

# How low cost technology can standardize and bring greater transparency to micro-insurance schemes

Swiss Center for International Health  
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Lusaka 09/05/2018

# Project Background

- **Context : Health System Support Program (PASS, Sud Kivu) financed by Swiss Cooperation (SDC) and implemented by Swiss TPH and GIZ IS**
  - Revitalizing mutual health insurance scheme “Mutuelles de santé”, in collaboration with regional social protection and health authorities
- **2017 : Pilot in South Kivu, Democratic Republic of Congo - Insurance Management Information System for 8 mutuelles de santé**
- **Objectives:**
  - Strengthening operational processes management improvement
  - Bringing more accuracy to health insurance data => better risk monitoring
  - More transparency to contribution collection and claim management
- **ICT4D link : on-line/off-line computer and phone use system to professionalize any type of health financing system including micro-insurance schemes**

# IMIS History



- 2011-12: SDC funded Health Promotion and System Strengthening (HPSS) project in Tanzania (ongoing)
- IMIS: Insurance Management Information System (developed by Swiss TPH)



- Supporting district-based government health insurance models in Tanzania, now moving to regional/national



- Centralized governmental model in Nepal

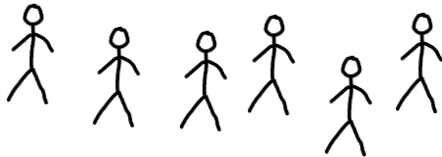
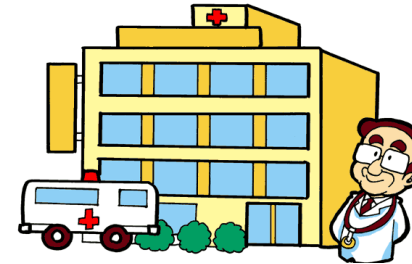


- Community Based Health Insurance / mutuelles in Cameroon and recently started in Democratic Republic of Congo and in Chad

# Technological support and users



ID	Name	Status	Date
0000001	Project A	Active	2023-01-01
0000002	Project B	Completed	2023-02-15
0000003	Project C	Pending	2023-03-10
0000004	Project D	On Hold	2023-04-05
0000005	Project E	Cancelled	2023-05-20



- On-line or Off-line system



- Uses mobile technologies to support enrolment, renewals, client enquiry, claims and feedback processes

# Transitioning process from IMIS to openIMIS



- The system evolved organically based on the user needs and their respective insurance schemes.
- Mostly developed by a Tanzanian company, with some add-ons from the national health insurance scheme in Nepal



- 2016: different countries' versions merged into one "Master Version"
- 2017: the software license was owned by SDC and based on individual agreements given to Cameroon, Nepal and DRC. SDC decided to release the system under an open source licence to pave the way to the openIMIS initiative



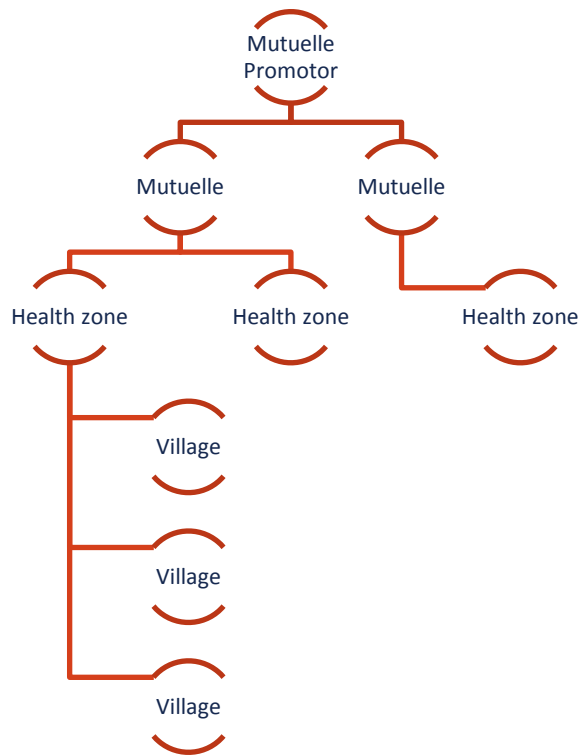
- 2018: Source code is made available on GitHub. The openIMIS Initiative is setting up an open source community based on developers and users. The software will follow a modular and interoperable system architecture.

