GLOBAL SOUTH EHEALTH OBSERVATORY

SUPPORTING ACTORS WORKING TO IMPROVE ACCESS TO HEALTHCARE

FONDATION PIERRE FABRE
The Global South eHealth Observatory, a Fondation Pierre Fabre initiative, is designed to identify, document, promote and help develop eHealth initiatives that improve access to quality healthcare and medicines for the most disadvantaged populations in resource-limited countries. It stands as the leading resource and networking platform for actors using innovative approaches to address the challenges faced by low- and middle-income countries in ensuring access to healthcare.

According to the WHO, digital innovations contribute to the goals for universal health coverage (1) - eHealth makes it possible to overcome certain impediments, like cost, access, or insufficient healthcare quality and to extend the range of services. Information and communication technologies (ICTs) make it possible to create appropriate, long-lasting, sustainable tools to improve health in the Global South, particularly in areas experiencing personnel and infrastructures shortages. The most frequently implemented project models are as follows: providing healthcare to the remotest populations and improving diagnosis quality using telemedicine; facilitating initial and continuing training of healthcare professionals through online distance learning (e-learning); improving patient and healthcare-data monitoring via electronic medical records; expanding access to information; and democratising health insurance using the mobile phone. In 2016, after a groundwork phase of analysis and brainstorming with a group of experts specialising in health, development and technological innovation, the Fondation Pierre Fabre unveiled the Global South eHealth Observatory.

Why a Global South eHealth Observatory?

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EHealth provides future solutions for the global south by helping reduce the cost of healthcare access, providing people with information to tackle epidemics, improve immunisation coverage and combat counterfeit medicines.

Beatrice Garrette
Director General of the Fondation Pierre Fabre

© HOPE, a blood-donation application in Senegal

© Perrine Legoullon - Start up Brics

« EHealth provides future solutions for the global south by helping reduce the cost of healthcare access, providing people with information to tackle epidemics, improve immunisation coverage and combat counterfeit medicines. »
The importance of ehealth
Since the 2000s, low and middle-income countries have been adopting new technologies at exponential speed. 95% of the world’s population is currently covered by a cellular network, with seven billion subscriptions. Between 2000 and 2015, the Internet penetration rate rose from 6% to 43%, thereby connecting 3.2 billion people. While access to healthcare remains the primary concern of people in developing countries, the use of eHealth tools that combine ICTs and healthcare is of great importance in this context.

3. Pew Research Center Study - September 2015

A great number of projects have already emerged in various fields of application, but most are pilot projects and rarely implemented on a real-world scale. Those involved have a very limited visibility. To address these issues, the first thing to be done is gather and analyse successful experiences, then develop those with the most potential on a broader scale. Hence the need to create a global south eHealth Observatory!

Gilles Babinet
Multi-Entrepreneur and Digital Champion for the European Commission

GILLES BABINET
Multi-Entrepreneur and Digital Champion for the European Commission

GLOBAL SOUTH EHEALTH OBSERVATORY: A THREE-PRONGED INITIATIVE

A scalable database to identify and support high-potential solutions

International conferences to bring together those working in eHealth

Support for award-winning initiatives that are transforming healthcare access in the Global South
Following a predefined timetable, the Observatory identifies high-potential eHealth initiatives. The collected data form a constantly updated database made available to all stakeholders on the www.odess.io website. The identified solutions cover a wide variety of healthcare topics and fields of application.

**Number of projects by health theme**

- Maternal and child health: 38
- Primary healthcare: 33
- Sexual and reproductive health: 26
- Vaccination: 20
- Nutrition: 19
- Malaria / Paludism: 18
- Access to quality medicines/ pharmacy: 17
- Chronic diseases: 17
- HIV/AIDS: 15
- Emergency care: 15
- Dermatology: 14
- Other: 14
- Ophthalmology: 12
- Maladies cardiovasculaires: 11
- Cardiovascular diseases: 11
- Cancer: 8
- Oral health: 6
- Mental health: 6

**Fields of application**

- Patient and medical data monitoring: 25%
- Telemedicine (remote diagnosis and consultation): 22%
- Information, education and behavioural change: 21%
- Training healthcare professionals: 20%
- Financial access to healthcare, microinsurance: 20%
- Information taken from the Observatory database: www.odess.io
Once the phase involving initiative identification, data analysis and field surveys is completed, the selected winners are invited to present their solutions and receive their awards at the Observatory Conference, which brings together international experts and potential partners. Here is a closer look at this annual meeting of eHealth actors.

