PARTNERSHIPS FOR INNOVATION IN ACCESS TO BASIC SERVICES

itd UPM
Innovation and Technology for Development Centre

POLITÉCNICA

FOMIN
Multilateral Investment Fund
Member of the **IDB Group**

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METHODOLOGY

This document summarizes the key findings from a case study research project carried out for the Multilateral Investment Fund, a member of the Inter-American Development Bank Group, by the Innovation and Technology for Development Centre/ Technical University of Madrid. The project was conducted in collaboration with Building Partnerships for Development in Water and Sanitation, ONGAWA and the Enlace Hispanoamericano de Salud. The research, which took place over a twelve month period between January-December, 2013, explored five partnership initiatives that have adopted innovative ways of delivering basic services to the poor.

The five case studies were chosen from a long list of suggestions provided by a range of development organizations[1]. The final selection was based upon criteria such as geographical and thematic diversity; length of time in operation; involvement of non-state actors; financial, technological and methodological innovations; and results to date.

The partnership arrangements were explored in their particular contexts through an examination of: the rationale for the development of each model; the range of actors involved; the innovations undertaken; and their financial and operational sustainability. An experienced multi-disciplinary research team was contracted to undertake the case study work. The team members were provided with training on the methodology to be used and equipped with appropriate guidelines and tools to support their inquiry[2].

Following a desk-based literature review which provided an initial appraisal of the model and its context, each initiative was visited for a period of 5-7 days to document its work in practice. The fieldwork consisted of semi-structured interviews with key stakeholders, focus group discussions with user groups, site visits, and the collection of personal testimonies and audiovisual materials.

Upon completion of the research visits, the data was triangulated and carefully revised with each of the initiatives involved. A workshop was also held to look at emerging findings across the five studies and extract preliminary lessons learned.

The original research data was captured in five long case studies[3]. The information from these studies has been used to provide the five case study summaries and infographics included in this publication.

1 See acknowledgments for list of participating organizations

2 Stott, L. & Ramil, X. Case Study methodology, Five Case studies for basic service provision to low income populations in Latin America and the Caribbean, April 2013

3 The five long case studies are available on www.itd.upm.es and may also be requested from comunicacion.itd@upm.es

INTRODUCTION

As 2015 draws near, there is wide acknowledgement that while the Millennium Development Goals have made solid progress in improving access to basic services, their success within countries and regions has often been uneven, particularly in efforts to reach the poorest of the poor[4]. Although regional economic growth in Latin America and the Caribbean has been above the global average over the last decade[5], and significant improvements have been made in the coverage and quality of basic services such as water, sanitation, urban transport and solid waste management, there are still substantial gaps in access to services for the most poor and marginalized – the last mile of the population[6].

A key challenge is to find ways of ensuring that basic services reach those for whom access is limited by structural inequalities such as spatial distribution and geographical location, socio-economic background, and educational, racial or gender disparities. At the same time, while regional poverty rates have decreased, 40% of the population still lives on US$4-10 a day and many are vulnerable to falling back into poverty[7]. The provision of quality basic services for people living in this situation is thus vital for keeping them out of poverty and driving economic change.

Latin America and the Caribbean in numbers

- 80% of the population living in urban areas with 111 million in slums[8]
- 40% of the population "vulnerable", earning US$4-10 a day[9]
- 125 million people lack access to health services [10]
- 30 million people without access to safe drinking water[11]
- 100 million people without improved sanitation[12]
- 40 million lack modern electricity services[13]

4 UN General Assembly Resolution, Keeping the promise: united to achieve the Millennium Development Goals, A/RES/65/1, 19 October, 2010 http://www.un.org/en/mdg/summit2010/pdf/outcome_documentN1051260.pdf. UN General Assembly, A life of dignity for all: accelerating progress towards the Millennium Development Goals and advancing the United Nations development agenda beyond 2015, 26 July, 2013 http://www.un.org/millenniumgoals/pdf/A%20Life%20of%20Dignity%20for%20All.pdf. See also: Meeting report United Nations Private Sector Forum on the Millennium Development Goals, UN Global Compact Office, New York, 22 September, 2010. Kabeer, N. Can the MDGs provide a pathway to social justice? The challenge of intersecting inequalities, UNDP, 2010

5 In 2011 the growth rate of exports was 23% compared to 14% in 2010. Statistical Bulletin: International Merchandise Trade in Latin America and the Caribbean, CEPAL, 1st quarter, 2012 http://www.cepal.org

6 GOLD III Report, United Cities and Local Governments. Basic Services for all in an Urbanizing World, 2013

7 Economic Mobility and the Rise of the Latin American Middle Class, World Bank, 2011. See also: Shifting gears to accelerate shared prosperity in Latin America and the Caribbean, World Bank LAC, June 2013: 15

8 State of Latin America and Caribbean Cities, 2012, UN-Habitat

9 Economic Mobility and the Rise of the Latin American Middle Class, World Bank, 2011

10 Proyecto EquiLAC II, Pan American Health Organization, 2012. http://new.paho.org/hq/index.php?option=com_content&view=article&id=2674%3Aequilac-ii-project--&catid=3452%3Ahss-equilac&Itemid=3720&lang=es

11 World Water Day: Latin America leads in water management but inequalities in access remain, The World Bank, March 22, 2013. http://www.worldbank.org/en/news/feature/2013/03/22/world-water-day-latin-america-achievements-challenges

12 Latin America: Bridging the gap in water access, The World Bank, August 30,2012 http://www.worldbank.org/en/news/feature/2012/08/30/agua-saneamiento-america-latina

13 Energy in Latin America and the Caribbean, Inter-America Development Bank. http://www.iadb.org/en/topics/energy/energy-in-latin-america-and-the-caribbean,1272.html

Although civil society organizations and service providers share responsibility with national, regional and local government authorities for improving access to basic services[14], this role has mainly been assumed by the public sector. In many contexts, however, government bodies are constrained in this task by weak capacity, poor accountability and unstable financial provision. To address this situation, multi-stakeholder partnerships are emerging that offer innovative, locally relevant and sustainable solutions for bridging gaps in access to services. These collaborative arrangements pool the expertise, resources and knowledge of different actors in the public, private and civil sectors, and incentivize those living at the "base of the pyramid"[15] to assume active roles in service provision.

The emergence of these new models does not mean the scrapping of traditional service delivery modes. Most partnership programs build upon existing systems by incorporating technological, financial and methodological innovations to extend and improve services to marginalized populations. By working closely with the public sector, these initiatives can also assist governments to provide alternative service modalities and reinforce public confidence in government institutions.

This document provides case study summaries of five partnership models that have successfully extended basic services to hard-to-reach groups through 4P innovations: in Product, Process, Position and Paradigm. The initiatives outlined cover a diverse range of services, including clean energy, ecological sanitation, health, water and solid waste management. In spite of these different focus areas, however, all the models use multi-stakeholder partnership arrangements to promote 4P innovations that provide quality services for those who are un- or under-served[16].

4P Innovations

- **Product**: changes in products or services
- **Process**: changes in the ways services are created or delivered
- **Position**: changes in the way services are presented to the user and how these are communicated and reframed by government
- **Paradigm**: changes in the underlying mental models that shape what the service offers

14 International Guidelines on Decentralization and Access to Basic Services for All, UN-Habitat, 2009

15 Defining the Base of the Pyramid, Inclusive Business, International Finance Corporation. http://www.ifc.org/wps/wcm/connect/as_ext_content/what+we+do/inclusive+business/news+and+highlights/defining+the+base+of+the+pyramid

16 Tidd, J. & Bessant, J. (2011) Managing Innovation: Integrating Technological, Market and Organizational Change, John Wiley & Sons, http://www.managing-innovation.com/teaching.php

The five initiatives chosen for this study include four models from Latin America and, with a view to transnational learning and comparison with another region, a model from South Africa which has received international acclaim for its innovative municipal approach to water and sanitation delivery. In a context that shares similar levels of economic development and inequality with many countries in Latin America and the Caribbean, the South African model showcases government efforts to improve access to basic services through decentralization and serves as a useful benchmark for effective service provision programs in the LAC region[17].

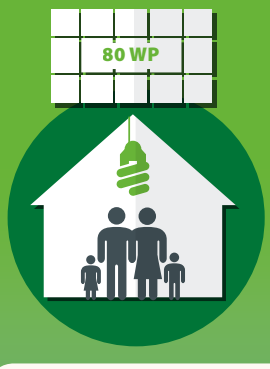
The models include:

- **Luz en Casa: Access to sustainable energy in rural communities in Peru**. A social enterprise delivering off-grid electricity in remote rural areas through a pay-for-service model centered upon close interaction with the local community.
- **eHealth in rural areas: Access to medical care, training and prevention in Guatemala**. A partnership that promotes health service improvements for isolated rural communities using Information and Communication Technologies (ICTs) to train nursing personnel, provide telemedicine and work with young people.
- **Inclusive Sanitation Markets: Sustainable solutions in peri-urban areas of Bolivia**. An ecosystem for market-driven sanitation services that boosts demand through social marketing campaigns and creates a quality low-cost service offer via local entrepreneurs.
- **Comprehensive solid waste management: The Ciudad Saludable model in Peru**. A holistic solid waste management system composed of multiple partnerships along the waste management value chain and the socio-economic inclusion of recyclers.
- **Innovative partnerships in access to water and sanitation: Equitable services in the municipality of eThekwini, South Africa**. A municipal water and sanitation unit working to expand services through community outreach activities and partnerships with academia, the private sector, and international foundations.

A short overview of each model is provided with a description of its main activities, results and impact to date. The case studies also analyze the role of the different partners, highlight the 4P innovations developed, and assess their financial and operational sustainability. In order to understand their potential for replication and scale-up, attention is given to how far each model has become institutionalized and the identification of key success factors.

The final section of the study summarizes key lessons from across the five case studies. It includes an overarching examination of how 4P innovations have been developed across all the models, their common challenges and possible solutions, and the main steps taken towards institutionalization of their work in order to ensure long-term sustainability.