- Co-financing agreement between Swiss and German cooperation (SDC and BMZ), GIZ has been commissioned to coordinate this transitioning process with Swiss TPH as an implementation partner.

<http://openimis.org/>



# Staff support, the case of “Mutuelle de santé” in DRC, South Kivu



- \* Configuration : 1 Scheme Administrator
- \* Claim validation : 1 Medical advisor to validate claim



- \* Encoding data : 2 Enrolment officers



Software maintenance:  
Swiss TPH



Server maintenance:  
Cloud services provider

# Staff support and IMIS users

Home Insurees and Policies Claims Administration Tools My profile Logout Search Insurance No [play] [help]

User Details

Language -- Select Language -- ▾

Other Names

Last Name

Phone Number

Email

Login Name

Password

Confirm Password

HF Name --- Select HF Code --- ▾

Check All

Role

ROLE
<input type="checkbox"/> Enrolment Officer
<input type="checkbox"/> Manager
<input type="checkbox"/> Accountant
<input type="checkbox"/> Clerk
<input type="checkbox"/> Medical Officer
<input type="checkbox"/> Scheme Administrator
<input type="checkbox"/> IMIS Administrator
<input type="checkbox"/> Receptionist
<input type="checkbox"/> Claim Administrator
<input type="checkbox"/> Claim Contributor

Check All

Region

REGION
<input type="checkbox"/> REMUSACO
<input type="checkbox"/> UVIRA

Check All

District

DISTRICT
<input type="checkbox"/> NYANGEZI
<input type="checkbox"/> NYANTENDE
<input type="checkbox"/> MWANA
<input type="checkbox"/> UVIRA
<input type="checkbox"/> KAMANYOLA
<input type="checkbox"/> CAHI
<input type="checkbox"/> KAZIBA

Save Cancel



# Key Successes

- Two instances are well configured and used online
- Insurance agent, Medical doctors, IMIS administrators are trained for 8 mutuelles
- 16672 insuree, 3508 families entered in the system
- 2512 policies activated
- Medical advisers tested claim management module: 346 encoded, 186 evaluated, including 40 rejected



**TABLEAU EVOLUTIF ET SYNTHETIQUE DE LA MUSA NYANGEZI POPULATION CIBLE:**

Année	OBJETIF	OBJETS	HOMMES	FEMMES	MONTANT	MONTANT	MONTANT CAS	MONTANT	HOMMES	FEMMES	Observat:
MUTUELLE	ATTENDU	ATTEINT			INTENDU	PERSU	RECHER	SURVEY			
2013											
2014											
2016											
2017											

Home Insurees and Policies Claims Administration Tools My profile Logout Search Insurance No

Go back to selector.

Primary Operational Indicators-policies

Period : Year 2017 | Region: REMUSACO | District: NYANGEZI | Product: PDT00001

Quarter: 1

2017 January

Code	Name	Policy			New Policy			Suspended Policy	Expired Policy	Policy Renewal	Insuree			New Insuree		
		M	F	O	M	F	O				M	F	O	M	F	O
PDT00001	Mutuelle_Nyangezi	520	85	0	429	72	0				1,500	1,614	0	1,332	1,443	0
Total for 2017 January :							429	72	0					1332	1443	0

2017 February

Code	Name	Policy			New Policy			Suspended Policy	Expired Policy	Policy Renewal	Insuree			New Insuree		
		M	F	O	M	F	O				M	F	O	M	F	O
PDT00001	Mutuelle_Nyangezi	525	87	0							1,512	1,638	0			
Total for 2017 February :																