Every July, the Fondation Pierre Fabre hosts its annual International Observatory Conference at its headquarters in En Doyse (Lavaur, France).

Over the course of the day, international experts share their analyses while those sponsoring the most germane initiatives speak about their solutions. Participants are from both the private and public sectors, representing international organisations, ministries, NGOs, healthcare institutions and companies. It is a unique opportunity to share knowledge, expertise and field experiences, and the conference fosters and facilitates dialogue, whether virtual or physical, between stakeholders and potential partners of eHealth ecosystems.

The day is livestreamed and watched on some fifteen digital campuses of the Agence Universitaire de la Francophonie around the world, giving students the chance to take part in discussions via videoconferencing.

An award recipient presents her eHealth initiative at the 2017 Observatory Conference.

Roundtable at the 2017 Observatory Conference — © Lydie Lecarpentier

International experts present at the 2017 international observatory Conference
- Agence Française de Développement (AFD)
- Agence Universitaire de la Francophonie (AUF)
- Fondation de l’Avenir
- World Health Organization (WHO)
- eHealth Africa (EHA)
- Rwandan Ministry of Health
- Management Sciences for Health (MSH)
- Centre National d’Appui à la Lutte contre la Maladie, Mali
- Réseau en Afrique Francophone pour la Télémédecine (RAFT)

NATIONALITIES REPRESENTED AT THE CONFERENCE
16
COUNTRIES CONNECTED LIVE
52
The projects honoured at the annual conference are mostly entities operating in the Global South, such as NGOs, startups, social enterprises and public structures. The Observatory prize gives them access to 12 months of financial and technical support to encourage their development and expansion. Here are the 2017 and 2016 winners.

**INITIATIVES THAT ARE TRANSFORMING HEALTHCARE ACCESS IN THE GLOBAL SOUTH**

**2017 winners**
- AMAKOMAYA
  - Nepal
- KHUSHI BABY
  - India
- PEEK VISION FOUNDATION
  - Botswana
- COMMUNITY TELEHEALTH
  - Nepal
- THE SAFE DELIVERY APP
  - Ethiopia
- HOPE
  - Senegal
- MMOM THAI NGUYEN
  - Vietnam
- KARANGUÉ
  - Senegal
- MIRA CHANNEL
  - India – Uganda – Afghanistan
- JOKKOSANTÉ
  - Senegal
- DOCTOR GRATIS
  - Indonesia – Nigeria – India
- OPISMS
  - Côte d'Ivoire
- E-DIABÈTE
  - Côte d'Ivoire
- MCLINICA
  - Philippines – Vietnam
- GIFTEDMOM
  - Cameroon
- MEDTRUCKS
  - Morocco
- MOSAN
  - Burkina Faso
- DJANTOLI
  - Mali – Burkina Faso

**2016 winners**
- AMAKOMAYA
  - Nepal
- KHUSHI BABY
  - India
- PEEK VISION FOUNDATION
  - Botswana
- COMMUNITY TELEHEALTH
  - Nepal
- THE SAFE DELIVERY APP
  - Ethiopia
- HOPE
  - Senegal
- MMOM THAI NGUYEN
  - Vietnam
- KARANGUÉ
  - Senegal
- MIRA CHANNEL
  - India – Uganda – Afghanistan
- JOKKOSANTÉ
  - Senegal
- DOCTOR GRATIS
  - Indonesia – Nigeria – India
- OPISMS
  - Côte d'Ivoire
- E-DIABÈTE
  - Côte d'Ivoire
- MCLINICA
  - Philippines – Vietnam
- GIFTEDMOM
  - Cameroon
- MEDTRUCKS
  - Morocco
- MOSAN
  - Burkina Faso
- DJANTOLI
  - Mali – Burkina Faso
People living in the mountain villages of Nepal are very isolated and have limited access to medical information and pre- and postnatal follow-up.

