**IGF Workshop Proposal 2018**

**The 4Cs That Expand and Sustain Internet Access**

**Connectivity, Content, Current, Currency**

Workshop Format: Case Studies to present working approaches/Developing Recommendations for sustainable, extendable approaches to address UN SDGs [#7 Affordable & Clean Energy, #2 Zero Hunger (Agriculture), #6 Clean Water &Sanitation, #4 Quality Education, #8 Decent Work & Economic Growth, #9 Industry, Innovation & Infrastructure] **90 minute workshop**

This session will not follow a traditional workshop format but is purposely designed to identify challenges/issues in a very fast paced presentation drawing on published data from a key UN Intergovernmental organization; then move on to examine existing solutions/approaches, engage the participants in developing recommendations for sustainable initiatives for addressing/integrating the “four C’s. To date, the recognition of the interdependencies between these four areas is limited. Thus, a key goal of this workshop will be to enhance recognition of these interdependencies and also seek to create ongoing working engagements to address the “four C’s “as more integrated projects. A key outcome will be to propose engagement with relevant Best Practice Forums, and for the CNB going forward.

**This session is designed as follows:**

* Call to Order and introduction of the Session: Session Moderator: 4 minutes
* Setting the Stage and Presenting the Challenges: 7 Minutes
* Lightening talks from existing Initiatives in each/all of the four “C’s” – 4 Minutes each speaker/strictly enforced by Session Moderator.
* Break out working sessions, with 1-2 experts from each of the “C’s” – this is the “participation segment” for the workshop and is intended to engage all participants in the room: 20 -25 minutes.
  + Each breakout will have one or more “experts” drawn from the lightening speakers and other experts, plus one rapporteur.
  + Youth participants will be invited as contributors and participants [drawn from youth attending the IGF, especially as a part of an NRI or Youth IGF Initiative. This offers a unique aspect for this workshop to ensure that youth are actively engaging.
  + Remote moderators will be assigned for each breakout, who will use chat to keep remote participants aware of the discussion in the small group and report on any comments and questions during the workout session.
  + The breakout/working session segment is focused on developing concrete draft recommendations which can then be further consulted following the workshop, and shared with relevant BPFs, especially the BPF on Local Content, and with DCs and CNB.
* A final segment of the workshop will present the initial recommendations that will also be part of workshop’s IGF Report – - 4 minutes per breakout group: total time: 20 minutes
* Summarizing comments by Session Moderator – 5 minutes.

**Detailed Description of Program for the Session**:

Phase I: Mini Introduction of the format: Workshop Moderator will set the stage, introduce the Keynote Speaker and then manage the time allocations and provide the summing up comments.

**Keynote Speaker/presentation on key challenges: 7 minutes**

Paul Akiwumi, Director of Africa, Least Developed and Special Countries Programmes, UNCTAD, Special Advisor, UNCTAD “The Least Developed Countries Report 2017”

**Phase 2: Lightning round for expert speakers -** all speakers are required to present both bios and one pagers to post online for the participants to access pre IGF, or during the IGF. All Expert Speakers will be given a deadline for their one-two page overviews, which will be posted online.

Each expert will be given 4 minutes to deliver a mini case study/ synopsis of a successful and currently operating program/activity that addresses one or more of the four areas below:

1. Connectivity – Internet access, Affordability, etc.
2. Content – useful applications, including addressing language, digital capacity building for especially under connected, and literate users [[1]](#footnote-1)
3. Current (Electricity generation and storage) – ranging from on grid to off grid approaches
4. Currency (payment system supporting the users ability to be a full participant in accessing both networks …Internet and Electricity)

**Phase 3: Breakouts:** After the “Lightning Round” which is focused on information/examples, the speakers and audience will break up into working groups defined by each of the four issues above to discuss how each area impacts the others and to develop recommendations for how to advance more cross sectoral contributions and to advance how more concrete progress can be made, especially in unique environments that lack at least two of the four as sustainable approaches.

**Phase 4: Reporting Back on Recommendations/Findings:** In the final segment of the workshop, working groups, via their moderator(s) will report back to the fully reconvened workshop with the key findings of the working group for final discussion. The final “outcome/recommendations” will be memorialized in the Workshop report for the IGF2018. .

