned to recruit SP to run this output indicator with an anticipated to be onboard in Q3. It is envisioned that 3 innovative applications with 3,750 users will be engaged.

- The sub-output 6.1 will be completed in at the end of second quarter of this year with practical findings which will contribute to the development of digital ecosystem study, KAS core platform, and digital technology outreach research. Sub-output 6.2 is hoped to have SP onboard in the third quarter and start rolling out their field activity implementation in 10 economic poles. The anticipated result from this SP would be 10 sub-projects formed with 10 entrepreneurs got trained, 100 trainees got trained in digital literacy and 100 people adopted digital technology of which 50% is female. For sub-output 6.4 which is the recruitment of

digital marketing SP will be employed in the third quarter and finished all of the assigned deliverables in the same year.

- 2 feasibility studies under output 6 will commence from this year till the project ends. They are agriculture value chain digitalization (sub-output 6.1) and digital technology outreach (sub-output 6.2). Activities under output 6.2 which begins in the second year are: research, digital literacy outreach development, delivery of digital literacy training, delivery of sub-project, enhancing capacity of entrepreneurs, follow up, and annual reporting. This study is expected to start working in 10 pre-identified economic poles (EP), develop and train 40 sub-projects with 1,000 participants as well as uptake 1,000 digital technology trainees and adopters. The trainees, users, and adopters have to be 50% each of female youths and male youths. In output 6.6, numerous activities required to attain are: agriculture value chain actors and potential products mapping out, identify market gaps for each of potential agriculture commodities and propose digital solutions, assess businesses that are applying digital technology as a service platform, follow up, and produce a quarterly report.

- Several activities are accumulated beginning in year 2, thus, the allocated fund disbursement should be 1,767.7K.

Year 3 (2022)

- The installation of the data center in output 1 will focus on operation and maintenance, continue to monitor the voluntarily plugged-in app, and provide capacity building to MEF staff for the purpose of handing over the task and responsibility to them. These activities will continue till year 4 and in the remaining years KAS core platform SP and MEF staff will take on the role.

- Output 2 of the pre-identified KAS-KUMRONG will continue while the kick-off the KAS-PORTAL and KAS-AI will emerge.

- Output 3 after successfully implementing the first application with adequate users, 2 newly key applications will be developed with intended 2,500 users.

- Engaging with 5 commercial partnerships such as Agribuddy, Khmer Smart Farming, or Angkor Salad under output 4 is significant as they have innovative applications and users in-place. Partnering with them is one of the backup plans in case of the applications which are supported by the challenge fund failed to complete the mission.

- Output 5 of the challenge fund will continue to work with the succeeded SP in recruiting new cohorts with expected 3 newly innovative applications will be onboard plus 3,500 application users.

- Sub-output 6.2's succeeded SP will start rolling out to the new 15 EPs with the anticipated result from this SP would be 30 sub-projects formed with 30 entrepreneurs got trained, 1,500 digital literacy trainees and 1,500 digital technology adopters in which 50% is female. Likewise, 5 key applications supported by the Challenge Fund will have to test and roll out in these 15 EPs. Sub-output 6.3's SP will continue to carry out the activities of assessing the availability of digital infrastructure and assessing each agriculture value chain actor digital technology and literacy skill. This SP will report to SC 2.2 every quarter.

- In the third quarter of 2022 SAAMBAT project's mid-term review (MTR) will be conducted. The result from the MTR will be resourceful findings to be used as a directive roadmap for the remaining year of the project implementation. Therefore, starting from year 4 onward there is a flexibility in forecasting project's outputs to be achieved.

- This year activities have become burdened and compacted, for instance, an increase in the number of numerous activities require to be done such as EP, sub-projects, and user uptakes.

For further detail of the annual work plan can be located in appendix 1.

6) M&E framework

The M&E framework is developed to monitor SC 2.2's output indicators progression through internal M&E tracking tools. Each of the indicators will be measured at different stages such as baseline, mid-term, and end line surveys. Mean of verification consists of sources where data storage will be located and retrieved, monitoring frequency based on indicator achievement, and the assignment of SC 2.2's employees who will be responsible for managing the accomplishment of that milestones. A summary of the M&E framework is tabulated in Table 3.

Table 3: SC 2.2's M&E Framework

Outcome hierarchy	Output				Means of Verification		
	Description	Base line	Mid-term	End-line	Source	Frequency	Responsibility
Installation of KAS Data center	Data center		1	1	SP's report, M&E & MIS	Quarterly & completion	Dr. Ravy
Development of KAS core platform	KAS core platform		1	1	SP's report, M&E & MIS	Quarterly	Dr. Ravy & Ratha
Production of 5 key applications	Key applications		2	5	SP's report, M&E & MIS	Quarterly	Dr. Ravy & Leakhena
	Users of the key applications				SP's report M&E & MIS	Quarterly	Dr. Ravy & Ratha
	Male value chain actor		2,500	6,250			
	Female value chain actor		2,500	6,250			
Challenge Fund (SP5)	Applications supported by Challenge Fund		3	10	SP5's report M&E & MIS	Quarterly	Dr. Ravy & Leakhena
	Male value chain actor		2,500	6,250			Leakhena & Ratha
	Female value chain actor		2,500	6,250			
Private partnership formation	# of commercial partnership		4	10	SC 2.2's M&E framework	Annually	Dr. Ravy & Ratha
Digital literacy and adoption of digital technology	# of persons trained in digital literacy				SP3's report, M&E & MIS	Quarterly	Dr. Ravy & Ratha
	Male value chain actor		750	2,500			
	Female value chain actor		750	2,500			
	# of sub-projects built		40	100			
	# of persons participating in technology adoption sub-project						