17 See for example: http://www.worldenergyoutlook.org/resources/energydevelopment/accesstoelectricity/ and http://recom.wider.unu.edu/article/decentralization-south-africa-role-politics



LUZ EN CASA

ACCESS TO SUSTAINABLE ENERGY IN RURAL COMMUNITIES IN PERU

Acciona Microenergía Peru is a social enterprise that has implemented an innovative pay-for-service model. This model will allow them to reach economic sustainability, while offering quality energy to low income families through Solar Home Systems (SHS)

DEPARTMENT OF CAJAMARCA, PERU

- **1,507,486** PEOPLE
- **52.5%** POVERTY RATE
- **21.3%** EXTREME POVERTY RATE
- **30%** of rural households still WITHOUT ELECTRICITY
- **36%** in the number of rural households with access to energy (2001 - 2011)

INVOLVED ACTORS ACCIONA MICROENERGÍA PERÚ (AMP) | ACCIONA MICROENERGÍA FOUNDATION | LOCAL AND NATIONAL PUBLIC ADMINISTRATION | MICRO-BUSINESSES | PHOTOVOLTAIC ELECTRIFICATION COMMITTEES (CEF) | RURAL COMMUNITIES

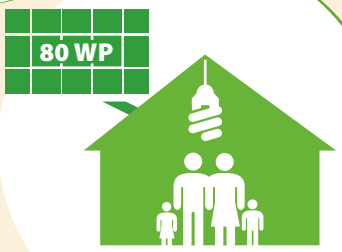
COMMUNITY ENGAGEMENT

The community development process of AMP´s program begins by identifying rural communities currently excluded from the electrical grid in order to prepare for their participation in the program

Participation from the community is promoted through CEFs, responsible for coordinating all the different actors, including the final users

85 CEFs HAVE BEEN CREATED SO FAR

13 AGREEMENTS SIGNED WITH MUNICIPALITIES



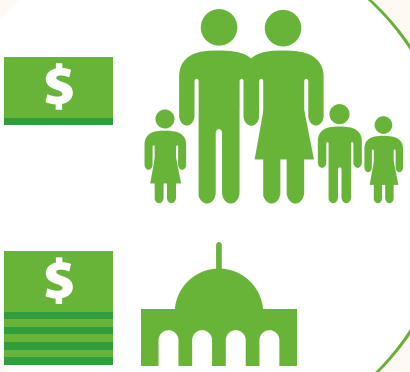
5.91 DAYS AVERAGE WAIT FOR RESOLUTION OF PROBLEMS IN 2012

QUALITY SERVICE

The SHS installed include 80 Wp solar panels that provide 3 low consumption lights and energy outlets for at least 4 hours a day

30 TECHNICIANS PROVIDING TECHNICAL ASSISTANCE TO 75 COMMUNITIES

Users are trained on proper use of the SHS, CEFs carry out basic system supervision and payment management and local technicians are trained in system installation and maintenance



BUSINESS MODEL

Families pay a monthly fee for the electricity offered, maintenance and equipment replacement for 20 years

For each SHS installed, the government´s Electrical Social Compensation Fund provides a price subsidy to AMP, who then offer consumers a final price adjusted to their level of income

3,000 SHS IN USE → **12,600** DIRECT BENEFICIARIES

39%

REDUCTION IN AVERAGE ELECTRICITY EXPENSES PER FAMILY

+PRODUCTIVE HOURS +TIME FOR STUDYING

INCREASE IN ACCESS TO MOBILE COMMUNICATION

SUSTAINABILITY

- The Ministry of Energy and Mines has certified the SHS as an alternative for energy service in rural areas
- The default rate in 2012 was 0.19%, decrasing from 3.03% in 2011
- The price structure is based on a cross-subsidy that allows families with consumption levels below 100kWh/month a discount financed by those families who have a higher consumption
- In 2014 AMP will reach operational sustainability by providing service to more than 3,000 families

EXTENSION OF THE MODEL

- The government has launched a program that will install half a million domestic photovoltaic systems throughout the country
- AMP has played a key role in developing Peruvian legislation and regulation for isolated electrical systems
- Acciona Microenergía Foundation has developed an energy program that will install 10,000 SHS in the region of Oaxaca, Mexico

↘ *Luz en Casa: Access to sustainable energy in rural communities in Peru*

Acciona Microenergía Perú (AMP) is a social enterprise that was founded by the Acciona Microenergía Foundation (FUNDAME) in 2009 to supply electricity to rural inhabitants of the Department of Cajamarca in Peru. The *Luz en Casa* (Light at Home) program provides electricity through Solar Home Systems (SHS)[18] that use solar panels to supply residential homes with low consumption lighting and energy outlets for up to four hours a day. The program has been carried out in two phases with the initial installation of 1.300 SHS prior to 2012 and a further 1.700 put in place in 2013.

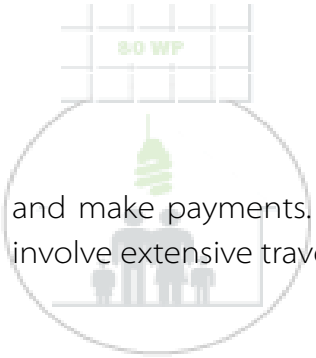
AMP has developed a model in which users pay a monthly fee for the service provided. This model has carefully positioned SHS within a comprehensive program that involves constant dialogue with national and municipal authorities, a high quality of service installation, operation and maintenance, and the dedicated capacity-building of local users.

Close collaboration with community users is ensured through local Photovoltaic Electrification Committees (*Comités de Electrificación Fotovoltaica* or CEF). In addition to liaising with AMP on information relating to the Program, the CEF assist with service inspections, tariff collection and protection of the SHS against theft. Community endorsement of the CEF has been assisted by AMP's work to ensure their similarity to traditional organizational structures and promote equitable gender representation. Explicit support for the CEF has also been obtained from municipal authorities with whom AMP has signed partnership agreements that endorse the *Luz en Casa* program and ensure easy access for the installation of the SHS.

Alongside the development of the CEF, AMP has worked to capacity-build members of the community to use the SHS and trained a network of local technicians to install and maintain them. A Technical Entrepreneurship Program for qualified technicians also offers instruction on opportunities for setting up micro-businesses that service installations, as well as sell equipment such as lamps, bulbs, mobile chargers and power adapters.

The roll-out of the entrepreneurial program has been important in addressing challenges related to technical service cover and the supply of spare parts. AMP has also responded to consumer demand for improved services by introducing higher strength LED lamps to boost lighting, and is looking into the possibility of using cell phones to transmit repair requests

18 Solar Home Systems (SHS) supply residential electricity using solar panels as the main source of power.



and make payments. In this way it is hoped that CEF fee collection systems, which often involve extensive travel and exposure to the risk of theft, will be enhanced.

The development of a positive relationship between AMP, the Energy and Mining Investment Supervisory Body and the Ministry of Energy and Mines has ensured clarity around regulatory requirements and the development of rules and regulations for new energy technologies in country-wide service expansion plans. As a result of this ongoing dialogue at national level, AMP was granted Peru's first photovoltaic-based electricity concession in May 2012.

Close interaction with the Peruvian government has also meant that the pay-for-service model adopted by AMP is affordable at household level. The standard price arrangement subsidy administered by the Electrical Social Compensation Fund (FOSE), by which users who consume more pay a higher fee that compensates a lower tariff for those who consume less, has been extended to off-grid users receiving services from renewable energy sources. In this cross-subsidy arrangement FOSE compensates AMP with 80% of the tariff so that users only pay 20%. This arrangement allows AMP to assume the costs of service installation, operation and maintenance, and offer customers a fair user fee based on careful prior analysis of economic capacity and ability to pay.

The *Luz en Casa* program has been well-accepted by the community and the default rate is extremely low. As well as the social benefits of improved access to electricity and mobile communication, the average cost of electricity has been reduced as the service is cheaper than paying for kerosene and candles. Meanwhile, having reached its target of providing a SHS service to 3.000 families, AMP has achieved financial sustainability and a balance between service costs and income from monthly fees.

4P Innovations

- **Product**: Delivery of photovoltaic technology within a comprehensive service program that includes maintenance, community capacity-building alongside continuous testing of more portable and efficient systems.
- **Process**: Capacity-building of community users to ensure they understand SHS systems and development of local CEF. Promotion of network of local technicians to maintain the SHS with exploration of further job opportunities related to the service.
- **Position**: Growth in demand for SHS services as a result of ongoing community engagement and delivery on commitments. Acceptance by government of new energy technologies for isolated rural populations in country-wide service expansion plans.
- **Paradigm**: Service provision is centered upon recognition of rural communities as users, clients and entrepreneurs.

AMP's close proximity to the community, and its special attention to the features of the specific environment in which it is working, have reinforced a perception among users that AMP delivers what it promises while also promoting opportunities to improve local livelihoods. The success of the model is also based upon a culture of open and continuous learning. This strategy combines exchanges of knowledge, experience and information and has enabled the model to respond well to challenges and make improvements. This way of working owes much to FUNDAME and its Director who have been instrumental in positioning and promoting AMP and the *Luz en Casa* program, both nationally and internationally.

Due in large part to the positive impact of the *Luz en Casa* program, the Peruvian government is launching a scheme to install half a million SHS throughout the country. While this institutional push is a huge opportunity, understanding of particular local contexts and adjustment to the requirements of different users are important considerations for expansion. AMP's conscientious tailoring of its work to address the specific circumstances and community needs in Cajamarca has been central to its success. This commitment has been duly taken on board by FUNDAME as it adapts the model in Mexico using, in this case, a microcredit scheme to pay for installation and services among families in small villages.

