1. How would you define, or how do you understand, the theme "Connecting and Enabling the Next Billion"?

- Connecting and enabling the next billion is an umbrella concept that is ultimately referring to the process of ushering the next billion Internet users into the information society. It is not solely about individuals having the ability to connect to the Internet in a secure, affordable, and useful way; it is also about ensuring such individuals have the skills to meaningfully engage online and critically understand the content they consume – as well as empower them with skills for them to create content as well.

- Many of my answers to this call for input stems from an extensive essay I wrote and published on CircleID about the connection between sustainable development and Internet governance: http://www.circleid.com/posts/20160429_wsis_internet_governance_plea_for_star_trek_over_mad_max/.

2. The first phase of Connecting and Enabling the Next Billion (2015) identified a set of policy options aimed at the creation of enabling environments, including deploying infrastructure, increasing usability, enabling users, and ensuring affordability. What are the factors to consider when adopting these policy options at local levels (e.g. the state of a country's market development, the available infrastructure, level of capacity-building, etc.).

- Four areas in particular require concerted attention as well as a multistakeholder approach to devise effective solutions and bridge the digital divide(s):

     1. More widespread internet infrastructure, which also includes wider availability of Internet exchange points (IXPs), IPv6, and Internationalized Domain Names (IDNs);

     2. More easy-to-use and affordable services;

     3. Relevant local digital content and local language support; and

     4. Higher digital literacy skills

- Understanding the regulatory environment is key, in addition to factors like infrastructure (IXPs, fiber, reliable electricity, etc.) and affordability. More importantly, though, it is critical to know what the needs of a local population are, consulting with unconnected communities and individuals to see how they understand what the Internet is and what they want from it, and what barriers had/have prevented them from going online. As mentioned above, digital media literacy training should be required as well when implementing any policies – there is no point of someone connecting if they do not understand what they are using or the related effects.

3. Are you aware of any specificities around connectivity at a local or regional level? (In other words, do you know of factors that impact connectivity in, for instance, rural areas but less so at an urban level? Or factors that affect connectivity at regional or larger scale, but not as noticeably at local or smaller scale?)

- N/A

4. Data shows that the growth of Internet adoption is slowing down in some areas, especially as broadband services extend to more remote, less densely populated areas (facing challenges beyond affordability and availability). What are some of the barriers or limitations preventing people who do have Internet access from being enabled or empowered through such connectivity?

- Although I do not have empirical data to answer this question, based on my experiences in Lebanon, India, Turkey, and elsewhere, however, there are multiple suggestions I can offer. One is the need for more affordable devices. Programs like Google's Android One program are a good start, but many unconnected individuals will need good hardware for a very affordable price (that will not offset the cost of basic necessities such as food or children's education). One idea is recycling devices. So many devices that have adequate software and hardware get thrown away (which is another problem entirely) or are left in a drawer after an upgrade. These devices could be wiped and redistributed to those who do not have the means to purchase them.

- In addition, we have to consider the importance of electricity and energy. One cannot access the Internet or charge their mobile phone without a reliable energy source. As such, encouraging the proliferation of renewable energy sources, especially solar, is paramount to connecting more people. Many places in the world experience electrical disruptions throughout the day. In some parts of Lebanon, for instance, people are without power for 12 hours or more at a time. They live off of generators, which is both expensive and horrible for the environment.

- Other suggestions include upgrading infrastructure, expanding mobile access or Creative Commons-licensed content, or incentivizing ideas such as the OneWeb satellite constellation, Mozilla's zero-rating initiatives, Facebook's Project Aquila, or Google's (Alphabet's) Project Loon. Engaging governments and other stakeholders to promote cooperation and foster inclusive, consensus-based sustainable outcomes is equally as important to solutions that involve technical or tangible means.

5. What does meaningful access mean?

- Meaningful access refers to the ability to connect to the Internet and discover digital content that enriches the life of the user. Ultimately, the point of being "connected" is to better the quality of life and well-being of individuals and communities. Thus, meaningful access suggests that individuals can find information they need to make

better choices or informed decisions, help their families, provide new opportunities, communicate with loved ones that are outside of their immediate vicinity, or maximize the benefits of the wealth of human knowledge that is now accessible through the Internet.

6. How can connectivity contribute to reaching the new SDGs?

- When it comes to the role of technology vis-à-vis development, it is also undeniable that the Internet and information and communication technologies (ICTs) can help empower people with the wealth of humanity's accumulated knowledge. As access becomes more ubiquitous, the Internet and ICTs can provide a key tool for development. In particular, as one author suggests, it can engage youth and include them in the development process; identify resources and map patterns for better decision-making or public action (such as with Ushahidi); quickly gather information to aid in the investigation or dissemination of information or instructions, e.g., with disease outbreaks such as the Ebola crisis or natural disaster relief management; support accountability, transparency, anti-corruption efforts, and human rights; and improve municipal services and information management.

