

# Challenges and lessons learnt from community interventions – the ‘People Side’

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## Abstract

Much has been said about ICT4D interventions in developing countries and the billions it has cost governments, research initiatives, donor communities and others. It is easy to find research literature and practical examples of the countless initiatives that have failed and less that have succeeded. Different approaches were followed and different roads have been taken, with little success. The question remains why so many initiatives fail and so little succeed? What has been done differently? What indicates ‘failure’ and what indicates ‘success’ and for whom? This paper will endeavour to provide answers to the questions above, focusing on the ‘people side’ of technology interventions in remote and underserved communities, using South Africa as an example of a developing country. It will discuss the challenges experienced from practitioners’ point of view before, during and after implementation as well as the problems that the communities experience. The authors will share the methodologies and processes followed to manage the people-side of change. Community interventions can either be direct or indirect. The moment an initiative or activities aims to change peoples’ lives or behaviour, it becomes direct, although it might have started out as an indirect intervention. In the light of the objectives of ICT4D initiatives i.e. to make life better for the intended beneficiaries by making access easier to services, information, education etc. It therefore involves direct interventions. This consequently requires direct interaction with the community. The **people** in the community thus become the most critical component. The authors will draw from experiences with the implementation of successful and unsuccessful initiatives in South Africa as well as the different approaches taken.

## Keywords

Change Management, Community Interventions, ICT4D Interventions

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# 1. Introduction

In 2011, 38.01% of South Africa's total population was living in rural areas comparing to the 42.62% in 2000, according to a World Bank report, published in 2012 (The World Bank: 2012). Rural population refers to people living in rural areas as defined by national statistical offices and is calculated as the difference between total population and urban population. This 38.01% equates to 19,229.650 people, who live in remote and under-serviced areas in the country. The depopulation of these areas causes an imbalance resulting in numerous socio-economical problems for the people who remain in these areas, as they are often women, old people and young children.

The remoteness and often inaccessibility of these rural communities deprive the people from basic services and essential information. Various initiatives from government, non-government organisations and the donor communities have tried over the past 15 years to make positive interventions in the rural communities in South Africa, in an attempt to address the challenges they were facing. These interventions were and still are, predominantly technology driven, disregarding the peoples' factor, which are imperative for any change to happen.

The approach that most development practitioners followed in earlier years was to develop a technology, which they think would address some of the issues that rural communities had, then implement whatever the technology was with big fanfares, just to return a few months later to find everything still being the way they were, nothing had changed. Then the approach changed to finding out what the communities' needs are, then develop the technology, do the implementation but still found the same results a few months later.

Why do so many development initiatives fail and so few succeed?

## 2. Objectives of this paper

This paper will discuss the challenges and lessons learnt from making technological interventions in communities, argue the need for applied change management in development initiatives to help people making mindset transitions to adapt and cope with the changes that development brings and briefly discuss the most commonly used change management methodologies. Case studies using applied change management for technology interventions in communities in the Limpopo and the Eastern Cape provinces of South Africa will be discussed to support this.

## 3. Finding the real challenges of developmental practice

### 3.1. Managing people and projects

#### 3.1.1. Putting People First

The importance of the **human factor** in development interventions are often ignored, causing

unnecessary complications, which consequently slowdown the process. Potential responses (positive and negative) of the people affected (directly or indirectly) by any intervention, should be taken in consideration during the planning phases of such interventions. Cernea (1995) made the following relevant statement:

“The systematic use of social knowledge, as a complement to economic and technical knowledge, is indispensable for ‘putting people first’ in planned, development interventions. Putting people first in projects is not just a goodwill appeal to the humanitarian feelings of project planners or a mere ethical advocacy. It is a concept for constructing projects for inducing development and an imperative for their effectiveness.” (Cernea 1995: 2<sup>nd</sup> Edition:7)

### 3.1.2. Change is a difficult thing

To understand what change management is, it is imported to understand what **change** is and how people react to change. At the most basic level, change is a movement out of a **current state** (how things are today), through a **state of transition**, into a **future state** (how things will be done).

