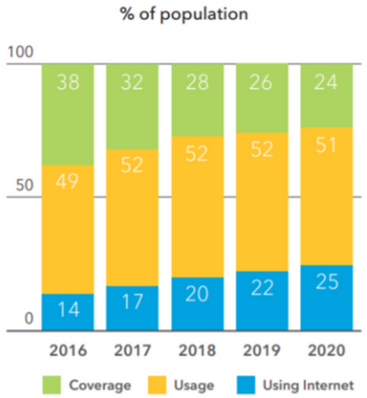
Universal and affordable access to the Internet in least developed countries (LDCs)

SDG 9 entails to “build resilience infrastructure, promote inclusive and sustainable industrialization and foster innovation” [7]. This SDG has several targets, involving technological capabilities, financial services, industrialization, infrastructure and connectivity. This poster is focused on target 9.c which suggests that affordable and universal access to mobile broadband translates into increased internet use [2] . There are two gaps relevant to internet use [2]. The coverage gap indicates the amount of people that do not have access to mobile broadband yet. Secondly, the usage gap where people are covered but do not use the internet. Reasons for this gap include affordability issues, a lack of awareness of the Internet and its advantages and a lack of digital skills [2].

Trends

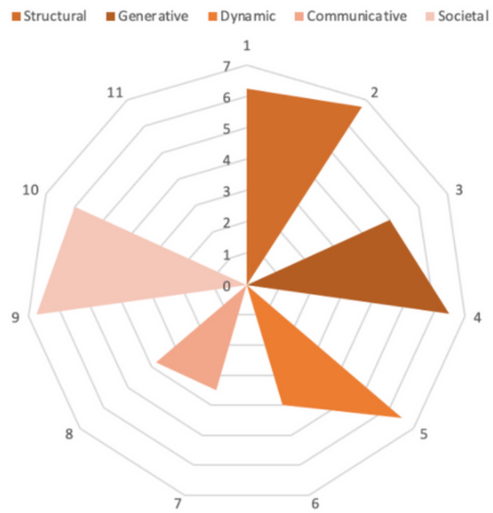


Target 9.c has only been reached by two LDCs. Some countries are almost there, but others still have a long way to go [2].

Mobile broadband coverage in the LDCs increased from 62% in 2016 to 76% in 2020. Growth slowed down the past few years, because of a lack of competition, demand and shared infrastructure [1]; [2].

The amount of internet users in LDCs almost doubled from 2016 to 2020, with 260 million users in 2020 (25% of the population) compared to 132 million users in 2016 (14% of the population) [1].

The usage gap is large: although 76% of the population in LDCs is covered, only 25% uses the internet [1]; [2].



Wickedness Analysis

SDG 9.c is a wicked problem in LDCs with a score of 54.55 on scoreboard #1. It can be considered as a level 4 issue with a low degree of responsibility by actors. Especially structural and societal complexity have high scores, therefore suggesting that these topics require the most attention from actors to foster more usage of the mobile network provided to enable internet access.

FrontRunner

telenor

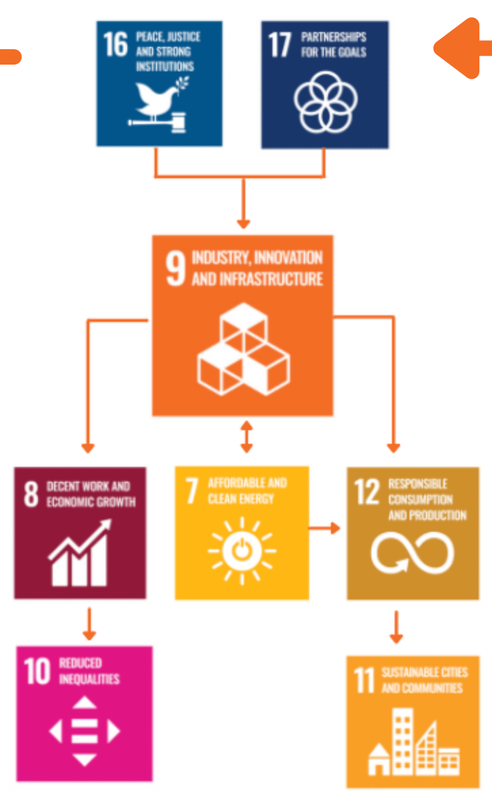
The Norwegian company Telenor commits to digital inclusiveness in order to empower societies and operates in multiple LDCs in Asia. In 2014, the telecommunications sector was opened up in Myanmar thanks to new legislation. Telenor was one of the two companies entering the market and as a result, mobile broadband coverage increased from 10% to 90% of the population in just four years [2]. This example demonstrates that companies are more likely to successfully enter the market if the state facilitates this through legislation.

Strenghts

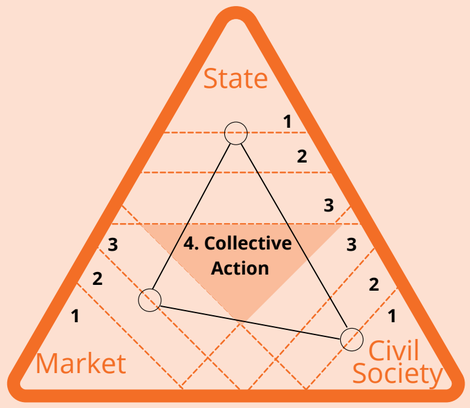
Telenor forms partnerships with multiple global organizations and local governments in order to increase their impact on the SDGs. The company goes beyond providing internet, and also provides training to improve online skills. Together with Unicef and Plan International, Telenor provides digital literacy classes and improves online safety for children [5]; [6]. This way, Telenor contributes to reducing the usage gap.

Weaknesses

Telenor provides digital access for millions of people in Asian developing countries. However, their business operations in Asia also have a downside. 66% of Telenor’s CO2 emissions can be traced to electricity grids in Asia. Telenor acknowledges the importance of SDG 7, affordable and clean energy, and therefore tries to make the transition towards renewable energy. However, renewable energy sources are currently scarce in Asia, making it difficult to achieve this goal [5]; [6].



Societal Triangulation



Our societal triangulation analysis has established that failure exists from both the state and the civil society. In fact, almost 15 percent of the population in LDCs live more than 100 kilometer from a national backbone, likely with no access to telecom networks [2]. The usage gap also represents a failure from the state and society to address the lack of awareness and digital skills [2]. These level 1 problems for the state and civil society should be addressed by individual action and/or intra-sectoral partnerships. More over, the market is functioning somewhat better, as there is an increasing amount of private players on the market. However, there is not enough competition to drive prices down [2]. To effectively deal with these issues, a dynamic fit is necessary [8], which should include a cross-sectoral partnership that is internalized into the core activities of the actors.

Corporate solutions

Starlink

Elon Musk's company SpaceX is currently developing a broadband internet system to provide internet access for consumers across the world [10]. Starlink is expected to roll out in Africa late 2021. Prices are still too high now, but after price adjustments, Starlink could be a possible solution to the Internet problem in developing countries [11].

Bluetown

Blue town provides affordable, sustainable Wi-Fi solutions for people living in rural areas around the globe. Bluetown creates base stations powered by renewable energy. These stations provide a wi-fi hotspot linked to existing infrastructure, satellites or even drones. This way, even people living in the most remote areas can be connected through the Bluetown local cloud [12].

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