

Windsor Consultation

“Imagine the Possible: Digital Innovation, Health, and Rehabilitation”

Strategies & Solutions - *Partnerships in Practice*

6-8 May 2014

St. George’s House, Windsor Castle, UK

Concept Note

Background

Within the framework of the global consultations on the United Nations Millennium and Sustainable Development Goals post-2015, the International Council for Caring Communities (ICCC) is organizing an international working session composed of a non-traditional gathering of governmental representatives, business leaders, educators, health professionals, and rehabilitation experts. The focus of the Windsor Consultation is to leverage their insights and expertise in addressing three major elements for enhancing “Better Living...Adding Life to Years “ by connecting the dots for Digital Innovation, Health, and Rehabilitation. The Windsor Consultation is part of the “Age of Connectivity: Cities, Magnets of Hope, Imagining the Possible” Dialogue Series which has addressed the challenges facing a rapidly urbanizing world since 1994.

The recommendations resulting from this event will be reviewed by the relevant United Nations Commissions and Forums. Actions will be taken to delineate, develop, up-scale and implement programs related to local cultures. It will also explore how a holistic approach enhanced by technology can be incorporated to facilitate the improvement of urban development outcomes. The high-level Windsor Consultation “**Imagine the Possible: Digital Innovation, Health, and Rehabilitation**” will be held at St George’s House, Windsor Castle, 6-8 May, 2014. The Consultation Chairs: Dr. Denis Gilhooly, Global Digital Innovation & Investment Initiative, Dean Craig Lehmann, School of Health Technology and Management, Stony Brook University, Dr. Bryan O’Young, Rusk Institute of Rehabilitation Medicine, NYU will lead the three related tracks of (I) Digital Innovation and Investment, (II) Women’s and Children’s Health, and (III) Rethinking Rehabilitation Medicine.

Importantly, the upcoming event will build on previous Windsor Consultations and in particular the November 2013 dialogue “**Innovation for Urban Development: Cities, Magnets of Hope**” which outlined the general purpose technology platform for delivering digital and smart cities in cooperation with UN Habitat. The challenge and opportunity, which will be explored in further detail in May, is to take this overarching platform and engage specific population needs and communities of interest in health, education, business and government services for the delivery of “digital public goods”. In this context, what are the pertinent issues pertaining to targeted sectors, where is most progress being made and what is needed in constructing principals for a new urban paradigm for the cities we need. Results and recommendations will feed directly into the *World Urban Campaign* and the *Habitat III* preparatory process.

The Windsor Consultation May 2014 is also designed to complement the important work of UNFPA. UNFPA welcomed the 47th session of the *Commission on Population and Development (CPD)*, which took place from 7-11 April 2014 at UN Headquarters in New York. The CPD adopted a resolution reaffirming the groundbreaking and forward-looking Programme of Action of the 1994 International Conference on Population and Development (ICPD).¹ It recognized that population and development issues, including gender equality and women’s

¹ See “*Commission on Population and Development Forty-seventh session: Assessment of the Status of the Programme of Action of the International Conference on Population and Development*”, 12 April 2014

empowerment, the needs and rights of adolescents and older persons, sexual and reproductive health and reproductive rights, migration and urbanization are essential to sustainable development and pave the way to align the findings to enhance our common efforts to build a more sustainable and inclusive future beyond 2015.

I - Digital Innovation & Investment: Bridging Network & Development Mega-Trends

Although there has been an underlying assumption that science, technology and cultural innovation should be harnessed as cross-cutting enablers for accelerating achievement of the Millennium Development Goals (MDGs), this has been far too slow to occur in practice. The fact that no plan of action yet exists to remedy this situation in the Sustainable Development Goals (SDGs) consultations is a cause for serious concern, as is the apparent lack of a specific Science, Technology and Innovation (STI) and Information and Communication Technology (ICT) global partnership for development component. Worries also persist that the ongoing SDG consultations are far too broad in scope, and in some areas actually competing in a dual track process with the *Rio+20 Summit* outcomes. All these issues must, as a prerequisite, be addressed before the planned *World Humanitarian Summit* in 2015.

This will be no easy task. The faltering global climate change talks in Copenhagen and Rio de Janeiro did little to instil confidence in the multilateral negotiating process. If a future that includes increased frequency and severity of climate-related shocks, disasters and pandemics (likely with zoonotic origins) cannot bring world leaders to the head table, the general public is entitled to ask, “What will?” How leaders can craft sound development policies in a time of austerity and limited financial resources is of course problematic. But global warming is just one of the socio-economic mega-trends that governments, business and civil society will be forced to confront in the short- to medium-term.