Reeler (2009) argued three major types of social change, namely:

- **Emergent changes** are gradual, unconscious, learning from experience changes that take place in people’s day-to-day lives.
- **Transformative changes** happens when growth and complexities outstrips people or communities’ capacities. This kind of change happens through difficult processes of **unlearning** previous beliefs and values to pave the way for renewal. It is therefore not surprising that this kind of change is characterized by tension, interpersonal conflicts and power struggles.
- **Projectable change** is possible in a reasonable stable and healthy community where people can create visions of a preferred future and make it happen (Reeler et al, 2009:20 -21).

The challenge for development practitioners is to create conditions for projectable changes prior to making any kind of intervention in a community. External donors often ignore this fact, trying to make interventions into peoples lives who are either not ready for such intervention or the intervention is inappropriate at that point in time.

### 3.1.3. Managing change

It is important to understand what **Change Management** is before attempting to manage a change. Prosci Inc. founded in 1994, the world leader in research and content creation in the field of Change Management, defines Change Management as the application of a structured process and tools to enable individuals or groups, to transition from a current state to a future state, to achieve a desired outcome (Prosci: Change Management Learning Centre: 1996-2013).

There are several change management methodologies, models and frameworks available on how to manage change. This section will outline a few selected models.

The first model to be considered is the model defined by John Kotter (1995). Kotter

advocates an 8-step Change Model (Kotter J: 1995) (Kotter and Cohen: 2002) comprising of the following:

1. Create a sense of urgency for the change to happen;
2. Put the change management team together;
3. Development the change vision and strategies;
4. Obtain buy-in from all stakeholders;
5. Remove barriers that will prevent the change from happening;
6. Produce short-term wins;
7. Do not let up;
8. Make the change stick.

The keys elements in Kotter's methodology is to create and increase the urgency for the change to happen, to build the guiding team and to get the vision right (Mashapa J, Chelule E, van Greunen D, Veldsman A: 2013)

The People Centered Implementation (PCI) methodology (Change First - Practitioner Programme: 2011) makes change happens by:

- Building leadership capacity
- Involve the people
- Help people to change their behaviors
- Create communication and training plans and rewards
- Building commitment on all levels
- Measuring and tracking change results
- Develop change leadership

The PCI methodology puts the people first, which is what change management is all about. Managing the *people side* of a project.

Prosci® follows a 6-step roadmap (Prosci: Change Management Learning Centre: 1995-2013), which are:

1. Ability, commitment and buy-in from the leaders
2. Clear understanding of why the change must happen
3. Effective designing, planning and implementation
4. Assessing change readiness
5. Understanding people's behavior when faced with change
6. Ability to implement behavioral change techniques

Leadership competency forms the basis for effective change management in Prosci's change management framework. Sponsor visibility and active participation in the change process is their formula for successful change.

If one analyzes these different methodologies and frameworks, it becomes clear that the following elements form the basis for all of them.

- Awareness of the change and why it should happen
- Change-readiness of all affected parties
- Strategies and implementation plans
- Skills development and training

- Application of acquired knowledge
- Sustainability to make the change stick

Mashapa’s (2013) analysis of various change management models showed that managing change consists primarily of three phases namely the Planning phase, Implementation phase and Managing the change phase (Mashapa J, et al: 2013). The above-mentioned elements or activities can be mapped to these phases as depicted in the diagram below.

