

Policies and Solutions for Implementing Digital Inclusion on a Global Scale

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Purpose

The purpose of this document is to suggest strategies for implementing digital inclusion in developing economies. Demanding affordable Internet access is not only part of the Sustainable Development Goals (SDGs), it was further stressed by the United Nations⁵, Governments⁶, the Internet Society, NGOs and local communities.

COVID-19 has addressed the need for digital inclusion and accelerated the digital uptake in a not-expected way. However, the digital divide has rather increased, as those having broadband connectivity could follow remotely both education and work related activities, while those without digital connectivity were left behind. Already before the pandemics, girls, women, and vulnerable and marginalized groups were least likely to have access to technology. This dire disadvantage has been enhanced due to lack of connectivity. As such, the digital divide has become even more alarming⁷. In March 2020, a report by the OECD found, “roughly 327 million fewer women than men have a smartphone and can access mobile internet. Women are on average 26 percent less likely than men to have a smartphone⁸. This gender divide, in South Asia and Africa these proportions stand at 70 percent and 34 percent, respectively.” According to UN Women, 1.7 billion women in low- and middle-income countries do not own a mobile phone.

The Government of Norway has pointed out affordable (i) access, together with (ii) skills, (iii) regulations and (iv) inclusion as the four drivers for Norwegian Policy². We appreciate the four drivers for Norwegian Policy, and like to contribute to a discussion on how to achieve them.

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⁵ The United Nations’ High-level Panel on Digital Cooperation listed in their final report the recommendation 1A as follows: “We recommend that by 2030, every adult should have affordable access to digital networks, as well as digitally-enabled financial and health services, as a means to make a substantial contribution to achieving the SDGs...”. See <https://digitalcooperation.org>

⁶ The Government of Norway has pointed out affordable access, together with skill, regulations and inclusion as the four drivers for Norwegian Policy. Source: “Digital Transformation and Development Policy”, Norwegian Government, Message to the Parliament, Meld. St. 11 (2019-2020), Apr2020, https://www.regjeringen.no/no/dokumenter/meldst11_summary/id2699502/?ch=1

⁷ <https://www.devex.com/news/opinion-we-cannot-allow-covid-19-to-reinforce-the-digital-gender-divide-97118>

⁸ World Food Programme <https://insight.wfp.org/coronavirus-pandemic-is-exposing-the-gender-digital-divide-6c9e1fef8ece>

Hypothesis

Our hypothesis is that “Free access to the National Knowledge Portal” addresses all four topics” access, skills, regulations and inclusion, as well as builds the framework for societal empowerment in development. Furthermore, the Portal would ease the implementation of Digital Public Goods (DPGs), and through the regulatory framework make the DPGs available for every single human.

The “Free access to a National Knowledge Portal”

A National Knowledge Portal combines three aspects (see Figure 1), all being central for the empowerment of societies:

1. Knowledge distribution for education, health, governmental information, as well as digital public goods. As an example, the portal may hold courses to acquire digital skills, and handle certificates for the educational sector.
2. Data governance and innovation of national data is the core for value creation within the country. “Data is the new oil”, this statement of Telenor’s CEO Sigve Brekke demonstrates the value of data, and the need for building the economy around these national data.
3. Inclusive access to the National Knowledge Portal is an easy way ahead for regulations. License conditions for Internet Service Providers (ISPs) and Mobile Operators could include the “free access to the National Knowledge Portal” as a prerequisite for a license.

