G4AW
GEODATA FOR AGRICULTURE AND WATER

GAP4A, (Good Agriculture practice for All)

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AUXFIN INTERNATIONAL

Characteristics G4AW-project

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Country	: Netherlands.
Lead Partner	: AUXFIN INTERNATIONAL.
Consortium	: AUXFIN INT, Waterwatch, Nextview, Weatherimpact, eLeaf, AUXFIN Burundi, R2000+, IFDC, Ministère de l'Agriculture et de l'Elevage Burundi.
Services	: Advisory services via a new technological platform, with apps such as, Crop selector (what to grow), Activity timer (when to grow), good agricultural practice (how to grow),
Targetgroup	: 100.000 small holders, (600.000 people)
Project period	: from 1-3-2018 to 1-3-2021.

Strong points of the G4AW project

Strong points in this project:

1 good consortium partners with sufficient expertise and motivation
2 technically real and fairly detailed plan
3 clear business agreements upfront
4 partners used and organised to build commercial products, not interested in one-off products
5 existing farmer network used to digital information
6 farmers know they have to - or are used to pay for services

Characteristics of the targetgroup

the target group, 2000 groups of 50 farmers, 100.000 families in total

Main crops banana, maiz, cassava, haricot,

average size of land is 0,25 HA

CAP (community Activation Platform) is organized in groups

the network is organized by AUXFIN Burundi, with a hierarchy to support the groups, Key Activators, Super activators, Master activators

G50 Champion group Gitega-Gitega rural-Songa-Kivoga-Gr2

Goal of the G4AW project

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Explain the goal of the project through 3 aspects:

1. **Pain** - What problem is to be solved with the G4AW project?
   Food shortage, decision on products, agricultural practices, no weather forecast

2. **Gain** – What is your solution and how is it better than conventional solutions?
   More products, better use of fertilizers, more income

3. **Promise** – What will be the situation for farmers once the solution is there?
   Better planning of the products, better practices, more income, less waste

State of Affairs – May 2018

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Where is the project now in terms of :

- Development of the solution – is there a service/app?
  The app is under development, first UI discussion during visit july

- How many farmers are using it?
  The first target are 66 groups of 50 farmers (the farmers are now taking ground data, type of products, crop calendar, soildata, gps measurement of plot, ..)

- Planning for the remainder of the project period
  Developing the apps, making films of good practices, training, growing the network 330 groups 16.500 farmers 2019, 100.000 farmers in 2020

- Does the project also (intend to) target other stakeholders in the value chain?
  Yes Public organizations, Strategic crop selector for the Ministry and large NGO's in the area of foodsecurity, and the production organisations (>2000)

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Achievements

- What has not (yet) been achieved?
  Alignment with Dutch- and other Embassies that work in food security area
  Connection to the WUR, regarding the PIP approach in Burundi

- What has been achieved that was not planned for?
  We planned for 22 groups, they have decided to go for 66

- What makes you very proud?
  The uptake in Burundi is very promising, the 2 local partners are enthousiastic,

- What was a disappointment
  nothing so far

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Lessons

- What are the strong points of the project

  The existing network from AUXFIN Burundi

  Existing UMVA Platform,
  - CAP is the result of AUXFINs vision to combine financial inclusion with social inclusion stimulating communities to improve on 6 pillars including: 1 Finance, 2 Work & Income (AGRI), 3 Governance, 4 Health, 5 Social and 6 Education.
  - UMVA Finance for payments,
  - UMVA COOP for farmer- and production data
  - Chatbot for direct communication and testing
  - AUX-EL for training

  The enormous food shortage in Burundi

- What would you do differently if you could redo the project ?

Business case

At the start of the project:

- Market potential: number of farmers to reach with the services/app
  in Burundi 1.2 million, outside Burundi in AUXFIN market: MALI Sesame farmers

- Which business model was intended at the start of the project
  payment of services by farmers in groups or individual, and NGO's

- What is the business case – please provide number of clients, sales, etc
  at year 3, 2000 groups paying 3 euro per month,

At present:

- How did/will the business model develop during the project: are there any changes made or foreseen in the business model?

- What lessons did you learn with regard to the business case of the project

Business case

Looking at the future:

- Who will be the business owner of the services/apps after termination of the project?
  AUXFIN Burundi will be the business owner in Burundi
  The consortium AUXFIN INT, Waterwatch ad Nextview will deliver the solution to partners around the world

- Will the product and business case be ready for market introduction ?
  Yes, the product will be developed during this project, but already we will test the delivery in Mali and other projects. Major issue will be the start up cost in a country, this is a small amount but need funding. GEO infrastructure, set up cost. The good news is that there are always (organized) groups who are in pain on the organizational and financial area, UMVA can deliver a value to these groups.

- What additional activities and/or resources are needed upon completion of the project to ensure that the product can be successfully introduced and continued in the market?
  Will be discovered when we deliver to Mali

UMVA MISSION

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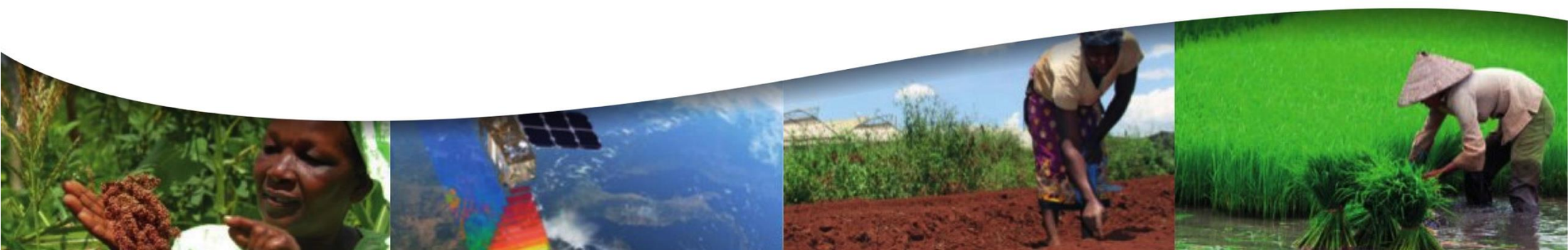
Aspiring Financial Access For All