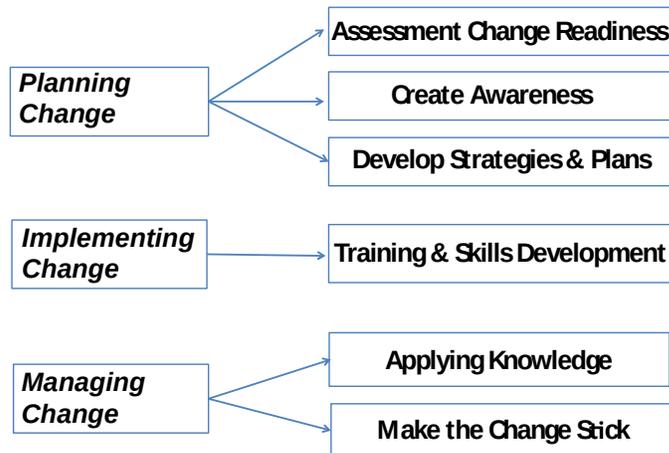


Figure 1. Mapping Change Phases to Change Activities

Prosci® has developed a methodology that assists change management practitioners to address all the elements mentioned above. The ADKAR® Model (Hiatt JM: 2006) is a conceptual model for understanding how individuals achieve change as well as a diagnostic tool for identifying root causes of resistance.

A	Awareness of the need to change
D	Desire to participate in the change
K	Knowledge on how to change
A	Ability to implement the change
R	Reinforcement to sustain the change

Figure 2. ADKAR® Model for managing change (Hiatt JM: 2006)

### 3.1.4. How do you implement Change Management?

When implementing change management, various processes are required to ensure success. One such process is that of Prosci. Prosci’s® methodology follows a 3-phased process that integrates fully with the ADKAR® Model. These three phases are:

- Phase 1: Preparing for the change
- Phase 2: Managing the change

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### Phase 3: Reinforcing the change

**Phase 1** of the change management process is a fact-finding period. During this phase, the necessary assessments are done with regard to the needs of the community, the gaps that exist, the change readiness of the community, the expectations of all the stakeholders, skills and knowledge base, local champions (which plays an enormous role in successful socio-economic interventions at community level), leadership capacity and the commitment and visibility of the sponsor/donor. Taking all this into consideration, a Change Management Strategy should then be developed, keeping in mind all the underlying structures and powers at play in the community. This phase is also the time to brief the change management team and to develop a sponsorship roadmap.

**Phase 2** speaks to the process that creates awareness and communicates the intended intervention(s) to the affected parties. Community engagement and community participation is key during this phase, as it will allow the change management team to identify barriers that might have a negative impact on the intervention later on in the project. The early detection of resistance will enable the change management team to deal with it sooner rather than later. The community will also acquire the necessary skills and training during this period, which will be supported by constant coaching and mentoring to ensure the application of the newly acquired knowledge.

**Phase 3** is characterized by actions to sustain the change. Feedback is obtained and analyzed; progress is monitored; gaps are identified and corrective actions taken; and successes are celebrated. Impact assessments are also undertaken during this period.

## **3.2. Working in communities: Where do you start?**

Making contact with a community for the first time should be done in such a way that it stimulates community action. It is of vital importance to spend time with the people, learn about their customs and cultures and identify and support natural leaders who have the potential to become change agents and drive the change processes from within the community (van Greunen D, Veldsman A: 2011). Once a trust relationship with the community has been established, phase 1 of the change management process can begin.

### **3.2.1. Examining the landscape**

Every community has an underlying culture that powerfully shapes the way things are done. When first engaging with a community, it is imperative to understand the social and governing structures at work where the interventions are to take place. These structures may include political structures, traditional structures, religious structures, social structures, commercial structures, bylaws etc. These structures have to be reckoned with, as they will form a crucial part of a project's Stakeholder Management Plan. What it requires is a clear understanding of the unique characteristics of the community, what has potential, accompanied by a deep respect for what is local and indigenous; and a subtlety of practice to give thoughtful and careful support where it is needed (Reeler et al, 2009:15). Although rural communities, due to their remoteness, are depending on one another for their survival, one should never

underestimate or ignore negative and undermining elements either, as that also forms part of being human.