The proposed solution
Amakomaya provides informative video content on foetal development, practical tips, and messages for the rest of the family. The goal is to help increase understanding of the changes that occur and the proper care that is required, while emphasising the need to see a doctor during pregnancy.

A second application designed for medical staff allows community health workers to register pregnant women in the system and auxiliary midwives to access patient information during their clinic visits. The data are compiled, allowing real-time monitoring of health indicators.

www.amakomaya.com
@amakomaya2012

In India, 500,000 children under the age of five die each year from vaccine-preventable diseases.

The proposed solution
Khushi Baby was created to resolve the challenges of managing vaccination of young children, collecting data and raising community health awareness. The patient receives a pendant containing an NFC chip that stores health information. This information can be accessed by healthcare workers using a mobile application and by health authorities via a dashboard. The pendants are waterproof, do not require a battery, and cost less than a dollar to produce. The device is wholly designed to fit with the local context, as the black cord used to hold the pendant is similar to that of the necklaces that babies in this region of India already regularly wear for protection against the evil eye.

www.khushibaby.org
@teamkhushibaby
@teamkhushibaby

The problem
39 million people in the world are blind, though blindness could be prevented in more than 80% of cases.

The proposed solution
Working in conjunction with the Botswanan government’s Expanded Program on Immunisation (EPI), Peek Vision has introduced systematic screening for schoolchildren through a comprehensive national ophthalmic health programme. Peek uses a visual-acuity application on mobile phones. The information is automatically sent to the ophthalmic health services to provide treatment (glasses, eye drops etc.) when necessary or to refer children for specialised care.

www.peekvision.org
www.med.upenn.edu/botswana
peekvision
peekteam

© Ambika Timila
**GLOBAL SOUTH EHEALTH OBSERVATORY**

**COMMUNITY TELEHEALTH**

**COMMUNITY HEALTH EDUCATION SERVICES BY TELEHEALTH (C.H.E.S.T) - NGO / DI SKIN HOSPITAL AND RESEARCH CENTER (DISHARC) - HOSPITAL**

**The problem**

Healthcare services are primarily located in urban areas, meaning people living in mountainous villages must travel long distances, at great expense, to access them.

**The proposed solution**

ICTs make it possible to provide health, vocational-training and education programmes in remote rural communities. C.H.E.S.T offers healthcare and development programmes in hard-to-reach areas through a teleconferencing system. Dermatology teleconsultations are offered by the DI Skin Hospital and Research Center (DISHARC), the first dermatology hospital in Nepal.

- [www.disharc.org](http://www.disharc.org)
- DISHARC (DI Skin Health And Referral Center)

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**ETHIOPIA**

**THE SAFE DELIVERY APP**

MATERNITY FOUNDATION, DEVELOPMENT ORGANISATION

**The problem**

Ethiopia has one of the highest maternal mortality rates in the world. Less than a third of women give birth with the help of a trained professional.

**The proposed solution**

The Safe Delivery App is a mobile application that provides midwives with direct and instant access to clear clinical instructions on emergency obstetric and neonatal care, through easy-to-understand, animated instructional videos, simple graphics, and medication lists. It can be used as a training tool for both initial and continuing education, even in the remotest areas.

- [www.maternity.dk/safe-delivery-app/](http://www.maternity.dk/safe-delivery-app/)
- Maternity Foundation
- @MaternityF

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**SENEGAL**

**HOPE**

DIAMBARS MOBILE – STARTUP

**The problem**

The shortage of blood products in hospitals leads to preventable deaths.

