



INCLUSIVE
HEALTHCARE
INNOVATION

INSIGHTS 2014:
HOW HEALTHCARE IN AFRICA
CAN BE RE-IMAGINED



A report produced by the Bertha Centre for Social Innovation & Entrepreneurship
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Introduction

This report extends an invitation to you to join the journey in creating a movement capable of transforming healthcare on the African continent through innovation.

By *Dr François Bonnici, Dr Lindi van Niekerk, Prof Walter Baets and Prof Wim de Villiers*

Healthcare systems across the continent are challenged in delivering the standards of care people require and in overcoming complex and concomitant disease burdens within constrained environments. Citizens and patients seek a positive experience of care in these systems and ultimately to lead healthy and economically productive lives. No single institution can be the custodian for promoting and delivering health to a continent. Rather, it requires the involvement of everyone in developing new approaches to tackling the complex challenges in our context.

We acknowledge the progress that has been made to bring about positive changes in the South African health system since 1994 and that many stakeholders have contributed to this achievement. However, the health system is dynamic and to allow for its further development such that all South Africans can receive efficient and high quality care, the social innovation capacity of the system at large should be enhanced.

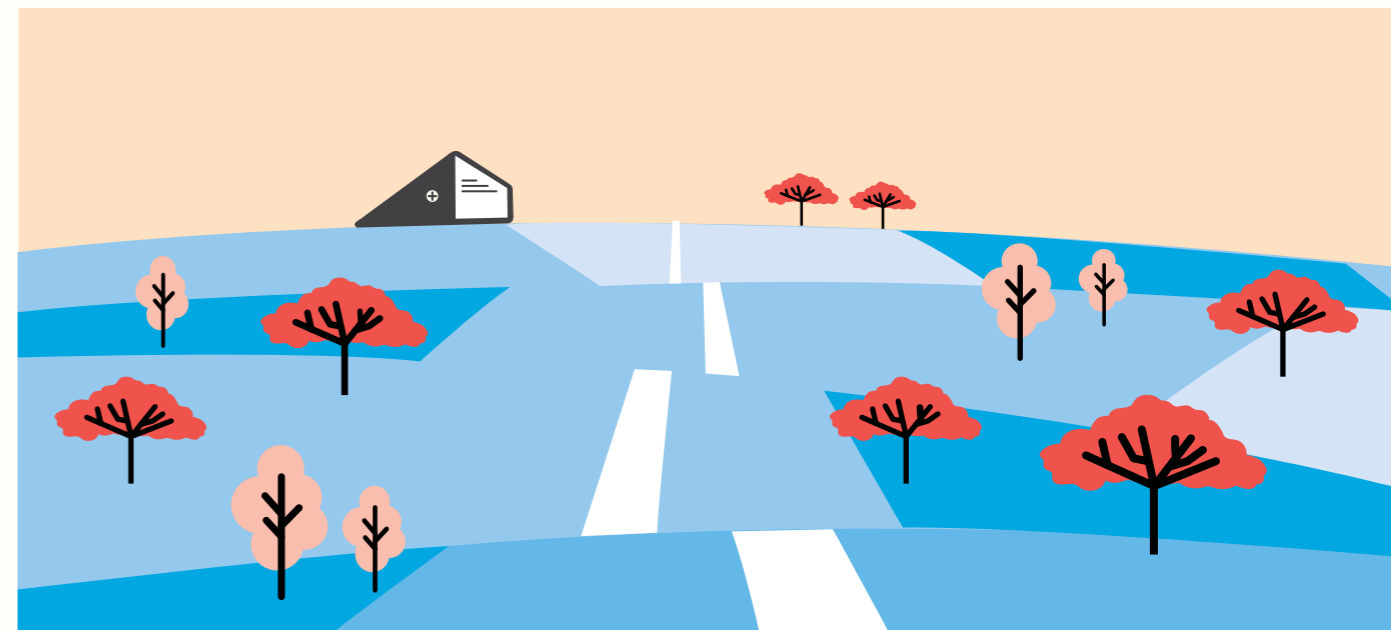
During the course of 2012 and 2013, we started this journey by engaging with various stakeholders involved in the healthcare system. These included patients, frontline health workers, hospital managers, academics and students as well as government and private sector leaders across the fields of medicine, technology, research, design and business.

From these conversations several needs within our local community were identified:

/ Innovation domains have predominantly been confined to technology and medical innovations.

/ Western approaches, processes and models of innovation are not always well suited to low-resource, culturally diverse African contexts.

/ Healthcare communities mostly operate in silos and there are few joint platforms for collaborative thinking.



/ To build the innovative capacity of the health system at large, a diverse range of members across hierarchies and roles should attain skills and permission to innovate.

/ Frontline health workers, students and entrepreneurs are mostly excluded from contributing to the improvement of the formal health system. There are no formal channels or platforms for these innovators to engage with healthcare leaders.

/ Across South Africa and Africa at large, there are already multiple existing healthcare solutions developed by resilient and creative innovators. These solutions however are not widely disseminated and thus scale is not achieved. Support and acknowledgement for existing innovators are needed.

To address these needs identified, each of our initial activities were designed to facilitate conversation across sectors, to educate and to capacitate the local community with knowledge and skills as well as to reward and recognise existing innovators.

Activities included:

/ The **Healthcare Hackathon** on 24 and 25 January 2014, brought together health workers, software developers, entrepreneurs and designers for 48 hours to build a technology solution that addresses a healthcare need experienced in public sector hospitals.

/ The **Inclusive Healthcare Innovation Summit** on 29 and 30 January 2014 catalysed a conversation, for the first time on the continent, between 284 delegates from seven countries and from eight sectors on African healthcare innovation.

/ The **2014 Health Innovator's Review** showcased and rewarded 15 impactful health innovators in South Africa for their pioneering solutions, resulting in a 120-pages publication.

Over 500 people participated in these initial activities. Every individual delivered a valuable contribution to further the focus on healthcare innovation in Africa, for Africa. It is thus our privilege to be able to share with you the key findings that emerged from this work. ■

Summary of Key Insights in Inclusive Healthcare Innovation

The Inclusive Healthcare Innovation initiative at the UCT Graduate School of Business and UCT Faculty of Health Sciences brought together leaders, experts and practitioners to assist in defining an approach to healthcare innovation in Africa, for Africa. We are pleased to be able to share with you the key insights generated which serve as a roadmap to how healthcare can be transformed.

1/

Innovation needs are best understood by listening to people from multiple perspectives

Needs for innovation don't only exist in disease categories but also in healthcare delivery. People on the frontline have a good understanding of these needs and each need provides an opportunity to innovate.

2/

Healthcare solutions must be designed with people and not for people

The top-down development of healthcare solutions by experts has not achieved all the desired outcomes. A complementary approach is required by which the communities requiring healthcare are invited to participate in a co-creative process to develop solutions from the ground up.

3/

Complex challenges require integrated solutions across silos and value chains

The current complexity of healthcare challenges require solutions that are not only medically or scientifically advanced but that also take into consideration how these fit into the broader system. This includes looking at how health workers are educated to deal with these challenges, the role of technology as an enabler of better care and how a good business model can deliver care in a sustainable manner.



4/

Measuring impact of innovations may require non-traditional methods

Beyond the randomised clinical trial, many other approaches, from big data to rapid-prototyping, could be used to assess the evidence of impact of innovations.



5/

Innovation is ignited through support, capital and practice

Creating a culture of innovation in Africa requires supportive national frameworks, the creative usage of private sector capital and practical skills development of potential innovators.



6/

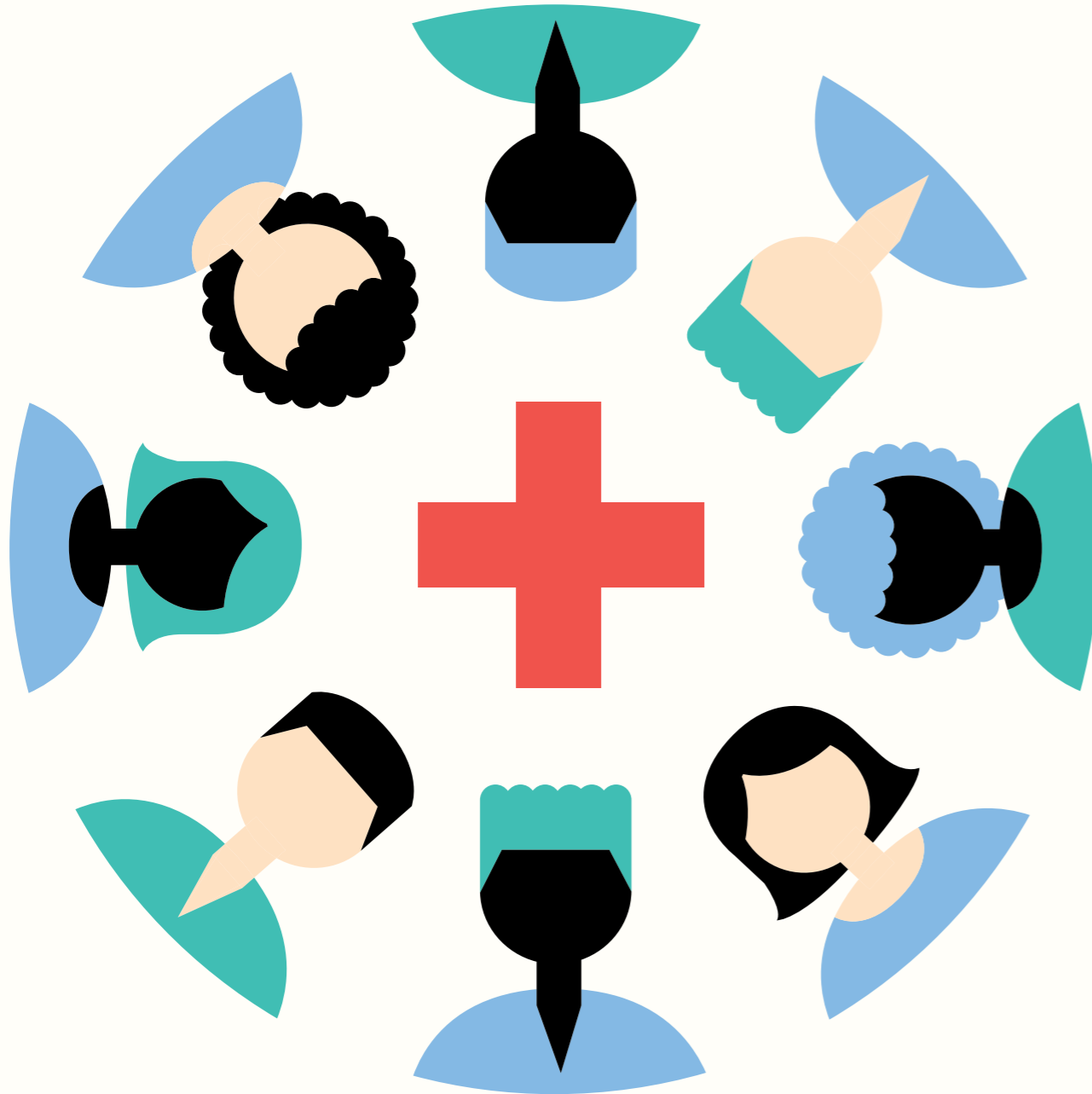
Healthcare solutions for Africa already exist locally