### 3.2.2. Determining the needs of the community

Practitioners and literature advocate the need for doing needs assessments prior to technology interventions in communities. This is necessary as the actual needs of a community are often far removed from the perceptions of the donors or development practitioners; or is far removed from what is do-able and viable. Such misconceptions often result in the failure of good intended projects, which ends up as just another developmental carcass.

Researchers are cautioned not to create unrealistic expectations when performing needs assessments, as what is said and what other people hear, are often two different things. The interpretation of these needs assessments on the other hand, should translate into the objectives of the planned intervention, if not, it ends up being a mere wish list.

### 3.2.3. Community readiness

Readiness is the degree to which a community is prepared to take action on an issue. Matching an intervention to a community's level of readiness is absolutely essential for its success. (Plested BA, Edwards RW, Jumper-Thurman P: 2006). Plested argues the existence of various dimensions of readiness that are key factors, influencing a community's preparedness to take action on an issue. Nine stages of community readiness, ranging from "no awareness" to "high level of community ownership" were identified. In order to help a community get ready for change, Plested developed a 'Community Readiness Model', that enables a practitioner to assess the level of readiness of a community. Depending on the level of readiness, goals and strategies to achieve these goals, are then developed and implemented.

Plested (2006) however emphasized that the model "...cannot make people do things they don't believe in." This is the most imported element for any community intervention, whether direct or indirect, which success depends on bringing about behavioral change in people.

### 3.2.4. Community participation

The role of community participation cannot be underestimated. Not only in the planning of the technology intervention that will take place but also in the design of the applications and/or systems. John Carroll states the following:

"Participatory design integrated two radical propositions about design. The first is the **moral** proposition that people, whose activities and experiences will ultimately be affected by a design outcome, should have a substantive say in what that outcome is. The second is the **pragmatic** proposition that the people who will need to adopt, and perhaps to adapt to an artifact or other outcome of design, should be included in the design process, so that they can offer expert perspectives and preferences regarding the activity that the design will support, and most likely transform". (Carroll JM and Rosson MB: 2007).

Community participation extends beyond the design and development of appropriate

artifacts. Community participation is a critical element for the sustainability thereof.

### 3.2.5. Technology adoption: Progress through the phases

Each person goes through change at his/her own pace. It is therefore imported to focus on **individual** change first, as without that, change at community or organizational level will not happen. Geoffrey Moore’s “Technology Adoption Model”, represents 5 phases of technology adoption (Moore G: 1999), which are:

- 1) Awareness of the technology;
- 2) Assessment of whether it is for them or not;
- 3) Acceptance of the technology;
- 4) Learning to use it; and
- 5) Usage.

Figure 3 depicts four phases the authors had experienced in communities where technology was deployed as an enabler for individual and community development. The progressions through these phases were initiated by external interventions that served as catalysts for change.

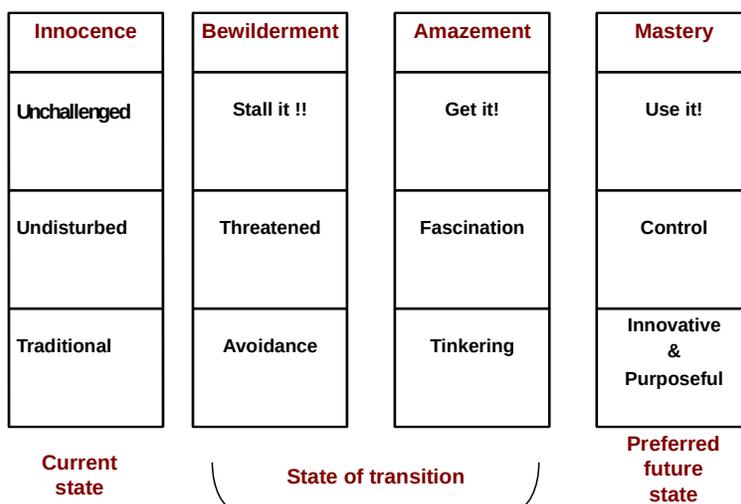


Figure 3. Phases of Technology Adoption

Before the introduction of technology, people’s thinking were unchallenged, their emotions undisturbed and their actions traditional. Once exposed to technology, one often finds a sense of bewilderment amongst the traditionalists. Their first reaction is to avoid using the technology and to stay with what is familiar and non-threatening.