In order to ensure full participation by remote participants, the workshop will also have four remote moderators for breakout segments. In addition, speakers will be encouraged to contact and engage any remote hubs from their countries [yet to be developed with any remote hubs].

**Rationale for the Session:** *The digitized world runs on electricity, access, more useful content, and access to payment systems, yet the gaps are notable, but often unnoticed.*

The 2017 UNCTAD “Developing Countries Report” focused on transformational energy access for the LDCs (least developing countries). It is not surprising that in these LDCs reside the bulk of the billions of people who have yet to be offered any Internet access, let alone affordable, reliable access with meaningful localized content, and affordable electricity/power.

The 2030 Agenda for Sustainable Development includes several goals that are dependent upon the explicit goal for energy (SDG #7) to “ensure access to affordable, reliable, sustainable and modern energy for all”. After all, the Internet “runs” on electricity; the new digitized economy cannot exist without power/electricity, and the delivery of communications via mobile devices requires access to sustainable and affordable power.

*And, as the digitized economy becomes a reality it must embrace and support all of the world’s citizens, including those who face digital literacy and basic literacy challenges.*

**A key question is the focus of this session:**

**“What if by focusing on Internet access and energy/electricity, significant changes in useful content and financial access/currency, the world could produce synergistic reinforcing outcomes that move forward in achieving the SDG’s collective goals?”**

**We all know some of the math: -3.6 Billion people do not have Internet access or have very limited access or unaffordable access – this is a well-known statistic.**

**-What is often ignored is that 1.3 Billion people have no access to electricity or have no reliable access. Electricity means that children can do their school work at home; or have a classroom that is well lit. That hospitals can operate the needed medical devices, perform surgeries; keep medicines at appropriate temperatures. Farmers can access information about how to better treat insect infestations or add the fertilizers to improve crop production.**

**-over 700 Million people [the majority are women] are totally literate, so even a smart phone is not a useful tool for them as much of the content is available only in English, or in the UN other languages[[2]](#footnote-2)**

**Background:**

1. Defining the Challenge: Inter-dependency of power [electricity] and Internet access:

After decades of work on the access side by governments and the private sector -- including governments commitment to designing and promoting national Broadband plans, it became obvious that progress on connecting the remaining billions of global citizens is stalled by other factors. Progress is ongoing on lowering costs on devices and supporting network infrastructure, although many issues continue. Some countries are now building new interconnected networks, and are documenting growing Internet penetration and use by adopting pro-growth policies and regulations. Key supporting government activities include reducing access taxes and fees, reducing ISP licensing fees and speeding up the licensing process, ending the luxury tax designation for cell phones; reducing customs assessments. And being bold about allowing the use of new approaches, such as TV White spaces; interconnection at cost-based prices. Yet, the Universal Service Funds remain locked behind restrictions on what they can support. Still, too many governments have not taken the needed and bold step to enable innovation and experimentation that might benefit the complex challenges of remote villages, such as enabling “community networks” and requiring interconnection by the incumbents, including the mobile operators.

The countries that are most affected by lack of electricity generation and storage for large source use, such as cloud computing are the LDCs; however, the lack of affordable and reliable electricity in remote villages and even in many cities in the developing world present an obvious and key contributor to even the basic deployment of affordable and reliable Internet access. Technologies are emerging that can solve the distributed need for power – whether that is wind; solar, etc.

An electric grid is not the solution for a small village in a country; but solar, or wind may be – but storage and distribution remain a key challenge. Especially when countries lack either skilled resources, or have legal systems that limit innovative solutions.

Technology advancements in distributed generation and storage of electricity using renewable fuel sources (solar, wind, geothermal, methane, hydro, etc.) now presents developing countries with the opportunity to provide additional electricity generation and capture to augment existing power generation in cities and suburbs to better manage power outages as well as extending electricity’s availability through the use of stand-alone microgrids to rural and even very rural areas that have remained out of reach.

Tanzania is a good example of a success story

(<http://www.wri.org/blog/2017/10/electrifying-africa-mini-grids-five-lessons-tanzania>)

One possible way to begin to deploy sustainable electricity further and further into rural areas in developing countries might be to partner with local carriers, cell tower owners and operators and government officials to develop a package of incentives sufficient to encourage the local carriers/cell tower owners and operators to replace the dirty, noisy and expensive diesel generators at the base of their cell towers with distributed power generation and storage units designed to generate electricity from renewable sources and store the power on site sufficient for the needs of the tower and the local community. A profitable 24/7/365 power generation business would be born and have as it’s anchor tenants local carriers and cell tower owners with sufficient additional power reserves to provide a subscription/pre-pay service to the local communities.