Outcome hierarchy	Output				Means of Verification		
	Description	Base line	Mid-term	End-line	Source	Frequency	Responsibility
	Male value chain actor		750	2,500	SP3's report, M&E & MIS	Quarterly	Dr. Ravy & Ratha
	Female value chain actor		750	2,500			
Web page developer/ Digital Experience Consultant	Digital marketing		1	1	Consultant's report, M&E & MIS	Quarterly	Dr. Ravy & Leakhena
Feasibility studies	Agriculture value chain digitalization		1	1	CPS' study to be submitted	Monthly	Dr. Ravy & Ratha
	Development of digital ecosystem in agriculture value chain						
	- Activity 1: Mapping out the value chain actors in the potential agriculture products		8 activities to be completed start from activities 1-6 and act 9-10	5 activities begin from activity 6 to 10	SP's report, M&E & MIS	Quarterly	Dr. Ravy & Ratha
	- Activity 2: Identifying the market gaps of each of the potential agriculture commodities (rice, vegetable, poultry, aquaculture, maize, cassava) and propose digital solutions to those gaps						
	- Activity 3: Assessing businesses that are using digital technology as their platform of services						
	- Activity 4: Assessing the availability of digital infrastructures						

Outcome hierarchy	Output				Means of Verification		
	Description	Base line	Mid-term	End-line	Source	Frequency	Responsibility
	- Activity 5: Assessing each agriculture value chain actor in digital technology skill						
	- Activity 9: Following-up and outcome monitoring						
	- Activity 10: Reporting						
	- Activity 6: Assessing government rules and regulations in supporting digital technology ecosystem						
	- Activity 7: Researching on an on-going e-Government practices what are the key challenges and opportunities						
	- Activity 8: Assessing chances of digital technology solution adoption rate						
	- Activity 9: Following-up and outcome monitoring						
	- Activity 10: Reporting						
	Digital technology outreach campaign (SP3)						
	- Activity 1: Conducting research		8 activities to be completed starting from activities 1-	4 activities begin from activity 6-9	SP's report, M&E & MIS	Quarterly	Dr. Ravy & Ratha
	- Activity 2: Development of digital literacy outreach activities						
	- Activity 3: Delivery of digital literacy activities						
	- Activity 4: Delivery of sub-projects						

Outcome hierarchy	Output				Means of Verification		
	Description	Base line	Mid-term	End-line	Source	Frequency	Responsibility
	- Activity 5: Linking innovators to rural value chain actors		5 and activity 7-9				
	- Activity 6: Testing and rolling-out of innovations						
	- Activity 7: Enhancing capacity of entrepreneurs						
	- Activity 8: Following-up and outcome monitoring						
	- Activity 9: Reporting						

a. Service providers' assignment facilitation and supervision planning

This section will explain SP selection criteria which is a part of solutions to tackle unforeseen risks. SC 2.2 is appointed to be a lead agency which acts as a guide and supervisor to manage and oversee sub-contracted SP. Several SPs will be employed to implement each output indicator. When hiring incompetent or wrong SP, it leads to a negative impact on SC 2.2's performance. To achieve the project milestones, it is very critical recruiting SPs who have proven extensive experience in handling given assignments such as setting up ICT platform, having competent skills in technical and vocational education and training, conducting research on smallholder farmers in the agriculture sector, analysing agriculture value chain, and understanding the uses of digital technology in Cambodia. In addition, it is also significant to have comprehensive TORs in-place that concisely describe selection criteria for prospective SPs with fund disbursements based on a rolling basis according to each milestone accomplishment. All recruited SPs will be closely monitored their work progression to avoid a delay or unproductive outputs.

A precautious preventive measurement by outsourcing both local and international SPs, who has expertise in the field of digital technology and implementation in Southeast Asia, for the backup purpose, in case of the selected consulting firms have failed to perform the assigned tasks, should also be considered. Alternatively, SC 2.2 could employ an individual expert consultant to assist in managing those tasks at the national level whereas, at the provincial level, SC 2.2 may partner with and sub-contract the local NGOs who have expertise and knowledge on the geographical areas as well as understanding agriculture value chain actors' behaviour change in adopting new technology and knowledge in the intervention economic poles (EPs). To accomplish these assignments, SC 2.2 should work closely with ASPIRE and AIMS to facilitate SPs, consultants, or local NGOs fieldwork by providing numbers of beneficiary clusters, their locations, categorical selection criteria of value chain actors, and types of agricultural products produced. It is advisable that SC 2.2 should only select SPs who are flexible and open for negotiation, in particular, when is asked to accept annual work plan changes especially the increase in the number of training events, digital literacy and technology applied by trainees, users, and adopters to be recruited by SPs. The flexibility of SPs in uptake extra number of beneficiaries should be clearly stated in the TORs. Likewise, all SPs will be renumerated based on output delivery in order to avoid unproductive results. SP selection criteria will be applied to all SPs to be employed to carry out output indicators. SC 2.2 will assist MEF-PIU in evaluating prospective individual consultant or/and SPs through consultant

evaluation committee process. This will assure that potentially qualified SPs will be correctly hired. Additionally, SC 2.2 will also facilitate all SPs work with its project sisters (ASPIRE and AIMS) to ensure SP will implement the field work smoothly through regularly support and monitor SPs' work progression. Moreover, SC 2.2 will also coordinate the communication of all recruited SPs within its sovereignty work as well as other sub-components.

The below section will explain each output indicator, implementation, and timeframe required to accomplish the assignments. Due to the global disease pandemic of the Covid-19 and the delay in the procurement process results in the push of most of the output indicator activities to the second year of the project implementation. Most of the SPs are expected to be on board in the second quarter of 2021. Table 4 below summarises service providers' assignment facilitation and supervision planning.

Table 4: A summary of service providers' assignment facilitation and supervision planning

Output #	Implementing agency	Expected result	SC 2.2's supervision activities
1. Data center (DC) establishment	Direct contract with DC service provider (SP)	An effective and efficient DC that is capable to offer smooth operation without breaking down	- To inform successful direct contract SP the location of DC to be installed - To facilitate the process of DC installation in MEF - To coordinate work between data center SP and other SP - To follow up DC SP providing capacity building and knowledge transfer to SC 2.2 maintenance staff after successfully installed DC - To check whether purchased equipment meet required specifications - To continuously monitor SP work progression through spot check against report submission
2. KAS core platform development	KAS core platform SP	An open and revolutionized digital platform that allows other web-based and mobile applications to integrate into the platform which is capable to mobilize meta data without any obstruction.	- To support and facilitate KAS-SP's works regarding an access to SAAMBAT relevant documents, ASPIRE & AIMS's MIS system, collaborate with all SP specifically with SP3 for field data collection, 5 key apps integration, and agri-tech startups' apps financed by the challenge fund - To check if the proposed KAS core platform is developed based on an open API for other apps to be integrable into the platform - To test the constructed KAS core platform is interoperable with other IFAD's MIS systems - To verify if the specifications of the well-equipped data center meet the requirements of KAS-SP - To regularly test and try out all developed web and mobile apps - To assist in rolling out developed mobile apps to targeted beneficiaries