Then people learn how to work with the new tools and they often are amazed with what they can do with the new knowledge they’ve acquired. This is also a period when people play and toy with the technology and is an important part of the transition phase.

But what is the key factor that will differentiate between the insignificant application of and mastery of the technology? What is the **one** element that will entice users to use technology innovatively and purposefully? That element is a clear, internal picture of a preferred future called **visioning**.

### 3.2.6. Managing resistance

There are many reasons why people resist change. Metre (2009) categorized resistance to change in three general forms namely revolt, withdrawal and discreet resistance (Metre C: 2009). Revolt causes people to confront the change, actively and explicitly accompanied by some level of aggressiveness. Opposed to the revolutionary-type of a foregoing form of resistance are those who passively resist the change by merely withdrawing from making the change happen. The people who 'discreetly' resist the change just go through the motions, do what they are told but without any urgency to make the change happen.

Metre (2009) adapted four common reasons why people resist change from an article written by Paul Strebel on the reasons why employees resist change (Strebel P: 1996). These reasons (discussed below) are also applicable when working with rural communities.

The first reason is **Self-Interest**. Fear for losing something of value is human nature therefore if there is no clear picture of "*What's in it for me?*", people will resist the change. In the spirit of the local Ubuntu culture in South Africa, the question is more than often "*What's in it for us?*" It should thus be clear that interventions in the lives of rural communities should benefit the people and not the individual.

The second reason is **lack of trust**. Change begins and ends with building relationships and the need to establish trust that allows people to be honest and establish good working relationships. (Van Greunen D, et al: 2011).

**Perceptions and expectations** are the third reason. Never accept that what was said, is what people heard. Hiatt (2006) claims that a message should be conveyed *seven times* for the listener to internalize it.

The fourth reason is a **low tolerance** for change. To change the behavior of a whole community, one has to change the behavior of each individual. People change at their own pace. Change cannot be forced.

## **4. The lessons learnt**

### **4.1. Case study 1: The deployment of a mobile application for collaborative procurement – the case of Kgautswane**

#### **4.1.1. Background**

Kgautswane is a one of 19 villages in Rietfontein, a rural area in the Greater Tubatse Local Municipality, in the Sekhukhune District of the Limpopo Province, in South Africa (Government Information Systems: 2009). There are approximately 120,000 people living in these villages that are mostly situated along a central dirt road. These villages were only connected to the national electricity grid in 2003. Fixed communication is virtually non-existent and there are no municipal services available such as sanitation, garbage removal etc. Although there is a telephone satellite tower on a hilltop near the valley, few people have fixed lines, as cell phones are more cost effective and reliable. Cell phone access is available but coverage is very spotty (van Greunen D et al: 2011).

Like many rural villages in South Africa, a high percentage of able-bodied men and women are forced to seek work in neighbouring towns or cities, several hundred kilometres away from home. Children are thus often raised by the grandparents or extended family members who remain behind and rely on financial support from those who leave to seek work elsewhere (van Greunen D, et al: 2011).

#### **4.1.2. Socio-economic landscape**

The primary economic drivers are subsistence farming, small-scale trading and slate mining. There are about 130 small-scale traders in the area, which are the only conveniently situated suppliers of essential foodstuff. Unfortunately, these shop owners had to travel long distances to replenish their stock, resulting in having to close their businesses for a whole day. Traveling costs are high and even higher to get their stock delivered to their shops in Kgautswane. A project was thus undertaken to develop an application that could run on a cell phone, which would enable the shop owners to collaboratively purchase goods and have it delivered to a central point in the village. This would save them time and money.