1. Once sustainable distributed generation has been established (and the key word here is sustainability (<http://www.wri.org/blog/2017/02/pay-you-go-solar-could-electrify-rural-africa>) the need to network these assets will be an important next step, as networking will ensure the reliability and resilience of each of the connected distributed generation units. The “dig once” protocol will ensure the trenches handle both the fiber optic cable needed to backhaul cell tower traffic as well as the power lines needed to network the distributed generation and storage units. Now both the communication/Internet (network of networks) and the electrical grid (network of networks) will be mutually re-enforcing in their capability to provide both access and the electricity needed to make full use of the access. It is important to understand that there are similarities but also differences between communications and energy but regulations can always be an enabler, or a barrier. It may be necessary to have unique approaches for schools, hospitals, extremely rural areas and how community networking approaches can be “combined” with more traditional approaches.
2. Content: It is not enough to have access or electricity. As described in the BPF on Local Content of the IGF <https://www.intgovforum.org/multilingual/content/bpf-local-content-0>
3. Currency: Only through the integration of mechanisms that enable the unbanked, and uncarded citizens of the world to have access to payment systems can we move forward toward the Information Society for all, in this increasingly digitized world.

Creative work underway by some of the credit card providers is seeking to address the “unbanked”. Recognizing that a major source of funding to many families in the LDCs may be remittances returned by a family member who has immigrated elsewhere but supports their family members through sending funds home struggle with the high fee for such transfers – but often these funds are what pay for their children to attend school; or care for their elderly parents. Increasingly, governments seek to use digital transfers for pensions, or other funds, including government salaries – but the financial systems in many countries in the LDCs do not yet support the “uncarded”, especially as many do not have identity papers, or, in some countries, where woman cannot open financial accounts.

Conclusion:

There is a plethora of reports on the Internet by many sources – ranging from the World Bank, OECD, Universities, WEF, CSTD, UNCTAD, and ITU as well as other sources detailing model legislative and regulatory approaches for countries looking for best practices in designing their national Broadband plans. However, the studies that address the five global challenges, which include food, energy, security, environment etc. are often treated as though these challenges are segregated. This new environment, seeing both electricity and access as reinforcing networks will need informed policy leaders who will see that the same best practices that have lead to success in the build-out and operation of their access networks will ensure similar outcomes in the build-out and operation of distributed and then networked power delivery systems.

Finally, the almost two centuries of operational success documented by both the Access/communications and Electricity networks points to the need to ensure subscriber payment networks are a robust and permanent part of the operating models. Likewise, evidence is abundant that localized content needs to be a ubiquitous component of any successful long-term acceptance of the Internet platform.

Speakers:

Paul Akiwahi, Special Advisor, UNCTAD as presenter of Challenges/Issues

Lightening Speakers:

1. Bai Blyden, IEEE Smart Villages [Developing Countries] – technical community
2. Melissa Sassi, Microsoft – White Spaces [global business]
3. Manu Bhadwaj, Mastercard Center for Innovative Growth [global business]
4. Dr. Ehsanollah Bayat, Bayat Group and Bayat Foundation [Afghanistan/CASA countries]
5. Rotary International – speaker to be confirmed [global focus] [NGO]
6. Dr. A. K. Ofosu-Ahenkorah – Executive Secretary, Energy Commission, Ghana, [Government]

Additional Special Advisors and participants during the breakouts:

* Tetra Tech
* American Tower
* OECD
* ISOC
* IFLA

Recommendations: The concluding segment is about presenting concrete suggestions that will be put forward to the participants, and then summarized for presentation into the full IGF Post Workshop Report and presented in summary in the Taking Stock of the IGF 2018 by the session coordinator or Session Moderator.

1. Outreach to the BPF on local content is being developed so that the issues identified by the BPF are included in the workshop. Participants in the BPF will be invited as attendees and participants in the breakout working segments in particular. [↑](#footnote-ref-1)
2. [**https://www.washingtonpost.com/graphics/world/world-without-power/**](https://www.washingtonpost.com/graphics/world/world-without-power/) [↑](#footnote-ref-2)