Summary of key success factors

- Positioning of SHS within a comprehensive service program that includes community capacity-building, liaison with government and continuous improvement.
- Constant technical reinforcement and oversight at local level to ensure proper SHS use and maintenance.
- Close and ongoing dialogue with the public sector to enable cross subsidy support for a fair tariff and improved access in isolated areas.
- Proactive engagement with the community from the start with dedicated tailoring of the program to their specific needs and circumstances, and recognition of their roles as users, technicians and potential entrepreneurs.
- Ongoing learning and information-sharing to improve and expand the model.

eHEALTH IN RURAL AREAS

ACCESS TO MEDICAL CARE, TRAINING AND PREVENTION IN GUATEMALA

TulaSalud shows how access to health in isolated rural communities in Guatemala can be improved by using Information and Communication Technologies (ICTs) within a flexible and horizontal multi-actor partnership model

ACTORS INVOLVED HEALTH DEPARTMENT OF ALTA VERAPAZ | MINISTRY OF PUBLIC HEALTH AND SOCIAL ASSISTANCE | THE COBAN NATIONAL SCHOOL OF NURSING | COBAN HOSPITAL | THE TULA FOUNDATION | TULASALUD

ALTA VERAPAZ, GUATEMALA

- **78%** live in RURAL AREAS
- **1/3** BIRTHS attended by healthcare personnel
- **268** WOMEN DIE for every **100,000** LIVE BIRTHS
- **1/50** CHILDREN do not reach the age of 5
- **89.6%** POVERTY rate
- **46.7%** EXTREME POVERTY rate

TELE EDUCATION

Training of nursing technicians and assistants in rural communities in coordination with the Coban National School of Nursing

Students come from the local rural communities

1,282 NURSING TECHNICIANS, ASSISTANTS AND GRADUATES CERTIFIED VIA DISTANCE TRAINING

37 REMOTE TRAINING CENTERS

35 TEACHERS INVOLVED IN DISTANCE TRAINING

TELE MEDICINE

A community tele-facilitator (FC) attends to patients

The FCs communicate with doctors by cell phone and gather epidemiological information

Staff who speak indigenous languages carry out medical consultations 24 hours a day through the telemedicine module in Coban Hospital

195 FCs HAVE A CELL PHONE AND CATER FOR :

710 RURAL COMMUNITIES

BETWEEN 2008 AND 2012 THE FCs AT TULASALUD CARRIED OUT:

- **116,275** MEDICAL CONSULTATIONS
- **6,783** CHECK-UPS FOR PREGNANT WOMEN
- **2,014** EMERGENCY TRANSFERS

PREVENTION

Through the X'beil li Kawilal initiative, female community leaders train young adolescents in health promotion and prevention

98 FEMALE LEADERS TRAINED, WHO, IN TURN, HAVE TRAINED :

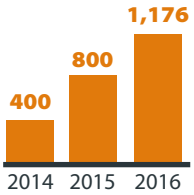
750 ADOLESCENTS INVOLVED IN PROJECTS ON HEALTH AND DEVELOPMENT ISSUES

SUSTAINABILITY

OPERATING COSTS

By the end of 2013 the public health system will incorporate the FCs and begin covering their operational costs

In 3 years the health system will cover the cost of 1,176 terminals



Communication terminals covered by the Ministry of Health

ENROLLMENT FEE 73 USD/MONTH

The fee paid by the pupils allows for the sustainability of the training courses

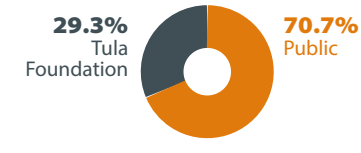
EXTERNAL SUPPORT

Cooperation agencies such as the Tula Foundation provide financial stability until the project is institutionalized

- **860** qualified nursing assistants
- **76%** Working, the majority, in the public health system

MODEL EXTENSION

Funding in 2013



The Government is setting up a nutritional surveillance model using mobile phones in 8 Departments

↘ eHealth in Rural Areas: Access to medical care, training and prevention in Guatemala

In 2008, the Guatemalan NGO TulaSalud established a partnership initiative to address high maternal and infant mortality rates among indigenous communities in remote rural areas of the Department of Alta Verapaz using Information and Communication Technologies (ICTs). With financial support from the Canadian-based Tula Foundation, TulaSalud's health service model includes the Ministry of Public Health and Social Assistance, the Health Department of Alta Verapaz, Cobán National School of Nursing and Cobán Hospital.

There are three core components to the work of the partnership:

- **Tele-education**: This program focuses on the training of local nursing assistants and technicians so that they can provide healthcare in their communities. A tele-education module has been developed that uses multi-videoconference training systems alongside a tutor who supervises the process in person. As well as assisting TulaSalud with the selection of applicants, the Cobán National School of Nursing provides premises for training in remote locations. The Ministry of Public Health and Social Assistance establishes the training requirements for the distance learning courses and covers most of the teaching costs.

- **Tele-medicine**: This component involves supporting local community facilitators to provide healthcare in remote areas. The Health Department of Alta Verapaz selects the areas in which the work will take place and health service providers then choose basic healthcare teams and community facilitators[19]. Endorsed by their communities and paid a small stipend for their work by the Ministry of Public Health and Social Assistance, community facilitators are equipped with a cell phone that enables them to make diagnostic inquiries and supply patient information to doctors and nursing staff based in health centers and hospitals, as well as receive ongoing training.

- **Teenage health protection and prevention**: In order to ensure long-term change through health education and awareness-raising, TulaSalud and the Health Department of Alta Verapaz have jointly developed the *X'beil li Kawilal* ("path to health") initiative. The program supports young indigenous female leaders to work with adolescent girls on issues such as prevention of teenage pregnancies, improvement of self-esteem, life-planning and decision-making.

19 Under the Program for the Extension of Coverage (PEC) Health Service Providers are registered NGOs that are certified by the Ministry of Public Health and Social Assistance, assigned specific jurisdictions and paid a fixed rate based on population coverage.

To guarantee the sustainability of their work from the start, considerable efforts have been made by TulaSalud and the Tula Foundation to ensure that the public health system assumes control of the program in the long-term so that the partnership is institutionalized. An Advisory Board composed of all the partners has been established to manage the initiative and promote the active involvement of public health authorities. At the same time the Cobán National School of Nursing has taken over full responsibility for the training of nursing technicians. Although the nursing assistant course is still directed by TulaSalud, the School issues the qualification, while the teachers are paid directly by the Ministry. In the telemedicine work community facilitators have now been incorporated into the local rural health system and the salaries of staff involved in the telemedicine service are paid by Cobán Hospital. In addition, questions from community facilitators are referred to personnel in the public healthcare system rather than to TulaSalud.

The work of the partnership depends primarily on financial support from the Tula Foundation. This commitment is viewed as having contributed positively to the stability of the initiative by giving the program sufficient time to achieve tangible results. The Foundation's long-term monetary contribution has enabled gradual assumption of program costs by the Health Department of Alta Verapaz and the Cobán National School of Nursing as positive results are demonstrated and public funds made available to support activities.

As well as the difficulty of finding donors willing to provide ongoing financial and technical support with the same flexibility as the Tula Foundation, other challenges are emerging as a result of the model's success. Given the interest in scale-up from national government, one of these is determining the viability of being able to provide the necessary technical and human resource support for an expanded health service network in rural areas. At the same time, as healthcare interventions using ICTs are promoted more widely, coordination between the different agencies involved in these new initiatives will be important.

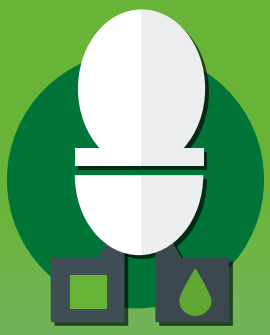
4P Innovations

- **Product**: ICTs such as the cell phone, portable ultrasounds and videoconferencing systems used as tools by locally-trained personnel to provide health services in remote rural areas.
- **Process**: Capacity-building of local community facilitators and young female leaders with careful consideration of cultural factors and community acceptance.
- **Position**: Adaptation of health services to specific needs of indigenous communities. Gradual adoption of activities by government agencies as a result of demonstrating positive program achievements.
- **Paradigm**: With appropriate training and support, indigenous actors can support local rural health systems efficiently and effectively.

The model developed by TulaSalud clearly demonstrates that healthcare in isolated rural areas can be improved by using ICTs, provided that such initiatives are backed-up by well-trained and motivated personnel with a clear understanding of the localities in which they work. Cultural sensitivity, and reinforcement of the role of the community as healthcare users and providers, have been reinforced by TulaSalud's facilitation of cross-sector relationships which place these elements at their center. Space has also been given to allow the public sector to progressively take over responsibility for program activities and costs. This flexibility, alongside ongoing coordination with relevant government departments at local, regional and national levels, has been integral to ensuring the institutionalization of the partnership and its work.

Summary of key success factors

- Balance between the use of appropriate technology and training so that personnel are equipped with the capacities to resolve problems effectively.
- Promotion of local personnel able to provide healthcare services to their own communities.
- Culturally relevant training and service provision that takes account of local needs and realities.
- Flexible human and financial support enabling public institutions to take over costs and responsibilities over time.
- Institutionalization of working relationships with government so that new service models are made sustainable.



INCLUSIVE SANITATION MARKETS

SUSTAINABLE SOLUTIONS IN PERI-URBAN AREAS OF BOLIVIA

Water For People (WFP) promotes the sanitation value chain through the installation of Ecological Dry Toilets (BES) alongside which WFP is generating inclusive businesses, creating demand and adapting products for low income families

DISTRICT 9 OF COCHABAMBA, BOLIVIA

- **120,000** PEOPLE
- **85 USD/Month** AVERAGE INCOME
- **59 Years** LIFE EXPECTANCY
- **20%** access to SEWAGE NETWORKS
- **15%** access to SEPTIC TANKS

ACTORS INVOLVED WATER FOR PEOPLE | UNIVERSITY OF SAN SIMÓN | MICROBUSINESSES | GRASSROOTS ORGANIZATIONS | FAMILIES | PUBLIC ADMINISTRATION | INTERNATIONAL COOPERATION ACTORS

SOCIAL MARKETING

WFP has designed its strategy around the extension of the BES, a sanitation system that allows toilets to be linked to other products such as showers, sinks or laundry areas

Social marketing campaigns are carried out through television, radio and newspapers, as well as through practical demonstrations of systems already in use. Families are informed about different models, financing schemes and, at a later stage, proper use guidelines and maintenance

45% SAVING
COMPARED TO CONNECTING TO THE SEWAGE NETWORK

56% OF FAMILIES
PREFER THE BES TO FLUSH TOILETS

SYSTEM INSTALLATION

The micro-business Servicio Integral de Saneamiento Ecológico (SISE), founded in 2010, is responsible for constructing the BES and supplying materials at affordable prices

At the moment families contribute between 72-85% of the total value and the rest is paid by WFP

22 MEN
25 WOMEN
TRAINED IN BES CONSTRUCTION

40% MORE AFFORDABLE
BES CONSTRUCTION COMPARED TO THAT OF FLUSH TOILETS

EXTENSION OF THE VALUE CHAIN

The micro-business Unidos por el Cierre del Ciclo Ecológico (UCCE), created for the disposal, transformation and enhancement of waste, sells transformed products (compost and liquid fertilizer) from its processing plant and in specialized fairs

The design of the BES toilet facilitates waste disposal by storing solid and liquid waste in different deposits

80 FAMILIES
HIRE DISPOSAL SERVICES

THE ENVIRONMENTAL IMPACT OF WASTE IS PRACTICALLY ZERO

SUSTAINABILITY

- With the support of the firm Casa del Ceramista the design of the BES has been improved and its cost reduced by 34%
- The commitment by Government to provide universal sanitation coverage by 2015 could lead to 6,000 new BES potentially being built per year in Bolivia
- SISE has become operationally viable after reaching a minimum demand of 8 BES per month

  As the construction cost is approximately 50% more than the average annual salary, 12.3% of the BES have been acquired through a micro-finance program

EXTENSION OF THE MODEL

- Initial replication in peri-urban areas of Bolivia is taking place in Santa Cruz and Riberalta
- The extension of the BES has received institutional support from the Vice-ministry of Drinking Water and Basic Sanitation as well as the National Service for the Sustainability of Basic Sanitation Services

95%
BES UTILIZATION RATE AFTER ONE YEAR

162
BES INSTALLED
PROVIDING A SERVICE TO APROXIMATELY 800 PEOPLE

4,000
LTS. OF WATER PER YEAR
SAVED BY FAMILIES USING BES INSTEAD OF FLUSH TOILETS

↘ *Inclusive Sanitation Markets: Sustainable solutions in peri-urban areas of Bolivia*

The American NGO Water For People (WFP) is piloting a global initiative to find new ways for small enterprises to generate income from sanitation services throughout the whole sanitation value chain: from disposal to treatment, and from the construction of appropriate systems to the management and sale of organic waste. In the peri-urban areas of Cochabamba in Bolivia, WFP has centered this program on the use of the Ecological Dry Toilet (*Baños Ecológicos Secos* or BES). The BES is a sustainable and affordable option in situations where conventional sewerage systems are limited or unavailable. BES adoption and use, however, require culturally appropriate familiarization to ensure acceptance, as well as education around their care and maintenance.