Output #	Implementing agency	Expected result	SC 2.2's supervision activities
			- To intermittently check if the built-up web and apps are running smoothly - To continuously monitor KAS SP work progression through spot check against report submission - To facilitate other unforeseen matters that may arise while implementing this assignment - To collaborate with KAS-SP to develop simplified basic digital literacy training to SP3's entrepreneurs
3. 5 key application development	2~3 SPs will be recruited	Beneficial applications that are capable to attract different ranks of stakeholders and the public to adopt and apply it	- To support the coordination workflow of SP regarding an access to KAS core platform as well as other related activities - To facilitate app testing and rolling out to SAAMBAT's beneficiaries - To support SP to developing an annual accomplishable work plan - To regularly monitor SP work progress
4. Commercial partnership formation (CP)	SC 2.2 (to locate potential private sector who has existing agri-app)	10 CP will be engaged and substantially benefited from partnering with SC 2.2	- To facilitate and assist CP in product testing & market research through downstream sub-projects under SP3 - To introduce and allow access to SAAMBAT's beneficiary business information to CP for the purpose of CP's market expansion strategy - To support the testing of applications and rolling out of business model through SAAMBAT's beneficiary pipelines - To assist CP to reach out to all SAAMBAT's beneficiaries - All CP are required to submit a quarterly report and a success story to SC 2.2 - To coordinate CP work with other SP

Output #	Implementing agency	Expected result	SC 2.2's supervision activities
5. Challenge Fund grant	Service provider 5 (SP5)	Support existing innovative agri-tech startups to be able to sustainably operate the business through downstream activities	- To guide and instruct works to be done by SP5 particularly an annual achievable work plan - To facilitate SP5 work with other SP - To monitor and facilitate SP5 in startups selection process - To assist SP5 in setting up cohort selection criteria - To assist SP5 in establishing pre-acceleration and acceleration program training curriculum - To assist SP in developing criteria for selecting trainers and mentors - To support selected startups to test and roll out their app to SAAMBAT's beneficiaries - To facilitate and coordinate work between SP5 and other SP
6. Digital technology outreach campaign	Service Provider 3 (SP3)	SAAMBAT's beneficiaries will benefit from digital data exchange, technical information retrieval, an online platform for trading their products	- To introduce the first phase selected economic poles to SP3 prior field implementation - To work closely with SP3 in developing the digital literacy training curriculum - To introduce SP3 to SC 2.1 to ensure that SP3 tasks would not overlap with SC 2.1's assignments - To facilitate work between SP3 and ASPIRE & AIMS's field staff as well as their business clusters & beneficiaries - To support linkages of all applications to SP3 for field implementation including testing and rolling out - To conduct both spot check and evaluate SP3 submitted report using M&E framework as in table 4 - To inform SP3 if the plan for agriculture value chain actors absorption did not match with the planned numbers then suggest for solutions

Output #	Implementing agency	Expected result	SC 2.2's supervision activities
			- To guide and instruct works to be done by SP3 particularly an annual attainable work plan - To check whether the training of master trainers conducted by KAS-SP to selected entrepreneurs are able to apply and transfer it to value chain actors - To coordinate SP3 with other SP

7. Recruitment of individual/SP
  a) Digital experience consultant
  b) Agriculture value chain digitalization study
  c) Development of digital ecosystem in agriculture value chain
	a) Individual consultant
	b) CPS
	c) Digital ecosystem in agriculture value chain SP
		a) Develop and maintain smooth functionalities of SC 2.2 webpage and reach out to/engage with agri-tech stakeholders through digital marketing tools and strategy
		
		b) The result of this study will provide an insight input for the development of digital ecosystem in agriculture value chain
		
		c) Support the development of the digital eco-system, agricultural extension policy, regulatory and policy framework which contribute to an increase of the rural economy
			a) Individual consultant will
			
			- Be guided on tasks to be completed with an annual achievable work plan
			
			- Be authorised to access to SC 2.2's webpage, KAS core platform, other relevant documents
			
			- Be facilitated the workflow and linked to other SP through SC 2.2 coordination work
			
			b) The Center for Policy Studies will assess capacity as below specification of cropping system in targeted provinces
			
			- Agriculture production system
			
			- Level of internet coverage and digital literacy
			
			- Existing business models and method of cash transaction
			
			- Mapping the payment process and financial challenges then propose solution using digital technologies

Output #	Implementing agency	Expected result	SC 2.2's supervision activities
			c) Agriculture value chain ecosystem development will mainstream below activities that will align with RGC policy and IFAD corporate priorities - Digital economy - Climate change and adaptation - Gender action plan - Youth and nutrition - Ethnic minority support

e. Objectives

➢ To facilitate and support the extension of innovative digital services to smallholder agriculture and the rural economy

➢ To improve digital literacy of rural value chain actors

➢ To raise awareness and adoption of digital technology empowering rural economy

➢ To provide access to information and marketplaces for rural value chain actors through digital applications

All activities and results under SC 2.2 will be recorded in the internal Management Information System (MIS). This system will be developed by SC 2.2, with support from MEF-PIU's M&E consultant and PMU's M&E specialist. It is expected that all of the SP recorded data entries will be able to migrate and extractable to IFAD's MIS system, to monitor SP field implementation against planned activity milestones. Likewise, it is obligated that all contracted SPs have to enter all relevant data into SC 2.2's MIS as well as SAAMBAT's MIS. The format of the field report will be provided and required all awarded SPs to submit field reports of the previous month to SC 2.2 on a monthly basis at every Wednesday of the first week of the new month. This will provide sufficient time for SC 2.2 to consolidate all reports that later on will be submitted to MEF-PIU's component 2.

