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BRIEFING NOTE: PEOPLE-CENTERED INTERNET GLOBAL FORUM AT STANFORD: BEGINNING A NETWORK OF NETWORKS

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In a one-and-a-half day meeting, 24-25 October 2015, a diverse group of information and communication technology and development practitioners, academics, venture capitalists, policy advocates and social entrepreneurs met at Stanford University to chart a vision of an inclusive, people-centered Internet, and a forum to promote digital dividends for all. The meeting was chaired by Vint Cerf, Vice President and Chief Internet Evangelist at Google. The statement is available at http://peoplecenteredinternet.org/

The meeting recognised that, while the Internet and related digital technologies held great potential for mankind and have diffused much faster than previous technological revolutions, access to these technologies remains highly unequal, and potential payoffs have been limited by complementary factors: policies, institutions and capabilities. Universal, affordable, open, safe and secure access to the Internet can empower people and transform institutions. Yet the potential payoffs for the global poor have yet to be realised as they involve more than mere access. They require digital literacy, services and applications of critical relevance to local needs, local content in local languages, and community leadership and civil society organisations. Economic incentives, social regulations, and cultural factors also play a role.

The forum discussed the desirable properties of an inclusive people-centered Internet. This was illustrated by applications in the health sector, and by sharing the experience of several countries. The forum explored some key steps towards an inclusive Internet and digital technology ecosystem, one that would support the 2030 UN Sustainable Development Goals in education, health and other development objectives and would empower the poor, women, and youth with relevant content and capabilities to promote shared growth, and better equip future generations.

A quick summary of the four panel sessions reflects just how the application of ICT can transform and is transforming life as we know it, and highlights advances in the digital sphere that many citizens across the world would not experience by virtue of a firmly embedded digital divide.

PANEL I: HEALTH AND THE INTERNET

Among other presentations, Ted Chan and James Killeen discussed the San Diego BEACH initiative, which includes the use of data analytics for patient treatment and management of chronic diseases, pairing information and analytics with devices. The application of these tools and techniques to dreaded diseases such as MERS and SARS, and the utilisation of location-based services to identify public health risks, all impact on the healthcare of individuals.

Discussions arising from this panel centered on individual, family-, community- and global-level implications of the Internet for health. In particular, there was animated discussion of how to use the Internet to publicly: share health information that is anonymised, make family-oriented health information available in the cloud, permit other family members to navigate very young or very old people's health information that a patient may not be able to digest – "what did the doctor mean by this?" While using a trusted person as a gateway to understanding health information, this does raise ethical issues with respect to self-regulating health communities.

A few ideas that appeared to gain currency in order to clarify the meaning of people-centered Internet were (i) thriveability: communities could and should thrive because of greater health literacy through heightened availability of health information via the Internet; (ii) co-ownership of health data: in the case of Estonian citizens; and (iii) access to future innovations in mobile health-wearables: for example GPS-enabled shoes for persons with early Alzheimers.

PANEL II: CASE STUDIES OF HEALTH AND INTERNET INNOVATION

Madis Tiik of Estonia, an e-health innovator involved in changing the fundamentals of healthcare by making it more accessible and personal, spoke of the importance of trust, leadership, common infrastructure and the need for citizens to own their personal health data, in order to make e-health innovations work. In his comments on moving from health 1.0 to health 4.0, with health 3.0 being the analytics layer and health 4.0 being the personalisation layer, he spoke of the need to analyse and understand health data for better health decision-making. In 2015, Estonia started a pilot project of personalised medicine, including personal and environmental data, and proposals on how to use this information to create more predictive and more preventative healthcare.

Mei Lin Fung, of the Secretariat for the Global Forum, spoke of health and Internet innovation in Singapore. She argued that Singapore succeeded in maximising ICT investment because of the completion of projects, the high level of trust in the introduction of innovation, and the low levels of corruption in general and more especially in digital transition.

Ahmed Calvo, of the Stanford Haas Centre for Public Service, spoke on networked improvement communities in the health sector and discussed the context of 9,000 federally qualified health centres, 23 million patients and over 90 million patient visits per annum, from which data is aggregated and analysed. The lessons learned reflected on the community of practice created for front-line receptionists in a "24/7 beehive of communication". Here, the receptionists share knowledge on managing patient services; the transparency of data and analysis; and the power of social innovation motivated by information from 23 million patients.

A key discussion point on the meaning of people-centered Internet arising from this panel discussion was the focus on the family-centered health Internet – what it is, how it will evolve, how it will enable the family to self-define and self-determine improvements in family health.

PANEL III: DEVELOPMENT AND LEARNING IN A CONNECTED WORLD

Deepak Mishra, co-director of the World Bank's forthcoming World Development Report 2016: Digital Dividends, briefed the meeting on the report findings in the context of a discussion of the people-centered Internet. This led to the reflection that digital technologies raise the opportunity costs of not doing the difficult social and economic reforms, as well as the necessary investments in complementary factors such as policies, institutions, capabilities, incentives and regulation. The stakes are much higher for developing countries where these investments are often missing.

Mishra spoke about a typical day in the life of the Internet – 207 billion emails sent per day, 4.2 billion Google searches per day, 8.8 billion YouTube videos watched per day. He discussed the transformation to a digital marketplace for traders in both urban and rural parts of the world, and to digital identity formats used by millions of people to access public and private services. He noted that the digital divide is a policy problem (accessibility, affordability), not a technology problem.