2017 March

Code	Name	Policy			New Policy			Suspended Policy	Expired Policy	Policy Renewal	Insuree			New Insuree		
		M	F	O	M	F	O				M	F	O	M	F	O
PDT00001	Mutuelle_Nyangezi	527	87	0							1,516	1,642	0			

# Standardizing enrolment information encoding

## 1. Based on Enrolment agent note book 2017

N° CARTE DE MEMBRE	N° MENAGE	N° DABRE	NON - L DOST - NON	SEXE	DATE DE NAISSANCE	ETAT CIVIL	AD
1519	1	01	M	M	11/13/74	Marié	
		02	B	F	21/7/1987		
		03	C	F	13/01/12		
		04	A	M	28/12/2014		
		05	M	F	21/06/10		
		06	M	F	19/5	Veuf	
2629	3	07	M	M	1990		
		08	M	F	1992		
		09	N	F	13/4/16		
		10	E				
2329	4	11	K	M	1974	Marié	
		12	M	F	1974		
		13	A	M	2005		
		14	L	M	2009		
		15	C	M	2011		
		16	A	F	2014		
		17	L	F	25/2/17		
633	6	18	M	F	1994		
		19	M	F	1994		
9500	2	19	M	F	7/7/1972		



Accueil Assurés et polices Remboursements Admin Outils Mon profil Déconnexion Rechercher le

Détails famille/groupe:

Promoteur: Choisissez un promot

Mutuelle / ZS:

Aire de santé:

Village:

Statut de pauvreté: Sélectionner oui ou n

Type de confirmation: Sélectionner le type

Type de groupe: Sélectionner le type

Détails de l'adresse permanente:

N° de confirmation:

Titulaire de la police d'assurance:

Numéro d'assurance:

Prénoms:

Nom de famille:

Date de naissance:

Sexe: Sélectionner le sexe

Statut marital: Sélectionner le statut

Carte de bénéficiaire: Sélectionner oui ou n

Région actuelle: Choisissez un promot

Mutuelle / ZS actuelle:

Aire de santé actuelle:

Village actuel:

Détails de l'adresse:

Sauvegarder Annuler

## 2. Encode following mandatory information:

- Insurance number / Surname / Family name / Date of birth. If you have only year, encode 01/06/YYYY / Sex
- Address / Marital status / Phone Number / Profession / Adherent card

## 3. Report insurance number in the note book

# Improving identification of insureds and claim management

Today's process of identification :

- Voucher « bons de soins » are delivered by the mutuelle to allow insured members to access health facilities.

Claims can be paid to non-insured :

- lack of verification at identification process
- lack of verification at claim process

The screenshot shows a web application interface with a blue header and a main content area. The header includes navigation links: Home, Insureds and Policies, Claims, Administration, Tools, My profile, Logout, and a search bar for 'Insurance No'. Below the header, there is a 'Go back to selector.' link and a pagination control showing '1 of 57'. The main content area is titled 'Families and Insureds Overview' and displays a table of insureds. The table has columns for 'Insurance Number', 'Name', 'Enrol Date', and 'Status'. The data is filtered by Region: REMUSACO, District: NYANGEZI, Municipality: MUNYA, and Village: MUNYA. The table lists 20 insureds, with some rows highlighted in grey. A red circle highlights a download icon in the top right corner of the table area.

Insurance Number	Name	Enrol Date	Status
Region : REMUSACO			
District : NYANGEZI			
Municipality : MUNYA			
Village : MUNYA			
118100700001		01/01/2015	Active
118100700002		01/01/2015	
118100700003		01/01/2015	
118144600004		01/01/2015	Active
118144600005		01/01/2015	
118144600006		01/01/2015	
118029400015		01/01/2015	Active
118029400011		01/01/2015	
118029400014		01/01/2015	
118029400012		01/01/2015	
118029400013		01/01/2015	
118029400009		01/01/2015	
118029400010		01/01/2015	
118034600016		01/01/2015	Active
118034600017		01/01/2015	
118029900059		01/01/2015	Active
118029900060		01/01/2015	
118029900061		01/01/2015	
118029900062		01/01/2015	
118029900063		01/01/2015	