In order to stimulate demand for the BES and position them as an acceptable and viable alternative to the traditional flush toilet, WFP has engaged in an extensive process of awareness-raising among potential users. As well as presenting the BES as part of a comprehensive domestic hygiene package that includes a toilet, shower and laundry area, WFP has used social marketing to promote domestic sanitation arrangements that suit the particular requirements of different families.

The growing take-up of the BES has led to new business and employment opportunities with the development of microenterprises that specialize in the design and development of toilet bowls, bathroom construction, maintenance services, and the management and use of waste products. To support the growth of these small local businesses, WFP has engaged in activities to capacity-build both male and female entrepreneurs with advice on accessing start-up funds and market information, and the delivery of certificated skills-training workshops for bathroom construction.

While still incipient, microenterprises emerging from this process include the *Servicio Integral de Saneamiento Ecológico* (SISE) which provides and builds low-cost bathrooms, and *Unidos por el Cierre del Ciclo Ecológico* (UCCE) which transforms waste into organic fertilizer. Business opportunities for BES product and service improvements are also emerging. WFP has, for example, worked with the *Casa del Ceramista* company to design new BES models at reduced cost, made links with the University of San Simón to improve BES technology, and is exploring the use of solar heating panels in areas where there is no electricity.

To encourage an enabling environment for the development of sanitation inclusive businesses, WFP has obtained support for its work from the Vice Ministry of Drinking Water and Basic Sanitation, as well as the National Service for the Sustainability of Basic Sanitation Services. Such connections are also important for obtaining clarity and promoting dialogue around regulatory issues, including forthcoming legislation on the commercialization of organic waste.

The initiative aims to make a range of products and services available to poor families so that they can access sanitation services without having to depend upon subsidies. The prices range from between US$730 for the construction of a bathroom with a toilet to US$1.171 for a bathroom with a toilet, shower and laundry area. To pay for the BES and ensure their continued use, families are required to make a financial contribution of between 72-85% towards total construction costs. WFP provides the remaining amount, describing this as a "smart incentive," that enables them to oversee correct installation, use and maintenance of the BES.

Flexible payment options are available for families who are unable to meet the full installation costs, including the possibility of building their own bathrooms with supervisory support from the program. In other cases, costs are off-set by user supply of construction materials. WFP has also sought to make microcredit services available to pay for BES installation. Although this option has been well-received, the fact that lending institutions often require title deeds to secure loans has been a challenge as many properties in the areas where the program operates are still not legally registered. To address this situation, some constructors have provided users with loans directly and WFP is also considering the idea of a guarantee fund to assist those without title deeds to obtain credit.

4P Innovations

- **Product**: Improvements in the design of Ecological Dry Toilets (BES) linked to business opportunities for related products and services.
- **Process**: Social marketing and intensive educational work to ensure potential users are fully informed about BES operation and maintenance, as well as support for related business opportunities.
- **Position**: Promotion of consumer demand through social marketing approach to meet user needs and aspirations. Support from government for promotion of BES and market opportunities related to services.
- **Paradigm**: Presentation of sanitation in marginalized areas as a business opportunity with market logic that includes peri-urban dwellers as both service users and entrepreneurs.

WFP's model is now being replicated in other peri-urban areas of Bolivia with assistance from the Swedish International Development Cooperation Agency. Opportunities for expanding the model in rural areas through initiatives related to organic compost markets are also being supported by the Multilateral Investment Fund/Inter-American Development Bank.

In order to take advantage of these opportunities and improve its work, WFP insists upon an open learning culture. It is an active participant in multi-level information exchanges such as the Decentralized Sustainable Sanitation Knowledge Node, a platform which generates knowledge and capacity around sustainable sanitation systems in Bolivia, as well as wider international linkages.

In view of government plans to ensure universal sanitation coverage by 2025, the WFP initiative has real potential for national expansion. By positioning access to sanitation as a market opportunity, WFP has created community endorsement for a new service delivery model. This has relied upon the organization's pivotal role in awareness-raising and capacity-building to position a new product, support inclusive business opportunities around it, and bring together all the relevant actors in the sanitation value chain to reinforce its work.

Summary of key success factors

- Use of business incentives and market opportunities to position non-traditional sanitation service options for the poor.
- Focus on the whole sanitation value chain and involvement of all related actors.
- Social marketing and promotion of a comprehensive domestic hygiene package tailored to the particular needs and means of individual families.
- Close and ongoing community development work to promote the use of a new product and support the development of related microenterprises.
- Coordination by an intermediary organization able to bring together different actors and foster positive relationships with government.

COMPREHENSIVE SOLID WASTE MANAGEMENT

THE CIUDAD SALUDABLE MODEL IN PERU

Ciudad Saludable has become a catalyst for change within the national solid waste management system, combining the creation of inclusive business, the social insertion of recyclers and environmental impact for the cities

PROVINCE OF LIMA, PERU

- **8.5 MILLION** PEOPLE
- **34.2%** of solid waste goes to landfills or is recycled
- **108,594** RECYCLERS
- **86%** of recyclers live with under 1.25 USD per day
- **30%** of recyclers are WOMEN
- **36%** of recyclers are concentrated in LIMA

ACTORS INVOLVED | CIUDAD SALUDABLE | PERU WASTE INNOVATION | HEALTHY CITIES INTERNATIONAL | CENTRAL AND MUNICIPAL GOVERNMENTS | RECYCLERS | DONORS | COMMUNITIES | BUSINESSES | EDUCATIONAL INSTITUTIONS | MEDIA | SOCIAL ORGANIZATIONS

POLITICAL ADVOCACY

The Zero Trash Program supports municipal legislation by promoting recycling, training local civil servants and providing technical assistance to improve waste management

INCENTIVE FOR PUBLIC ADMINISTRATIONS:
To develop an integral solid waste management model with the participation of recyclers

IN 2010 A SOLID WASTE MANAGEMENT LAW WAS PASSED THAT PROMOTED THE LEGAL INTEGRATION OF RECYCLERS

SOCIO-ECONOMIC INTEGRATION

The Pro-Recycler Program encourages partnerships among recyclers, promoting the creation of micro-businesses and favoring their socio-economic integration

INCENTIVE FOR RECYCLERS:
Socio-economic inclusion and substantial improvements in living conditions

637 RECYCLERS FORMALIZED → **33%** WOMEN

+24 ASSOCIATIONS CREATED

ENVIRONMENTAL AWARENESS

The Environmental Citizens Program combines training with the promotion of better environmental practices among households, schools, businesses, communities and universities

INCENTIVE FOR USERS:
Creating a clean and healthy environment within their neighborhoods

IN THE DEFAULT RATE FOR WASTE MANAGEMENT SERVICE PAYMENTS

IN THE MUNICIPALITIES OF SAN JUAN DE MIRAFLORES, VILLA MARÍA DEL TRIUNFO, VILLA EL SALVADOR AND LIMA CERCADO:

- **320** JOBS
- **35** MICRO-BUSINESSES

INCLUDING GREENHOUSES, ORGANIC COMPOST PLANTS, RECYCLED PAPER COMPANIES AND SANITATION LANDFILLS

- **57%** OF RECYCLERS INCREASED THEIR INCOME TO MORE THAN 2 USD/DAY
- **↓74%** IN THE NUMBER OF RECYCLERS WITH ACUTE DIARRHEAL DISEASES

SUSTAINABILITY

- Peru is one of the first countries to have passed a law regulating the work of recyclers
- Recycling Work Groups have been created that bring together recyclers, businesses and the public sector in order to improve waste management and promote inclusive businesses

  Ciudad Saludable is developing a system to guarantee the quality of the service provided by recyclers in waste management programs
- To promote implementation of the model, funds transfered from the central to the municipal governments are linked to meeting recycling goals

EXTENSION OF THE MODEL

- Ciudad Saludable's model is being adapted in Brasil, Chile, Haiti, India and the Dominican Republic
- The Ciudad Saludable Group has been created with the participation of the firm Peru Waste Innovation and the Healthy Cities International Foundation located in New York

↘ *Comprehensive solid waste management: The Ciudad Saludable model in Peru*

The NGO Ciudad Saludable has established an integrated model for waste management in Lima that now operates in 20 cities across Peru. The model seeks to address the entire solid waste value chain by linking together three key elements: advocacy at municipal-level to reinforce a comprehensive solid waste management system; social and economic inclusion of recyclers; and environmental awareness-raising. To address these themes, a diverse set of partnership arrangements between stakeholders such as private companies, central, regional and local government, educational institutions, recyclers and communities has been channeled into three cross-cutting programs:

The Zero Trash Program aims to change policies and practices by promoting an integrated system of solid waste management that covers the generation, handling, reuse and disposal of waste. It works with local and regional governments, businesses and the general public to ensure that all reusable materials are recycled and that unusable waste is disposed of in controlled landfills. To guarantee the implementation of local legislation on solid waste management, Ciudad Saludable provides municipal staff with training workshops and technical assistance to improve local waste management systems.

The Pro-Recycler Program assists recycler collectives to create formal associations and to develop inclusive businesses that collect, process, manage and recycle solid waste. Ciudad Saludable provides recyclers with equipment such as *motofurgones* (small vehicles able to negotiate narrow transport routes), access to finance through microcredit and training programs for both men and women on topics such as occupational health, business advice and professional development in solid waste separation. In addition to classroom courses and workshops, the program makes use of virtual learning platforms and community activities that support the social inclusion of recyclers.