**The proposed solution**

HOPE is a network of interconnected blood donors connected to blood banks through a digital platform that uses text messages, voice calls in local languages and IT tools. HOPE helps blood-transfusion structures create interconnected networks of blood donors to expand the country’s transfusion activity, particularly in the case of urgent blood needs. HOPE also serves as an interface to raise awareness about blood donation among diverse groups of people.

- [www.sunuhope.com](http://www.sunuhope.com)
- HOPE, mon sang pour sauver des vies

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**VIETNAM**

**MMOM THAI NGUYEN**

INSTITUTE OF POPULATION, HEALTH AND DEVELOPMENT (PHAD) RESEARCH INSTITUTE

**The problem**

Ethnic minorities and women living in remote mountainous areas of Vietnam have lower health indicators than the general population.

**The proposed solution**

mMom Thai Nguyen provides health information through mobile phones to improve health-related knowledge and behaviour of ethnic minority women. The programme was the subject of a research project and the authorities of Thai Nguyen Province took over its implementation. The model is expected to be replicated in other districts.

- [projects.phad.org/tn-mmom/](http://projects.phad.org/tn-mmom/)

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**COMMUNITY HEALTH EDUCATION SERVICES BY TELEHEALTH (C.H.E.S.T) - NGO / DI SKIN HOSPITAL AND RESEARCH CENTER (DISHARC) - HOSPITAL**

© Community Telehealth

© HOPE

© mMom Thai Nguyen

© Agata Szymanowicz
SENEGAL
KARANGUÉ
25 TECHNOLOGIE - START-UP

The problem
Lack of awareness about the immunisation schedule for children and pre- and postnatal visits contributes to high rates of maternal and infant mortality.

The proposed solution
Karangue is an innovative alert system based on calls in local languages and text messages, two days and one day before vaccinations and pre- and postnatal appointments. The call language is based on the region, using national languages (Wolof, Pulaar, Sara, Diola, French, etc.), with messages recited by some of the country’s iconic voices (Baba Maal, Simon Sene, Marie Ngoni, El Hadji Ndaye, etc.). Karangue also provides practical advice for pregnant women and information on periodic epidemics. Karangue also makes it possible to schedule hospital appointments via USSD/SMS.

INDIA - UGANDA - AFGHANISTAN
MIRA CHANNEL
ZMQ DEVELOPMENT – SOCIAL ENTERPRISE

The problem
In remote areas of India, poor health indicators are primarily caused by lack of communication on maternal and child health, coupled with impediments to accessing medical infrastructures and services.

The proposed solution
MIRA Channel is an integrated mobile phone service to provide health communication and information tools and to connect healthcare services with disadvantaged and isolated women using mobile phones. It is an interactive discussion tool to communicate with semi-literate women. MIRA offers many value-added services, such as decision-making stories and “serious games” to raise awareness and encourage new behaviours. The platform connects women to public health clinics and generates data to assist health authorities.

CÔTE D’IVOIRE
OPISMS VACCIN / VIRTUAL VACCINATION CARD
GROUPE IVOCARTE-ABYSHOP – CONSULTING COMPANY IN IT, ICTS, AND MAPPING SYSTEMS

The problem
A lack of knowledge about and adherence to vaccination schedules.

The proposed solution
OPISMS is designed to increase immunisation coverage by through SMS reminders on vaccination dates and to raise awareness of the importance of this medical intervention. The solution also makes it possible to obtain a virtual vaccination card. By virtue of a mandate from the Ministry of Health and Public Hygiene, the system has led to creation of a vaccination database in Côte d’Ivoire, making real-time statistics available.

© Karangue - Sénégal
© Perrine Legoullon - Start Up Brics
© Fondation Pierre Fabre
CÔTE D’IVOIRE
E-DIABÈTE
UNIVERSITÉ NUMÉRIQUE FRANÇAISE MONDIALE (UNFM) / INSTITUT NATIONAL DE SANTÉ PUBLIQUE (INSP)

The problem
Côte d’Ivoire lacks specialists to ensure proper care of patients with diabetes.