Across the continent there already exist innovative solutions that have been developed in response to local health needs. These solutions have improved care in an inclusive, effective and affordable manner. The resilient innovators responsible for each serve as inspiration to ordinary citizens of their potential to make a positive impact in healthcare. ■

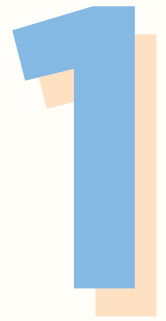
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Key insight:
**Innovation needs
are best understood by
listening to multiple
perspectives**



Healthcare in Africa is facing a myriad of challenges but reframing the challenges as innovation needs enable leaders, health workers and citizens to see opportunities for co-creating new solutions. Empathetic understanding of these needs is imperative and thus views and opinions should be considered from different levels across the healthcare system. Here are multiple needs and opportunities for innovation, as identified from different perspectives from across the healthcare system: The National Ministry of Health, key experts, and frontline health workers.

Innovation Needs and Opportunities: Perspective of the National Department of Health, South Africa

“Innovation has occurred in drugs, diagnostics, therapeutics and devices but now more than ever innovation is required in healthcare delivery systems. An example of this pressing need is prolonged patient waiting times. South Africa’s anti-retroviral programme has successfully expanded to provide treatment to 2.4 million people currently but it is predicted to increase to 4.6 million by 2016. As it is impossible for health facilities and health workers to increase at the same rate, innovation is needed.”



Minister Dr Aaron Motsoaledi
National Minister of Health, Republic of South Africa

Innovation Needs and Opportunities: Perspectives of Cross-Sectoral Experts

“The existing reactive, curative allopathic medical system structure is ill equipped to cope with current health challenges. Innovation is a necessity requiring focus and courage to take existing ideas to scale. A return to understanding the basic needs of patients is required as our existing untailored solutions are not effective. An example of this is the myriad of community health workers trained in vertical disease areas. Patients with multiple concomitant diseases require integrated services. In KwaZulu-Natal, the Office of the Premier has been successful in training all community health workers, irrespective of which government department they are located in, in ten critical health interventions which can be delivered at the patient’s doorstep. This approach has delivered revolutionary results in wellness as well as positive curative spillovers.”



Dr Ernest Darkoh
Founding Partner, BroadReach Healthcare, South Africa

“Globally, the sustainability of healthcare is becoming a pressing challenge as health expenditure is rising. No longer can clinicians divorce themselves from this reality. The notion of value, as framed by Michael Porter from Harvard University, assists in addressing this problem. For clinicians, the central objective of their job should be to deliver value, not as what is perceived by them, but value as from the patient’s perspective. Value, defined as outcomes relative to cost, thus clearly highlights two innovation imperatives: improving outcomes without raising costs or providing care at a lower cost. Producing value for patients will be influenced by how students are trained and orientated in their outlook towards care. Care is central

to medicine. It is the one thing that can add huge value to patients at no cost.”



Dr Peter Raubenheimer
Head of General Medicine, Groote Schuur Hospital,
University of Cape Town, South Africa

“There is a clear need for innovation in healthcare to increase productivity in the current resources that exist. The innovation opportunity is the gap market that exists for 25% of South Africans who are restricted from buying primary healthcare access, as current costs are unaffordable. This market needs to be stimulated through a positive environment with the correct inputs and structures. Several obstacles are currently hindering the stimulation of the market on the supply side. The current clinician fee-for-service systems are disincentives to delivering value and making the market more efficient. There is further lack of focus on producing competent medical candidates with a business and management understanding. Historical legacy issues are hampering the development of mid-level health professionals with suitable future career paths. Lastly, a measurement framework is required to routinely report on the value proposition from hospitals and doctors which will allow private sector management to respond to signals.”



Dr Brian Ruff
General Manager, Discovery Health, South Africa

“There exists a huge opportunity to learn through collaboration. Through the GlobalHealth Lab hosted at the MIT Sloan School of Management, over 70 collaborative improvement projects have been conducted in partnership with frontline healthcare organisations in the past five years across Africa and Asia. These projects have taught us several valuable lessons. Firstly, collecting meaningful data helps to cast a light on the real challenge organisations are experiencing. Secondly, the design-orientated perspective is valuable to solving challenges. Thirdly, it is important to leverage ideas that have already been developed by frontline staff and to link ideas to professional practice and systematising them. We should develop means and methods to support health workers to use data and knowledge more effectively, to disregard that which is not working and to improve and iterate on solutions that have the greatest potential. In order to go forward, a culture of innovation and improvement needs to be embedded in the health system and research should be conducted to study the outcomes of innovation.”



Prof Anjali Sastry
Director, GlobalHealth Lab, MIT Sloan School of Management,
United States

Innovation Needs and Opportunities: Perspectives From the Frontlines

“The core of healthcare is people caring for people. Innovation must be for people and with a responsibility to focus on the poor. In rural areas, hospitals and primary care clinics should be integrated through partnerships. For us, Zithulele Hospital in Mqanduli in the rural Eastern Cape Province, effective coordinated partnerships with NGOs have assisted us in delivering the missing components of care as well as those in the financing and management of healthcare. It is imperative to see opportunities within opportunities and to look not for rocket science solutions but to attempt to do even the simplest things better. An example where we, at Zithulele Hospital, have found a simple solution is the pre-packaging of anti-retroviral treatment. This solution has already been implemented in the Western Cape but we have taken one step further to manage a patients’ care better across different hospitals. A further important area for innovation is in management. Managers must be equipped to be vision-custodians and the main job of health leaders should be to enable others with possibility.”



Dr Ben Gaunt
Clinical Manager, Zithulele Hospital, Mqanduli,
Eastern Cape Province, South Africa

“Innovation should be for us as Africans and healthcare should be accessible whether we are rich or poor, urban or rural. There is a fine line between being the patient, the provider or the financier of healthcare. My own experience has gone from being a public-sector patient in Khayelitsha six years ago to now being the provider of care and, in the coming years, I will likely become a financier of care. Some further areas where we need innovation are: empowering communities to receive the appropriate care they require for their context, to place the power in the hands of the people and civil servants when it comes to healthcare delivery and not at the whim of politicians, to educate our nation especially on preventative health measures and to address issues regarding poor access and availability of essential medicines.”



Dr Vuyane Mhlomi
Community Service Doctor, Uniondale Hospital,
Klein Karoo, South Africa

“Innovation should be focussed on improving access and quality of healthcare. Socio-economic conditions or geographical locations should not influence the care South Africans receive. Four key innovation areas exist from a health rights perspective: First, the

most important when it comes to developing innovations is to ask the people involved, to really listen, have meaningful discussions and have an ongoing feedback system between patients, policy makers and innovators. A pressing but simple issue for patients is the prolonged waiting times. Second, changing the patient-facility relationship is vital. Access and delivery of healthcare should be achieved through decentralised means, for example using community health workers. Third, supporting healthcare workers, a scarce resource in the South African context, is needed. Addressing the issue of drug stockouts is one of the ways to do this. Fourth and last, for real innovation to happen a flexible intellectual property system is required such that local R&D will be encouraged to produce low-cost and affordable innovations.”



Sasha Stevenson
Attorney, Section27, South Africa

“Nurses and midwives are the frontline providers of care, especially as in many areas in South Africa there are not sufficient doctors. Innovation should happen to make the environment suitable, to educate and support this cadre of workers. Machines and equipment are not the only way to reduce mother and child mortality, but by enabling our frontline workers, they can make the change that is needed in the healthcare system. These workers should be treated with respect regarding their interests and placing them in areas where they are not only educated in but where they are passionate to work in. Placing a health worker in a setting that is not their passion will result in poor care delivery and poor worker attitudes. It is imperative to re-engineer the selection of nurses and midwives for training. There is an abundance of people interested and passionate to work in these areas but the system is not providing them with the opportunities. Often it is thought that money is all that is needed but in Africa it is about our workers. They need to be listened to, supported, assisted and, with the right opportunities, they will become the change agents of the future.”