# How to improve both identification and claim management ? a standard enrolment process model with IMIS

Collect contribution



NA:000000860001 DODOMA

**FOMU YA UANDIKISHAJI  
MWANACHAMA WA CHF**


  
008600012

Jina la Mkoa: \_\_\_\_\_  
 Jina la wilaya: \_\_\_\_\_  
 Jina la Kata: \_\_\_\_\_  
 Kijiji / Mtaa anapoishi: \_\_\_\_\_  
 Kitongoji anapoishi: \_\_\_\_\_  
 Jina la ukoo: \_\_\_\_\_  
 Majina mengine: \_\_\_\_\_  
 Tarehe ya kuzaliwa (TT/MM/MM): \_\_\_\_\_  
 Jinsia:  Me  Ke  
 Hali ya ndoa :  Ameoa / Ameolewa  Hajaolewa / Hajaoa  Mtalaka  Mjane  
 Mkuu wa kaya?  Ndiyo  Hapana



Jina la wilaya: \_\_\_\_\_  
 Jina la ukoo: \_\_\_\_\_  
 Majina mengine: \_\_\_\_\_  
 Tarehe ya kuzaliwa (TT/MM/MM): \_\_\_/\_\_\_/20  
 Tarehe (TT/MM/MM): \_\_\_/\_\_\_/20  
 Jinsia:  Me  ke  
 Tarehe ya kuanza huduma (TTMM/MM):  
 \_\_\_/\_\_\_/20


**ONYESHA KITAMBILISHO HIKI UNAPOENDA  
KUPATA MATIBABU**

  
Namba ya utambulisho  
(Pre printed)




Jina la wilaya: \_\_\_\_\_  
 Jina la ukoo: \_\_\_\_\_  
 Majina mengine: \_\_\_\_\_  
 Tarehe ya kuzaliwa (TTMM/MM): \_\_\_/\_\_\_/20  
 Tarehe (TTMM/MM): \_\_\_/\_\_\_/20  
 Jinsia:  Me  ke  
 Tarehe ya kuanza huduma (TTMM/MM):  
 \_\_\_/\_\_\_/20

**ONYESHA KITAMBILISHO HIKI UNAPOENDA  
KUPATA MATIBABU**

  
Namba ya utambulisho  
(Pre printed)

Jina la wilaya: \_\_\_\_\_  
 Jina la ukoo: \_\_\_\_\_  
 Majina mengine: \_\_\_\_\_  
 Tarehe ya kuzaliwa (TTMM/MM): \_\_\_/\_\_\_/20  
 Tarehe (TTMM/MM): \_\_\_/\_\_\_/20  
 Jinsia:  Me  ke  
 Tarehe ya kuanza huduma (TTMM/MM):  
 \_\_\_/\_\_\_/20

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KUPATA MATIBABU**

  
Namba ya utambulisho  
(Pre printed)

# Enrolment of member

Home Insurees and Policies Claims Administration Tools My profile Logout Search Insurance No [?] [?]

Family/Group Details

Insurance Number 118114900747	Region REMUSACO	Confirmation Type
Last Name NAKABABA	District NYANGEZI	Confirmation No.
Other Names ZIGABE	Municipality MUZINZI	Permanent Address Details
Poverty Status	Village MULENDE	