7) Risk analysis

SC 2.2 is required to employ numerous SPs to execute the fieldwork. It oversees and supervise field activities implementation. Several challenges are projected to occur during project implementation, therefore, SWOT matrix is analysed. The findings from SWOT analysis will be translated into action plans. In addition, a preventative measurement against potential risks will be raised and risk analysis will be conducted to measure its probability and impact on the project outcomes and then proposed mitigations will be discussed.

i. SWOT analysis

There are 2 intuitive factors that each institution or business possesses. They are internal and external factors. The former consists of strengths and weaknesses and the latter comprises opportunities and threats. By conducting SWOT analysis, it will assist institutions to evaluate and identify its internal strengths and external opportunities that could leverage to attain its objectives while seeking to mitigate internal weaknesses and external threats (Gurel, E. 2017). To mitigate and minimize uncertainties, it is vital to conduct SWOT analysis. It is one of significant tools to analyse the project key strengths and opportunities to overcome hindrances that might happen during the project implementation. Additionally, this analysis will be as of useful as a strategic guideline and to assure that SC 2.2 will operate on the right trajectory.

S W O T

Strength

- S.C 2.2's staff are rich of knowledge
- Comprehensive TORs were produced which embeds uncertainty precaution measurements
- Supportive management team
- Well-communicated with other components & other IFAD funded projects

Weakness

- S.C 2.2 has limited human resources
- Do not have a line department at the provincial level
- Lack of domain expertise in emerging technology
- Delayed in procurement process

Opportunity

- An established KAS core platform would be an enabler for inspiring Ag startup to try out new ideas which in turn may create business and economic sound opportunities for new startups
- S.C 2.2 bolsters and encourages youth and Ag startup to gain experience on digital technology (DT)
- Align with the government policy on encouragement of DT adoption to move to digital economy which leads to DT absorption by public and private sector. This open an opportunity for private sector to invest on DT infrastructure

Threat

- Unforeseen risks such as COVID 19 pandemic
- Lack of data sharing privacy protection law
- Capacity of SP to implement the tasks
- Human culture of the elder generation in accepting DT
- Limitation of infrastructures particularly is internet coverage
- Rural value chain actors poor in digital literacy
- Lack of DT regulator

Figure 1: SWOT analysis

The SWOT analysis matrix has shown that weakness and threat factors have posed major threat on SC 2.2 implementation. The combination of these two factors such as the unforeseen of the global pandemic disease, lack of data sharing protection law and digital technology (DT) regulation, limitation of internet coverage, elder generation resisted to accepting DT, rural value chain actor poor in digital literacy, dependency of SPs' capacity to implement all project milestones plus SC 2.2 has limited human resource, no provincial line department, lack of domain expertise in an emerging technology as well as the delayed in procurement process may highly likely lead SC 2.2 to fail in administering this assignment. To overcome the likelihood of failure, from the matrix analysis the combination of the identified strengths and opportunities could light up the solution. For instance, SC 2.2 had already recruited employees who are rich of knowledge with supportive management team and on top of that the comprehensive TORs, which most of it had already been developed and sought feedback several times from management team for polishing these TORs, will be incorporated uncertainty precautious measurement procedures into it. Additionally, SC 2.2's backup plan is

to recruit an individual consultant to oversee each output where the field implementation has to be sub-contracted the local NGOs to operate the tasks. Overall, SC 2.2 will deploy and translate identified strategy into action to tackle challenges like having had a proper backup plan, highly knowledgeable staff, as well as wise employees allocated to manage each output, it is believed that SC 2.2 would be able to overcome weaknesses and threats.

ii. *A road map to mitigate a possibility of potential risks*

This part will introduce a preventative measurement's road map of a possibility of potential risks might be arisen which poses a potential menace on SC 2.2's activity implementation. These risks are (1) no service provider applied for the tasks at the initial stage and (2) SP failed to comply with the given TOR requirements as in Figure 2. This road map provides an insight to all of SC 2.2's output indicators that could possibly overpower these potential risks which will cause a detrimental effect on SC 2.2's outcomes. A diagram in figure 2 illustrates four different shapes and each shape defines specific meaning as the following:

- Parallelogram represents IFAD funded project
- Rectangle serves as the planned risk mitigation
- Rounded-rectangle depicts the backup plan
- Ellipse stands for SC 2.2 outputs
- Green box means Yes or accepted
- Red box denotes No or rejected

In this figure, the flow chart commences from parallelogram on the left and ends in elliptical shape on the right. TSC is assigned to manage and oversee SC 2.2 by sub-contracting several service providers to conduct field-implementation.

During SC 2.2 execution, uncertainties or risks might occur along the way. Therefore, to address projected risks, proposed mitigations should be in-place with the backup plan. It is foreseen that in the process of calling for tenders to seek for qualified SP, 3 possible scenarios may arise as the followings:

a. Scenario 1: Denotes the answer is Yes, meaning that there are qualified SP to be recruited.

b. Scenario 2: Represents the response is No, reflecting that there are no competent SP for these assignments.

c. Scenario 3 is a backup plan of SC 2.2 which it will recruit individual consultant, a research team, and local NGO partners to take over the assignments and implement SC 2.2 by

itself if the green light is given by IFAD with a minor rectification of the project implementation manual.

SC 2.2 will recruit several SP to manage various output indicators (refers to table 1). When publicly announcing for SP, will there be any qualified SP available to apply for the intended tasks or not.

- If the answer is Yes, then competent SP will be hired. While implementing the task, do they comply with and meet all requirements stated in the TOR or not. If Yes, then SP will be granted a green light to implement those output indicators till the project phases out. However, if they do not comply or fail to meet the TOR requirement then scenario 3 will be applied.