The proposed solution
eDiabète is designed to improve the quality of diabetes care through an online education platform available through low-speed internet, offering continuing education for healthcare professionals, including by holding international interactive classes. The tool also incorporates Diabdata, patient-tracking software to improve diabetic patient care.

Connect + Pharmacy
www.unfm.org/unfm

PHILIPPINES
CONNECT + PHARMACY
MCLINICA – START-UP

The problem
In many emerging markets, the main healthcare problems are usually costs, access and adherence to treatment.

The proposed solution
Connect Pharmacy is an affordable-medicine programme, making it possible for patients to receive sponsored discounts by supplying their mobile phone number. They also receive health-education messages and prescription-renwal reminders to help them manage their illness, while promoting patient loyalty to their chosen pharmacy. This programme also provides market information for health authorities about medicines that were previously unavailable.

Cameroon
GIFTEDMOM
SOCIAL ENTERPRISE

The problem
There are established pre- and post-natal care recommendations, but insufficient means of communication to convey this information, which leads to delays in women consulting healthcare services.

The proposed solution
GiftedMom is an SMS and voicemail platform that sends notifications to women to remind them of the date of their next pre-natal appointment or their child’s immunisation, as well as educational messages about pregnancy and post-natal care. The service also gives women the means to express their concerns and receive answers directly from health professionals. In collaboration with the Cameroon Ministry of Public Health, more than 29,000 pregnant women and mothers have been monitored in partnership with 28 healthcare facilities and more than 40 community health workers.

www.giftedmom.org
@theGiftedMom

MOROCCO
MEDTRUCKS
STARTUP

The problem
The scarcity and unequal geographic distribution of health services means it is difficult to access health care, such as the monitoring necessary for chronic diseases.

The proposed solution
Medtrucks supports healthcare entities by operating mobile treatment units. Medical trucks include real-time mapping and route-mapping tools to ensure effective implementation. Identifying beneficiary groups and service points helps combat medical deserts by delivering care to the right place just when it is needed.

www.medtrucks.com/blog
@medtrucks
**Burkina Faso**

**Mosan**

**The problem**
Some health services are underutilised due to geographical and financial impediments to access, lack of health-related information and illiteracy.

**The proposed solution**
The Mosan initiative (a portmanteau for mobile-santé, mobile health), implemented in 26 villages of the Nouna Health District, was designed to improve the health conditions of pregnant women, mothers of children under age five and people living with HIV. Mosan promotes access to adequate, affordable, equitable health services, along with targeted information on health facilities. Through computers and mobile phones, community entities and health workers are connected to a patient-tracking platform, and a local-language vocal server has been installed at five health centres to raise awareness and generate appointment reminders.

- www.crsn-nouna.bf
- @CRSNouna

**Senegal**

**JokkoSanté**

**The problem**
Medicines are one of the major healthcare expenses, making access to them inequitable. The use of expired products and the illegal sale of medicines both constitute substantial health risks.

**The proposed solution**
JokkoSanté is a secure web and mobile application that offers more impartial access to medicines. Users drop off unused medicines at affiliated health centres in exchange for points on the mobile application. The points can be applied to obtaining other medicines by prescription, or can be exchanged or purchased. JokkoSanté gives companies the opportunity to improve their social impact by funding medicines for the population segments of their choice: the beneficiaries are notified by SMS.

- www.jokkosante.org
- @JokkoSante

**Indonesia - Nigeria - India**

**Doctor Gratis**

**The problem**
The problem: When lacking access to medical personnel, individuals have difficulty obtaining reliable and/or appropriate health information.

**The proposed solution**
Doctor Gratis is a mobile application that allows free initial contact with a doctor, via instant messaging, in Indonesian, English or French. The objective is to reassure patients and possibly refer them to a specialist if in-person consultation is needed.

- www.doctorgratis.org
- @DoctorGratis

**Mali - Burkina Faso**

**Djantoli**

**The problem**
In West Africa, the leading causes of death are the preventable complications of a disease. In Burkina Faso and Mali, people resort to health care too little or too late when their children fall sick, for cultural, educational, geographical and/or financial reasons.