Phoebe Lolly Mashao
Midwife, Limpopo Province, South Africa



Key insight: **Healthcare solutions must be designed *with* people and not for people**



Contributors: *Dianna Kane* (Senior Designer, Medic Mobile, United States), *Jennie Winhall* (Service Design Strategist, United Kingdom), *Richard Perez* (Director, World Design Capital Cape Town 2014, South Africa), *Becky Malby* (Director, Centre for Innovation in Health Management, Leeds University, United Kingdom).

Traditionally, innovation is approached in ways that fail to give voice and value to those whom the innovation is intended to benefit. This top-down paternalistic approach has resulted in healthcare innovations that are novel and academically sophisticated but that fail to truly meet the needs of the people for whom they were created; or the innovation is met with great resistance from those tasked with its implementation and as a result, it never achieves its intended benefit or scale. Framing an approach to tackling healthcare challenges faced in Africa is essential.

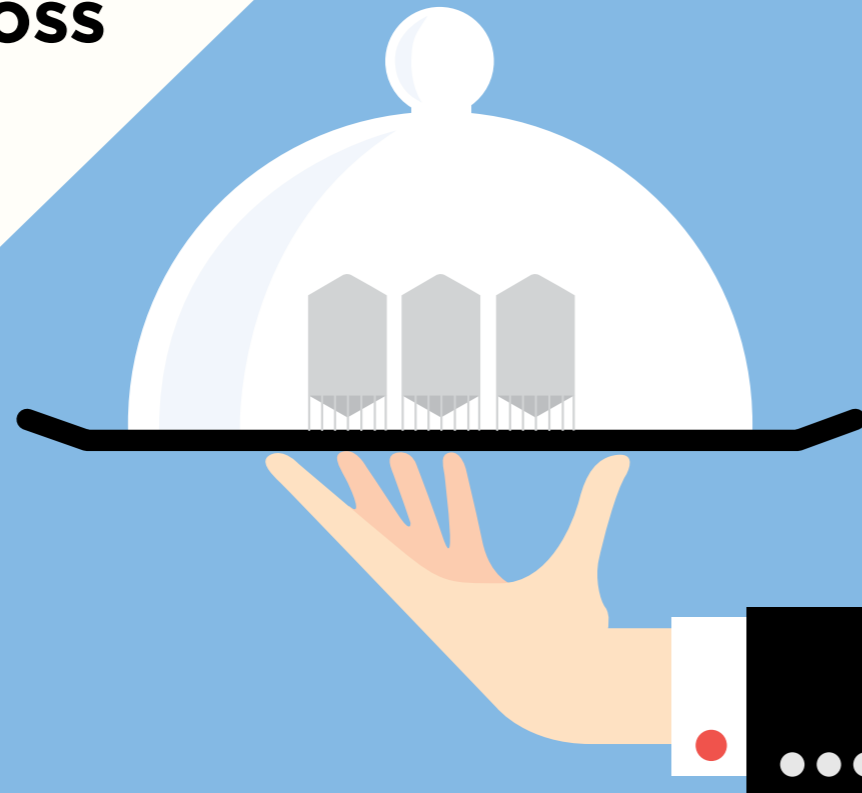
Thus how can new solutions in healthcare be developed to truly meet the health challenges of Africans? Human-centred design has gained traction in healthcare as a process and methodology that yields sustainable, high impact products and services that address the challenges the community cares the most about; builds upon existing strengths and local resources; and can be effectively integrated into daily life and work practices.

To ensure that innovative products or services are grounded in the needs and contexts of users, the starting point for designing a new solution is to lead with empathy. The innovator places himself/herself in the shoes of the user, listens, experiences and keeps an open mind to what the true need for innovation may be and then reframes the problems. This method of design-led innovation goes a step further to facilitate a collaborative process where users from all backgrounds become enabled and equipped to co-creating the solutions. In this way innovation becomes a tool of social transformation.

This design-led innovation process thus moves from empathy, through need identification to ideation of solutions and quickly and rapidly builds a prototype. Rapid prototyping and iteration is vital to ensure a cycle of continuous feedback and to ensure that the innovation meets the real need as well as enhances the user's experience. This process celebrates early failure in order to succeed sooner. ■

3

Key insight: Complex challenges require integrated solutions across silos



3A: Primary health care is about more than just the infrastructure

Contributors: *Lisa Kimbo* (CEO, Viva Afya, Kenya), *Stefanie Weiland* (Executive Director and Burundi Country Director, LifeNet International, Burundi), *Dr Ben Gaunt* (Clinical Manager, Zithulele Hospital, South Africa), *Prof Anjali Sasty* (Director, GlobalHealth Lab, MIT Sloan School of Management, United States).

The value and importance of primary health care as the basic foundation of any healthcare system has been emphasised multiple times. Across the African continent, innovators and entrepreneurs are developing new models of primary care provision. These models are transcending the current challenges to deliver quality primary care that is accessible and affordable to those who need it most. In delivering primary care, it is important to start thinking beyond just the basic building blocks.

Three African organisations delivering primary healthcare shared the models that has allowed them to deliver primary care in an innovative way.

/ Viva Afya, in Nairobi, Kenya, is a for-profit organisation delivering affordable primary healthcare to a low-income population in high-density urban areas. Mid-level healthcare workers run this hub-and-spoke clinic model and great focus is placed on community outreach in the form of education and prevention work.

/ LifeNet International, a not-for-profit organisation, operates in Burundi. Through a convergence franchise model, LifeNet International has partnered with 43 primary care clinics to support them in the delivery of high quality care through appropriate medical and management training, pharmaceutical delivery and loan capital for equipment.

/ Zithulele Hospital, in rural Eastern Cape Province in South Africa is a public-sector district hospital providing specialist care. Zithulele Hospital has however realised the importance of supporting the delivery of primary care services in the community and does this through an outreach model of multi-disciplinary teams and partnering with appropriate non-governmental organisations to support care delivery in this resource constrained environment.

Each of these organisations have identified several key lessons from their experiences:

/ A humble willingness to take risks

It is important to retain humbleness to learn continuously from the local context. This learning only happens by challenging the status quo, taking risks, failing fast and trying again. Through creating an environment where people have the permission to experiment and innovate, learning can be shared collectively.

/ Ask, listen and co-create with the community

Innovation in primary care can't be forced but happens when opportunities present themselves. Through spending time with those delivering care, particularly health workers and patients, new innovation opportunities are identified and existing care can be iterated upon and improved. Real engagement, not consultation, builds better relationships but also enhances the overall care experience.

/ Have a vision

Change in primary care can only happen with a vision or dream for what better care will look like. Without a multidisciplinary team and long-term commitment, no vision can be achieved. A core of committed staff allows for progressively bigger and more engrained challenges to be addressed and ultimately for a change in the institutional culture.

/ Partnership and trust

Healthcare systems across Africa have often failed workers, patients and communities. Shifting from a patronage model of care delivery to one of true partnership with health workers allows for personal relationships to be built, which become fundamental in changing the behaviours, values and attitudes of health workers and as a result yield higher patient outcomes. Sustainable and lasting change can only occur when trust exists. Trust is built through honouring promises, honest dedication and consistency.

3B: Educate our health workers not to address current issues, but rather to be innovators for the health system we want in future

Contributors: *Prof Wim de Villiers* (Dean, Faculty of Health Sciences, University of Cape Town, South Africa), *Prof Patricia McInerney* (Education and Development Coordinator, University of the Witwatersrand, South Africa), *Prof Vanessa Burch* (Deputy Head and Chair of Clinical Medicine, Groote Schuur Hospital and University of Cape Town, South Africa), *Dr Peter Benjamin* (Head, mHealth Capacity Building, mHealth Alliance, South Africa), *Prof Sabiha Essack* (Dean, Faculty of Health Sciences, University of KwaZulu-Natal, South Africa).

South Africa is facing a quantitative and qualitative shortfall of health workers and existing training programmes struggle to meet the country's healthcare needs. World Health Statistics 2011 indicate that health worker density per 100 000 population is substantially lower in South Africa compared to similar benchmarked countries as well as the BRIC nations (Brazil, Russia, India and China). A current shortfall of 80 000 health workers in South Africa is estimated. Neighbouring African countries face even greater shortages per capita.

Innovation in the production and education of a health workforce requires a multitude of stakeholders to reimagine their roles and responsibilities together. By integrating individual and sometimes competing priorities into a collective and overarching goal, equity of access and quality healthcare can be provided by a high quality workforce, across the health system.

Training a future generation of health workers starts before university. Across the country, schemes to support high school students from all socio-economic backgrounds are needed to get students university-ready and to ensure they have the basic educational foundations in place. This support needs to be extended across a student's university duration through adequate mentorship programmes.

The opportunity exists to re-assess how entrance into a career in healthcare is given. Current acceptance mechanisms for university education are biased towards academic marks. Psychometric assessments may be more appropriate in identifying young individuals who will become caring and empathetic healthcare professionals. Students should be trained to meet the needs of the local context both in terms of the disease burden and the ability to deliver care amidst resource constraints. Curricula should be able to empower students not to be passive recipients of knowledge but to equip students to teach themselves and become lifelong learners.