TO CONNECT WE NEED A PLATFORM

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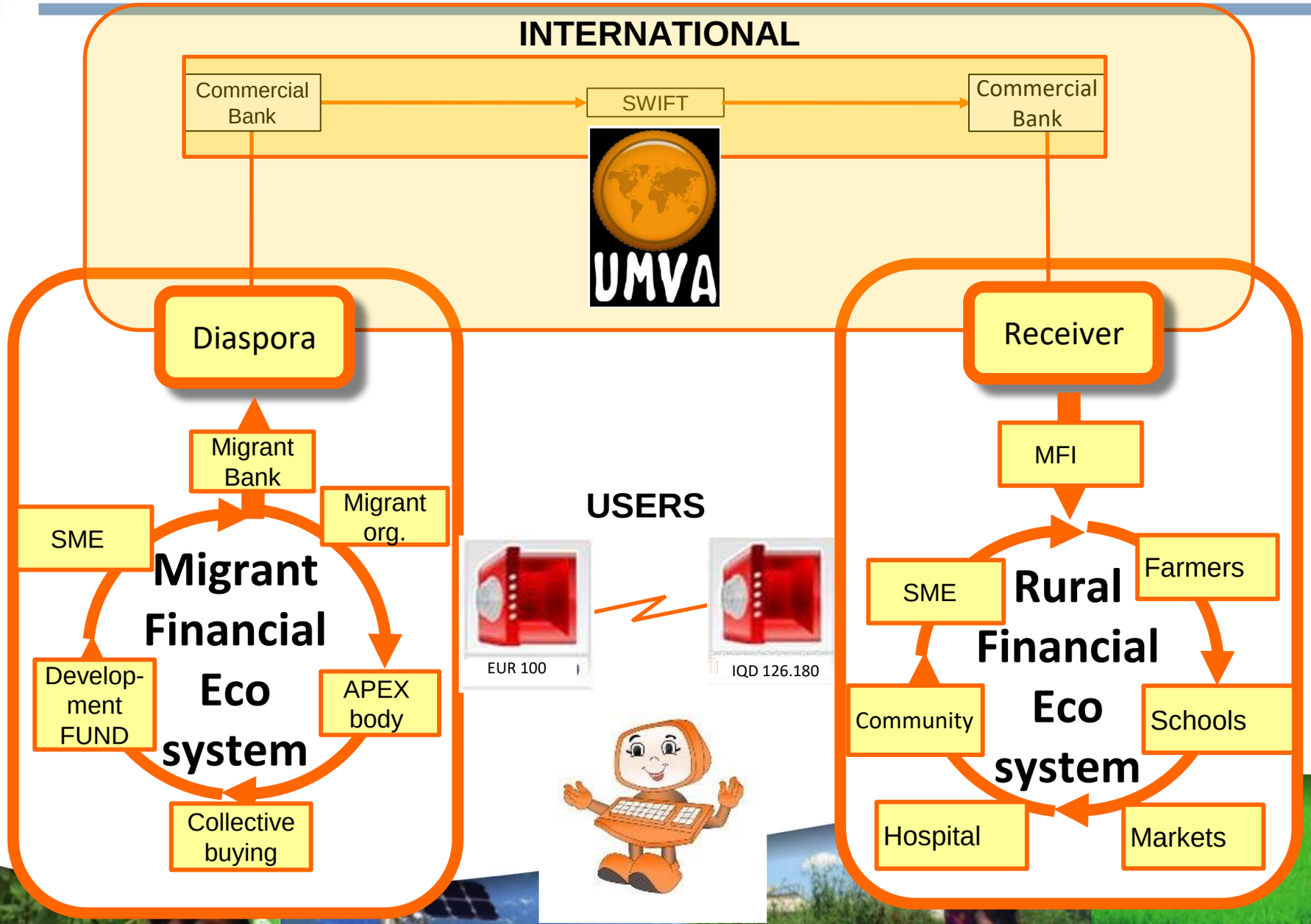

UMVA PLATFORM.

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UMVA CAP used to monitor in Burundi