Insuree

Insurance Number

Other Names

Last Name

Birth Date

Gender  ▼

Marital Status  ▼

Beneficiary Card  ▼

Current Region  ▼

Current District  ▼


Current Municipality  ▼

Current Village  ▼

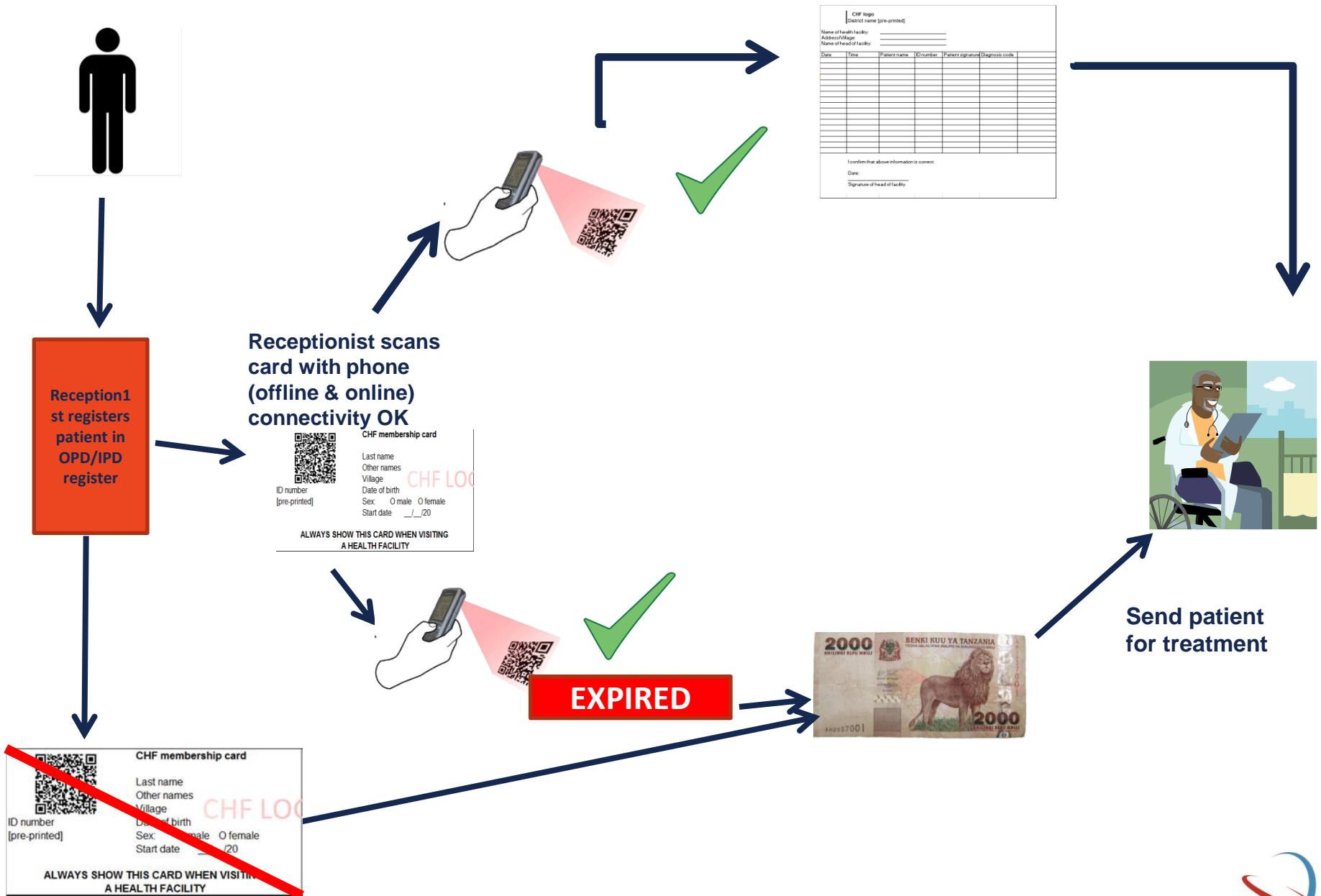
Current Address Details

Profession  ▼

Education  ▼

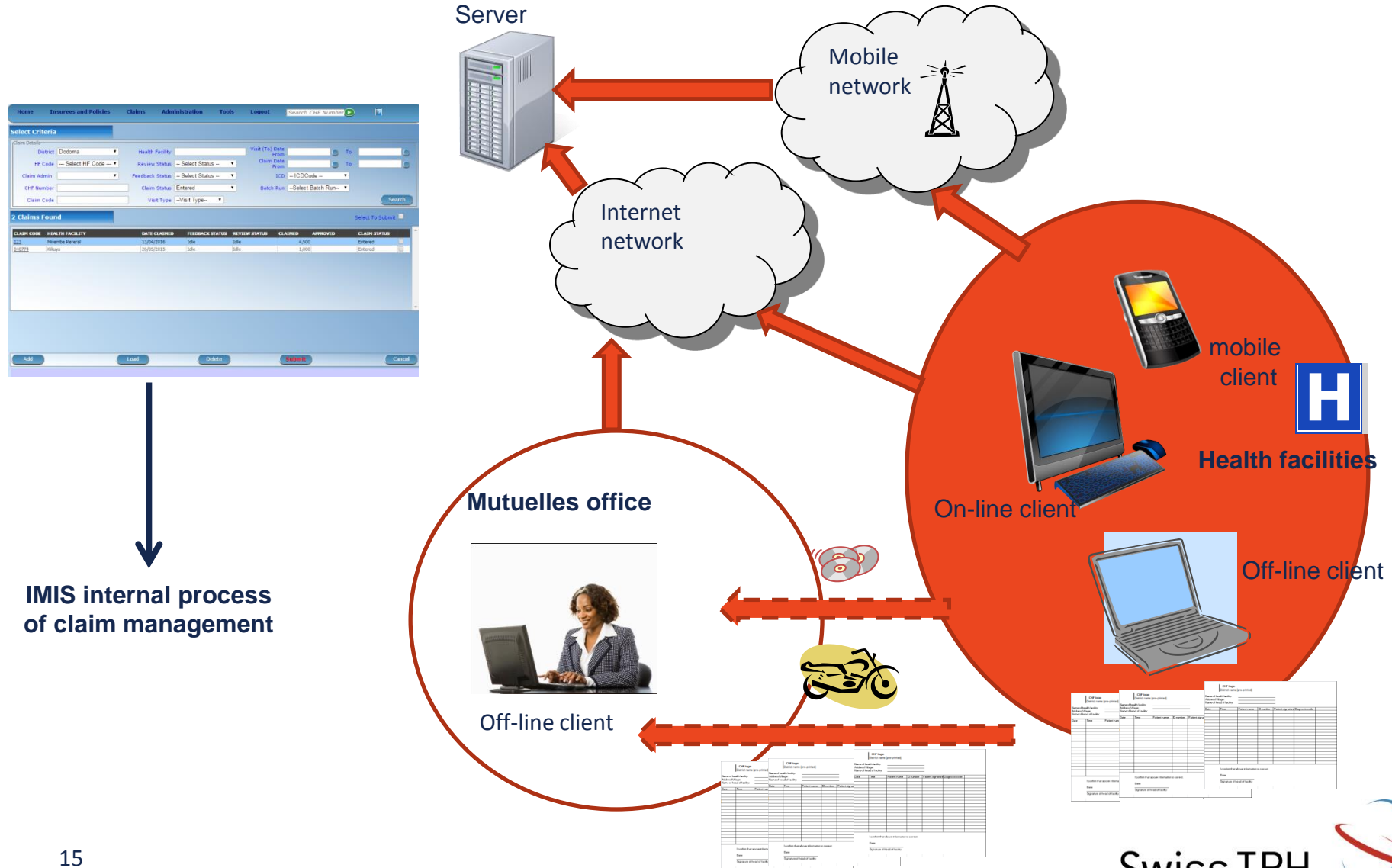


# Insuree Service Utilization Process





# Clarifying health facilities invoicing to standardize processes



IMIS internal process of claim management

# Clarifying health facilities invoicing to standardize processes

Home Insurees and Policies Claims Administration Tools My profile Logout Search Insurance No

Claim Details

HF Code:  HF Name:  Visit Date From:

Insurance Number:  Patient Name:  Visit Date To:

Main Dg:  Claim No.:  Date Claimed:   Claimed:

Sec Dg1:  Sec Dg2:  Sec Dg3:  Sec Dg4:

Claim Administrator:  Guarantee No:  Visit Type:

**Services**

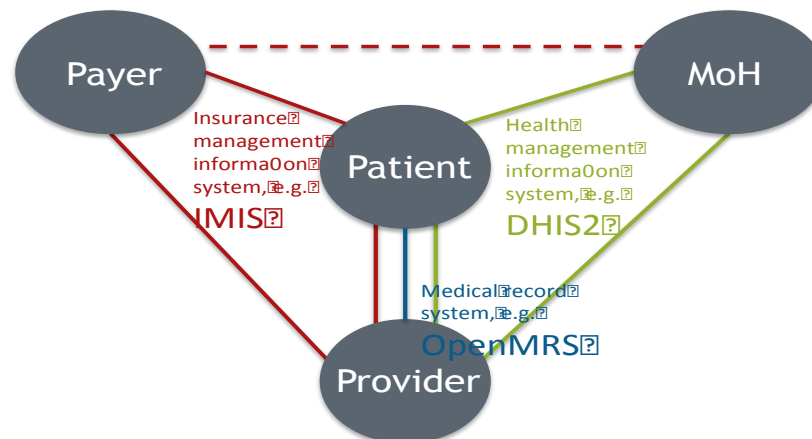
SERVICE CODE	QUANTITY	PRICE	EXPLANATION
<b>CODE</b>	<b>NAME</b>	<b>PRICE</b>	
PM0012	ACCEUTO Accouchement Euto (HGR, CH, HG)	10.00	
PM0013	ACCEUTO.EPI Accouchement eutocique et episiotomie (HGR, HG, CH)	15.00	
PM0014	ACCDYSTO Accouchement Dysto (HGR)	15.00	
PM0015	CESAR CESARIENNE	60.00	
PM0016	PED1 Pediatrie 1ier episode	33.00	
PM0017	PED2 Pediatrie 2iem episode	16.50	
PM0018	PED3 Pediatrie 3iem episode	8.25	
PM0019	MED1 Medecine Interne 1ier episode	45.00	
PM0020	MED2 Medecine Interne 2 iem episode	22.50	

Explanation:

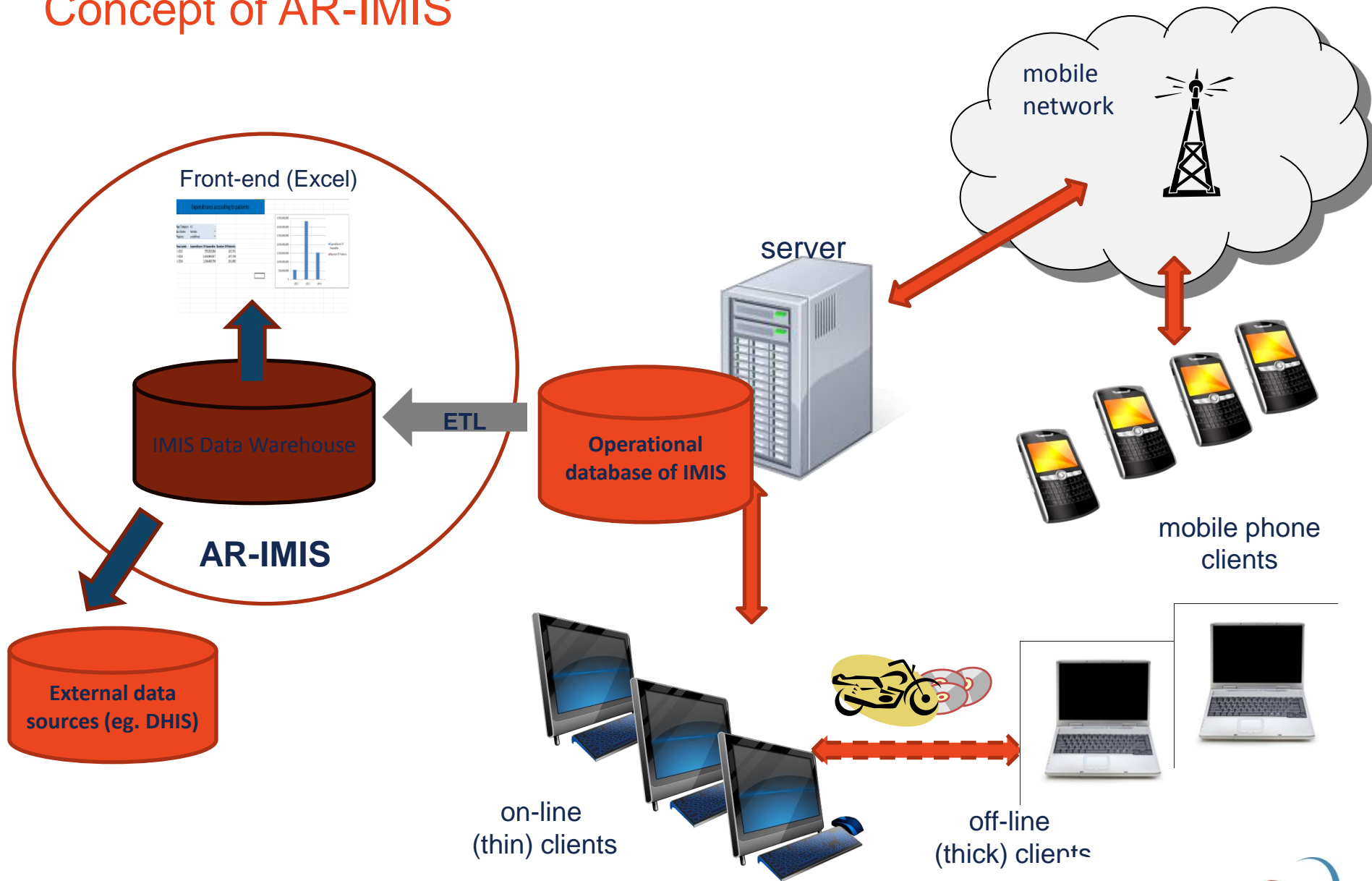


# Key Issues / Challenges

- **Lack of information/standardization:** pre-existing mandatory information expected to configuration the system
- **Limited onsite support:** pilot implementation based on consultation missions without local technical coordination
- **Infrastructure and IT challenges :** internet instability
- **Identifying the knowledge house:** IMIS administrator should have a good knowledge of the insurance scheme in order to configure the système
- **The tussel for access to data:** confusion on accessing data by external actors



# Concept of AR-IMIS



# Lessons Learned

- Applying an online based ICT solution in a remote area within a micro-insurance system is practical
- It takes time to install and encode due to internet instabilities, needs of IT training, process adaptation
- Important to explain the tool and methodology involving all stakeholders at the feasibility study stage including health facilities staff, social protection agency and health authorities.
- IMIS improves claim validation processes : effect on insurance scheme sustainability, better relation with health facilities, increasing trust both for health facilities and insured population => increase enrolment rate, in line with Universal Health Coverage
- Scaling up : network of mutuelles expressed their willingness to extend to 22 mutuelles in South Kivu (5 were piloted)
- Sustainability issues : need the frame of a long term project implementation, financial support to launch the system, lack of capacity in some mutuelles, adequate implementation of offline and online components according to internet availability
  - Recommendations done:
    - Define the most stable access to internet (use of mobile phone offline apps)
    - Capacity building for mutuelle
    - Strengthen institutional frame work



Questions?

**THANK YOU FOR YOUR ATTENTION**

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Schweizerisches Tropen- und Public Health-Institut  
Institut Tropical et de Santé Publique Suisse

Associated Institute of the University of Basel

**ICT4D**   
CONFERENCE