- If the answer is No, SC 2.2 will re-announce the advertisements although there will be some delays in field implementation. Then if there is still no qualified SP apply for the tasks then it goes to backup plan which falls into scenario 3. However, if there are qualified SP applying at this stage, SC 2.2 will recruit them then the process will repeat the step of SP that has to comply with and meet the TOR requirements.
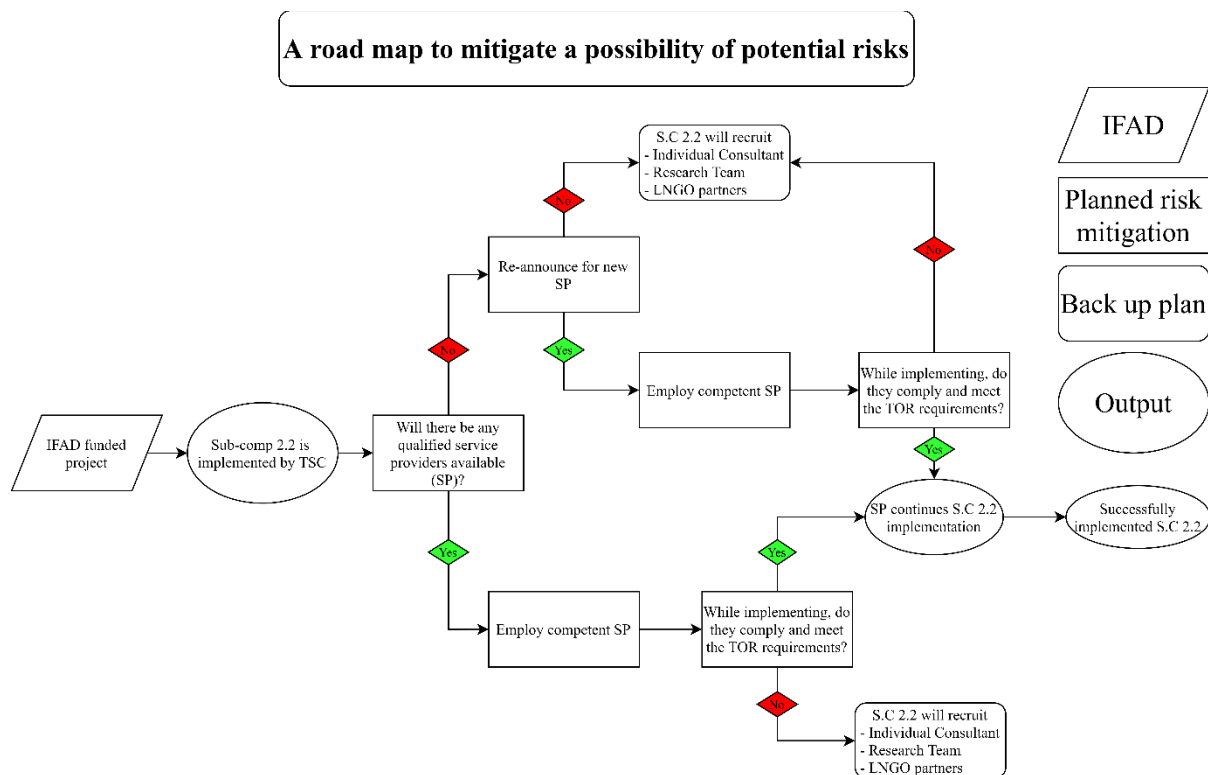
Figure 2: A possibility of a preventative measurement road map against potential risks

iii.   Risk analysis and proposed mitigation

This section will examine risk analysis and proposed risk mitigation. While executing field implementation, the unforeseen uncertainty or risk could arise. An acquired output from risk projection matrix can be interpreted into a mitigation strategy to avoid and/or minimize the

project failure. 13 possible risks were identified and the table below illustrates the risk probability and risk impact then translate it into proposed risk mitigation strategy which will be taking place if the pre-identified uncertainties/risks occurred (in a chronological order of outputs).

Table 5: Risk analysis and proposed risk mitigation

Risk	Risk probability	Risk impact	Proposed mitigation
1. No qualified SP	Medium	High	- SC 2.2 might deploy experts to take over the tasks by recruiting a group of consultants to assist in a project implementation. Each individual consultant will be assigned the task with role and responsibility to get the job done in the timely manner. However, this action requires an approval from IFAD - To break down an output in each TOR then employ numerous SP to implement each specific indicator, though there will be troublesome when conducting project monitoring and evaluation
2. SP failed to perform tasks or dropped off in the half-way, then there was no potential SP for replacement particularly digital application development SP	High	High	- To adhere to output-based fund disbursement as stated in the TOR when hiring SP - To closely monitor a progress report against milestones - To regularly conduct field spot checks in Q1, Q2, & Q4 per year - To employ new SP for replacement from the potential SP list - SC 2.2 might deploy experts to take over the tasks by recruiting a group of consultants to assist in the project implementation. Each individual consultant will be assigned the task with role and responsibility to get the job done in the timely manner.

Risk	Risk probability	Risk impact	Proposed mitigation
			- To break down an output in each TOR then employ numerous SP to implement each specific output - For each economic pole at the provincial level, SC 2.2 might recruit local NGOs to implement field activities as they have experience and are knowledgeable of the geographical areas
3. May not be able to recruit an intended number of rural youths/value chain actors	Low	Low	- To engage with existing ASPIRE and AIMS beneficiaries - To clearly state in the TOR that SP should only be engaged with rural youths/value chain actors - SC 2.2 should consider recruiting an entrepreneur who would be a role model that could influence others in the village
4. Selected entrepreneurs lack of ability or knowledge to collect real-time data	High	High	- To continuously provide an interval refresher training in data collection to all selected entrepreneurs. It is advisable to recruit ASPIRE commune extension worker or AIMS social mobilizer who have already had experiences working with those 2 projects' beneficiaries - To regularly monitor entrepreneurs data entry into the MIS - To establish the hotline number in case of entrepreneur has questions to be clarified
5. All startups might not be succeeded	High	Medium	- To capture digital literacy training opportunity and continuously provide supports on digital technology which is hoped that rural youth and value