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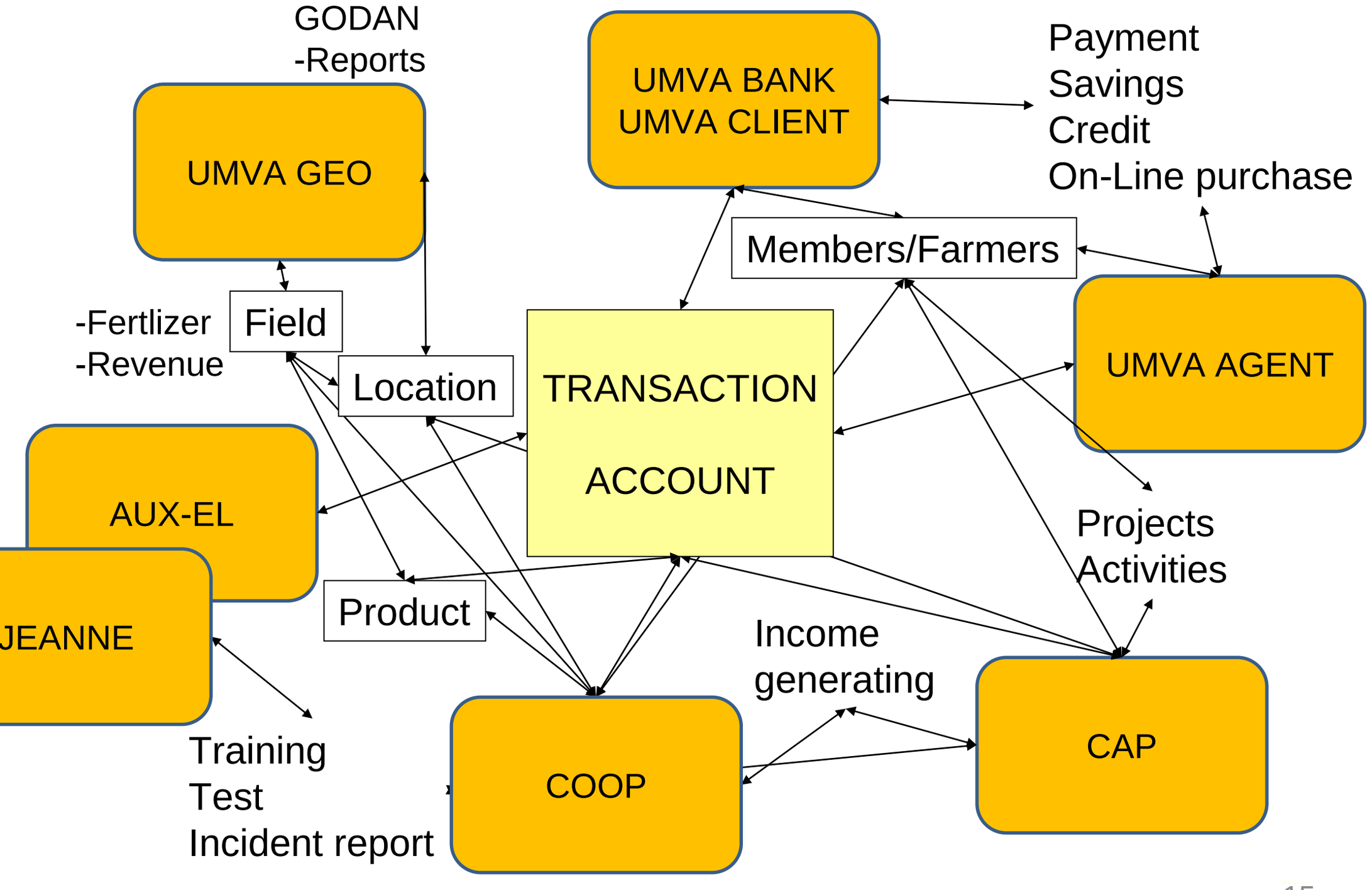
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1				**Project SIFI Report**																	
2																					
3																					
4	**Activator Name:**		**Expert Co-ordinator**				**From:**	11-4-2018			**To:**	17-4-2018		**Created Date :**				**19-4-2018 09:50**			
5							group identified for GAP4A	Main Crops identified by group	Main Crops identified by farmer	GPS of group registered	GPS of plot registered	Size of plots registered	base line registered	project goals explained	Interview Leaders	Interview group members	crop calendars per locality in COOP	crop calendars per week in COOP	crop calendars accepted by groupmembers	soil samples taken	soil sample results in COOP
6	**PROVINCE**	**COMMUN**	**ZONE**	**COLLINE**	**LOCALITY**	**GROUP**	**G1**	**G2**	**G3**	**G4**	**G5**	**G6**	**G7**	**G8**	**G9**	**G10**	**G11**	**G12**	**G13**	**G14**	**G15**
7																					
8	GITEGA																				
9		GIHETA																			
10			GIHETA	BIHORORO																	
11					BIHORORO	BIHORORO-GR3															
12					GISEBUZI	GISEBUZI-GR1															

G1 group identified for GAP4A
G2 Main Crops identified by group
G3 Main crops identified by farmer
G4 GPS of group registered
G5 GPS of plot registered
G6 Size of plots registered
G7 base line registered
G8 project goals explained
G9 Interview Leaders (this at the level of report, group, colline, commune, prov etc)
G10 Interview group members
G11 crop calendars per locality in COOP
G12 crop calendars per week in COOP
G13 crop calendars accepted by group members
G14 soil samples taken
G15 soil sample results in COOP
G16 prod. results report y-1 registered in COOP
G17 prod. results report y-2 registered in COOP
G18 prod. results report y-3 registered in COOP
G19 prod results >10%
G20 meteo results
G21 group is in other agri projects