Technology is fast becoming a tool for democratising knowledge across the continent. Although a mobile phone will never cure disease, this tool is becoming a great agent for change and especially for equipping and empowering health workers with the skills and learning they need throughout the course of their career in whatever location they may find themselves. Several existing programmes have shown great ability to achieve this both in providing content and acting as a social support network to connect health professionals working in the most remote areas.

The most important aspect of educating a next generation is to be future-orientated. Currently students are trained to overcome current problems.

Above and beyond the clinical components of a healthcare curriculum, the tools and skills of the innovation process should be transferred to all students. This will ensure students become not only future doctors and nurses but also innovators with the ability to imagine a radically different healthcare system.

3C: M... is about solutions not technology

Contributors: *Dr Patricia Mechael* (Executive Director, mHealth Alliance, United States), *Dr Peter Benjamin* (Director, mHealth Capacity Building, mHealth Alliance, South Africa), *Dr Kirsten Miller-Duys* (eHealth Portfolio Manager, Vodacom, South Africa), *Geoffrey Otieno* (Country Director and Regional Head, Sproxil East Africa, Kenya), *Gustav Praekelt* (Founder and CEO, Praekelt Foundation, South Africa), *Dr Sam Surka* (Associate, Inclusive Health Innovation, Bertha Centre for Social Innovation & Entrepreneurship, South Africa), *Etienne Dreyer* (Associate Director, PricewaterhouseCoopers, South Africa).

Africa has experienced a revolution in the use of mobile phones from a simple handset to a device that could be potentially lifesaving. The transition over the past four years has been rapid from starting with the term mHealth not being recognised, to where it is burgeoning to become a separate discipline in healthcare. Pilot programmes testing the use of mobile phones in healthcare have sprouted everywhere. In South Africa alone there are 96 mHealth pilot projects. As opportunities for mHealth are plentiful, competition should be consolidated into greater collaboration between various stakeholders. Bold leadership and partner agencies are assisting the progression beyond pilots through providing the required policies and guidance to move the innovations forward. However, it is important to clarify what mHealth really is or is not.

M... is for everything

Mobile phones are becoming a tool for Africans to do everything with, from buying airtime, communicating, watching videos to receiving healthcare. The cure is not in the SMS or in the app, but in what the technology enables people to do and achieve within the ecosystem in which they operate.

M... is inclusive

Mobile health is not a separate medical discipline like medicine, paediatrics or surgery. It is the connector of people, organisations, processes and information between various points. It transcends silos and creates a collaborative platform that can facilitate various areas of the health system to work together and ultimately allow for greater

universal access to healthcare. From the outset, applications need to be designed for scale.

M... is about solutions, not technology

Excitement exists around a new technology but the real excitement in mHealth lies in the needs this tool is able to address. The mobile phone is not the magic bullet but merely a tool. The design process is thus a key consideration in the development of an mHealth tool that truly meets the needs of the people it is serving or the people who are using it. The best incentive for the adoption of any new technology is demonstrating the value it is achieving in meeting pressing needs in a manner that is simple, effective and affordable.

M... is to empower

To allow for the uptake of mobile technology, health practitioners should be empowered to use these disruptive innovations. Empowerment starts with involving them in the design of the technology, facilitating senior management engagement as well as providing on the ground support and education.

M... is ready for adoption

This wave of change is here to stay. A recent international research report by PricewaterhouseCoopers has found that South Africa, compared to other countries, is most ready for mHealth innovation. Contrary to other countries, consumers are not as concerned with confidentiality issues and the existing regulatory frameworks in place are ready to embrace it.

3D: Inclusive business models for people, with people

Contributors: *Prof Anjali Sastry* (Director, GlobalHealth Lab, MIT Sloan School of Management, United States) *Joubert Steyn* (Head of Business Development and Marketing, Metropolitan Health Group, South Africa), *James Kiumbe* (Director of Business Operations, Jacaranda Health, Kenya), *York Zucchi* (Founder, Hello Healthcare, South Africa), *Maarten van Herpen* (Innovation Director Africa, Philips Africa, Philips Research, Netherlands), *Dr Shaun Conway* (Associate, Inclusive Health Innovation, Bertha Centre for Social Innovation, & Entrepreneurship, South Africa).

Innovative business models are important to assist African health systems to leapfrog new and more inclusive systems with improved access for all Africans. Organisations, whether for-profit or not-for profit, have a role to play to enable better healthcare delivery but they require a viable, sustainable, reliable and well-designed business model.

The potential achievable social and financial impact of a well-designed business model across Africa is vast. No longer should Africa adopt traditional western models of care but the continent requires new locally developed solutions. The value proposition of business models should be to ultimately allow for healthcare that is accessible and affordable to more people. If this value proposition is achieved, it will have great export potential to European and American markets where the sustainability of healthcare is under threat.

Three enterprises, **Philips Africa**, **Hello Healthcare** and **Sproxil**, shared insights into their business models in terms of their various components: the goals of the organisation; the activities, operations and revenue; the value proposition; and also the measurement of value delivered. Despite operating at different scale, each of these enterprises has a clear mission and goal to improve healthcare for Africans and were able to share lessons and learning that are key to developing inclusive and innovative business models.

/ Real innovation starts through a deep understanding of the needs of people and then developing products that make sense to those people.

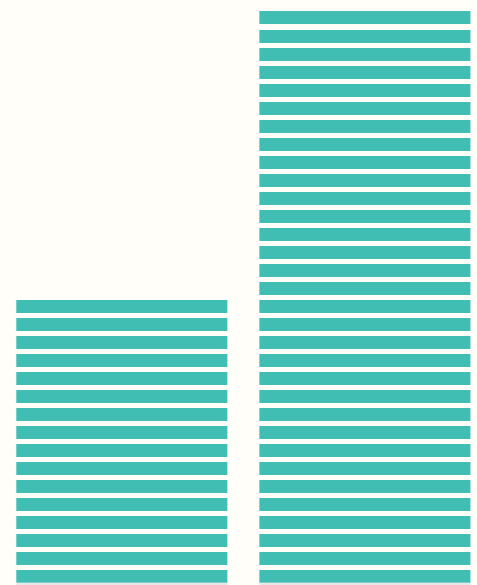
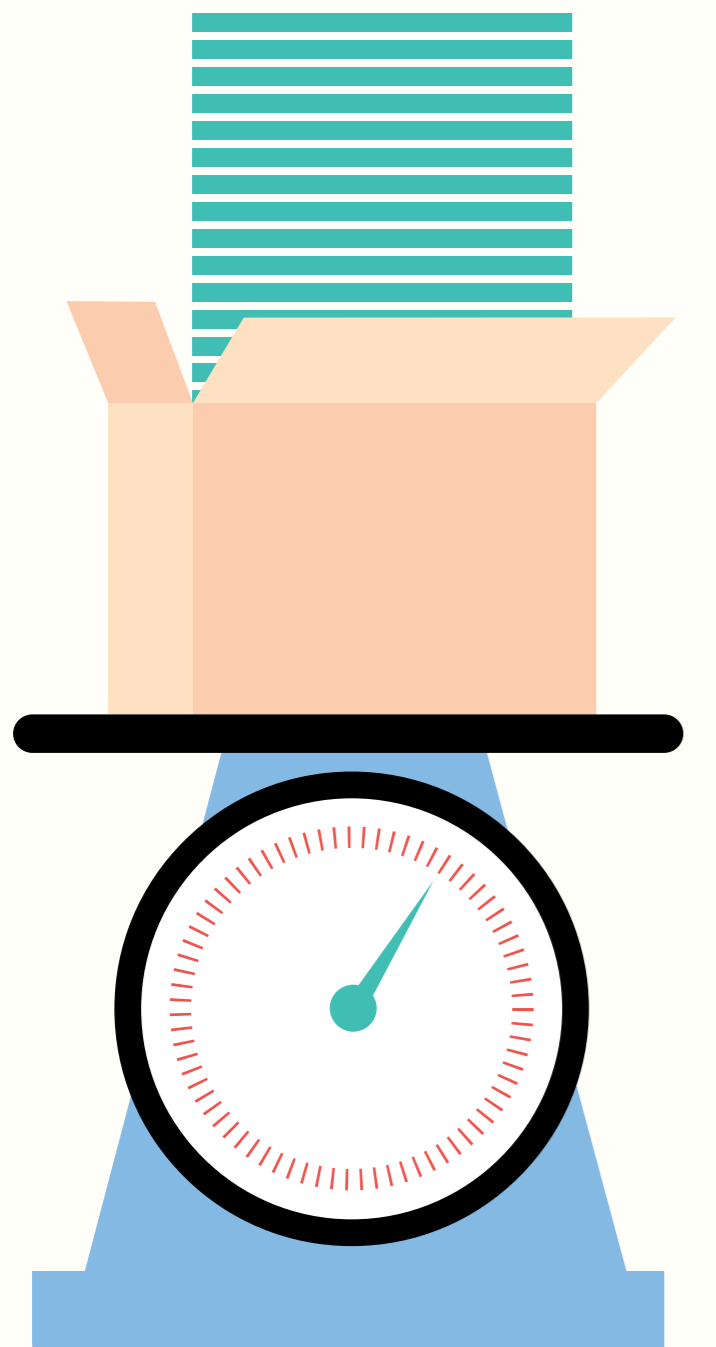
/ Different innovations require different business models. Adapting or changing a product may not require a new business model, however innovations that are disruptive require radically different cost structures and revenue streams. Disruptive innovations could lead to fundamental changes in delivery of care, improved health outcomes, wide-scale community benefits and untapped profitable markets. The risk is higher but the gain is higher too.

/ Co-designing the model with people from the organisation or with those to whom the business aspires to deliver value, allows for a more viable model.