Risk	Risk probability	Risk impact	Proposed mitigation
			chain actors would be convinced to initiate the rural startup operation. Also, there should be a small grant package to encourage the rural startups - To take advantages on commercial partners, who have successfully implemented innovative applications, to fill out the gaps
6. 5 keys & the challenge fund supported applications have no or low adoption rate	High	Medium	- To capture digital literacy training opportunity and continuously provide supports on digital technology which is hoped that rural youth/value chain actors would be convinced to initiate the rural startup operation. Additionally, with support from SC 2.1 to incentivize these agri-tech startups, it is believed that all startup would be successful. - To take advantages on commercial partnerships, who have successfully implemented innovative applications, to fill out the gaps - To concisely state in the TOR that SP should encourage value chain actors to use these app via an incentive competition or small grant by engaging with SC 2.1 of the skill development - To announce the benefits of these applications and mainstream it to relevant stakeholder channels and outsiders of the project beneficiaries who project work focus on agricultural intervention
7. Less qualified startups to apply for the challenge fund	Medium	Medium	- To promote and encourage both newly and existing agri-tech startups to apply for the challenge fund via public relationship materials - To minimize requirement criteria for selecting startups

Risk	Risk probability	Risk impact	Proposed mitigation
			- To continuously provide refresher training and guide startups till they become succeeded - To make sure that all startups are reached out, publicly announce the express of interest through different networks and pathways e.g., Mass media, social media, existing networks etc.
8. No collaboration between SC 2.2 with other projects in data sharing	Medium	High	- To promote SC 2.2's objectives via public relationship events with other agriculture funded projects - To encourage other project to integrate their collected data by showing their future benefits, for instance, data could be monetized for profit and useful for existing or incoming agriculture finances projects - To develop a prototype of KAS core platform and introduce it to relevant stakeholders - To request an official data sharing letter from MEF Project Director to support this intervention
9. The developed KAS core platform lack of business enabling mechanisms (CP)	Medium	Medium	- To develop a clear business enabling strategy of the KAS core platform - To promote and encourage businesses and startups to hook onto the KAS core platform by showing the benefits of the platform via downstream beneficiaries - To continue to conduct public relationship events via showing case of success stories

Risk	Risk probability	Risk impact	Proposed mitigation
10. May not be able to partner with commercial companies due to no grant is offered	Medium	High	- To develop a clear strategy on how to engage with commercial partners - To publicize the benefits of becoming a partner with SC 2.2 via public relationship events or/and social media. Those benefits are their app would be well-known through SC 2.2 beneficiary channels, SC 2.2 will support the partners on organizing the public relationship events, and link them to several beneficial channels of ASPIRE & AIMS, and assist them in conducting a market research etc.
11. The incorporation of digital literacy training curriculum and digital outreach campaign into SC 2.1, ASPIRE and AIMS may not be feasible	Low	Low	- As all components and projects are under an umbrella of IFAD, thus, the likelihood of uncooperative is low - To prepare and send out an official letter from senior management to all related IFAD projects for future collaboration - To closely communicate at the lower level to build trust among all IFAD's components and projects
12. The development of digital ecosystem study is vague	Medium	Medium	- SC 2.2 will discuss in-depth with IFAD supervision mission team to clarify the technical content - SC 2.2 will propose some initiative ideas on activities to be incorporated into the study

Risk	Risk probability	Risk impact	Proposed mitigation
13. The delayed in agriculture value chain digitalisation study	Medium	Medium	- To follow up MEF-PIU on the approval of AWPB 2021 and a contract signing between CPS and MEF-PIU - To go on following up CPS and request them to begin the study as earlier as possible although budget have not been approved yet - To start collecting secondary data of this study and allocate expert to take over this initiative

Overall, most of the projected risk probabilities and risk impacts are dominated by medium and high rank. This matter was also pointed out in SAAMBAT project design that "Digital innovation is inherently risky". This indicates that the chance of SC 2.2 failure is in between medium to high level. Therefore, SC 2.2 requires proper precaution measurements to tackle these risks.

It is significant to have proper risk mitigations which was explained in table 5 and provide clear strategies and guidance as stated in the implementation framework to assure that all output indicators will be achieved.

8) Conclusion

To achieve SC 2.2's objectives, several action plans were established and put in-place such as output indicator implementation plan, a SWOT analysis matrix, a road map to mitigate potential risks, and risk analysis and proposed mitigation. Those action plans have also responded to the objectives of SC 2.2 such as (1) to facilitate and support the extension of innovative digital services to agricultural smallholder and the rural economy through digital technology outreach campaign and the challenge fund, (2) to improve digital literacy for rural value chain actors through digital literacy training curriculum under SP3, (3) to raise awareness and adoption of digital technology empowering rural economy through sub-projects, digital literacy and adoption of SP3, the adoption and application of 10 applications supported by the challenge fund, as well as the 5 key applications, and (4) to provide access to information and marketplaces for rural value chain actors through digital applications of KAS core platform and all voluntarily plugged in applications.

It could be concluded that SC 2.2 would become the first ever national platform and a favourable ecosystem of agriculture value chain to drive innovation and enterprises through digital technology.

This master plan will be kept as a "Living Document" which can be updated and modified according to the factual situation.

Annexes

Annex 1: TOR for employing a service provider (SP) to develop KAS core platform

TOR of KAS-SP - Core.docx

Annex 2: Project Implementation Manual

PIM v6_inputs - 20200409-TSC (2).do

Annex 3: Challenge Fund guideline

061020_TOR_SP5_C hallengeFund.docx

Annex 3: TOR for employing SP to conduct a study on agriculture value chain digitalization

250520_Proposal_for _Study_of_Agriculture

Annex 4: TOR for employing SP3 to conduct a study on digital technology outreach

250820_ToR_Digital Technology Outreach

Annex 5: SAAMBAT's Annual Work Plan and Budget Plan for 2021

AWPB 2021_SAAMBAT's CO

Reference

1. Arun, R. (2017). Four ways smart technology can help farmers. Development Asia report. Retrieved from http: www.development.asia/summary/four-ways-smart-technology-can-help-farmers

2. Heng, P. (2018). Embracing the digital economy: Policy considerations for Cambodia. Enrich Institute. Viewed on 07 July 2020, < http://www.enrichinstitute.org/uploads/1/3/6/3/13638009/embracing_the_digital_economy-_policy_consideration_for_cambodia.pdf>

3. Heng, P. (2019). Preparing Cambodia's workforce for a digital economy. Konrad Adenauer Stiftung: Digital Insights, 2019. Viewed on 10 July 2020, < https://www.kas.de/documents/264850/264899/Preparing+Cambodia%C2%B4s+Workforce+for+a+Digital+Economy.pdf>

4. Gurel, Emet. (2017). 'SWOT ANALYSIS: A THEORETICAL REVIEW', *Journal of International Social Research*. Vol. 10, no. 51, pp. 994-1006.