The demographic revolution is obviously another. According to the United Nations, the population aged 60 years or older is estimated to reach nearly 2 billion by 2050 when it will be as large as the population of children aged 0-14. With this shift, there will be accompanying changes in disease patterns such as the spike in chronic non-communicable diseases (NCDs) and associated risk factors. Likewise, we are witnessing the rise of “mega-cities”. More than 50% of the world’s population currently live in urban areas and this is expected to increase to 70% by 2050. The World Health Organization (WHO) estimates the majority of this urban population growth will occur in cities of developing countries.

At the macro-level, we can already see social and economic development converging. The relationship among the state, citizens and business is increasingly dynamic and systems are changing. The correlation between social and economic development is reflected, for example, in the inclusion of health and education in development policies and in other inter-sectoral approaches. At the same time, frontiers of public sector reform are shifting. In the future, there will be increased interaction by and amongst institutions in various sectors as well as heightened informality within global labour. Silos will be broken down leading to a deeper complexity of mixed systems – both public and private – particularly in the health and education sectors.

Figure 1 – Global Digital Innovation & Investment Dynamic



Our social futures are altering beyond recognition as the digital revolution races ahead. Personal, radical connectedness to free flows of ideas and information will continue to place stress and in some cases distress on many established industries and institutions. Changes in the access to information and modes of communication will continue to empower citizens, yet as the “Prism” revelations have shown also raise major privacy concerns as will the growing social isolation and exclusion. New ways of learning with massive open, online courses (MOOC) offer opportunities for scalable, sustainable and profitable forms of skills, training and education. Game-changing advances in scientific research and medical science will likewise transform health care.

In fact, we are fast approaching a strategic inflection or tipping point in digital development. Technology and innovation actors who accelerate – and, indeed, enable – the vision of “development everywhere and for all” by bringing to market the needed products and services will be well positioned to participate in an historic solution to one of humanity’s most pressing issues in poverty reduction. And they will be able to realize a tremendous growth opportunity as the epicenter of the development shifts from the government to wherever the citizen happens to be. Not only are the technology and innovation available, but consumers, governments, institutions and society at large are increasingly ready for a digital power shift in global development.

However, for development everywhere and for all to work in practice, emerging network and development mega-trends will need to coalesce (see Figure 1). In terms of STI and ICT, the technology and innovation mega-trends with the potential to enable a new digital development dynamic will be driven primarily by the proliferation of **Broadband Communications** in combination with the four other currently converging, and some might argue most fashionable, ICT mega-trends: smart mobility; social networking; cloud computing; and big data analytics – in theory all working together and in concert:

- **Smart Mobility** – a collective term to describe various wireless devices (smart-phones, tablet computers, and mobile-enabled devices), their networks and the applications that drive their usage.
- **Social Networking** – interactive network communities that allow people to develop relationships and discover relevant information in both personal and business contexts.
- **Cloud Computing** – a model for enabling on-demand access to a shared pool of computing resources (networks, servers, storage, applications and/or services) that can be rapidly provisioned and scaled.
- **Big Data Analytics** – the computer resources, software, techniques and business strategies necessary to mine business data and transform it into actionable insight.

The question of how the existing and new Goals will institutionally and in practice address these network and development mega-trends will require a step change in thinking, commitment and action from all stakeholders. The trick will be retaining the best of the old while ushering in the shock of the new. Indeed, thinking digitally about what the great social scientist Ithiel de Sola Pool called the “*Technologies of Freedom*”, which could equally evolve as the “*Technologies of Incarceration*”, may offer us a unique opportunity to open so many traditional issues around health, education, gender, youth, age and employment that have remained shrouded in stigma and taboo in the development field since the birth of the Breton Woods and United Nations family.²

Questions for Consideration

How do reinforce the linkages between the priorities of the ICPD Programme of Action and sustainable development giving particular attention to addressing shortfalls in the Programme whilst ensuring effective monitoring of progress?

How do we define digital innovation and investment as it pertains to local, national and global development?

² See “*Scaling Science, Technology and Culture to Meet the Millennium and Sustainable Development Goals*”, Global Digital Innovation & Innovation Initiative 2013-2015, 23 September 2013, www.gdiii.org

What are the areas of prioritization for the maximum impact of intervention?