The Environmental Citizens Program engages in activities with the wider public to promote awareness about waste management. In the community, Local Environmental Management Committees have been formed to manage solid waste collection, separate and market recyclable materials, participate in the monitoring of microenterprises established by recyclers, and ensure that solid waste that cannot be recycled is disposed of in controlled landfills. Partnerships have also been created with local and national businesses to assist them to design and implement waste separation systems. Collaboration with educational institutions involves teaching school children about recycling. Research and training activities related to waste management are also carried out with universities such as the Pontifical Catholic University of Peru.

The model is financed from a number of different sources. In 2012, nearly 90% of Ciudad Saludable's funding came from donor and government grants, and the rest from public funds and waste management consultancy activities offered to businesses and government institutions. Of the money obtained from grants and service revenue, 32% is assigned to cover core costs. The remaining amount is used for the development of activities.

To further ensure financial and operational sustainability, the Ciudad Saludable Group was established in 2009 with the aim of sharing information about the model worldwide and raising funds for the implementation of its activities. The Group was founded by Ciudad Saludable in partnership with Peru Waste Innovation, a service company that undertakes organizational and technological consulting projects to support Ciudad Saludable financially, and Healthy Cities International, a New York-based foundation responsible for dissemination of the Ciudad Saludable model and international fundraising.

Ciudad Saludable's advocacy work has contributed to the comprehensive focus of Peru's General Law for Solid Waste, one of the first national laws to integrate regulations for recyclers. The transfer of funds for waste management from central to municipal government has also been successfully linked to recycling goals. Meanwhile, community awareness about waste management as a result of Ciudad Saludable's work has contributed to a decrease in the default payment rate of municipal solid waste management taxes.

Recycling Work Groups have also been created to bring together key actors to facilitate appropriate waste management and promote inclusive businesses related to recycling at district and national levels. Through these Groups, recyclers and exporters of products made from recycled waste have been able to join together to push for exemption from taxes on purchases related to the sale of small-scale solid waste.

4P Innovations

- **Product:** Training via virtual learning platforms and the provision of *motofurgones* to collect and transport waste so that recyclers are provided with opportunities to establish formal associations and create microenterprises.
- **Process:** Awareness-raising and capacity-building activities for all actors in the solid waste value chain.
- **Position**: Reappraisal of waste as a business opportunity and inclusion of regulations for recyclers in regulatory framework for solid waste management.
- **Paradigm**: Comprehensive solid waste management model that operates throughout the value chain and integrates recyclers as users, clients and entrepreneurs.

In order to improve its work and ensure sustainability, Ciudad Saludable has recently implemented a series of changes, including the use of a balanced scorecard and a results-based management system for each program. This includes the participatory design of activities with analysis of each actor's specific responsibilities and close ongoing follow-up of activities. As well as training recyclers in leadership skills and developing a guaranteed quality service system for recyclers that operate under the Ciudad Saludable umbrella, the initiative is also looking at how the Recycling Work Group model can further support comprehensive waste management at district and national levels, as well as outside Peru.

Endorsed by ongoing knowledge exchange, the Ciudad Saludable initiative has raised interest in a range of countries throughout the world and is currently being replicated in the Dominican Republic with support from the Multilateral Investment Fund/Inter-American Development Bank. While the potential for adaptation and scale-up of the model is high, it is important to note that its success is based upon a profound understanding of the complex issues and challenges faced by recyclers in Peru. Ciudad Saludable has made continuous efforts to overcome negative perceptions of these collectives and resistance to working with them. The committed and active leadership of Ciudad Saludable's founder in championing the rights of recyclers has also ensured international interest in the model.

Ciudad Saludable has successfully facilitated the development of a model with recyclers at the core of collaborative arrangements across the solid waste management value chain. Its comprehensive approach has been reinforced by awareness-raising and educational activities with a wide range of actors, and continued engagement with government institutions to promote a positive regulatory environment for waste management across Peru.

Summary of key success factors

- Reappraisal of waste in order to support business opportunities related to recycling.
- Development of a comprehensive service system that addresses the whole waste management value chain.
- Focus on the social and economic inclusion of recyclers with education, capacity-building and business support.
- Partnerships with multiple actors to promote recycling and improve waste management systems.
- Institutionalization via Recycling Work Groups and relationships with municipal and national government in order to promote changes in policy and practice.

INNOVATIVE PARTNERSHIPS IN ACCESS TO WATER AND SANITATION

EQUITABLE SERVICES IN THE MUNICIPALITY OF eTHEKWINI, SOUTH AFRICA

eThekwini´s Water and Sanitation Unit brings together academic research, private business services, technological innovation and community participation, through multi-stakeholder partnerships, offering each of them the right incentives

ACTORS INVOLVED ETHEKWINI WATER & SANITATION SERVICES (EWS) | UNIVERSITY OF KWAZULU-NATAL | WATER RESEARCH COMMISSION | WATER AND SANITATION FIRMS | COMMUNITY REPRESENTATIVES | INTERNATIONAL DONORS

MUNICIPALITY OF eTHEKWINI, SOUTH AFRICA

- **+3.7 MILLION** PEOPLE
- **34%** INFORMAL households
- **31%** POVERTY RATE
- **92%** access to WATER
- **76%** access to SANITATION

PARTNERSHIPS WITH THE

PRIVATE SECTOR

The municipality signs contracts with the private sector to, among other services, manage sewerage and wastewater treatment or empty pit latrines

INCENTIVE FOR FIRMS:
Clear and transparent online bidding processes

PIT LATRINE EMPTYING:

5
CONTRACTS WITH FIRMS

↓

125
COMMUNITY MEMBERS EMPLOYED

↓

35,000
LATRINES EMPTIED

PARTNERSHIPS WITH

ACADEMIA

Scientific, technological and social research analyzes the viability of the systems, user perception and social acceptance

INCENTIVE FOR UNIVERSITIES:
Research carried out in a practical context

↘

UNIVERSITY RESEARCH ALLOWS EWS TO DESIGN ITS PROGRAMS BASED ON THE REAL NEEDS OF COMMUNITIES

PARTNERSHIPS WITH

COMMUNITIES

User platforms and focal groups participate in the supervision of services and problem solving

17
USER PLATFORMS

The 'Water Detectives' program in schools educates students on the protection and preservation of water

80,000
BENEFICIARIES OF URINE-DIVERSION TOILETS

↓

95%
STILL IN USE

INCENTIVE FOR USERS:
Job creation through the private sector or the municipality

SUSTAINABILITY

- Community participation to ensure adequate service and correct use of systems
- Innovative designs in water and sanitation systems in order to reduce environmental impacts
- **CROSS-SUBSIDIES**
  EWS is successfully implementing the central Government's initiative to establishing a cross subsidization system that guarantees access to water services for the poorest families

  The first **9,000 liters** of monthly consumption are free for those households whose property is valued at less than **24,900 USD**

  Fees for water consumption vary depending on the pressure system of each household, and they increase in cases of industrial or commercial use

PARTNERSHIPS IN PRACTICE

EWS has brought together different actors in order to build 400 community ablution blocks (CAB). Each block is equipped to provide service for 50 to 75 families living in informal settlements

3,500 JOBS
CREATED FROM CAB CONSTRUCTION CONTRACTS

UNIVERSITY RESEARCH
ON THE USE OF CABs

480 JOBS
FOR COMMUNITY MEMBERS IN CAB MAINTENANCE

EXTENSION OF THE MODEL

- Municipalities in South Africa, as well as other countries, are replicating and adapting eThekwini´s approach
- The Municipal Institute of Learning, a pioneer platform for knowledge management, is used to share the experience of EWS

↘ *Innovative partnerships in access to water and sanitation: Equitable services in the municipality of eThekwini, South Africa*

In South Africa, uneven access to water and sanitation across different socio-economic and racial groups has been further complicated by post-apartheid geographical boundary changes and urban migration, which have led to a massive increase in municipal populations and demand for basic services. This situation is clearly manifested in the eThekwini Metropolitan Municipality where the population has increased by some 2.6 million people since 2001, with most new inhabitants living in informal settlements and rural areas. To address the challenges of extending water and sanitation service coverage, and ensure that the diverse needs of different community groups are adequately met, eThekwini Water and Sanitation Unit (EWS) has developed a system of service provision based upon innovative multi-stakeholder partnerships.

The approach developed by EWS has evolved within the confines of a positive regulatory regime at national level that has clear frameworks for water and sanitation services and water resource management. A Free Basic Water Policy provides poorer customers with a minimum quantity of water and sewage disposal services at no cost. In addition to these guarantees, EWS has further improved and extended water and sanitation services by drawing upon the different skills, capacity and knowledge of the private sector, civil society, academia, donors and the public sector. These partnerships have enabled EWS to work on a range of mutually reinforcing initiatives that address social, health and environmental issues while developing appropriate facilities for those without services.

The EWS model is centered upon understanding and meeting the right incentives for different partners to contribute to water and sanitation services. Academic partners include the Water Research Commission and the University of KwaZulu-Natal whose Pollution Research Group works with EWS to undertake trans-disciplinary research on water and sanitation delivery. Researchers are able to test out their work in practice and at scale, and are also afforded opportunities to work on cutting edge research projects with international partners such as the Bill and Melinda Gates Foundation. Private sector partners, meanwhile, undertake service delivery activities such as the treatment of sewerage and wastewater, and the emptying of pit latrines. As well as clarity around tender procedures, such relationships are beneficial for building positive relationships with the community through job creation.

The community piece is central to the service delivery strategy adopted by EWS. In order to meet diverse geographic and socio-economic needs, efforts are made to simultaneously provide appropriate infrastructure, job opportunities, education and training. In informal settlements where residents are awaiting formal housing, residents have assisted the

construction of Communal Ablution Blocks[20] which, in turn, has provided job opportunities for caretakers who supervise their proper use. In areas where pit latrines are in place, private companies have subcontracted members of the community for pit emptying, while in rural areas with few facilities the introduction of urine diversion toilets has been accompanied by an extensive hygiene education and behaviour change program.

Community engagement has been further promoted through User Platforms that participate actively in water services monitoring and conservation activities. Platform members are provided with a short cross-disciplinary training course on basic legislation, water and sanitation policy, environmental conservation and hygiene issues. Community representatives also participate in Focus Groups that address the specific needs of groups such as people with disabilities. In schools, meanwhile, young pupils are involved in educational activities related to water protection.