5. Networked Readiness Index (2018). Retrieved from https://reports.weforum.org/global-information-technology-report-2016/economies/#indexId=NRI&economy=KHM

6. Rattanakthida, K. (2019). Understanding Digital Economy, Vol 1, Issue 5, 2019. Viewed on 10 July 2020, < https://cd-center.org/wp-content/uploads/2019/07/P127_20190729_V1IS5.pdf>

7. Simon, K. (2020). Digital 2020: Cambodia. Retrieved from <http://www.datareportal.com/reports/digital-2020-cambodia >

8. Sununta, S. (2016). High tech solutions for poor farmer. Retrieved from http://www.Developmet.asia/insight/high-tech-solutions-poor-farmers

Appendix 1: A detailed annual work plan of SC 2.2

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	**Y2**	**Y3 (MTR in Q3)**	**Y4**	**Y5**	**Y6**
1	**Output 1: Data centre infrastructures for KAS-DC Development**		▓	▓	▓		
	- Recruit KAS-Data Centre Service Provider - Contract signed and Inception report submitted		▓				
	- Proceed purchasing computational infrastructures - Set up and install software - Testing firewall and security protection against cyber attack - Testing app on the platform - Monitor voluntarily app that plug into this platform - O & M - Provide capacity building to MEF staff for hand over		▓				

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Continue to monitor numerous voluntarily app that plug into this platform - O & M - Go on to providing capacity building on technical issues regarding this ICT to MEF staff for hand over purpose			■	■		
2	**Output 2: KAS core platform development, expected outcome, and planned fund disbursement**		■	■	■	■	■
	- Contract signed & Inception report submitted - Requirement analysis & design report		Q2				
	KAS-IAM - KAS-IAM system planning: Assess available system, evaluate the choice of implementing and option selection. - Identity provider/authentication server implementation.		■				

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Identity provider / authentication server testing, review, and update - SSO implementation. - SSO testing, review, and update. - Open APIs, orientation, and training development.		███				
	KAS-KUMRONG - KAS-KUMRONG Implementation plan: MVP for KUMRONG application and Administration Site and UIUX Design sign off - Android mobile application development - KAS-KUMRONG Administration Site		███				
	KAS-KUMRONG - SSO and 3rd party Integration - Android tablet application development - iOS tablet application development			███			

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Open APIs, Orientation and training development - KAS-Weather Implementation plan: data-gathering device assessment, and option(s) selection, purchase of order, strategy to obtain data from data sources with the selected device(s) - Product shipment, SSO and 3rd party Integration - Daily regionalized climate data pipeline for each EP - Weekly on-field climate data pipeline - Monthly on-field aerial image data pipeline						
	KAS-PORTAL - Web-Portal Implementation plan: MVP and UIUX Design sign off (web and responsive) - SSO Integration						

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	**Y2**	**Y3 (MTR in Q3)**	**Y4**	**Y5**	**Y6**
	- Web portal development - Open APIs, Orientation and training development						
	KAS-AI - KAS-AI product implementation plan: implement a standardized process for intelligence product development. Product may require Literature Studies, Data Gathering, Data Sampling, Data Training, Data Testing and Proper Performance Measurement. - Develop financial profiling model, test and deployment - Develop KUMRONG project profiling model, test and deployment - Develop Actor performance profiling model, test and deployment						

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Develop KUMRONG project recommendation model, test and deployment - KAS-AI Administration site			███			
	DATA CENTRE OPERATION AND MANAGEMENT			███			
	KAS-WEATHER - KAS-WEATHER Administration site - Open APIs, orientation, and training development - KAS-Portal				███		
	KAS-AI - SSO and 3rd party integration - Develop Agricultural master map, plant production map, livestock production map - Develop a farm health monitoring system - Library, open APIs, orientation and training development				███		

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Develop Khmer inference search - Find 3rd party for KAS-AI Smart Diagnose system						
	DATA CENTRE OPERATION AND MANAGEMENT						
	OPERATING, MAINTAINING, AND UPDATING OF ALL KAS PROJECT						
3	**Output 3: 5 key applications establishment with expected result of 12,500 users**						
	- 2 key applications developed		1 app	1 app			
	- Number of app users		2,500 users	2,500 users			
	- 3 key applications produced			1 app	2 app		
	- Number of app users				2,500 users	2,500 users	2,500 users
4	**Output 4: Formation of commercial partnerships with projected result of 10 CP**						
	- To engage commercial partnerships (CP) who have existing apps and willing these to be rolled-out via SAAMBAT's beneficiary channels		5 CPs: Agribuddy or Khmer smart	2 CP: Academic institutions to test out	2 CP	1 CP prototype products	

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
			farming/Angkor salad	prototype products			
5	**Output 5: 10 applications supported by Challenge Fund with expected 12,500 users (12-18 months period)**						
	- Challenge fund introductory workshop - Open for applications - Shortlist of new innovative products or agriculture startup markets expansion						
	- Pre-accelerator - Pitch-day - Contracting and fund release - Accelerator - Project implementation Cycle of the Challenge fund repeated starting from open for applications till project implementation		2 apps (2,500 users)	3 apps (3,750 users)	3 apps (3,750 users)	2 apps (2,500 users)	
6	**Output 6: Feasibility studies and planned fund expenses**						

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	6.1. Agriculture Value Chain Digitalization (A baseline survey which will contribute to digital ecosystem development study. It will be conducted in 11 EP across 5 provinces with anticipated 500 samples for a period of 4 months. CPS proposed budget is 45K)		Q2				
	6.2. Digital Technology Outreach (Within 50 EP with 10,000 digital literacy and sub-project trainers of which 50% is female agriculture value chain actor) - T1 or type 1 where DBST and concrete roads are built - T2 or type 2 where other projects are supporting rural road construction for agriculture development		10 EP	(T1, 5 + T2, 10) 15 EP	(T1, 5 + T2, 5) 10 EP	(T1, 5+ T2, 5) 10 EP	T2, 5 EP
	- Recruit Digital Technology Outreach Service Provider (SP3) - Contract signed		Q2				