But before embarking on the project, a clear understanding of the socio-economic conditions of the area with regard to the households, business owners, youth, employed and unemployed groups, educators, health practitioners etc. had to be gained. It was also necessary to determine what the real needs of the communities were in order to develop a viable solution.

#### **4.1.3. Needs assessment**

It was evident from the studies that the conditions and needs of the people living in

neighbouring communities, were quite different from one another with regard to infrastructure (roads, dwellings etc.), connectivity (telecommunications, cell phone usage, internet etc.), basic needs (running water, electricity etc.), communication (newspapers, radios, television etc.), social issues (violence, abuse, etc.), literacy, health matters (HIV/AIDS, teenage pregnancies etc.) and entertainment.

The planned intervention had to take all of this into consideration, which meant that basic requirements such as cell phone network signals, electricity and connectivity had to be addressed.

#### **4.1.4. Change readiness**

The research team also came to realize that the majority of shop owners were elderly people who were not familiar with technology. They relied on their children and more than often their grandchildren to assist them in using mobile phones to write and send SMS text messages. For this group, the use of technology was threatening and the team experienced a great deal of resistance amongst the older shop owners. This fact alone had a huge impact on the uptake, implementation and rollout of the mobile application.

#### **4.1.5. Participatory design**

In an attempt to overcome these challenges, the shop owners were invited to participate in the design and development of an appropriate solution, using iconography, which they were familiar with and could relate to, instead of text, to guide them through the various screens on their cell phones. The younger business owners were fascinated, eager to participate and embraced the change faster and more willingly. But despite their enthusiasm, the older generation remained reluctant and kept on reverting back to familiar ways of doing things.

Even when the advantages of collaborative procurement became evident, they remained skeptic. With the result that only a small percentage of the small traders made use of technology to buy their stock while the rest preferred not to.

#### **4.1.6. Challenges**

Illiteracy and language caused problems since the ordering and buying system was based on SMS communication, which illiterate users were unable to use. The use of icons could support the ordering part of the process but the transactional part was executed via intermediaries, which again created mistrust. Cell phone reception remained unreliable. Poverty resulted in people not buying foodstuff in bulk but one or two items at a time. Shop owners were not interested to buy a variety of products either but persisted in buying goods they knew. They also did not trust the concept of virtual buying.

The duration of the project was only 24 months. And as with most donor funded development projects, time was also an issue. To embed an intervention in a community and make it 'stick', takes at least five years.

#### **4.1.7. Lessons learnt**

Even if it is a great idea, it does not mean that it will work. Plested's (2006) statement that "... *one cannot make people do things they don't believe in*" proved to be very true. Researchers are currently working at yet another model, which will leverage on the existing traditional buying/selling relationship involving physical interaction between small-traders and their suppliers.

### **4.2. Case study 2: The deployment of a mobile patient management system for community-based health care workers – the case of Emmanuel Haven**

#### **4.2.1. Background**

Emmanuel Haven is a non-government organization located within the boundaries of the Nelson Mandela Metropolitan Municipality in Motherwell, Port Elizabeth in the Eastern Cape of South Africa. The NGO was established in 2004 by a local medical doctor who had noted the need for home/community-based care services for people living with HIV & AIDS.

In an attempt to address the health problems in Motherwell, four hundred plus Home-based Care Workers were trained by the Department of Health and deployed in the community, on a voluntary basis. Their tasks are to identify, record, report and physically care for the sick, weak and vulnerable people in their community, which includes the elderly and children. They are equipped with nothing more than a clipboard (paper-based record keeping system) that gets taken to Emmanuel Haven on regular intervals for the nursing staff to check and monitor the patients (Veldsman A, van Greunen D: 2013)

The Nelson Mandela Metropolitan University (NMMU) recognised the benefits of establishing an emerging Living Lab at Emmanuel Haven in order to assist the centre in reaching their goals by developing sustainable solutions that would benefit the centre and the community by involving both groups. Living Labs in essence, are systemic initiatives, which focus on creating multi-stakeholder collaboration in different stages of the research, development and innovation (RDI) processes. In Living Labs, users or citizens are seen as a source of new innovations, as co-creators of new services and products, typically linked to creation or application of ICTs or ICT-enabled services.