In line with the national Free Basic Water Policy, EWS provides indigent families and consumers whose properties are valued at less than 250.000 South African Rand ($US2.500) with 9 kiloliters of free water. A progressive block tariff structure is applied for other domestic consumers based upon the type of connection and the amount of water used over a 30 day period. This means that those who consume most water pay a higher price for it. The low bill payment default rate indicates that tariffs are affordable and that customers are willing to pay the established fees. In addition, information on tariffs is made accessible to consumers via the Municipality's website and offices, and customer call centers report high levels of satisfaction with the service generally.

As a local government entity, funding for EWS and its activities comes from municipal budgets. However, the development of new initiatives is also made possible with additional finance from external research and donor agencies. Some examples include the Valorization of Urine Nutrients in Africa and Reinvent The Toilet Challenge projects which are funded by the Bill and Melinda Gates Foundation with support from the Swiss Federal Institute of Aquatic Science and Technology.

4P Innovations

- **Product**: Development of tailored socio-environmental sustainable technologies and products through links with different community groups and other partners.
- **Process**: Building of multi-actor partnerships based upon experimentation and learning, with community involvement in user platforms, focus groups and research links with academia.
- **Position**: Delivery of variegated services to meet different community needs. Wide acceptance of partnerships as viable business models for delivery of services.
- **Paradigm**: New product, service and business model in which multiple actors work collaboratively to deliver quality services that support local livelihoods.

20 Shared water and sanitation facilities in female and male blocks that contain toilets, urinals, showers and basins for washing hands and laundry facilities.

To ensure the continuity of funding for service improvements, ongoing efforts are made to demonstrate positive outcomes from the projects undertaken. Proactive sharing of information and results is assured through national, regional and international learning exchanges, including the Municipal Institute of Learning, a collaborative knowledge management platform developed by EWS which aims to enhance local government capacity.

As transfer of knowledge and expertise is central to the success of the model, EWS is aware that greater efforts are required to encourage mid-level technical and managerial skills and prepare more fully for staff transitions. Other challenges include increased demand for more and better services from a continuously growing population, and possible changes in municipal focus areas, personnel and budgets following elections.

The highly effective model developed by EWS has been made possible by the vision and dedication of a leadership that has created space for innovative ideas and approaches. As a result, a diverse set of multidisciplinary and multi-actor partnerships has generated practice-based learning that informs strategic decision-making and ensures appropriate service provision for a vast range of different community needs across the eThekwini Municipality. In consequence, municipalities in South Africa, and beyond, have attempted to replicate the EWS model and adapt some of its approaches in their specific contexts.

Summary of key success factors

- Establishment of multidisciplinary and multi-actor partnerships that link social, health and environmental issues with service provision.
- Focus on addressing the particular incentives of potential partners to ensure their commitment and participation.
- Development of an affordable, culturally sensitive, and practice-based approach that addresses different and specific community needs.
- Linking of infrastructure development with job creation and capacity-building to ensure sustainability.
- Use of evidence-based research and continuous learning so that improvements are made and initiatives are able to start at scale.

LEARNING FROM THE MODELS

This section summarizes key lessons from the five models in order to provide further insight into their potential for replication and scale-up. Its overarching premise is that the transfer of learning about how the models work in their specific and dynamic contexts is central to an assessment of how far they, or elements of them, might be extended. While it is clear that "one size does not fit all", by sharing the learning from these different experiences, the models, or specific aspects of them, may be adapted, expanded or used to inspire the development of new initiatives that assist access and delivery of basic services to the poor elsewhere.

The ability of the initiatives to test innovative solutions in their particular environments, and ensure that the changes they promote are sustainable, is at the heart of their success. In order to explore how the models have achieved this it is necessary to examine:

- 1. The different 4P innovations that have been introduced;
- 2. The challenges faced and solutions for addressing these; and,
- 3. The steps taken to institutionalize the models and ensure sustainability.

1. INNOVATIONS

While the models differ in their emphasis on particular innovations, each of them has been active in all of the 4P areas; Product, Process, Position and Paradigm. These innovations have been achieved incrementally - by doing something better, and radically - by doing something different. Interestingly, none of the initiatives have followed a linear process from product and process to position and paradigm innovation. Instead, space has been found for different actors to come together and experiment with new ways of working at different levels simultaneously. This broad conceptualization of innovation has clearly enhanced the ability of all the models to make a sustainable difference in guaranteeing wider access to basic services.

An analysis of the innovations promoted by the models in each of the four overlapping areas is provided below.

↘ Product innovations

"…The use of ICTs has been a means to achieve an end and not an end in itself." [21]

The models in this study have innovated by adapting or building upon existing products or services, often around the use of technology. At the same time, their work is also focused on ensuring that products and their use are part of overarching programs or systems rather than standalone devices or interventions. Some of the most exciting product innovations are shown in the Guatemala case where ICTs such as the cell phone, portable ultrasounds and videoconferencing systems have been used as tools by locally-trained personnel to provide health services in remote rural areas.

As well as building holistic programs, the models have also worked to constantly improve the products and services that they offer. These changes are largely in response to demands from clients and are coupled with efforts to ensure that costs are not increased. In the case of AMP, for example, LED lamps that boost electric power are being introduced, while WFP has promoted the development of different BES models that can be adapted to fit specific family needs in Cochabamba. In this respect, the emphasis that has been placed upon a flexible choice of quality service options that respond to the particular requirements and expectations of different end users in poor communities is also a product innovation.

21 eHealth in rural areas: access to medical care, training and prevention in Guatemala

↘ Process innovations

"Good coordination and the presence of institutions and facilitators that promote collaboration among different actors are necessary for ensuring the efficient use of resources."[22]

The central process innovation of all the models is their adoption of flexible collaborative processes in which actors from the public, private and civil society sectors work together to provide and improve services. This approach is best illustrated by the EWS model in South Africa where partnerships are constantly evolving through experimentation and learning links between local government, academia, the private sector, donor agencies and community groups.

The partnerships in this study have emerged as the result of exhaustive examinations of each operational context, with careful study of geographic, cultural, political, economic, social, organizational and institutional factors, and examination of prior experiences to inform their work. Such research has led to an ongoing and proactive connection that informs, raises awareness and capacity-builds actual and potential clients, as well as partners.

The leadership and mediation role played by promoter organizations has been central to the development of process innovations. TulaSalud, WFP, AMP, Ciudad Saludable and EWS have all acted as change agents by assuming vital intermediary roles in encouraging new approaches and facilitating relationships between different actors. This has involved special emphasis on working with government so that efforts are streamlined with public sector systems and plans.

All the promoter organizations have clear and realistic expectations of their stakeholders. In the *Luz en Casa* case, for example, community users have been capacity-built to ensure that they understand the SHS systems that provide them with electricity, a network of local technicians has been promoted to maintain them, and job opportunities related to the service are being explored. In Bolivia,– meanwhile, WFP has used social marketing alongside an intensive education program so that potential users are fully informed about BES operation and maintenance, and options for business development around its use.

Other process innovations include responsive ongoing review systems that are built in from the start and encourage feedback from all actors in order to make improvements. Comprehensive appraisal processes are demonstrated through access to documentation, encouragement of progressive reiterations, and the institutionalization of learning. AMP, for example, is renowned for its open information-sharing, WFP is an active participant in national and international networks, and EWS has promoted a range of learning connections to share its knowledge and experience.

22 Inclusive Sanitation Markets: Sustainable solutions in peri-urban areas of Bolivia.

The promotion by the models of cultures of continuous learning has enabled the development of new ideas for improving their work. As a result, vibrant cross-organizational eco-systems have been created in which innovation and experimentation are encouraged, and activities are able to start at scale rather than being tested out through small or ad hoc pilot projects.

↘ Position innovations

"Ciudad Saludable has applied a systemic vision of the waste management system based on the value chain and involvement of all relevant actors".[23]

All the models have redefined the way services are accessed and delivered by adopting an inclusive pro-poor approach in which service solutions are carefully tailored for, or co-designed, with those who are hardest to reach or most disadvantaged. In Guatemala, for example, TulaSalud has focused on working with indigenous populations in remote rural areas so that they can provide improved health services to their communities, particularly during pregnancy and childbirth. This has necessitated engaging in a manner that positions cultural and gender issues at the center of its work. AMP's work in isolated rural communities and Ciudad Saludable's activities with recyclers, both of which also give due consideration to gender and the participation of women, are further examples of this focus.

As well as working in close partnership with the public sector, the "re-positioning" of hitherto marginalized collectives in service models requires important efforts to ensure that government attention is given to the particular needs of these groups. In this way an enabling environment, with clarity around regulatory issues and the development of policies and incentives that encourage service expansion for them, is created. In Peru, for example, Ciudad Saludable has worked closely with national government to promote changes in legal regulations on waste management that support recyclers. In South Africa, EWS has positioned the idea of diverse initiatives to meet the needs of different community groups across the Municipality, including inhabitants of informal settlements awaiting formal housing, rural area dwellers and people with disabilities.

↘ Paradigm innovations

"...The focus is on the commitment and the obligations of the users..."[24]

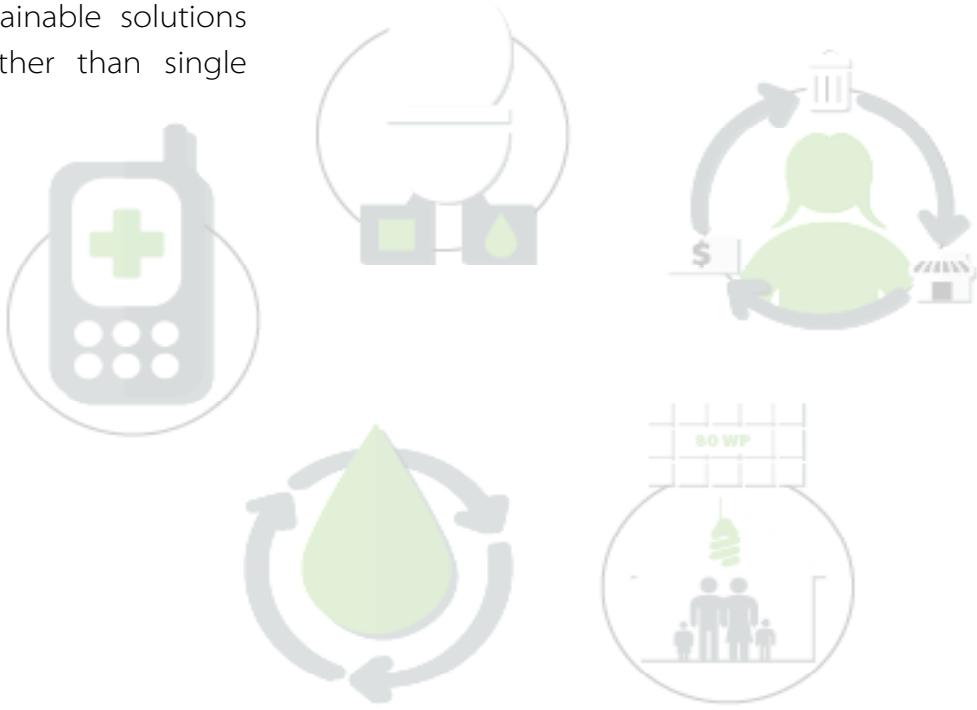
This form of innovation moves beyond simply positioning new and different ways of providing basic services to the poor, to changing and redefining the overarching systems in which these services are delivered. In all the models, the role of end users has been re-conceptualized with their involvement as active players in the development and operation of new services, rather than as recipients or beneficiaries. In the cases of AMP, WFP and Ciudad Saludable, for example, basic service provision is centered upon the idea of marginalized groups such as remote rural or peri-urban dwellers and recyclers as