/ Throughout the lifespan of a business, it is important to listen and gain feedback from clients, to iterate and pivot the business model as required.

/ Technology combined with data, either through eHealth or mHealth, are rapidly becoming opportunities for new business models that can deliver healthcare at a scale.

/ Measuring impact in both financial and social terms are key as is documenting all the various components of the business model that are working synergistically to deliver value. ■



Key insight: Measuring impact of innovations may require non-traditional methods



Contributors: *Dr Kamal Bhattacharya* (VP and IBM Distinguished Engineer, IBM Research Africa, Kenya), *Shona McDonald* (Founder and CEO, Shonaquip, South Africa), *Laura Poswell* (Executive Director, J-PAL Africa, South Africa), *Prof Charles Wiysonge* (Deputy Director, Centre for Evidence-based Health Care, Faculty of Health Sciences, University of Stellenbosch, South Africa), *Dr Fabienne Jäger* (Clinical Associate, Swiss Tropical Institute, Switzerland), *Prof Carel IJsselmuiden* (Executive Director, The COHRED Group, Switzerland).

The importance of good evidence is paramount to assess the impact of interventions or products and to inform decision-makers about which innovations should be scaled broadly. Traditionally, the randomised controlled clinical trial (RCT) has been regarded as the gold standard for generating rigorous and reliable evidence. However, more and more, the nature of different innovations calls for a variety of methods to be used as most applicable to the innovator or organisation. Below are some different approaches to assessing impact.

The economists of the Abdul Latif Jameel Poverty Action Lab (J-PAL) in Africa, based at the University of Cape Town, are using the traditional RCT methodology but applying it to social interventions in an attempt to find answers to questions around demand, supply and human behaviour. By applying this methodology in the development space, researchers can generate rigorous impact measures of programmes. A further step is then taken to assess which interventions are good cost effective measures for reaching the poor. In the health area, this has been applied to the pricing of preventative health programmes.

Big data is presenting opportunities for assessing impact like never before. Advanced computing and even cognitive computing can be applied in healthcare to assess impact at a volume larger and cost less

than any previous methods. More and more, the collection of data on a grand scale is becoming easier but this data should not be the proprietary knowledge of one organisation, instead intra-operability and sharing of data is important. That which is currently considered complex and powerful technology will become the norm in the years to come and will transform the way in which health professionals work.

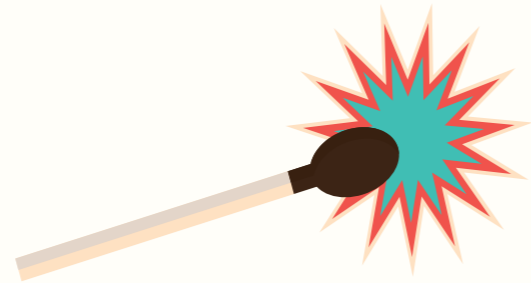
Traditional methods are not often available or affordable to frontline innovators. Shona McDonald, a social entrepreneur and Fabienne Jäger, a medical doctor and public health researcher shared their difficulties in applying traditional methods to assessing impact. McDonald, founder of a social enterprise producing low-cost wheelchairs, has used design-thinking and rapid prototyping as a means to assess the impact her products are having on disabled children. As a clinician working in low-resourced African settings, Dr Jäger has struggled to consolidate the reality of assessing impact of quality improvement interventions in paediatric wards with the traditional methods dictating how best evidence is to be gathered. Dr Jäger emphasises that “randomised clinical trials are important and useful but there is a need to reflect on what is really the evidence needed for decision-making and not for peer-reviewed journals.”

In the debate about evidence, it is important to distinguish between the rigour that points to methodology and the way in which we learn. The latter creates the space for many other methods to assess impact, e.g. cognitive computing or rapid prototyping. Previously we learned on the basis of rigour but for organisations where these traditional methods are unfeasible and unaffordable, new ways of generating evidence with the same power are providing opportunities to assess the innovation’s impact. ■

Key insight: Innovation is ignited through support, capital and practice



The potential for innovation in African health systems is abundant but several strategies at a national and local level need to be put in place. Through support, capital and practice, innovation can be ignited in the people of Africa to ultimately allow for the impact and improvement of health outcomes.



5A: Support innovators through policy and structures

Contributors: *Richard Stubbs* (Head of Commercial and International Innovation, NHS England, United Kingdom) *Dr Richard Gordon* (Director, Strategic Health Innovation Partnerships, South African Medical Research Council, South Africa).

Lessons learned from how other countries have been able to support local innovators could be valuable to Africa. One such example is the National Health Service (NHS) in the United Kingdom. Richard Stubbs, Head of Commercial and International Innovation from NHS England shared on the journey undertaken by the UK thus far to grow and support a culture of innovation in the health system. The NHS has adopted a policy strategy to promote innovation called *Innovation Health and Wealth*. This strategy recognises that despite the abundance of ideas, adoption and scale is severely delayed due to a lack of support. Two further obstacles have been the lack of recognition of innovators within the system and the need for leadership that will foster a culture of

innovation. “For every minute you focus on the potential opportunities for game changing innovations you need to spend twice as long on creating the culture for change and on the strategy of how you will take people with you”, said Richard. To encourage this, it has become a legal requirement for NHS commissioners to promote innovation. Regional bodies comprised of universities and healthcare providers have been established, *Academic Health Sciences Networks*, to consolidate and simplify the landscape. These bodies allow for a more focussed and directed conversation with industry. A single web portal was created for innovators to share their ideas, to find like-minded individuals and to gain support. The *NHS Innovation Challenge* prizes

have been pioneered to direct and encourage hospitals to develop solutions to pressing disease challenge areas in the systems.

Despite the advances made to nurture innovation there still exists a shortfall in innovation entering frontline health worker consciousness. However, an organic movement called *NHS Change Day*, which has emerged spontaneously among frontline providers, has been successful in creating positive change. Every year, health workers pledge to make a positive change in clinical practice or administrative behaviours. Last year alone, 200 000 pledges were received and Richard admits: “The trick for us is not to squash it, not to bureaucratise it, but to let movements like these live on their own.”

From the UK to South Africa...

Through a pioneering new partnership between the South African National Department of Science and Technology and the National Department of Health, focussed on supporting development of basic health sciences, the Strategic Health Innovation Partnership (SHIP) was launched in April 2013. Under the leadership of Richard Gordon from the Medical Research Council, this governmental collaboration is based on a product development partnership model. Serving as a catalyst to support companies throughout the ecosystem, SHIP aims to find, fund and manage the development of high-risk products that address key areas of health needs in South Africa. Similar to the approach taken in the UK, SHIP aims to actively build collaboration between the various universities in South Africa and to leverage their collective skills. As the South African ecosystem supporting basic sciences innovation is very small, this collaboration is important to allow clinicians and scientists to work together to discover a treatment gap with market potential. The role for government is to develop the supportive infrastructure and enable the ecosystem thereby allowing for home-grown intellectual property development.

5B: Blended finance has the potential to ignite innovation and create impact

Contributors: *Jane Newman* (International Director, Social Finance, United Kingdom), *Dr Reinder Nauta* (Managing Director, CareCross Health, South Africa), *Dr Heather Sherwin* (Investment Manager, ELMA Philanthropies, South Africa), *Terry Wyer* (Senior Manager, Global Partnerships & Impact Investment, Cadiz Asset Management, South Africa), *Dr François Bonnici* (Director, Bertha Centre for Social Innovation & Entrepreneurship, South Africa).

A plethora of innovative financing mechanisms, tools and funds have been established through a range of partnerships to stimulate, explore and scale up health interventions in both the public and private

domains in order to increase the access and quality of healthcare delivery in Africa. Current economic times have brought into question the conventional belief that investments exist only to maximise profit and that social impact can only be achieved through charity. Heather Sherwin from ELMA Philanthropies explained that grant making and donor funding alone is not sustainable. Now more than ever, these organisations must be narrowly focussed on their mission and this can be sustainably achieved by putting money to work in the private sector or through public-private partnerships.

In the past four years, the rise of the impact investment sector has emerged as a potential approach to unlocking private capital for social investment. An important area where the social impact bonds have been very effective has been in the area of prevention. Private sector investors align to provide the capital needed to deliver a well-conceived prevention programme. If the set goals are successfully achieved, governments then repay the initial investors. This concept has been successfully applied to 14 programmes in the United Kingdom and has driven delivery. In the health arena, the social impact bond model is being applied to reducing social isolation in the elderly that frequently leads to mental health issues and hospital admissions as well as to the early identification and self-management of diabetes.

Two further examples discussed were that of impact investment funds like AMIIF (Africa Medicines Impact Investment Fund) and HugInsure. HugInsure is the world's first social impact insurance entity to help organizations immediately access funding that might otherwise be tied up in institutional processes or delayed because the risks of development work are not widely understood.

A local innovative South African example of where private sector capital has been applied to allow for more inclusive primary healthcare delivery is that of OSCACare, a medical insurance product developed by CareCross. For only R195 per month, low-income workers can receive unlimited access to primary healthcare services. This is achieved through eliminating the inefficiencies that drive cost in healthcare and using a capitation model instead of the tradition fee-for-service model for healthcare providers. This is proof that affordable, high quality healthcare is possible.