1 single database



Improve what already exist

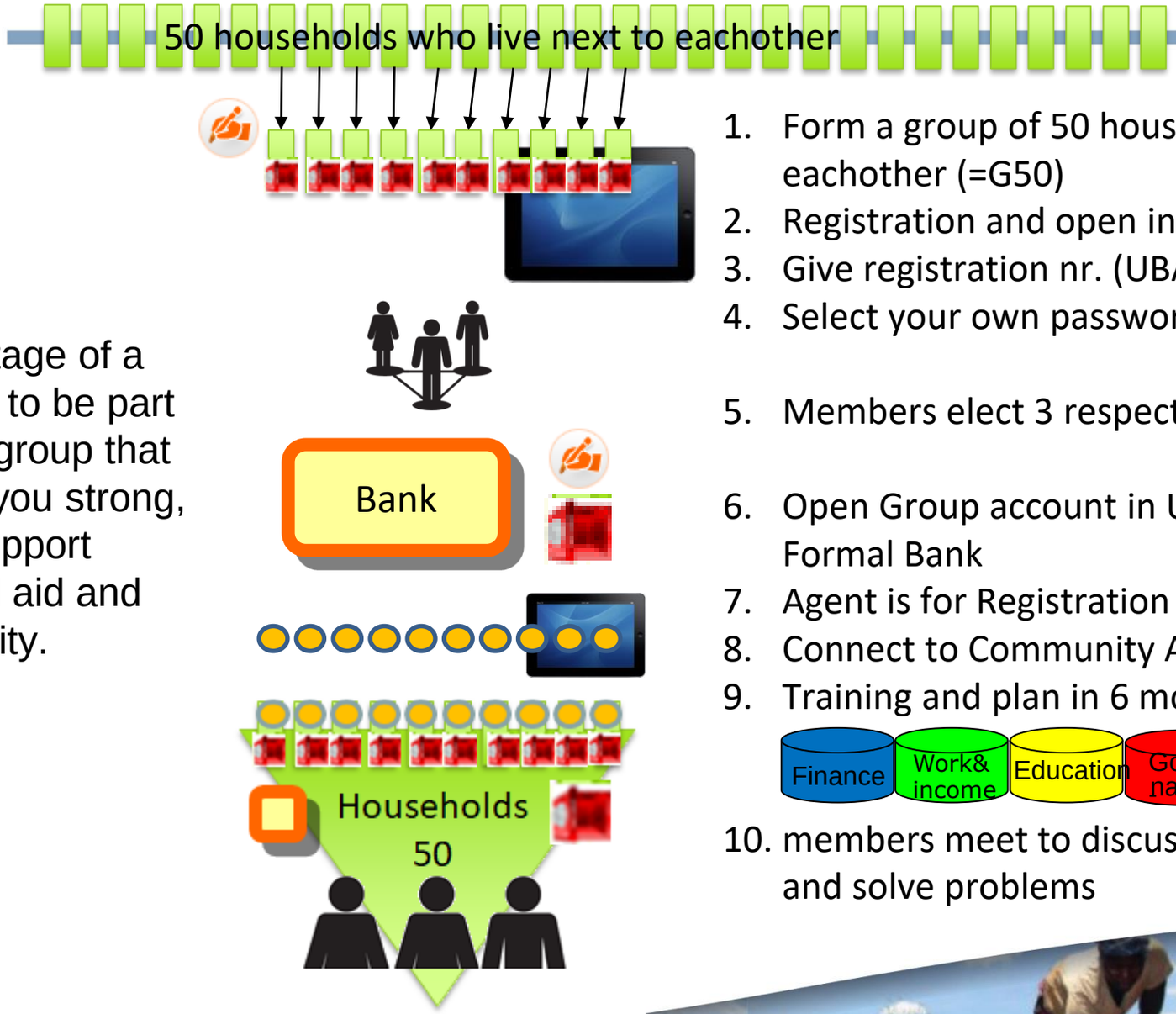
In the villages, some persons have an account
It works as an informal bank (savings, credits), It is not secured

VSLA
MUSO
Now y nuze
Tontine
Rosco
Self Help Group
Cooperatives
Farmer coop's
Prod Org
…

We move this to an on-line UMVA Transaction account.