- Although ICTs, the Internet, and technology in general are not a panacea for the world's problems, using the story of the young, famed Malawian inventor William Kamkwamba – who built an electricity-producing windmill out of scrap, in part, due to access to his local library – as an example, it is clearly deducible how the ability to locate pertinent information, access existing patents, research scientific literature, or connect with a knowledgeable person or resource can make a significant difference in the lives of underprivileged people in particular. Yet, ensuring that such knowledge and information is open and accessible so that it can be used as a resource to help both individuals as well as organizations solve the developmental challenges of the 21st century and fulfill the 17 SDGs is imperative to progress. While access to knowledge and instant communication technologies themselves will not feed the hungry or resolve civil conflict, they can provide access to solutions, new ideas and perspectives, or communities or nongovernmental organizations (NGOs) that can support innovation and creative problem solving.

- The Internet governance community and all involved in expanding accessibility such as governments and international NGOs are responsible for empowering sustainable development by ensuring the needs of developing societies and the underprivileged are met. This should incorporate multiple courses of action, including but not limited to protecting openness and accessibility; upholding internet access as a human (or civil) right; expanding network interoperability and security; supporting technological innovation and infrastructural development; providing platforms and fora where the multiple and often competing interests of stakeholders can be addressed and discussed; promoting collaboration and cooperation among stakeholders; and engaging in capacity

building and education, specifically technical skill building and digital media literacy education.

7. Do you know examples of stories where using ICTs to support development has not worked, and why?

- I'm fairly certain there were examples covered in the World Bank's [Digital Dividends](#) report, or perhaps in [this report](#).

8. Can you think of ways in which ICTs or Internet connectivity could be used to help reach the SDGs?

- This is basically the same question as number 6 (see above).

9. Do you know of examples of success stories that can illustrate how Internet access can help to address real-world problems (in either developed or developing countries)? For example, do you have stories or experiences to share regarding some or all of the following SDG-related questions:

- How can connecting and enabling users help to reduce poverty in its various forms? (SDG 1)
- How can connecting and enabling users help to end hunger, achieve food security and support improved nutrition? (SDG 2)
- How can connecting and enabling users help to promote sustainable agriculture? (SDG 2)
- How can connecting and enabling users help to ensure healthy lives and to promote well-being at all ages? (SDG 3)
- How can connecting and enabling users help to ensure inclusive and equitable, quality education? (SDG 4)
- How can connecting and enabling users help to promote lifelong learning opportunities? (SDG 4)
- How can connecting and enabling users help to achieve gender equality? (SDG 5) • How can connecting and enabling users help to empower women and girls? (SDG 5)
- How can connecting and enabling users help to ensure the availability and sustainable management of water and sanitation? (SDG 6)
- How can connecting and enabling users help to ensure access to affordable, reliable, sustainable and modern energy? (SDG 7)
- How can connecting and enabling users help to promote sustained, inclusive and sustainable economic growth? (SDG 8)
- How can connecting and enabling users help to promote full and productive employment? (SDG 8)
- How can connecting and enabling users help to ensure decent work? (SDG 8)

- How can connecting and enabling users help to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation? (SDG 9)
- How can connecting and enabling users help to reduce inequality within and among countries? (SDG 10)
- How can connecting and enabling users help to make cities and human settlements inclusive, safe, resilient and sustainable? (SDG 11)
- How can connecting and enabling users help to ensure sustainable consumption and production patterns? (SDG 12)
- How can connecting and enabling users help to combat climate change and its impacts? (SDG 13)
- How can connecting and enabling users help to conserve and sustainably use the oceans, seas and marine resources for sustainable development? (SDG 14)
- How can connecting and enabling users help to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss? (SDG 15)
- How can connecting and enabling users help to promote peaceful and inclusive societies for sustainable development? (SDG 16)
- How can connecting and enabling users help to provide access to justice for all? (SDG 16)
- How can connecting and enabling users help to build effective, accountable and inclusive institutions at all levels? (SDG 16)
- How can connecting and enabling users help to strengthen the means of implementation (SDG 17)
- How can connecting and enabling users help to revitalize the global partnership for sustainable development? (SDG 17)

I would suggest that having access to information and the critical skills needed to understand how to access information is in and of itself a way to address real-world problems. One example of a good program, though, is Solar Sister in East Africa. Another is Harassmap from Egypt.