23 Comprehensive solid waste management: The Ciudad Saludable model in Peru.

24 Light at Home: Access to sustainable energy in rural communities in Peru.

users, clients and entrepreneurs, with a clear acceptance that "a pro-poor opportunity is also a business opportunity".[25]

The case studies illustrate how members of poor and vulnerable populations have successfully assumed roles in new service systems as users and consumers, teachers and trainers, entrepreneurs and producers, technicians, advisors and reviewers, among others. This acceptance of the multifaceted nature of "base of the pyramid" populations has enabled the identification and mobilization of previously unacknowledged local resources and skills, including community knowledge, expertise and entrepreneurial abilities. In this sense, the models endorse broad concepts of inclusive business and social entrepreneurship which recognize the poor as change agents in the development of sustainable solutions that address multiple rather than single problems.[26]



25 What is Inclusive Business?, Spotlight on Inclusive Business, April 2012 http://businessinnovationfacility.org/page/publications-spotlights

26 See Anja Cheriakova, "Framing the concept of social entrepreneurship", The Emerging Social Enterprise, October 28, 2013 http://www.thebrokeronline.eu/en/Articles/The-emerging-social-enterprise

2. CHALLENGES AND POSSIBLE SOLUTIONS

Adaptation and scale-up rely upon honest appraisals of the difficulties faced by the models and investigation of the solutions proposed to overcome them. In this way potential problems can be better anticipated and addressed by those wishing to emulate the models, or parts of them. The study shows that, while many difficulties are context specific, a number are shared by all the models.

The challenges outlined here clearly require long-term investments of time and commitment to resolve. In this regard, it is worth noting that shortcuts and easy fixes for difficulties encountered have been avoided by the model promoters. Instead, in all cases, scrupulous attention has been paid to finding solutions that are tailor-made for the specific and dynamic contexts in which they are working.

↘ Financial sustainability

The achievement of financial sustainability has been a challenge for all the models. Concerted efforts have been required to obtain funding for the initial installation of service components and community outreach activities, and put fair and affordable services in place for consumers that also cover running costs. This has necessitated the adoption of a diverse mixture of funding options, including grants, community contributions, in-kind resources, cross-subsidy arrangements, and novel donor-government connections.

Upfront costs to install services and get programs going have generally been provided by grants from international aid agencies, foundations, governments or private actors. Ciudad Saludable, for example, has relied heavily upon donor and government grants to put its model in place. In South Africa, although costs have generally been covered by municipal budgets, donor funding has been important in enabling the model to expand. In the AMP case, the first SHS installation phase was covered by a grant from the ACCIONA Microenergía Foundation while, during the second phase, the achievement of full cost recovery was made possible through the repayment of a loan acquired to purchase SHS systems.

WFP's work in Bolivia has centered upon encouraging families to make a contribution of up to 85% towards the cost of BES construction. Different mechanisms have been tested to assist families to cover these costs, including access to credit. However, to date only a few families have been able to take up this option due to the stringent requirements from credit agencies for collateral such as land tenure.

The costs of community awareness-raising and capacity-building activities, activities that are essential to guaranteeing smooth service operation, add substantially to financial overheads. In the cases of AMP and WFP, for example, community outreach work implies an additional 33% to the cost of the systems installed. In both cases, these expenses are assumed by the promoter organizations rather than passed on to the customer as part of user fees. Ciudad Saludable is able to recoup some of these costs by charging businesses and government institutions for waste management consultancy activities. In this model, 32% of the income derived from service revenue and grants is assigned to core costs while the rest is used for the development of activities.

Once the service has been installed, most of the models charge user fees that cover running costs. The Guatemala initiative is an exception to this as, due to the nature of the service (pre-natal care), no fees are charged. In this case, the Tula Foundation has worked to gradually integrate program activities within government budgets over time.

The remaining models have made important efforts to tailor tariffs and installation payments to the diverse needs and capacities of different local users. In some cases they have relied upon subsidies so that poorer families can access services. In eThekwini, for example, poor and indigent families are provided with a free basic service while a progressive tariff system ensures that users who consume more water subsidize those who consume less. AMP, meanwhile, has been able to base fees upon a government tariff subsidy by which families pay 20% of the fee required for full cost recovery. These user fees also offer savings of up to 39% compared with previous energy costs for candles, kerosene and the charging of cell phones. In the WFP initiative, meanwhile, the relatively low costs of BES operation and maintenance, of between US$2.9 to US$3.6 per year, are covered by families whose average household income is US$83 per month.

The fact that default rates across the models have been extremely low suggests that the tariffs and charges in place are both affordable and acceptable to users. AMP notes that the default rate in Cajamarca dropped from 3.03% in 2011 to 0.19% in 2012. In Cochabamba, WFP estimates a 95% success rate in the usage of BES a year after installation, while customer call centers in eThekwini report high levels of satisfaction with the service generally. In all these cases, the provision of accessible information about service costs also appears to have generated a sense among users that prices are transparent and fair.

The importance of an early and long-term vision of funding that considers the volume of the service to be provided, and the consolidation of a client base for it, has been fully understood by all the model promoters. As the AMP model demonstrates, this clarity of focus is important in enabling the breakeven point for full cost recovery to be achieved more smoothly. Such an approach also relies upon sharing results and demonstrating impact on a continuous basis so that all stakeholders, including partners, clients and donors, fully understand the potential of the model and are willing to invest in it.

↘ Human resource limitations

The case studies show that good leadership is vital to the development of the models, especially in the early stages of their work. Sometimes key individuals, such as those leading the AMP, EWS and Ciudad Saludable initiatives, play particularly important roles as catalysts and guides. However, long-term sustainability and institutionalization rest upon moving beyond individual champions by broadening senior management functions and responsibilities, and developing leadership skills at other levels.

As well as acquiring mid-level managerial competencies within promoter organizations, leadership skills gaps among partners, community and end users are being overcome through focused capacity-building activities. These include Ciudad Saludable's leadership training program for recyclers, TulaSalud's training of young indigenous female community leaders and AMP's Technical Entrepreneurship Program.

All the models demonstrate the importance of dedicating adequate time to the building of human resource capacity. In addition, as the Municipal Institute of Learning platform developed by the EWS initiative confirms, it is also important to make space available for improving skills by sharing knowledge and expertise among different partners, levels and disciplines.

↘ Changing attitudes and behavior

The time, resources and energy required to situate different models for delivering services cannot be underestimated. In order to position changes in behavior and encourage new ways of doing things, education and awareness-raising activities have to be consistent and ongoing. WFP, for example, estimates that oversight of up to a year following BES construction is necessary to ensure their correct use and maintenance. In Guatemala, TulaSalud reinforces the importance of continuously monitoring staff training, while in South Africa the environmental, hygiene and behavior change programs initiated by EWS have been essential to the rollout of its services.

↘ Working with government

While all the models have ensured close liaison with the public sector this can often be impeded by lack of access, influence or information at policy level, changes due to electoral processes and weak public sector capacity. Municipal attitudes and rotation of staff are acknowledged by Ciudad Saludable as limiting the application of recycling legislation. In South Africa, as well as restraining the application and reinforcement of enabling legislation, municipal changes as a result of elections, are viewed as potentially discouraging the development of good ongoing relationships with wards and councilors. In Bolivia, meanwhile, possible changes in regulations relating to the use

of organic waste may limit opportunities for commercialization of BES waste.

The multi-pronged approach adopted by the models in making and maintaining linkages at national, regional and local levels of government is a useful way of addressing these challenges. As well as raising public sector awareness and support for new models of service at policy level, public sector capacity-building initiatives, such as those promoted by Ciudad Saludable and EWS, are also important activities for generating government understanding of the models and buy-in for them.

Once again, it is worth noting that changing public sector attitudes and practices requires time and patience. This is clearly shown by the ongoing negotiation processes between AMP and the government of Peru, and the long-term support provided by TulaSalud and the Tula Foundation while waiting for government agencies to take over their work.

↘ Addressing growth in demand for improved services

The success of the models has augmented demand from both national government and end users for their expansion and improvement. In some cases, such as that of EWS, a growing population as a result of increased migration has added to these demands. Institutional pressure for extensive and rapid rollout has raised concerns about contextual appropriateness, technical viability and sustainability, particularly as all the models have adopted a paced and participatory delivery process that is deeply rooted in the particular environments in which they are working. To address this, robust connections with government that enable ongoing dialogue to ensure that these factors are acknowledged and built into expansion plans are important.

While also a challenge, client demands for improved services offer opportunities to enhance the models by providing better quality services to end users. Work by AMP to provide stronger electrical power in Cajamarca, and WFP's efforts to put forward improved BES models in Cochabamba, are examples of positive responses to customer demands. Such improvements require careful consideration to ensure that they do not increase costs for the end user. To address this, the models have drawn creatively upon their partnership connections. Research links with universities in the EWS, WFP and Ciudad Saludable initiatives, for example, have been central to the promotion of improved products and services that maintain or even reduce costs.

3. INSTITUTIONALIZATION

The ability to overcome challenges, achieve financial and operational sustainability, and build robust collaborative relationships able to promote 4P innovations, rest upon the extent to which the models are mainstreamed in the contexts in which they operate. This process of institutionalization necessarily requires time as the changes initiated by the models are consolidated within overarching governance systems so that they become part and parcel of standard policy and practice.

