SOCIETY

Digital Inclusion_

At Telefónica, we are developing a series of programmes so that the underprivileged can have access to and benefit from these technologies

The European Commission considers that 'M-Inclusion' is a good example of collaboration between Europe and Latin America (for Horizon 2020)

'M-Inclusion'

The *M-Inclusion* project is co-financed by the European Commission and implemented by a consortium led by Telefónica and made up of Econet, Futura Networks Colombia, Innovation Engineering, the Nokia Institute of Technology of Brazil, the Cayetano Heredia University of Peru, and the Polytechnic University of Valencia (UPV).

The initiative began in 2011 with the goal of creating a framework for cooperation among the developers of mobile solutions in Europe and Latin America, and different end-user organisations and entities, as well as to define a roadmap for achieving social inclusion through mobile technology of groups that are at risk of exclusion, targeting the conclusions at different stakeholders.

The project has been aimed at providing mobile solutions to people with disabilities, chronic disease, low-income groups, and isolated areas. At the same time, the project promotes user-oriented innovations and the search for affordable mobile solutions.

A stakeholder group has been created around *M-Inclusion*. This group is made up of entities with a strong interest and commitment to the interests of *M-Inclusion*, and whose members act as advisors to the *M-Inclusion* consortium. The stakeholder group was formed to provide the *M-Inclusion* Community with a high level of expertise in inclusion-related topics, from a technical and social point of view. The stakeholder group has its own section on the website where its activities are promoted.

One of the project milestones was the definition of a roadmap that identified the keys to making inclusion a reality through mobile solutions for the agents involved in this transformation: users and their organisations, mobile developers, public institutions, financing entities, and industrial partners.

For End Users

- The number of terminals and applications for low-cost mobiles is growing very quickly.
- The evolution of broadband in regions of Latin America. The 3G and 4G standards will be the main drivers of growth in the area.
- More new inclusive services offered by mobile technologies.

For Developers

- The size of the market in Latin America: 600 million potential consumers.
- Operators will invest in 4G standards and HTML5 as the new development language.
- New sources of financing: crowdfunding for startups and developers.

For Public Institutions

- Broadband implementation contributes directly to economic growth.
- Digital culture to narrow the digital divide.
- The mobile industry contributes to public financing through taxes.

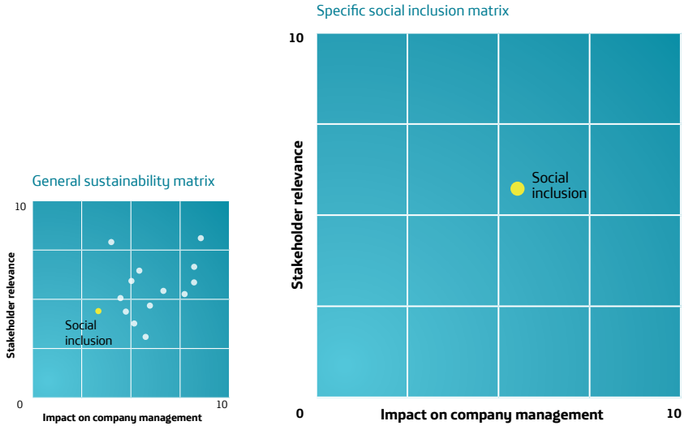
For Financial Institutions

- The introduction of broadband is directly associated with the growth of the GDP of the country.
- Price flexibility: mobile broadband charges drop and low-cost devices are available.
- Mobile technologies have significant potential to change the lives of millions of people.

For Industrial Partners

- Low-cost devices will encourage the growth in and demand for traffic by the population.

Materiality matrix



- Newly-created regulatory agencies are working to reduce taxes and eliminate barriers.
- Improvements in regulations and telecommunications licences will promote the implementation of infrastructures.

In addition to covering these key aspects, the *M-Inclusion* roadmap also includes the needs of end users (from a general perspective as well as from a more specific point of view, taking into account the participating stakeholders), ICT solutions that are suited to these needs, the technological divides and emerging trends to fully address the social inclusion objectives in healthcare, education, the economy, and mobility in Latin America.