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- SP3 to submit an inception report to get the first 10% payment						
	- Conduct research to identify existing levels of digital literacy, uptake of technology, demand for skills upgrading and gaps in technology provision in the rural value chain - Develop activities for upgrading the digital literacy and digital adoption of rural value chain actors and improving awareness of the potential uses of digital technologies (6 events per annum) - Implement the activities reaching out to 500 participants in AIMS and / or ASPIRE business clusters - Select and enhance capacity of 10 entrepreneurs - Develop and implement 10 sub-projects with 50 participants per sub-project to increase use of existing digital		- 1000 pax of digital literacy (50% FVCA) - 1000 pax of digital adoption of the sub-project (50% FVCA) - 20 entrepreneurs got trained				

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	technologies in rural value chains (e.g. use of social media to improve exchange of information in business clusters, improved use of market information systems etc) - Help link innovators to rural value chain actors through rural digital forums, workshops, short-duration internships, facilitating market research (6 events per annum) - Monitor uptake of digital technology in the rural value chain through the project MIS - Timely submission of 3-monthly activity and financial progress report - Timely submission of a semi-annual activity and financial progress report timely (Every June & December)		███				

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Regularly participate in a supervision mission by IFAD and RGC (Every March & September)						
	- Implement the activities reaching out to 1,500 participants in AIMS and / or ASPIRE business clusters - Select and enhance capacity of 30 entrepreneurs - Develop and implement 30 sub-projects with 50 participants per sub-project to increase use of existing digital technologies in rural value chains (e.g. use of social media to improve exchange of information in business clusters, improved use of market information systems etc) - Help link innovators to rural value chain actors through rural digital forums, workshops, short-duration internships,			- 1,500 pax of digital literacy (50% FVCA) - 1,500 pax of digital adoption of the sub-project (50% FVCA) - 30 entrepreneurs got trained - Testing & rolling out 5 key app and some app from challenge fund			

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	facilitating market research (6 events per annum) - Support testing and roll-out of the 5 key applications with innovative digital solutions developed through the upstream activities - Monitor uptake of digital technology in the rural value chain through the project MIS - Timely submission of 3-monthly activity and financial progress report - Timely submission of a semi-annual activity and financial progress report timely (Every June & December) - Regularly participate in a supervision mission by IFAD and RGC (Every March & September)						

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Implement the activities reaching out to 1,500 participants in AIMS and/or ASPIRE business clusters - Select and enhance capacity of 30 entrepreneurs - Develop and implement 30 sub-projects with 50 participants per sub-project to increase use of existing digital technologies in rural value chains (e.g. use of social media to improve exchange of information in business clusters, improved use of market information systems etc) - Help link innovators to rural value chain actors through rural digital forums, workshops, short-duration internships, facilitating market research (6 events per annum)				- 1,000 pax of digital literacy (50% FVCA) - 1,000 pax of digital adoption of the sub-project (50% FVCA) - 20 entrepreneurs got trained - Continue to roll out 5 key app and 5 app from challenge fund		

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Support testing and roll-out of 5 innovative digital solutions developed and supported the Challenge Fund - Monitor uptake of digital technology in the rural value chain through the project MIS - Timely submission of 3-monthly activity and financial progress report - Timely submission of a semi-annual activity and financial progress report timely (Every June & December) - Regularly participate in a supervision mission by IFAD and RGC (Every March & September)						
	- Implement the activities reaching out to 1,500 participants in AIMS and / or ASPIRE business clusters - Select and enhance capacity of 30 entrepreneurs					- 1,000 pax of digital literacy (50% FVCA)	- 500 pax of digital literacy (50% FVCA)

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Develop and implement 30 sub-projects with 50 participants per sub-project to increase use of existing digital technologies in rural value chains (e.g. use of social media to improve exchange of information in business clusters, improved use of market information systems etc) - Help link innovators to rural value chain actors through rural digital forums, workshops, short-duration internships, facilitating market research (6 events per annum) - Support testing and roll-out of another 5 innovative digital solutions developed and supported by the Challenge Fund - Monitor uptake of digital technology in the rural value chain through the project MIS					- 1,000 pax of digital adoption of the sub-project (50% FVCA) - 20 entrepreneurs got trained - Continue to roll out 5 key app and 5 app from challenge fund	- 500 pax of digital adoption of the sub-project (50% FVCA) - 10 entrepreneurs got trained - Continue to roll out 5 key app and 5 app from challenge fund

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Timely submission of 3-monthly activity and financial progress report - Timely submission of a semi-annual activity and financial progress report timely (Every June & December) - Regularly participate in a supervision mission by IFAD and RGC (Every March & September) - Submission of completion report (3 months prior the project end)						
	6.3. Digital Ecosystem for Agriculture Value Chain						
	- Activity 1: Mapping out the value chain actors in the potential agriculture products						
	- Activity 2: Identifying the market gaps of each of the potential agriculture commodities (rice, vegetable, poultry,						

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	aquaculture, maize, cassava) and propose digital solutions to those gaps		■				
	- Activity 3: Assessing businesses that are using digital technology as their platform of services		■	■			
	- Activity 4: Assessing the availability of digital infrastructures			■			
	- Activity 5: Assessing each agriculture value chain actor in digital technology skill			■	■		
	- Activity 6: Assessing government rules and regulations in supporting digital technology ecosystem				■	■	
	- Activity 7: Researching on an on-going e-Government practices what are the key challenges and opportunities				■	■	
	- Activity 8: Assessing chances of digital technology solution adoption rate				■	■	■

No	Description	Planned achievable activities by year (2020-2025)					
		Y1	Y2	Y3 (MTR in Q3)	Y4	Y5	Y6
	- Activity 9: Follow-up and outcome monitoring						
	- Activity 10: Reporting should be quarterly submitted using short and concise format of bullet points		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly & at Q3 before the project ends
	6.4. Digital Marketing Service Provider		Monthly Report				

Remark: Blue highlights are the period of each activity to be attained in a yearly basis

CONTACT US

Hotline: +855 81 922 329

Email: info@techostartup.center

Website: www.techostartup.center