Interfaced by a tablet by the groups

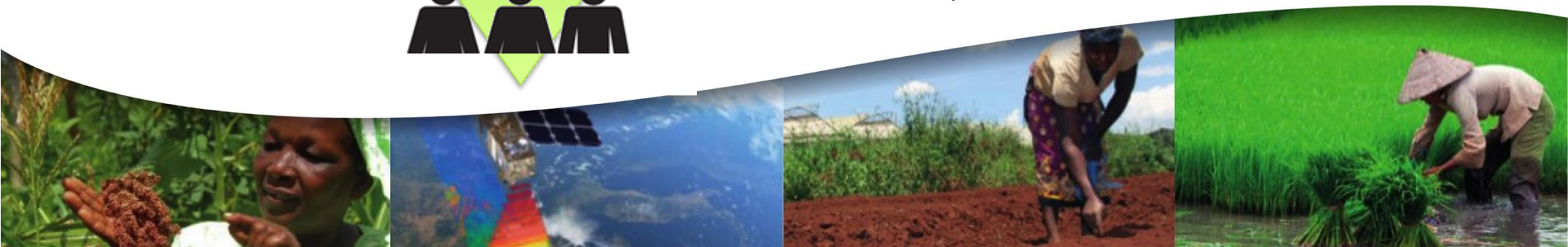
G50 model in Burundi



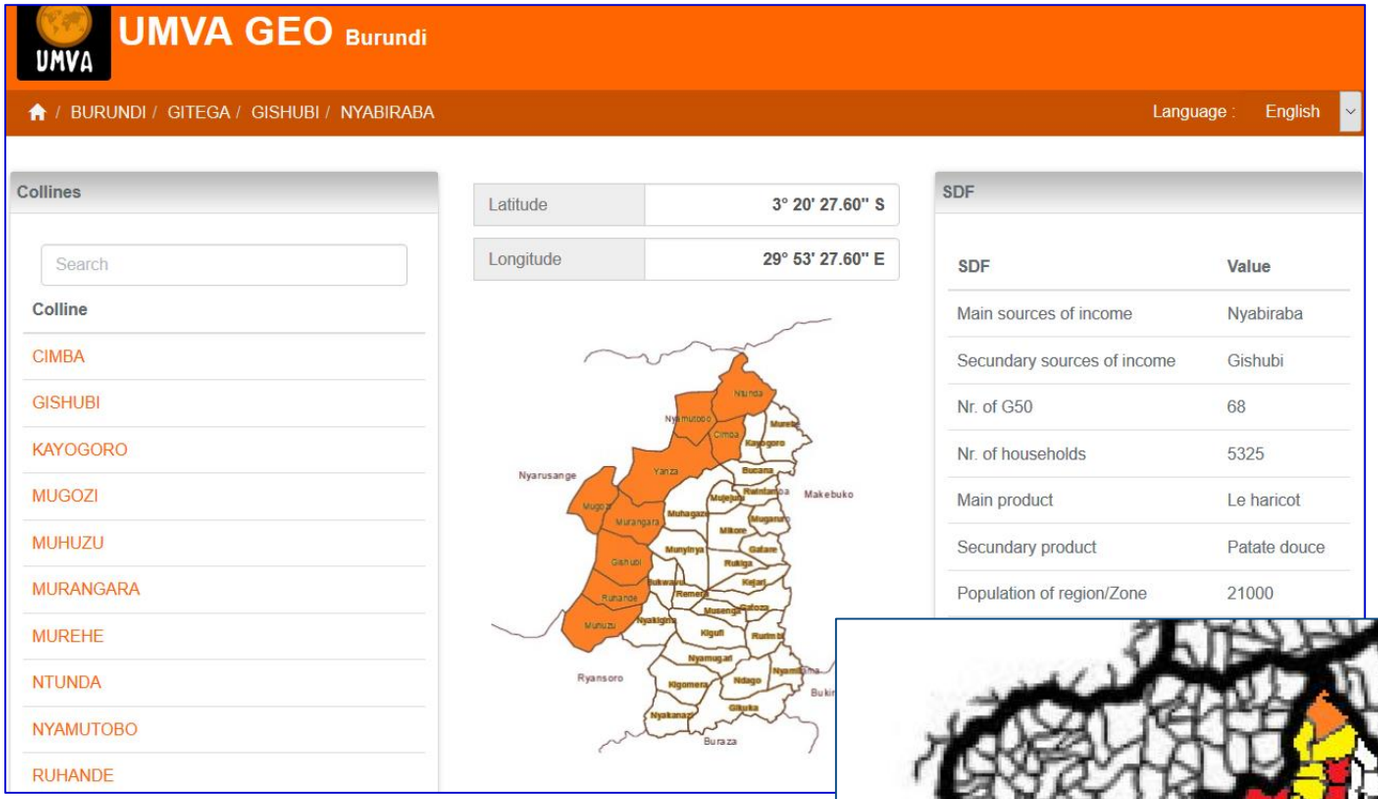
advantage of a G50 is to be part of the group that make you strong, and support mutual aid and solidarity.

1. Form a group of 50 households who live next to eachother (=G50)
2. Registration and open individual UMVA accounts (FI)
3. Give registration nr. (UBAN)
4. Select your own password
5. Members elect 3 respected leaders
6. Open Group account in UMVA AGENT and at a Formal Bank
7. Agent is for Registration and transaction
8. Connect to Community Activation Platform (SI)
9. Training and plan in 6 modules