5C: No solution comes without practice: Hacking for Healthcare 2014

Contributors: *Dianna Kane* (Senior Designer, Medic Mobile, United States), *Hadi Salah* (Facilitator, Hacking Health, Canada), *Dr Sam Surka* (Associate, Inclusive

Healthcare Innovation, Bertha Centre for Social Innovation & Entrepreneurship, South Africa), *Dr Shaun Conway* (Associate, Inclusive Healthcare Innovation, Bertha Centre for Social Innovation & Entrepreneurship, South Africa), Dirk Hanekom (Consultant, Inclusive Healthcare Innovation), *Dr François Bonnici* (Director, Bertha Centre for Social Innovation & Entrepreneurship, South Africa), *Dr Lindi van Niekerk* (Lead, Inclusive Healthcare Innovation, Bertha Centre for Social Innovation & Entrepreneurship, South Africa).

On 24 and 25 January 2014, a hundred frontline health workers, software developers and designers gathered at Groote Schuur Hospital in Cape Town to address some of the public sector's most pressing challenges through a mobile or web-based solution. This first, Healthcare Hackathon applied design-thinking and start-up methodology to facilitate participants through a process of converting challenges into ideas and building rapid prototypes.

This effort was consciously undertaken in an attempt to stimulate and build a culture of innovation in the public healthcare sector in South Africa. This arena is well known for the problems encountered daily in the delivery of healthcare amidst resource constraints as well as the low motivation and morale of health workers. To date, the system has not had avenues where skilled people outside of the health sector could contribute towards the collective development of new solutions. Fast advancing technology is also causing a growing divide between the public-sector health and the technology community. Health workers of all cadres have a deep understanding and experiential knowledge of the areas where innovation is needed. Technologists and designers have the practical skills to build solutions to these needs. Bringing diverse stakeholders together is the catalyst for innovation.

This Healthcare Hackathon was a testimony to the passion of ordinary South Africans to improve healthcare as their energy, motivation and dedication never ceased over 48 hours. The event began with an empathy workshop, led by Dianna Kane from Medic Mobile and Hadi Salah from Hacking Health Canada. All participants informally shared their challenges on the "Empathy Wall" followed by short presentations by health workers and even patients. Multidisciplinary teams formed around the various challenges and each team spent the afternoon scoping the exact need by talking to other health workers, patients or visiting areas in the hospital. This was followed by a lively brainstorming session and finally the hacking of new ideas began at the end of Day 1. A noticeable difference was the lack of commercial motivation driving the proposed ideas and the empathy-driven design approach used to come up with solutions. All participants were focused on a common goal: a more affordable, accessible and inclusive healthcare system for all citizens. Participants returned early on the second day to continue hacking and preparing for the judging ceremony at the end of the day.

As smartphones have not yet achieved wide-scale spread in Africa, a number of teams focused on developing solutions tailored to feature phones. VUMI, the SMS-based technology presented by the Praekelt Foundation, and the Mezzanine platform made it possible to develop a diabetes management app, a patient-doctor feedback system and patient appointment reminder system. Some hardware-based solutions were developed to better manage beds in health centres and to track patient waiting times in primary care clinics.

The Hackathon concluded on Day 2 with demo presentations attended by the Chief Operating Officer of Groote Schuur Hospital, the Head of Strategy for the Western Cape Provincial Department of Health and the Head of Tertiary Care for the National Department of Health. The event received recognition on national television. An independent judging panel assessed each of the solutions and three semi-finalists were selected to present at the Inclusive Healthcare Innovation Summit.

The final winner was **ECTracker**, a team led by UCT medical student Farah Jawitz. The winning team was awarded a prize worth R15 000 from PricewaterhouseCoopers (PwC). The three leading teams will receive further incubation support from Inclusive Healthcare Innovation and PwC.

See below for more information about the solutions developed:

Winner: ECTracker

Team:

Farah Jawitz (Medical Student, University of Cape Town (UCT)), *Muzzammil Ismail* (Medical Student, UCT), *Debré Barrett* (User-Experience Director, Flow Interactive), *Jennifer Poole* (User Experience Consultant, Flow Interactive), *Steven Sajja* (BCom Information Systems Student, UCT), *Jarred Martin* (MSc Computer Sciences Student, UCT), *Javonee Martin* (BSc Honours Computer Science Student, University of Stellenbosch), *Sikumbuzo Mabunda* (Public Health Registrar)

Solution:

A native android application and web app that is designed based on the needs identified in regards to inefficient processes resulting in poor patient flow at Groote Schuur Hospital's emergency centre. ECTracker enhances patient flow by reducing bottlenecks, improves registry on the system and serves as a visual indicator of the number of unseen patients. Real-time tracking of the patient's journey from arrival to discharge is possible with minimal electronic input by healthcare workers. The ultimate goal of the application is to improve the productivity of emergency teams and enhance the quality of service to patients in hospitals in emerging economies.

Semi-Finalist: Theatre Waiting List

Team:

Dr David Carmen (Medical Doctor and Linux Systems Engineer), *Dr Robin Dyers* (Public Health Registrar, University of Stellenbosch), *Kate Whittaker* (Instructional Designer and Digital Project Manager, UCT), *Samuel Tome* (Linux Systems Engineer), *Dr Naadira Vonker* (Medical Doctor)

Solution:

Due to resource constraints, there exists a long, first-come-first-serve waiting list for public sector patients requiring hip and knee replacement (arthroplasty) surgery. The team identified a need that exists in the Western Cape Province to have a unified list that can prioritise patients for surgery in terms of need and length of time waiting. A web-based interface was developed for use by clinicians across the province, accessible through the current information system platform (Clinicom).

The application allows for a clinical and scoring systems module as well as interoperability functions. This goal of the application is to assist in reducing delays for patients requiring surgery.

Semi-Finalist: Gratify

Team:

Sifiso Duma (Computer Science Student, University of Western Cape (UWC)), *Prangnat Chininthorn* (Computer Science Student, UWC)

Solution:

Gratify rating system aims to improve healthcare service delivery in South Africa by prompting a patient to rate a service provided by the healthcare personnel after visiting a healthcare setting. This application was developed in response to interviews with patients revealing that they often get unfairly treated when visiting a health facility and interviews with health workers stating their high stress levels from working in resource-constrained settings.

Based on the notion that competition can spur enhanced performance, the Gratify application prompts a patient to rate and leave encouraging comment about the service assisted by specific personnel at a healthcare setting which will then feed back to management and assist them in improving the facilities. The application is based on a USSD platform to allow for accessible and affordable access, as well as real time communication.

Other solutions developed:

Look-see-do – a low-cost software-hardware solution to provide a real-time indication of hospital bed occupancy. This solution will allow ambulances to be directed to hospitals with available beds, assist casualty staff with patient admissions and is ideal in disaster management situations. A dashboard will receive information automatically from occupied hospital beds and provide an indication of the number of available beds per hospital in the city.

Sweet Life – a diabetes management application that can be used on both smart and functional cell phones. This allows it to be used by all people who have diabetes and its simplified design makes it ideal for children with diabetes as well. Its functionality includes blood glucose management (capture and generate a report of readings); hypo alerts (send a SMS to a predefined emergency contact person in case of a hypoglycaemic episode); and motivational tips to reach optimal glycaemic levels.

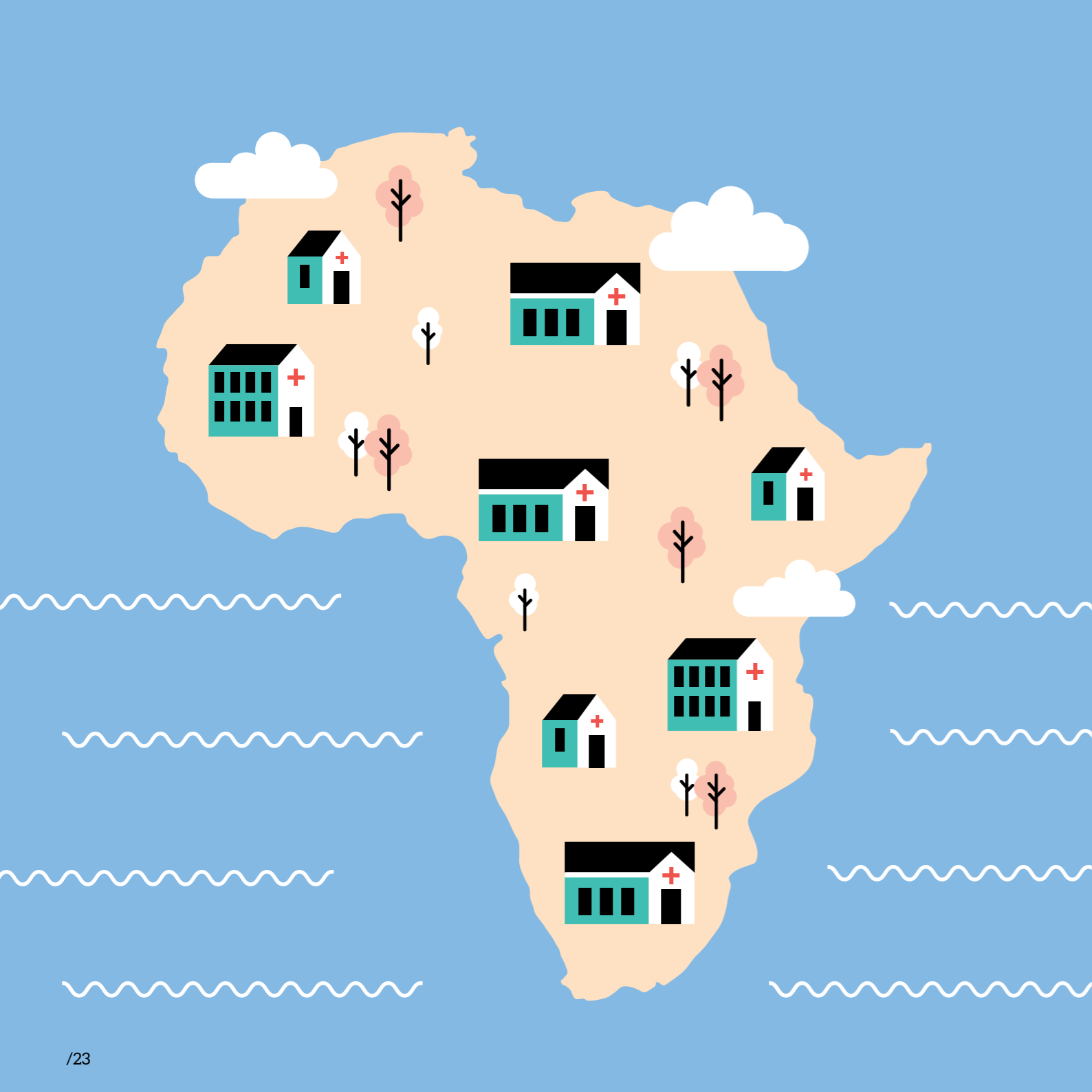
Prescription Pulse – a drug administration module of Pulse+™, an online medical administration application. The primary purpose of a RX Pulse is to allow medical professionals to electronically prescribe medication anytime and anywhere. An electronic prescription tool will allow for better communication between doctor and pharmacist, faster service and lower error rates.