The models in this study appear to follow three key steps towards institutionalization:

↘ Step 1: Demonstrating tangible change

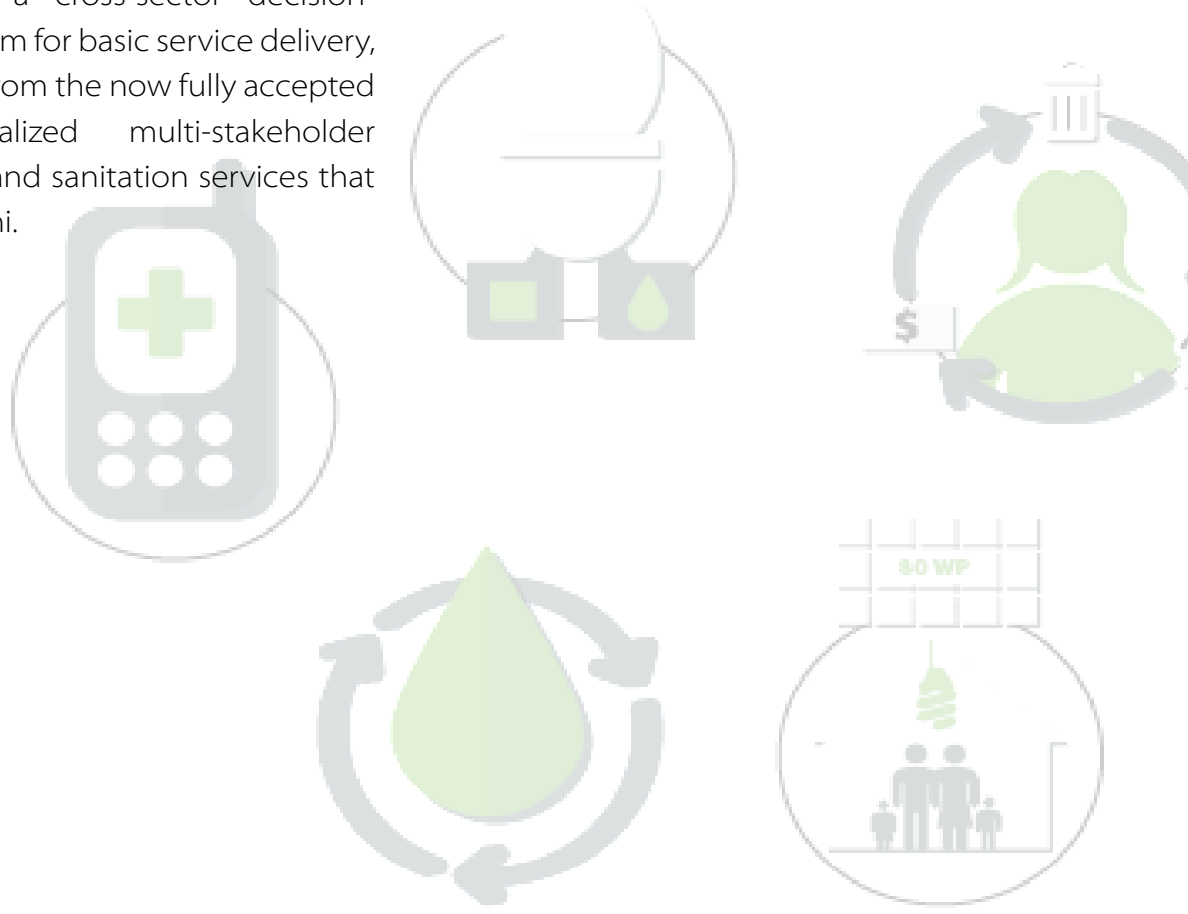
All the initiatives have begun by positioning new products or processes to address gaps in service access or delivery in a practical manner, with an emphasis on demonstrating change through tangible results and positive collaboration in a specific area over the short-term. With the introduction of the BES in peri-urban areas of Cochabamba; the tele-education and telemedicine services in Alta Verapaz; the recycling services promoted in Lima by Ciudad Saludable; the provision of photovoltaic electricity in Cajamarca; and the improved water and sanitation services in eThekwini, each model has quickly put the central elements of a new service in place and, by working closely with multiple actors, stimulated interest and support in expanding this.

↘ Step 2: Internalizing the learning

As the models have developed, partner organizations and community groups have begun to internalize the learning from collaborative activities. In the medium-term, new ways of doing things have become part of organizational cultures and the changes positioned by the promoter organizations have started to have a deeper impact on how they work. This is clearly illustrated in the Guatemala case where government agencies have begun to take over the activities and costs initially assumed by TulaSalud and the Tula Foundation. The growing confidence of community Photovoltaic Electrification Committees and participation of municipalities in the *Luz en Casa* program also demonstrate this change. In the case of EWS, the model is seen as an example for service provision elsewhere because of the transformation it has generated within community groups, as well as among politicians, businesses, donor agencies, academia and other stakeholders.

↘ Step 3: Changing the way things are done

In the long-term, the models become sustainable by formalizing and reinforcing partner relationships and government connections, influencing policy so that legal and regulatory changes are promoted, and ensuring that results are reinforced at end user level through expansion and improvement. In this manner, changes in how services are accessed and delivered become accepted practice. As a result of the work of Ciudad Saludable and AMP in Peru, changes have been made to legal and regulatory frameworks for waste management and new energy technologies that reinforce improved basic serve provision. The establishment of the multi-partner Advisory Board for the running of the rural health service initiative in Guatemala is a clear example of the formalization of a cross-sector decision-making mechanism for basic service delivery, and a step away from the now fully accepted and institutionalized multi-stakeholder model for water and sanitation services that exists in eThekwini.



↘ FINAL CONSIDERATIONS

Innovative "out of the box" solutions that involve different social actors working together in partnership to improve access to basic services are on the increase globally. The case studies show that the capacity of these collaborative initiatives to ensure long-term change for the poorest of the poor rests upon their ability to:

- Reposition the end user as an active agent in service provision,
- Ensure close and ongoing cooperation with the public sector, and
- Generate new business models for covering service costs and related activities.

While replication and scale-up of such models is desirable, it is important to highlight that their success is based upon careful attention to contextual variables, the adoption of comprehensive models that address whole value chain systems, and the development of appropriate mechanisms for dialogue, decision-making and review among the different actors involved, including end users themselves. The commitment and dedication of the agencies that have promoted the models to positioning new multi-sector service options, finding non-traditional ways to finance them, and ensuring ongoing reinforcement of the initiatives as they are built and maintained, are central to these efforts.

The models outlined in this document have initiated a progressive process of institutionalization between and across organizations, sectors and levels. This has, in turn, assisted the development of an overarching enabling environment for new and improved ways of providing services to previously marginalized communities. The space for innovation is reinforced by frank and ongoing exchanges of knowledge and experience, and practice-to-policy feedback loops. By sharing learning about how they work, the models demonstrate that innovative partnership arrangements have real potential to secure lasting improvements in the lives of the poor and make a valuable contribution to sustainable development.

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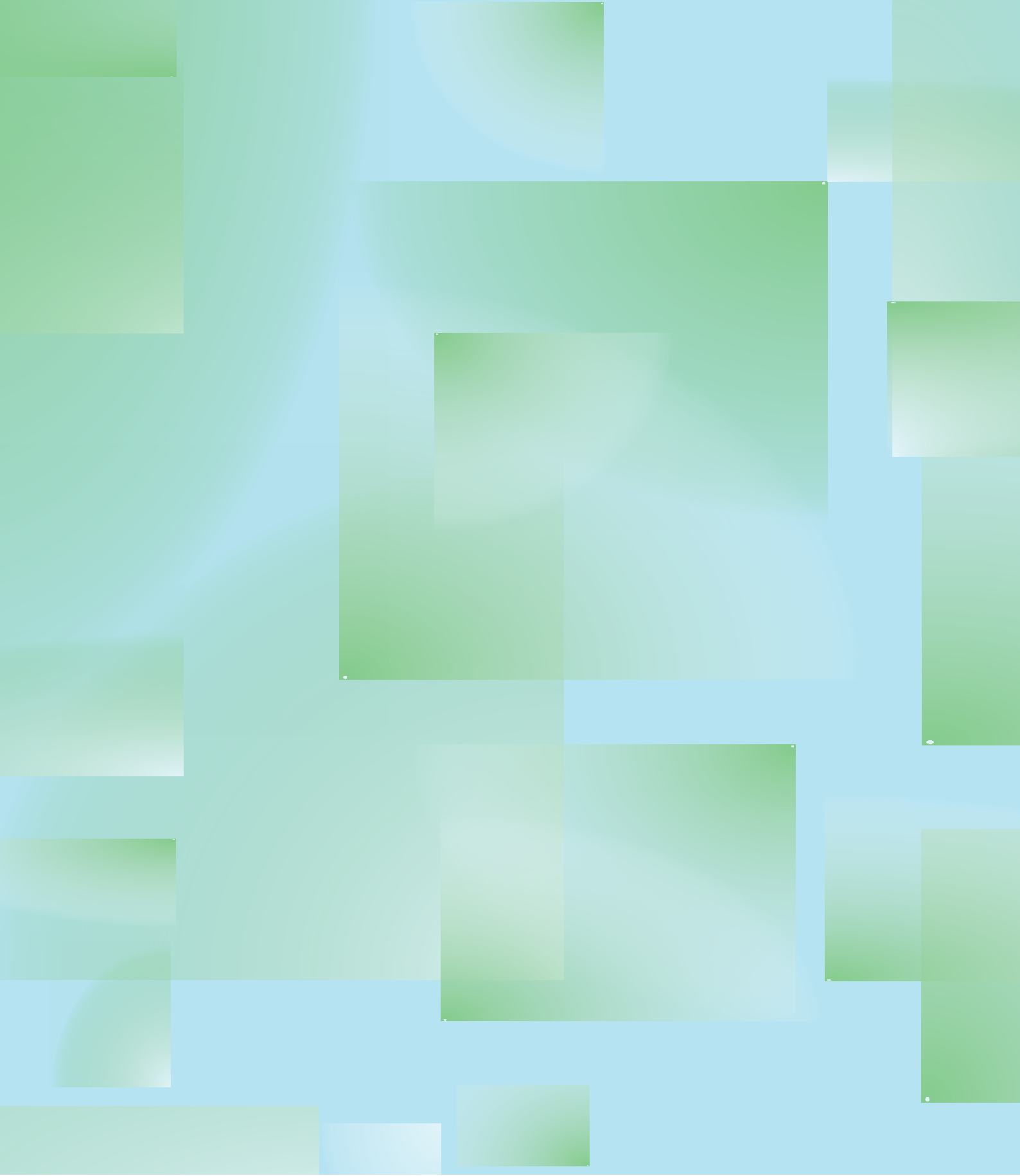

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