10. members meet to discuss their future, make plans and solve problems

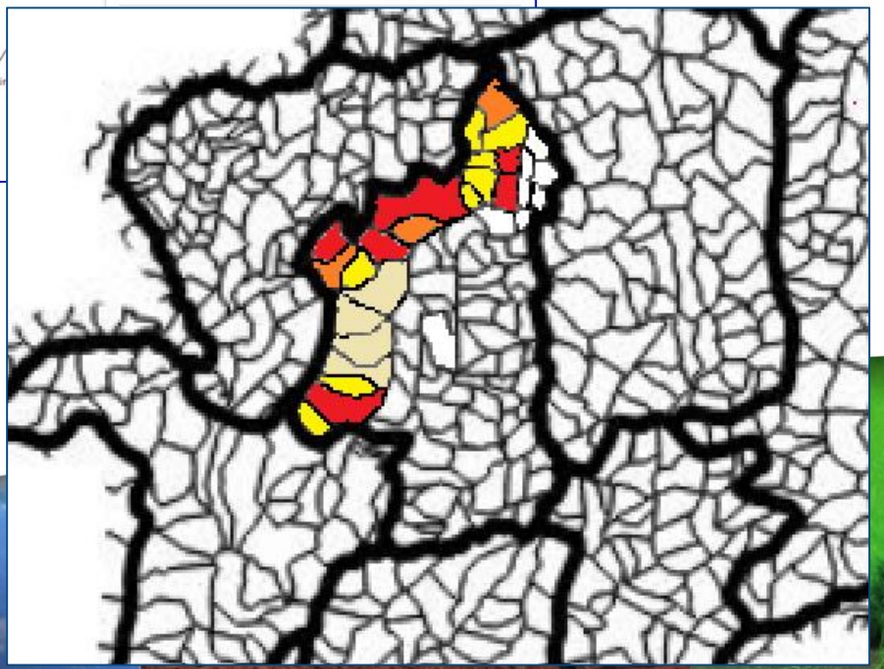


UMVA GEO connected to G50

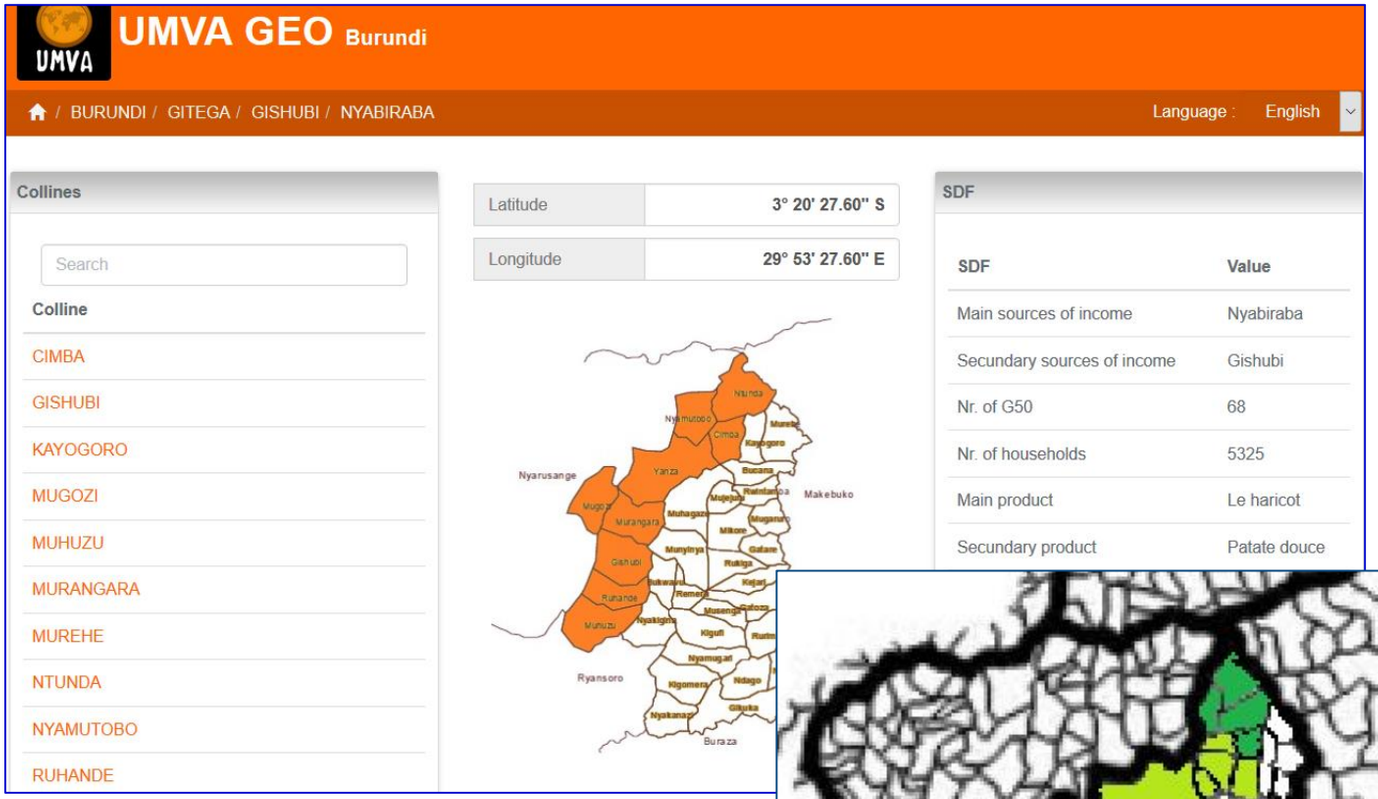


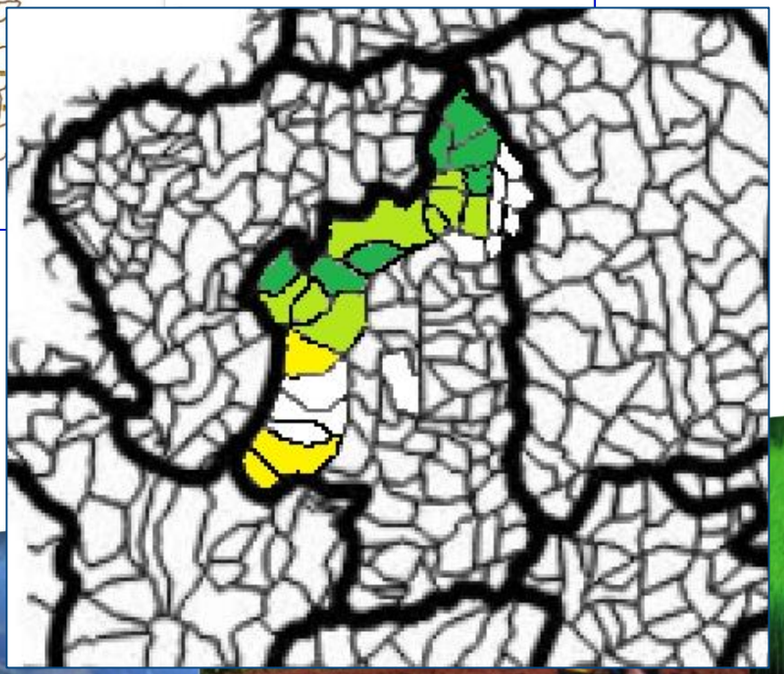
Connected to GIS:
The groups (G50) indicated where malaria is a health problem, red=priority1 orange=prio 2 etc.