Barcode Scanner – Patients attending primary care clinics often wait for many hours before seeing a health worker. Although more health workers are not a current solution, operational inefficiencies can be addressed. A solution using barcode scanners can assist in assessing patient waiting times and by doing so identify the bottleneck areas where attention is required.

Bophelo – Identity is the cornerstone of electronic health records. No consistent way exists to identify patients wherever they are. Using the fingerprint as an ID, Bophelo attempts to design a universal identification system for all citizens.

Catch & Match – A rapid risk assessment and response tool for young children and their mothers. Catch & Match attempts to identify at-risk youth before their health and wellbeing deteriorates to a point at which their life is in jeopardy (from a health and social perspective).

Healthy Life – a program that incentivises wellness and a healthy lifestyle. ■



Key insight: Healthcare solutions for africa already exist locally



Health Innovator's Review 2014

Contributors: *Dr Lindi van Niekerk* (Lead, Inclusive Healthcare Innovation, Bertha Centre for Social Innovation & Entrepreneurship, South Africa), *Dr François Bonnici* (Director, Bertha Centre for Social Innovation & Entrepreneurship), *Dirk Hanekom* (Inclusive Healthcare Innovation), *Rachel Chater* (Inclusive Healthcare Innovation), *Gus Silber* (Independent Journalist, South Africa), *Mark van Dijk* (Deputy Editor, Men's Health South Africa), *Peter Maltbie* (Photographer, South Africa).

The need for solutions to improve healthcare in Africa is abundant and often we do not need to reinvent the wheel or start from scratch. Across the continent, there already exist passionate and resilient people who have successfully challenged the status quo by designing and implementing an innovative solution to improve the healthcare delivered to their local community. These change-makers need their work to be acknowledged, to receive the exposure and to be supported so that their solution can scale. The benefit of sharing the solutions they have developed is that this broadly enables other communities, the country and the continent to learn from their best-practices and in so doing achieve improved healthcare for all Africans at a faster pace.

The 2014 Health Innovator's Review, published by Inclusive Healthcare Innovation, focussed on finding, documenting and acknowledging South African health innovators. The 120-pages publication includes people from all walks of life: health workers, students, social entrepreneurs and larger organisations. The underlying premise of the review is that all have a valuable contribution to make to the improvement of healthcare at a national level.

In July 2013, an open call for nominations was widely distributed calling for people to share existing solutions that they have designed and implemented. These solutions had to meet three main criteria

of being inclusive (ability to provide care to the majority of South Africans), affordable (reduces costs or is more cost-effective than existing solutions) and effective (has resulted in a measurable improvement in healthcare). Over 100 nominations were received from all over South Africa within the areas of chronic disease, HIV/AIDS, maternal and child health, eye health, disability, trauma, general health and human resources.

Each of these nominations were reviewed and a shortlist of 58 nominations meeting the criteria proceeded to be reviewed by a panel of international and local experts in medicine, public health, management, design and innovation.

International experts were:

- Prof Anjali Sastry, Director GlobalHealth Lab, MIT Sloan School of Management, United States
- Thulasiraj Ravilla, Executive Director Aravind Eye Care System, India
- Michael Norton OBE, Founder, Centre for Innovation in Voluntary Action, United Kingdom
- Andrew Jack, Health Correspondent, Financial Times, United Kingdom
- Dianna Kane, Senior Designer, Medic Mobile, United States

Local experts were:

- Dr Peter Raubenheimer, Head of General Medicine, Groote Schuur Hospital, South Africa
- Prof David Woods, Emeritus Associate Professor of Neonatology University of Cape Town, South Africa
- Glaudina Loots, Director of Health Innovation, National Department of Science and Technology, South Africa
- Prof David Sanders, Emeritus Professor Public Health, University of the Western Cape, South Africa
- Dr Dan Ncayiyana, Medical and Public Health Specialist, South Africa

Finally, 15 innovators were selected to be featured in the Health Innovator's Review. Each innovator was interviewed to gain a deeper understanding of their work and the impact it has had. The publication complimented the innovator profiles with opinion pieces and key articles by the expert panel and frontline health workers, students and academics.

The Bertha Centre for Social Innovation & Entrepreneurship provided five awards worth R10 000 to the leading innovators. To acknowledge the innovators, share their work and to inspire others to action, these innovators were invited to present their work at the Inclusive Healthcare Innovation Summit.

The awards in each of the categories were as follows:

Award – Collaboratively Reimagining Care.

Innovation calls for co-creation: people from all walks of life, sectors and disciplines uniting to imagine and develop bold solutions to improve healthcare. This award shone the spotlight on two successful projects that offer proof of the power of collaboration in healthcare.

- **Operation Sukuma Sakhe** (*Stand up and build*) is an initiative of the KwaZulu-Natal Office of the Premier and Broadreach Healthcare, bringing government, municipalities, NGOs and communities together in a united front against poverty and illness to meet basic needs and strive towards the highest ideals of poverty alleviation. Building on the military metaphor, this programme has developed "war rooms" in the municipal wards which serve as a base for community development workers, community caregivers, youth ambassadors and other field workers called to meet the most basic needs of poverty alleviation. Operation Sukuma Sakhe improves the health of the rural communities through assisting people to graduate from poverty to independence. Already, more than 2 000 community health workers have been trained in primary health skills, including screening for HIV and TB, monitoring early childhood development, checking adherence to ARV regimes, and performing home-based care.

Award Recipient: *Dr Fekile Ndlovu*

- **Electronic Continuity of Care Record** (eCCR) is a project initiated at Groote Schuur Hospital, Cape Town and developed by the Western Cape Department of Health to bring clinical electronic record keeping into a South African public sector setting. This easy-to-use software

application, designed with input from ward clerks, clinicians, hospital managers and directors, aims to address the issues faced by poorly written discharge summaries and the lack of continuity of care which exists between specialist and primary level care. This application thus integrates and streamlines all the forms for a patient discharge, captures ICD codes, prescriptions and other data prior to discharge. This application is seen as a key part of the Western Cape Department of Health's strategy, Healthcare 2030, to achieve more patient-centred healthcare.

Award recipient: *Dr Robin Dyers*

Award – Transforming the System from the Inside-Out.

Africa's health workers are a force to be reckoned with. These passionate and dedicated individuals deliver care to high volumes of patients amidst some severe resource constraints. However, some go even beyond their daily jobs to develop innovative solutions that can enhance care at a broader scale for the patient community they serve.

- **Parents Guidance Centre** is based at the Gelukspan District Hospital in the rural area of the North West Province. This centre is a beacon of hope for those living with physical disabilities due to cerebral palsy. This centre confronts and challenges the age-old perception that disability is a curse and provides interactive therapy and educational programmes to inspire, uplift and empower marginalized rural children. Working with a team of physiotherapy assistants, community-based volunteers and parents, Undine Reuter, founder and innovator focuses on shifting these kids from institutionalisation to inclusion into their communities. Undine or "Mmatumelo" (mother of faith) as she is fondly referred to, believes that given access to services, including long-term study and work opportunities, severely disabled children have a better chance of becoming self-sufficient adults who contribute to society. This centre is able to achieve its huge impact on a modest budget of R250 000 annually.

Innovator and Award Recipient: *Undine Reuter*

- **AfriTox**, developed by Dr Clare Roberts at Red Cross War Memorial Childrens Hospital Cape Town, is a novel digital and online database of toxins and toxic substances that provides easy and potentially life-saving access to relevant and appropriate knowledge when a child has ingested a poison. Across the Cape Flats this problem is abundant and in South Africa, 70% of all victims of poisoning are children aged 1—2 years. Afritox is one of only four poison databases

worldwide, in English, and the only database unique to Africa, a continent where local knowledge of indigenous poisons really matters. Doctors anywhere can access this database from a desktop, laptop, smartphone or tablet. Downloadable versions exist in areas with poor internet access. This database assists doctors to accurately identify the poison and provides over 600 treatment protocols. This innovation not only holds the potential to save multiple lives across the continent but also contribute to saving money due to reduced hospital costs.

Innovator and Award Recipient: *Dr Clare Roberts*

Award – Minding the Gap.