People who connect to the web platform can now discuss, participate in the project, and access the services that the portal offers, including open innovation, to find financing or partners, or the mobile app marketplace, which currently has more than 4,300 applications.

As part of *M-Inclusion*, two challenges have been launched called *Apps4change*, which are aimed at recognising the mobile solution that most encourages social inclusion. The first year the event was held, in 2012, 120 people from 15 countries participated, and some of the applications that were presented are available for download free of charge. The winner was Byron Llerena, a 26-year-old from Ecuador, for his entry, *Black and White*, an innovative programme for Android aimed at people with visual disabilities.

The second year, in 2013, Javier Gonzalo from Spain won with his *MicroHealth* app that allows patients and parents of children with problems of haemophilia and other congenital coagulopathies to monitor the progress of the treatment in real time and share evidence and conclusions with healthcare professionals.

Also, in 2013, *M-Inclusion* was awarded the prize for Best Project 2013 by the Spanish Association of Information and Telecommunications Service Users (Autelsi), for its commitment to social and environmental issues. It was also recognised at the 4th Corresponsables Awards in the Large Company category. These awards are given by the Corresponsables Foundation, which recognises the most innovative and sustainable initiatives in the area of Social Responsibility.

'M-Inclusion'

- Innovation of services in mobile technology that are more inclusive for users
- New sources of financing for startups and developers
- Broadband development promotes economic growth

Today, the Brazilian Amazon is connected to the world thanks to broadband and 3G from Telefónica

Conexão amazônica

Information and communication technologies transform people's lives significantly, and one of example of this is that the Brazilian Amazon today is connected to the world thanks to broadband internet and third-generation (3G) technology offered by Telefónica.

Since 2009, the municipality of Beltarra, with a population of almost 16,000, has enjoyed these telecommunications services thanks to an alliance between Vivo (owned by Telefónica), Ericsson, and the collaboration of the Brazilian non-governmental agency *Saúde e Alegria*, which developed a digital inclusion project that has helped to narrow the geographical divide of remote communities in the state of Pará, in the northern part of the country.

The arrival of telecommunications services has resulted in significant developments for the region, including better access to healthcare, education, and economic growth. According to a study by the Faculdades Integradas do Tapajós, close to 90% of the people felt that mobile phones changed their day-to-day lives for the better, and 53% thought that they had actively contributed to the creation of companies and the generation of jobs.

During the execution of the project, it was discovered that the Tapajós River was acting as a mirror, increasing the range of the 3G signal. This has made it possible for the hospital ship *Abaré*, which sails along the length of the river and provides healthcare services to the inhabitants of more than 70 communities, to connect to the broadband network. Today, doctors on board the *Abaré* can communicate with their colleagues around the world and send X-rays and other diagnostic images. This means that thousands of people who live in the Amazon can benefit from quality medical care.

The *Abaré* is also using its mobile broadband connection to offer educational programmes to the communities along the Tapajós River with the support of local universities.

This project won the Global Mobile award in 2013 for the *Best Mobile Product, Initiative or Service for Emerging Markets.*

'Intégrame'

Intégrame (Integrate Me) is a project of Telefónica Perú that brings telecommunications services to distant rural areas in the country with high poverty levels. This initiative, which began in 2006, was started as an alternative model for the development of public service infrastructure, with the goal of narrowing the digital divide and fostering social inclusion through public-private alliances to promote the development of telecommunications in rural areas.

Using wireless technology, the programme offers mobile telephony, fixed telephony, public telephones, Internet access, and satellite digital television services, taking advantage of the efficiency generated by the use of a single network for all of the services.

In 2013, the programme reached more than 229 rural towns, which benefited inhabitants of areas like Piura, La Libertad, Ancash, Moquegua, Tacna, Cajamarca, Ucayali, Pasco, Junín, Cuso, Puno, and Huancavelica.

This project has become a benchmark for sustainable development programmes and has been recognised at the International Business Awards (Stevies), which award the best strategies and actions in the area of businesses worldwide. The initiative was also chosen as one of the best examples of Social Responsibility in South America, and one of the best telecommunications products worldwide.