What new and truly innovative digital goods and services in the public and private domains will entrepreneurs be able to create using transformational technologies, and just how will they be monetized for payment and payback?

How can digital innovation and investment flourish in today's somewhat surreal state that combines the discontinuity of disruptive change with the continuity of total connectedness and convergence?

How do we reconcile the democratization and decentralization of digital power to the individual somehow co-existing with the concentration and centralization of digital assets among industry leaders?

II - Every Woman, Every Child - Creating Cost Effective Health Technology for the World

Of the 136 million women that will give birth this year, 58 million will have no medical assistance. A recent study by The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) health sector program in Kenya, "New Roadmap for Maternal and Newborn Health"(MNH), has specified three high impact objectives targeting this statistic:

- 1) To increase the availability, access, acceptance and utilization of skilled attendance during pregnancy, childbirth and post partum period at all levels of the health care delivery system;
- 2) To strengthen the capacity of individuals, families, communities and social networks to improve maternal and newborn health; and;
- 3) To strengthen data management and utilization for improved MNH". In response our speakers will propose to utilize technologies that overcome barriers of resource availability and remote geography, coupled with low cost devices that can improve healthcare outcomes.

The Every Woman, Every Child (EWEC) track will focus on MDG 4 Reduce Child Mortality, and MDG 5 Improve Maternal Health, that are a special initiative of the UN Secretary-General including the *EWEC Innovation Working Group (IWG)*. The discussion will tap into the rapidly expanding global marketplace for technology innovations that show potential for improving health outcomes and strengthening health systems in developing countries. The geographic area of our case study will be Meru, Kenya. It will be used as an example has been identified as the focus for research, utilization and development of information communication technologies (ICT) due to the need for improved health outcomes as documented by MNH and other global measures such as the MDGs and forthcoming SDGs.

GIZ and other partners have proposed high impact interventions that focus on improving access to institutional and community health service. The report had concerns about financial and geographical access barriers as well as attitudes of health care providers towards patients. The report highlights that delivery of health care to uneducated women by professionals has been declining since 1993. Other factors include financial access, distance, travel cost and time to get to a health facility, perceived quality of care, and lack of knowledge for antenatal care.

UNFPA itself is a global actor and plays a fundamental role in advocating for MDG 4 and MDG 5. Their mission statement clearly states "deliver a world where every pregnancy is wanted, every birth is safe, every young person's potential is fulfilled." UNFPA has continuously demonstrated their commitment in improving maternal health. MDG5, is a key UNFPA priority and the MDG target lagging the most. Important UNFPA initiatives include the Maternal Health Thematic Fund, the Campaign to End Fistula and numerous partnerships.

To further demonstrate their commitment and corporation in these areas, UNFPA welcomed the following inclusions from the 47th CPD Resolution.

PP11. Reaffirming the need to promote gender equality and the empowerment of girls and young women in all aspects of youth development, recognizing the vulnerability of adolescent girls and young women and the need to eliminate discrimination against them, and the critical role of boys and young men in ensuring gender equality,

OP9. Urges Governments to address existing gaps in the implementation of the ICPD Programme of Action including in the area of, inter alia, the respect, protection, promotion and fulfilment of human rights, gender equality and empowerment of women and girls, unequal progress in achieving universal and equitable access to health services, including for sexual and reproductive health, newborn, and child health, as well as uneven progress in health conditions, life expectancy and the elimination of violence and discrimination without distinction of any kind.

The objectives of Track II is to discuss and address MDG 4 and 5 priorities by delivering high impact interventions that will improve health outcomes for women and children in developing countries while strengthening health systems. To help identify diseases, interventions, test interventions, introduce interventions. Identify potential global institutions that will serve as a resource by providing leadership, direction and experience in health technology assessment, development, introduction and field implementation.

The Challenges: **a:** Providing Innovations for Global Health Technology that will address child survival and maternal and neonatal health. **b:** The ability to identify, develop and introduce new diagnostic technologies in low-resource settings. **c:** Identify and recruit individuals who are leaders in health care and/or e-health technologies and will serve as the catalyst for engaging public and private sector agencies and nongovernmental organizations (NGOs) in partnering for health technology innovation.