We have over 100 indicators in our systems



UMVA GEO connected to G50

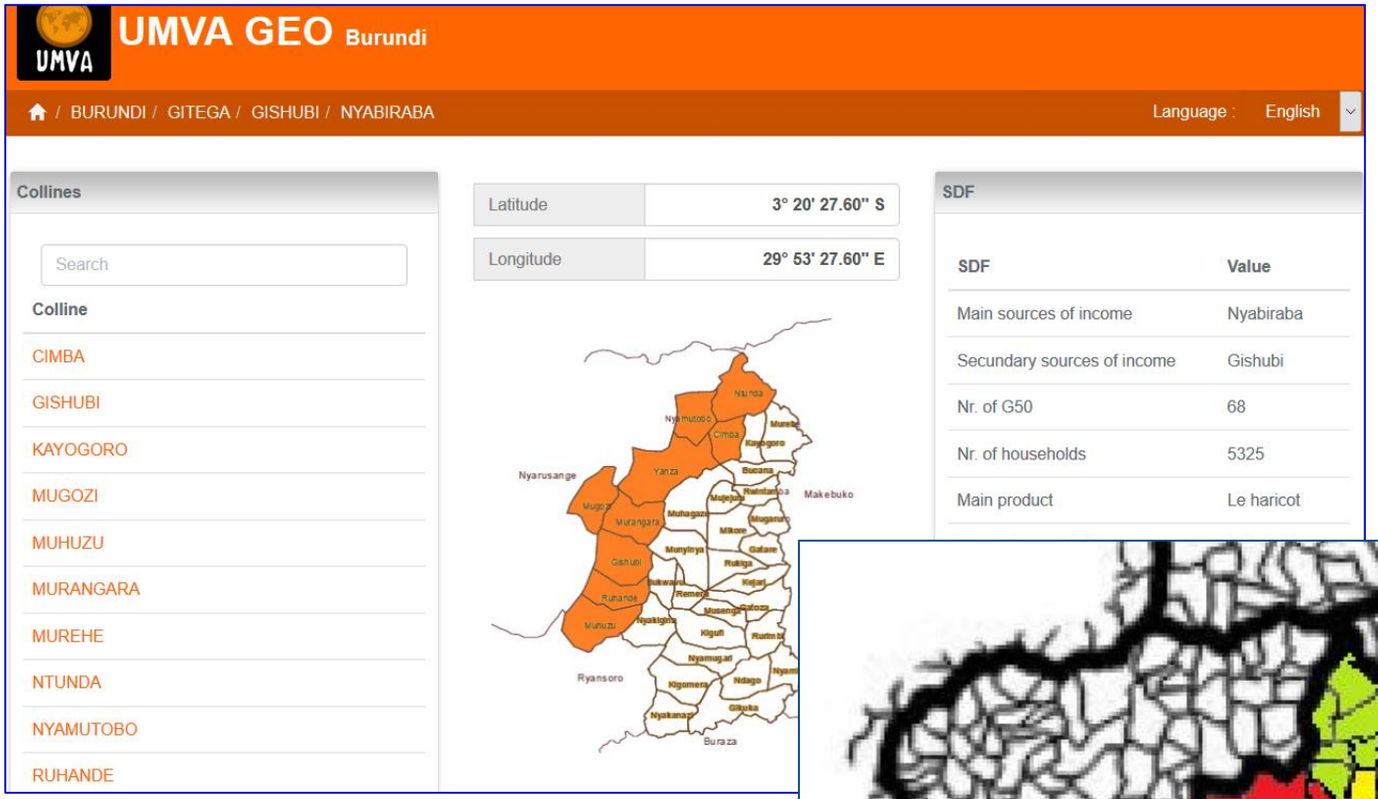


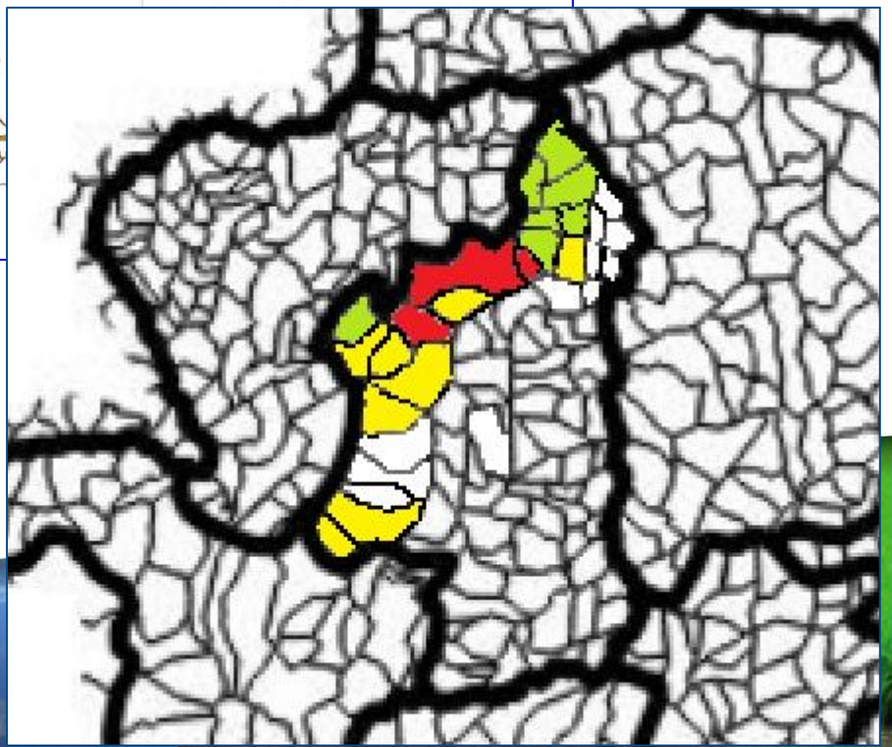


Connected to GIS:
The groups (G50) indicated their production.