With 24% of the global disease burden but only 3% of the global health workforce, a variety of strategies have been tried in Africa to either increase the number of health workers or to prevent existing health workers from leaving for greener pastures. However, as these strategies have yet to prove effective, new innovative programmes and processes should be conceived to allow for a new generation of health workers on the continent who will have the clinical competence but also the social consciousness to take responsibility for the health of their communities.

- **Umthombo Youth Development Foundation** provides an innovative programme of training, mentorship and support to ambitious rural students to become the healthcare professionals of the future. This scholarship and mentorship scheme was set up in 1998 by Dr Andrew Ross in an attempt to address the shortages of rural healthcare professionals. The programme starts even before university as Umthombo seeks out talented youth and assists them to prepare for university, supports them throughout and then ensures that they return during the course of their studies and afterwards to be embedded and serve the people of their local community. To date, the programme has already produced 180 graduates in 16 health professions and over 80% are still working in rural healthcare in their home communities.

Award Recipient: *Dr Gavin MacGreggor*

Award – Enabling Inclusive Technology.

As we move deeper and deeper into the technology era it is important to become conscious to its effects. Technological advances are not always synonymous with improvements in healthcare. Thus, it is imperative to

design products based on deep understanding and empathy of the needs of people. Such technology can enable the delivery of healthcare and empower communities to achieve good health.

- **The Praekelt Foundation**, a non-profit organisation founded by Gustav Praekelt in 2007, harnesses the power of mobile technology to improve the health and wellbeing of Africans. Over the past six years the organisation has developed several programmes to address pressing health needs. TxtAlert is a SMS service sending messages to people with chronic conditions, e.g. HIV, to remind them to take their medication and attend their clinic visits. A newer initiative, MAMA (Mobile Alliance for Maternal Action) uses three mobile channels to inform and empower mothers during pregnancy and up to the age of her child's first birthday. Inclusive, easy to use and affordable, the Praekelt Foundation's work is proof that mobile technology can make connections enabling behavior and lifestyle change.

Award Recipient: *Simon de Haan*

Award – Pioneering Approaches Delivering Value.

The essence of healthcare lies in caring for our fellow human beings and care is achieved when a focus is placed not only on the type of service delivered but the experience of the services. New health services should focus on achieving greater efficiency but in the design of these, a deep understanding is needed of the people for whom the service is being created.

- **Kheth'Impilo** is a not-for-profit organisation that arose from the passionate desire of Dr Ashraf Grimwood to see an AIDS-free generation in his lifetime. The organisation contributes to the fight against the HIV epidemic by helping fill the gap through the provision of specialist education on HIV and TB management for clinical staff, training, mentoring and deploying cadres of health workers within affected communities. These innovative leadership programmes support the transformation in the public health sector by creating employment and mobilising funding. One of the core components of Kheth'Impilo's work is patient advocacy which brings one-on-one counselling and support to people living and grappling with the challenges of living with HIV and AIDS. Today, this organisation employs over 900 staff, including 450 patient advocates (people who themselves have HIV), and reaches over 200 000 patients and their families in high prevalence areas in the Eastern Cape, KwaZulu- Natal, Mpumalanga and the Western Cape.

Innovator and Award Recipient: *Dr Ashraf Grimwood*

Next Steps for Inclusive Healthcare Innovation

To conclude the first stage of our collective journey, the Inclusive Healthcare Innovation Initiative was formally launched on 30 January 2014. This joint initiative between the University of Cape Town's Graduate School of Business and the Faculty of Health Sciences will contribute to reimagining a transformed system of healthcare delivery in Africa.

We believe that through this initiative we have framed an approach to healthcare innovation in Africa, for Africa.

In summary, the potential of inclusive innovation is to open the gateway to anyone in healthcare to contribute and to participate. It serves to benefit the broader society and economy as a whole. It is based on an understanding of the real health needs and is driven by empathy. It seeks pioneering solutions and business models that allow for healthcare solutions to be delivered to as many people as possible. It calls for inclusiveness through co-creation, acknowledging all people as potential innovators, in government, in business, in academia, in the healthcare system and society at large. It brings different disciplines together – public health, medicine, business, financing, management, engineering, and design – on the quest to see things differently. It seeks not just to change processes and products, but to change the routines, attitudes, resources and beliefs of the health workers who deliver them. Finally, it can transform, incrementally, radically, and potentially on a scale as large as the continent itself.

The Inclusive Healthcare Innovation Initiative envisions being an enabler of social innovation in the health sector in South Africa and Africa. This will require collaboration with government, organisations and individuals.

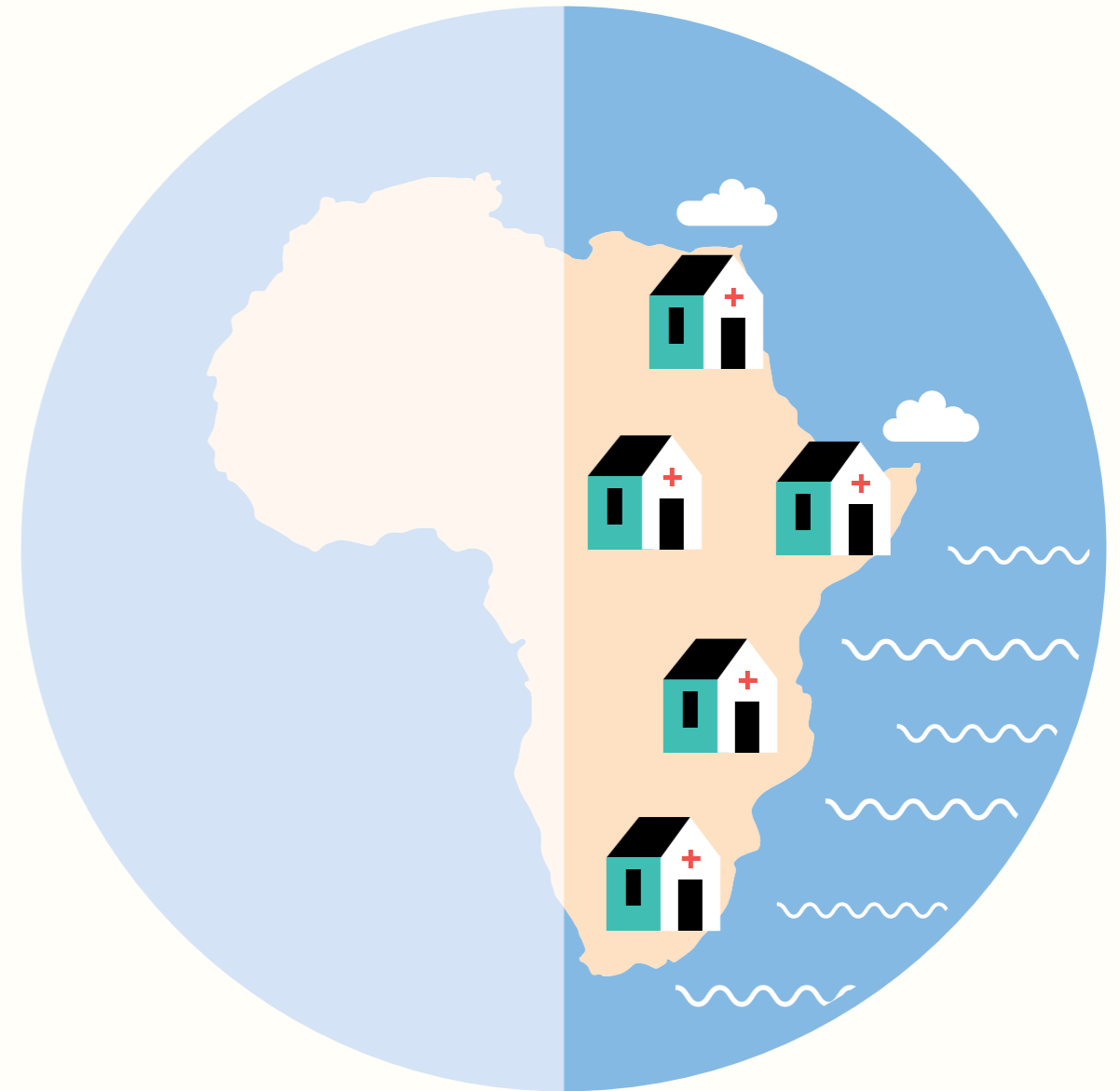
The next steps for the initiative are to:

/ Serve as a thought-leader and develop a knowledge base for inclusive healthcare innovation in Africa through publications and contextual research.

/ Contribute to the health system's capacity development for social innovation through education, facilitating cross-sectoral and cross-disciplinary platforms and disseminate methods and tools on the innovation process to healthcare organisations.

/ Create opportunities and provide practical support and advice to frontline innovators across Southern Africa through workshops and programmes.

Positive impact and change in African healthcare will only be achieved if we all join this movement towards inclusive healthcare innovation. ■



We hope this report has provided you with the knowledge, insight and inspiration to plan your actionable next step in inclusive healthcare innovation

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A JOINT INITIATIVE OF THE BERTHA CENTRE FOR SOCIAL INNOVATION & ENTREPRENEURSHIP, THE GRADUATE SCHOOL OF BUSINESS AND THE FACULTY OF HEALTH SCIENCES, UNIVERSITY OF CAPE TOWN.

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We thank Sarah-Anne Arnold, Prof Walter Baets, Rachel Chater, Shaun Conway, Prof Wim de Villiers, Dirk Hanekom, Nicolette Laubscher, Prof Bongani Mayosi, Dr Peter Raubenheimer and Sam Surka for their support and contribution.

Design, layout and print: DEEP Agency