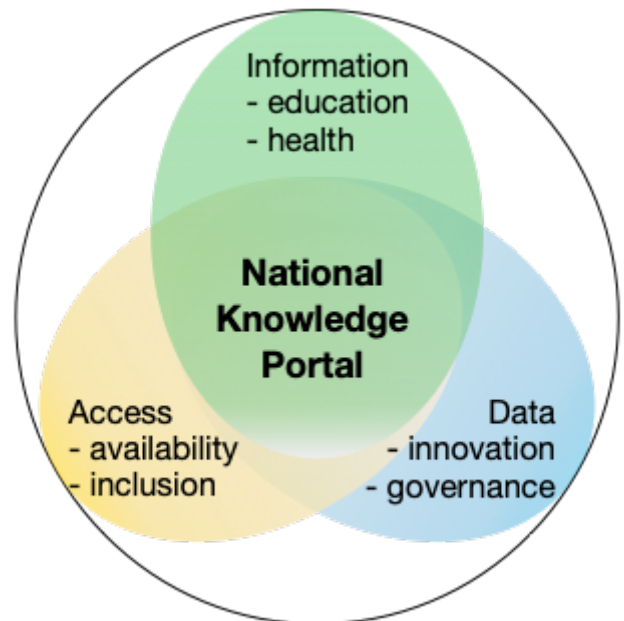


Figure 1 - Components of a National Knowledge Portal

The argumentation for a National Knowledge Portal is straight forward, given the clear advantages for owning such a portal on a national level. The Portal has the ability to become the driver for societal innovation, based on the ownership and governance of the national data. Through application interfaces to the national data, one can invite for public-private partnerships, both making business on the use of the data, and at the same time enhancing the quality of the data. The re-use of biometrical information in Tanzania for acquiring a SIM card for the mobile phone is one such example. On arrival in Tanzania every visitor is asked for a fingerprint, which is then used as the basis for purchasing a SIM card.

Furthermore, the portal contributes to development of the educational sector, as content for schools and universities can be made available for everyone in the society. Regarding digital health and community involvement in public health, both aspects can be covered through converting health messages into digital health, and making them available through the portal.

Finally, access and inclusion to the portal can be demanded as part of the license conditions for ISPs and mobile operators. As an example, the government in Ethiopia aims at re-using the optical fibre of the high-voltage lines as backbone for school connectivity (*SchoolNet*) to the regions.

Using lightweight protocols, as e.g. provided by the Internet of Good Things⁹, the amount of data used is in the order of 2-3% of the bandwidth of the mobile network, and provided for free for the users. In areas where no mobile broadband (3G, 4G) network is available, or for reaching out to those who are not in the possession of a mobile phone, information spots at schools and villages can be established providing free access to information. The “Non-discriminating access for Digital Inclusion” (DigI¹⁰) project has demonstrated that such information spots can be operated for as little as 20 USD per month¹¹.

Conclusion and Upcoming Work

The COVID-19 pandemic showed clearly how important digital inclusion is, not only for providing digital health information, but also for inclusion in times where schools and universities are closed. Picking up the priorities, access, skills, regulations and inclusion, of the Government of Norway, as described in the report “Digital Transformation and Development Policy”, this paper argues for ways on how to establish digital inclusion.

Starting from a hypothesis of “Free access to a National Knowledge Portal”, we see that the four priorities are well addressed:

- Access - by demanding the “free access” to the portal, access is put out as priority, addressing health, education, governmental information and other relevant information.
- Skills - adding digital health and education on the Portal, and making these universally available, we provide digital skills to everyone
- Regulations - demanding free access through regulations will enhance the conversion towards digital societies, an effect well documented through the freemium model used in other areas, e.g. apps for mobile phones.
- Inclusions - by regulations on free access, and by placing information spots in villages with free access to the portal we ensure that the two main hindrances “availability and affordability” are removed.

In conclusion, we suggest that the Norwegian Government should encourage and promote free access to information on the Internet for all and national knowledge portals in developing economies.

⁹ UNICEF ventures established a cooperation for the Internet of Good Things (<http://InternetOfGoodThings.org>), providing information at no cost in various countries in Africa.

¹⁰ The DigI project (2017-2020) focussed on Digital Health provision through information spots in Tanzania, see: <http://DigI.BasicInternet.no>

¹¹ Workshop on School connectivity in Feb2020 in Tanzania, https://its-wiki.no/wiki/DigI:TZ-Sustainability_SchoolConnectivity_Feb2020