In 2011, the Board of directors of Emmanuel Haven and NMMU signed a Memorandum of Understanding. This MoU proclaim the establishment of the NMMU/Emmanuel Haven Living Lab. Though this MoU, the NMMU aligns with the goals of Emmanuel Haven in its quest for community upliftment, transformation, development and sustainable enterprise through health promotion, education and skills transfer for work and life.

#### **4.2.2. Socio-economic landscape**

A survey was undertaken to understand the socio-economic landscape in Motherwell. The Matron at Emmanuel Haven, responsible for the healthcare sector and therefore the healthcare workers, selected a group of caregivers to execute the survey. The group was

trained on how to conduct the survey. The aim of the survey was to determine what health and social problems exist in this impoverished community where more than 70% of the employable population, are unemployed. It also investigated the extent of these health issues and what healthcare services were available in the community. Finally it considered the existing technologies utilized by the community as well as the healthcare workers to determine whether a technology solution would be appropriate and useful.

#### **4.2.3. Needs assessment**

A total number of 1500 households were surveyed. From the survey results, the needs of the community were determined. It was equally important however, to understand what the tasks and responsibilities of the caregivers were, how they went about their daily work, what reports they have to submit, what the reporting requirements were as well as what challenges they experience and what their needs were.

#### **4.2.4. Participatory design**

In collaboration with the nursing staff at Emmanuel Haven, a medical doctor and students of the NMMU, functional and non-functional requirements were determined and a prototype developed. Ten home-based caregivers are currently participating in a pilot project to develop and test a mobile application, which would make their work easier and faster, whilst cutting-down on more than 90% of the paperwork they are used to.

Due to the automation of the healthcare system, potential health risks and illnesses can be detected early and can be acted upon immediately.

#### **4.2.5. Change readiness**

Change readiness not only affected the healthcare workers but also their patients. Before embarking on the pilot, the members of the households had to be informed, in a non-threatening way, of this new way of recording patient data. The best people suited for creating the awareness, were the caregivers themselves, which meant that they too, had to have a thorough understanding of the technology and the benefits it could bring.

#### **4.2.6. Challenges**

Since the initiative is still in pilot phase, the research team has not experienced major challenges as yet. The development of the application follows an iterative process of two-week cycles till the next interaction between the student developers and the caregivers. At the time of writing this paper, usability evaluation and user satisfaction studies are undertaken.

#### **4.2.7. Lessons learnt**

The staff working at Emmanuel Haven is volunteering their time and efforts to help people in need, which means that they are extremely committed to the cause. These community development champions realize the benefits this intervention can bring. The burden of disease in their community is ever increasing and the primary healthcare system in the province is wavering, causing a sense of urgency amongst them to make the change happen.

## 5. Conclusion

People are left behind because they have limited or no access to basic services, information, formal education, healthcare services and many more. Unemployment is ever increasing; the disease burden is worsening; educational and healthcare structures are collapsing and the social and economical divides between affluent and poor are worse than ever.

Technology interventions aimed at helping developing countries, are the only way to abridge the time it would take to encompass people living in these marginalized and underserved communities, into the information era. And although the intentions of government, donor organizations, research institutes and development practitioners to name a few, are good. The people affected by these interventions are seldom asked what they want and how the changes that inevitably will follow, will affect them.

This paper argued the need for applied change management for socio-economic development interventions, not only in interest of the various initiatives but also for the sake of the affected communities.

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