**The proposed solution**
Djantoli’s mission is to reduce infant mortality by facilitating access to preventive, long-term healthcare services for families through an inexpensive monthly subscription. This service combines health insurance that reduces medical costs for families, a home-monitoring network that carries out regular health check-ups on young children to rapidly detect childhood diseases, and an education programme on prevention and proper health practices. The association has also developed an “electronic health record” to facilitate monitoring, screening and early warning in case of illness. The data are collected in a mobile application by the Health Care Mediators and can be viewed by health centres.

- www.djantoli.org
- @Djantoli

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© Mosan
© JokkoSanté
© Djantoli
© Doctor Gratis © Doctor Gratis
© Health 2i © Sensys Solutions - Startup
© Doctor Gratis © Doctor Gratis
THE OBSERVATORY COMMITTEE AND PARTNERS

The eHealth Observatory expert committee

- Gilles Babinet, an entrepreneur many times over, is Digital Champion for the European Commission
- Cheick Oumar Bagayoko, Associate Professor in Medical Informatics, Director of the Centre d’Expertise et de Recherche en Télémédecine et E-Santé (CERTES) and General Coordinator of the Réseau en Afrique Francophone pour la Télémédecine (RAFT)
- Mehdi Benchoufi, a physician by training and head of clinic at the Hôtel Dieu, is an expert in digital technologies and founder of the think-tank known as the Club JADE
- Jean-Luc Clément, a university professor who is now Research Advisor at the Delegation for European and International Relations and Cooperation (DREIC) of the Ministry of National Education, Higher Education and Research
- Demba Diallo is a founding partner of Innhotep, a consulting firm that fast-tracks growth for its clients’ businesses using technological and management innovations
- Catherine de Rohan Chabot, a pharmacist by training, specialises in communications in the healthcare sector
- One expert laureat each year

Observatory partners

AFD is France’s inclusive public development bank. It commits financing and technical assistance to projects that genuinely improve everyday life, both in developing and emerging countries and in the French overseas provinces. In keeping with the United Nations Sustainable Development Goals, AFD works in many sectors – energy, healthcare, biodiversity, water, digital technology, professional training, among others – to assist with transitions towards a safer, more equitable, and more sustainable world: a world in common. Through its network of 85 field offices, AFD currently finances, monitors, and assists more than 2,500 development projects in 108 countries. In 2016, AFD earmarked EUR 9.4bn to finance projects in developing countries and for overseas France.

The Fondation de l’Avenir for Applied Medical Research was created in 1987 by the Mutualité Française. It has been recognized as a public utility since 1988. Driven by its vocation of general interest and its membership in the local economy, the Foundation embodies the link between the mutualist movement and public health actors. Through its actions, recommendations and publications, it actively participates in the improvement of our healthcare system. It allows researchers to advance their research projects and move beyond the fundamental stage for the benefit of all.

The Francophone University Agency (AUF), an international higher education association created more than 50 years ago, brings together more than 840 universities, major schools, scientific networks and research centers around the world. As coordinator of one of the world’s largest higher education networks, AUF assists universities for their structuration, expansion and involvement in local and global development. Its teams are present all over the world, and provide follow-up and advice for the design and management of projects. AUF offers technical and financial support and helps in the search for new partners. AUF develops and manages large-scale multilateral projects in all fields of higher education and social development.

Technical partners

Startup BRICS, Founded in 2013 by Samir Abdelkrim, StartupBRICS.com takes part in monitoring and conducting field studies of the initiatives listed by the Observatory.

In 2017, the Observatory award winners enjoyed support from the Easis Consulting firm, specialising in new digital-management solutions.
About the Fondation Pierre Fabre

Officially recognised in France as an institution of public utility since 1999, Fondation Pierre Fabre works to provide the people of the Global South with better access to quality drugs and healthcare. Its four action areas are: training of drugs specialists, combating sickle-cell disease, access to quality healthcare, and dermatology in tropical areas. In 2017, the Foundation conduct 23 programmes in 15 countries in Africa, Asia, Lebanon and Haiti.