'Pescando con redes 3G'

Pescando con redes 3G (Fishing with 3G nets) is a project that was started in 2010 to promote economic and social development in the city of Santa Cruz Cabrália, in the south of Bahía, in Brazil, through the digital and social inclusion of fishermen and oyster farmers.

During phase one of the project, the fishermen in Cabrália received mobile devices with credit and used 3G networks to access information on fishing conditions and market prices in real time. Software applications were also designed to support the fishermen in their activities by analysing and providing information on navigation, weather, market research, direct sales, and technical support.

Other initiatives consisted of training the fishermen to use these new technologies, which included the creation of training centres in Santa Cruz Cabrália, as well as a ship to reach the more distant communities. As a result, the fishermen's income increased and they improved the efficiency of their sales.

In total, approximately 60 fishermen in seven communities benefited directly from the project, and more than 750 members of the community and local businesses benefited indirectly.

'Intégrame', is a project of Telefónica Peru to bring telecommunications to poor, isolated rural areas

In phase two of the project, participants received an augmented reality application that uses Qualcomm's Vuforia platform to provide access to data, images, and videos on the *Pesca don Redes 3G* project, information on the community, and restaurants that are participating in the project, tourist information, and a game for increasing social-environmental awareness.

Instructions have also been created for the farming of oysters as a sustainable alternative to traditional fishing in the off-season. The addition of oyster farming to the fishing trade in Santa Cruz Cabrália has increased employment and income per family in the region.

The most recent activities developed as part of this project include the new Centre for Education and Innovation Fishing with 3G Nets (CEIT PR3G), installed in a building donated by the city, which offers training courses to locals. Participants use tablets and smartphones to connect through the 3G network of Telefónica Vivo to an online platform with development tools that allow them to create localised digital content and unique mobile applications. The project will affect more than 4,000 people in Santa Cruz Cabrália and another 5,000 people in other nearby communities.

The awards received by this project include third place in the Social Technologies award of the Bank of Brazil Foundation, and the Viva Mobile OI display award.

'WawaRed'

WawaRed. Connecting to improve maternity-infant health in Peru is a project in collaboration with the Inter-American Development Bank (IDB), which consists of the implementation of an electronic clinical record for prenatal care of underprivileged pregnant women in Peru.

The project seeks to use information and communication technologies (ICT) to provide a solution to the problems of maternal mortality in Peru, promoting an improvement in maternity-infant health and helping to achieve Millennium Development Goals 4, 5, and 6.

The initiative uses text messages to send personalised information on nutrition, vitamins, alarm signs, and recommendations for potential problems during pregnancy. The messages are related to the health and gestational age profile of the patient. The project also includes the implementation of an interactive voice response (IVR) system that consists of a telephone exchange with pre-recorded voice messages with information that is of interest to the users.

WawaRed currently gives access to the healthcare system to approximately 5,000 pregnant women, providing better healthcare conditions for both mothers and children alike.

Based on the initial results, work is underway to expand the programme through *WawaRed Plus*, which goes beyond the pregnancy phase and provides support to mothers for at least the baby's first year of life, with reminders of appointments, vaccinations, recommendations for care, feeding, development, etc.

Other Important Projects

In Mexico, we have started a rural telephony project that started in February 2013 with the presence at the International Franchise Fair 2013 in Mexico, and during the early months of the year, the programme was promoted in different forums like the FIF in Guadalajara and Expo PyMes 2013. Over the course of the year, this project has benefited 6 municipalities in the 2 states in which it has been implemented, with a total of 22,000 people.

Last year we also carried out important projects for financial inclusion in Brazil, such as the Zuum service via MFS, a joint venture between Telefónica Vivo and MasterCard, which is based on a pre-paid cellular current account, designed specifically for a large part of the Brazilian population that does not have the payment functions of a bank account. It has been calculated that 36% of the population of Brazil does not have a bank account, 4 out of 5 people use cash as their principal method of payment, and just 13% of the population uses credit cards as the principal means of payment. But while Zuum promotes social inclusion, at the same time it is also exploring a business opportunity. At the end of 2013, 223,000 people were using the service.

16,000
people in the Amazon have telecommunications services

9,000
fishermen will have quality training in the Bahía region (Brazil)

5,000
Pregnant women in Peru will have access to the healthcare system thanks to WawaRed