The greener the more kg's per HA

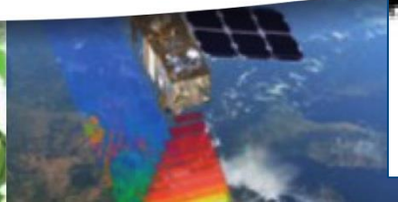
UMVA GEO connected to G50





Connected to GIS:
The groups (G50) indicated their purchase of chemical fertilizer

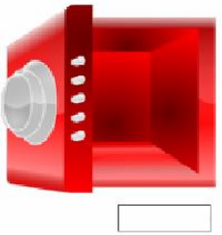
Red = below average bags per HA



G2P

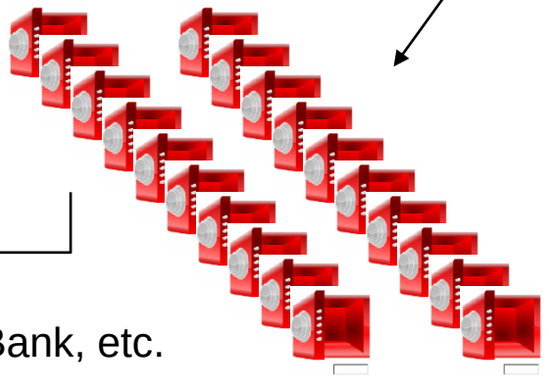
Database tool: CAP REG REP connected to cash transfers, subsidy programs

Sum of funds available for the interventions

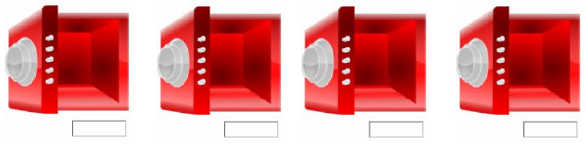


Automated distribution to target population, with application of relevant filters.

Contractual data privacy respecting the interests of the users/members and in compliance with national and international regulation.



Local shops, Bakery, Bank, etc.



Advantages

Fully traceable and good reporting and monitoring functionality, less cash, less risks (safety or corruption), highly efficient and low cost, more autonomy to beneficiaries, reduced likelihood of “undesirable” spending behavior, providing a platform for Community Activation beyond the Cash Based Intervention.

Resume

Most important lessons:

1. Already in the proposal: clarity on the business partners
2.
3.

Will the service/app be sustainable upon completion of the project:

- Technically ? What should be added or change to make it (more) sustainable
  Base data is the same, localization is the key, we will discover this in MALI

- Business case ?
  we will discover in MALI

Thank you for your attention

Back up slides: Used data sources:

1. eLEAF will acquire data from:
   a. NASA's moderate-resolution imaging spectroradiometer (MODIS)
   b. GEOSS: a coordinated set of many open data resources from more than 150 national and regional providers, including NASA, ESA, WMO and Digital Globe.
   c. ERA5: A new global climate monitoring dataset from the Copernicus Climate Change Service (C3S). This dataset is expected to be fully available in the first quarter of 2018
   d. Meteosat Second Generation (MSG)
   e. SRTM
2. Weather Impact will acquire data from:
   a. ECMWF weather forecast data from the KNMI.
   b. CHIRPS: satellite based rainfall product
   c. ERA5 (described above)
   d. NASA's Global Surface Summary Of the Day (GSOD): ground based observations from every continent.
3. AUXFIN will acquire data from:
   a. The UMVA platform of AUXFIN collects in current situation data about farmers, farmer groups, farm plot, soil data, farm products, activities and plans via self reporting.
4. WaterWatch will acquire data from:
   a. The acquire water productivity data from the FAO WaPOR data base for the evaluation of the increase in water efficiency of this project.
5. The Next View will acquire data from:
   a. The srtm-90m-digital-elevation-database-v4-1 and the SOILGRIDS data is collected by The Next View

Back up slides: Chatbot:

The GAP will be provided to the end-users as interactive chat bot on the UMVA platform that guides farmers and extension workers through the crop selection process (What), the timing of farm activities (When) and the best practice information for crop cultivation and natural resource management (How).
The chatbot has 3 levels of communication:
1 it instance it can push information to the farmer;
2 it can detail advice using dialogues and decision trees and;
3 It can perform Q and A using artificial intelligence for the most frequently asked questions. If the problem does not get solved using these three communication strategy the group leader gets connected to a helpdesk with agronomists.

Such a dynamic interface using a chatbot is possible in the context of Burundi, because the the farmer groups targeted by this project in the Auxfin network are already equipped with tablets connected with 2 simcards to the network and have the capacity to manage their financial affairs this tablet and similar communication methodologies.
The App will be added to the service portfolio in the Community Activation Platform (CAP) with 6 pillars, supporting the pillar work & income.

Back up slides: Organisation:

The G50 group leaders have been trained in using this platform to work on the 6 pillars of CAP and will be trained in using the AgriCoach app. The training and uptake are supported by a network of agents including: the Key activators (200), the zonal activator (40), the commune activator (2), and the Coordinator (1). The Network is coordinated by Auxfin Burundi.
Project activities are registered daily in the platform.
G50 Group leaders use the tablet to access the Community Activation Platform is to develop and perform a short term and a long term plan with his or her group for the community.
Each G50 group consists of 50 households. A G50 group has 3 group leaders who get paid by the group to perform services Each group's gets together at least once a week to work on their plans, self report and evaluate progress. New information is fed to the group in a modular fashion and the uptake by the farmers monitored by doing tests.
For urgent messages SMS can be used to send message to the group or the individual farmer, e.g. if a certain pest requires a quick action. About 50% of the farmers have a simple 2g phone and about 50% of the farmers can read. The message will spread further through oral communication in the group.
The AgriBusiness App provides the communication channel to the government, NGO's, MFI’s or Traders. The exact design will be determined during the project and in dialogue with the end users. The App will be developed as a web app which easily converted to an android app if needed.