**Geek Out with Tariq: The Geek and the Internet**

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[00:00:06.92] TARIQ KHOKHAR: Hi. Welcome to geek out with Tariq. I'm Tariq Khokhar, a data scientist here at the World Bank, and I spend my days analyzing data and statistics to understand the world around us. I want to share an idea with you. Digital technologies like the internet can boost economic growth, but they require investment in infrastructure, and their impact isn't yet evenly distributed around the world. Let me show you some data.

[00:00:28.49] So if you don't already know about it, data.worldbank.org gives users free and open access to global development data compiled from international agencies and national governments around the world. OK, let's say I wanted to know how many people in Mexico have mobile phones. I can type in mobile phone subscriptions, and then punch in Mexico, and I see for the latest year available, 2016, there are 88 mobile phones subscriptions per 100 people in Mexico.

[00:00:59.86] Now let's ask a different question-- how many people in the world have access to the internet? I can actually connect directly to this database using a statistics program called R and a graphics library call ggplot. So let's do that. I'm going to make a graphic of all the people online. So before I hit this button, what do you think? Do 20% of the world have access to the internet? Is it 50% of the world? Is it 90%? Let's find out.

[00:01:25.63] So we look at our data, we see that there's been a lot of progress since 1995. But even today, just under half the world has access to the internet. Now this varies a bit between low income countries, middle income countries, and high income countries. But before we talk about that, let's talk about infrastructure. So the internet is actually a global system of interconnected networks. If you're watching this video in Asia, in Europe or Africa, then information is probably reaching you via an undersea cable.

[00:01:53.02] In fact, 99% of all international internet traffic goes through undersea cables. Take a look at this map of Africa. These are the major undersea cables around the continent. And now one of these, this dark blue one here called the easy cable, was partly funded by the World Bank. Now this is a piece of infrastructure that starts in South Africa, goes up to Mozambique, lands in Madagascar, Comoros, Tanzania, Kenya, Somalia. Goes round to Djibouti and ends up in Sudan.

[00:02:23.92] This is 10,000 kilometers of undersea cable that's bringing inexpensive reliable connectivity to millions of people. How big do you think this cable is? This big? Bigger? This big? This big? Well it turns out, one of these undersea cables is about that big. It's about as thick as a drinks bottle. So when these cables are deep under sea, there's not much that's going to actually harm them. So their fiber optic cables with a little bit of shielding.

[00:02:52.90] When they're closest to the shore, they're a bit thicker with more armor to stop things like boats and anchors messing them up. In fact, one of the strangest things that ends up damaging cables is sharks who like to chew on them. So let's get back to how access to technologies varies around the world. So here is a graphic from our upcoming 2018 Atlas of sustainable development goals, which will be available to the public in early May, but you can have a sneak peek now.

[00:03:17.43] So remember earlier we saw how internet access was available to about half the world's population, this actually varies by income group. So in low income countries, something like 12% of people have access to the internet, which is roughly where internet access was 20 years ago in high income countries like North America. But there's some good news-- take for example sub-Saharan Africa. While technologies like fixed line mobile phones and fixed line broadband haven't really spread on the continent, mobile phones are everywhere.

[00:03:45.88] There is something like 80 mobile phone subscriptions for every 100 people on the continent. Now mobile phones and digital technologies like these are the foundation for new approaches to urban planning, transport, health care and education. But it's only with investment in infrastructure that these approaches can be available to everyone in the world and not just a few.

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