Response 1: While many developing countries lack ICT infrastructures, and legal and regulatory environments that encourage investment and deployment, partnerships between governments, NGOs and private companies can now offer mobile phone technology to provide electronic health records (EHRs). EHRs have the ability to contain pertinent patient health information, such as medical history, radiology, diagnostics, current medications and point-of-care results. In addition, low power ECG monitors, drug quality screening, solar power dye-type sensors and low-cost off-grid wireless networking are some ICT applications that can easily be adapted for developing countries.

Most require minimal instruction, therefore, users do not need to be formally educated (e.g., community health workers-CHWs). Prior research has found impressive benefits from health care interventions that utilize community-based care including increased access to care, especially in underserved populations. For example, with EHRs, a small hospital in Rwanda is currently serving 35,000 individuals from an on-line data base through the use of mobile phone technology. Such technology could easily be combined with additional assistive technologies to improve health outcomes for maternal and child health care.

Response 2: A case study will be presented describing the process of designing health technologies and their barriers.

Questions for Consideration

How do you build an international team? Who are the key players if any and what are their roles and responsibilities?

What are the financial and geographical barriers and how can they be resolved? How do we overcome social attitudes of health care providers in reference to technology and innovation?

What is the role of health education in a digital world? How can community health workers and other groups be empowered via technology and innovation?

III – Rethinking Rehabilitation Medicine

The eight Millennium Development Goals set forth by the United Nations in 2000 are a list of goals with several different purposes. Whether the goal is to eradicate poverty and hunger, to promote gender equality and to empower women, or to achieve universal primary education, all eight goals have one single common thread that binds them all. That thread is to serve and protect the rights of people who are disadvantaged.

Persons living with disabilities comprise the world's largest and most disadvantaged group. Greater than 1 billion people, 15-20% of the global population, would fall under the category of persons living with disabilities. In all areas of the world, persons with disabilities are inadequately represented among disadvantaged groups such as the poor and lack equal access to fundamental resources such as education, employment, healthcare and social and legal support systems. Despite this situation, the actions and effects of most mainstream development agendas and processes, including the MDGs are not emphasized.

In 2015, the UN will be defining a new set of priorities for the post 2015 Sustainable Development Goals agenda for the next decade and a half with disability as a major focus. This will be a monumental opportunity for a cross-sectoral dialogue from the leaders of the academic sector, private sector and the government sector to generate solutions that are replicable, scalable, and sustainable. The objective of Track III is to review several concepts with real life implications that have been successfully implemented. Using a cross sectoral approach, the aim is to explore means to make these models replicable, scalable, and sustainable.

Another focus within the track is the discussion of the paradigm shift from a medical understanding to a social understanding of persons with disability. According to the CRPD, "disability results from interactions between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others." The emphasis is on removing barriers which prevent inclusion. By promoting the understanding that everyone faces barriers depending on age, gender, and socioeconomic background, the emphasis is to foster an understanding that everyone will face disability at some point in their lives.

By changing the mindset that disability does not only affect the disabled but everyone, then each individual will become a stakeholder in any policies and technological advances that are designed to remove barriers. One way of viewing discrimination is that it exists when the quality in others are viewed as different. The moment these qualities are no longer viewed as different and as part of oneself, then discrimination is less likely to prevail. This more comprehensive view of disability fosters inclusivity and will increase participation from all sectors. As this process is for everyone, it also promotes social and financial sustainability. By addressing these barriers, we aim to be one step closer towards a more inclusive society.

The track break-out sessions will promote a cross sectoral dialogue on case studies which highlight concepts that remove barriers that are replicable, sustainable, and scalable. Specific case studies are planned on: Government policies that can empower the disabled; Village of happiness – village for all people; Latest technology to empower everyone including disabled

Questions for Consideration

How can the academic sector collaborate with the experts from government, private sector, and technological sector to create a barrier-free society for everyone including persons with disabilities?

How can the education of rehabilitation be advanced to shift the focus from a medical understanding towards a social understanding of disability to include the concept of barrier-free society for everyone including persons with disabilities?

Technology has played an essential role in creating a barrier-free society. How can technology be made more accessible to encourage full participation in creating a barrier-free world?

How can rehabilitation services be made more sustainable to encourage a barrier-free society? How can we increase participation from all sectors to encourage a barrier-free society?

Who should pay for the concept and prototype of the new health technology? e.g. Foundations, Donors, country government, local government, patients, etc. How do we maintain financial sustainability of the product (business model)?