In Nagy Hanna's presentation, he drew on his reviews of country experiences and practices to suggest a few lessons to take into account as we move ahead in the aim to realise digital dividends for all. Two gaps (misalignments, disconnects) must be overcome. The first is between investing in digital technologies and changing the socio-economic-political complementary factors. The second is between access to the Internet and other components of a vibrant digital transformation ecosystem, such as a digital leadership, human resources, local ICT services, and the local digital content industry. Hanna argued that we needed to understand the reasons behind the persistence of these gaps within countries and development agencies, and address them: turfs and silos, disciplinary biases, technological determinism, etc. Hanna also called for enabling locally led initiatives and grassroots innovations, as well as top-down policies and reforms, to scale up the promising ones within their diverse contexts.

Policy makers play a crucial role in creating the enabling policies and institutions, so it would be important to develop compelling narratives to influence decision makers and engage them as agents of change to transform their economies, institutions and societies. In many ways, these lessons resonated with the policy advocates who participated at the forum.

The panel posed the question: What will be the tipping point in moving from a focus on infrastructure to a focus on e-services and digital transformation of economy and society? This question is important in a context where many developing countries have a relatively decent digital platform to work on, but the investments in e-services and complementary contributors to transformation are much lower. The panel also highlighted the Internet of the small and informal business sectors as a key to realising shared prosperity and an inclusive people-centered Internet.

PANEL IV: COUNTRY EXPERIENCES IN PURSUING NATIONAL DIGITAL TRANSFORMATION

Virgilio Almeida, National Secretary for Information Technology Policies in the Brazilian Ministry of Science, Technology and Innovation, presented a set of Internet facts and figures for Brazil, noting the presence of 105 million Internet users out of a population of 210 million in 2014 and the growing importance of ICT in health, electronic government and Brazilian schools.

Almeida raised the debate of the false dilemma of spending on ICT versus spending on infrastructure and poverty, and commented that digital transformation strategies and economic agendas are regrettably not seen as complementary or supplementary. Almeida reflected on the difficulty in working with disruptive technologies and mastering digital transformation, hence the need for transformation strategy to be part of the economic and political agenda of countries and governments.

Bitange Ndemo, former Permanent Secretary in the Kenyan Ministry of Information and Communications, explained that the mobile money application M-Pesa had changed the nature of digital transformation in Kenya.

Ndemo also spoke of digital transformation pilots in healthcare, education, agriculture, and the judiciary. He argued that success in specific e-initiatives could (i) lead to savings of up to 40% in public healthcare budgets through applications with respect to non-communicable diseases, e.g., tests for malaria, typhoid and other diseases, which consume up to 50% of the health budget, and (ii) free up doctors to look at more serious diseases by introducing an incentive programme to move the non-communicable diseases onto electronic platforms.

M-Pesa had given the Kenyan government the confidence to introduce ICT innovations, but legal frameworks needed to change, which could take years to reform. And existing systems do not allow risk taking for innovation purposes.

Lucienne Abrahams, Director, LINK Centre, University of the Witwatersrand, a research centre in policy and regulation, spoke of the lived experience of mobile and Internet communications for the majority of communities with low and very low household income, reflecting on multiple forms of value: money proposition of Internet usage (every cent counts); electronic communications to keep the household or family connected; limitations of access to affordable services and applications such as Skype; and use of social media by rural communities to share experiences of health facilities (Kgabo clinic in Winterveldt, South Africa).

Abrahams argued that policy must meet the challenge for "resilient success" – it should seek to extend the role of the private sector even more strongly towards digital inclusion innovations. Policy should aim for a government contribution that starts at the end of the spectrum of digital transformation closest to where the most disadvantaged citizens are, and farthest away from private sector interests, for example e-education and e-health in the public sphere. While public-private partnerships (PPPs) are often lauded, they have rarely come together in African contexts, because of the complexity of the risks faced by both parties. Public-private sector collaboration may have more value than formal PPPs.

SUMMING UP

One of the emerging themes of the forum is the exploration of the meaning of a people-centered Internet, in other words an Internet of the people, by the people, and for the people. A new debate can and must ensue with respect to creating new meanings and new values for the Internet era. This can include family-centered e-health innovation, community- and women-centered incentives for economic and social change, and small-business-centered Internet innovation for value creation.

Policy-making must focus more on people than on technology. It needs to become diversity-oriented and include culturally open-minded perspectives on what people want from the Internet, as well as address the availability and affordability of student-oriented computational power.

What then is the role of policy-makers, scientists and innovators in creating a people-centered Internet, that is global, benefits all parties, fosters human networks for good and is connected electronically? In these circumstances, it will become increasingly important to move towards a greater emphasis on socially-oriented regulation side by side with economically-oriented regulation. The people-centered Internet can be more than the Internet of Things (IoT) – it can be the Internet of People (IoP).

The other recurrent theme of the forum is the urgency to realise the promised digital dividend for all. Access to the Internet and other digital technologies remains a necessary, but not sufficient, condition to digital transformation. It aims to induce, scale and sustain deep changes in economies and institutions and thus realise the substantial payoffs of ICT.

There is an urgent need to understand the process of digital transformation and harvest the rich experiences and innovations of the many countries pursuing such transformation of their economies and societies. This calls for evaluative research, systematic experimentation, and knowledge sharing in best practices in national policies and strategies to advance digital transformation in government, economy, and society.

In order to realise digital dividends, it will take political commitment and long-term persistence to overcome institutional barriers. Further, it will require close interactions between ICT and development professionals to integrate digital technologies into countries' economic transformation strategies. These strategies will need to mobilise stakeholders and build local partnerships to secure inclusive and sustainable transformation.

We welcome comments and feedback on how to advance this vision of people-centered Internet, and of inclusive digital transformation for countries at all levels of development.

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