



DIGITAL GIANTS AND THE SUSTAINABLE DEVELOPMENT GOALS

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When Google was founded in 1998, 3 percent of the world's population was online. Fourteen percent was online by 2004, when Facebook was founded.²³ While it takes many organizations to create a thriving digital ecosystem, these two companies, along with a few other peers from China and the US,²⁴ are central to the internet experience of the growing ranks of first-time and mobile-only users around the world. In 2021, as the world has notched 50 percent online and its fourth billionth user,²⁵ it is important to understand the unique roles the digital giants play in building inclusive digital economies and achieving the Sustainable Development Goals (SDGs).

The digital giants are not just 'platforms.' They are also what some call 'super platforms,'²⁶ constellations of interconnected products and services, leveraging deep pockets, talent, operating systems, hardware, infrastructure, platforms, data and AI to offer a multitude of mutually reinforcing products and services to billions of users, many of whom consume them 'for free' (without payment, instead in exchange for advertisements, data, and attention).

The sheer size of these digital businesses, and the scope of the services they offer, makes it both difficult and important to think carefully about them. As they have come to mediate so many elements of the economic and social spheres, their services support many of the SDGs. For example, satellite imaging can improve sustainable agriculture (Goal 2).²⁷ Mobile-based personal wellness monitoring²⁸ and disease surveillance²⁹ can help ensure well-being (Goal 3), and 'Smart cities' may soon help make human settlements more inclusive, safe, resilient and sustainable³⁰ (Goal 11).

As companies, too, these digital giants participate directly in "the Global Partnership for Sustainable Development" (Goal 17). Facebook has a new initiative called, accordingly, Project17, focused first on gender equality (Goal 5).³¹ Google is a partner on several SDG initiatives,³² and Microsoft is leading by example, committing to be carbon negative by 2030 (Goal 13).³³

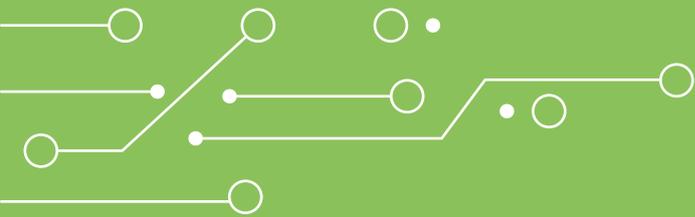
Against this rather complex backdrop of activities, this article focuses on three SDGs to highlight reasons for considerable optimism, as well as measured concern, for the ways in which these digital giants may support inclusive digital economies.

Deploying Infrastructure

Several of these giants are central to the infrastructure and innovation systems underpinning Goal 9, especially relevant to Target 9.c: *universal and affordable access to the internet*. Specific technologies include everything from undersea cables to urban rings to new low-Earth orbit satellite solutions to promote more universal access. These companies continue to advance the boundaries of affordability and access.³⁴ A similar logic underpins their role in financial services—the giants have a role to play in addressing the 'unbanked' just as they do with the 'unconnected'. Facebook's efforts to offer a global cryptocurrency may have stalled, but its WhatsApp payment functionality is live in India and Brazil. Alibaba's Alipay, too, is supporting a revolution in payments. The march towards increased accessibility and affordability of digital tools and the internet itself continues, led in no small part by the digital giants.

Making Inclusive Markets

Goal 8 is to *promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*. Here, there is promise in new 'platform livelihoods.'³⁵ Some giants (and many smaller platforms) are revolutionizing e-commerce, allowing microenterprises to sell goods online, either via formal marketplaces or informally via messaging and social media, in a widespread practice known as social commerce. A similar dynamic plays out in labour markets, where people find 'gig work' in freelancing, ride-hailing, delivery, and all manner of local services. An inclusive digital economies agenda here would seek to ensure that these marketplaces not only increase consumer choice and lower prices, but also provide market access and reliable incomes to small enterprises,



and secure, dignified working conditions for individuals. To be clear, this balance is a work in progress, and a combination of carrots (partnerships) and sticks (regulations) will be necessary to make sure these markets are fair and not exploitative.³⁶

Upskilling a Generation

Goal 4 focuses on *equitable access and lifelong learning*. Platforms, including the giants, are developing upskilling programs for gig workers and small-scale sellers and creating training materials like Grow with Google and Facebook for Business that teach valuable business skills to entrepreneurs.³⁷ Meanwhile, in K-12 learning, advancements in e-learning continue, accelerated by COVID-19 and the demand for remote instruction. Google's YouTube platform hosts a vast array of third-party content. Khan Academy on YouTube is just one great example here: clear, concise instruction in mathematics, available 'for free' in English, Portuguese, Hindi, Spanish and Gujarati.

Remaining Challenges

Two caveats are in order. First, this article is too brief to explore all the permutations of digital giants' engagement with the SDGs. Second, it is critical to simultaneously acknowledge some ways in which the current digital ecosystem actually works against the SDGs—for example, in hosting and spreading disinformation,³⁸ in underestimating the risks of AI bias³⁹ and in allowing skewed competition,⁴⁰ there are substantive critiques of the digital giants which cannot be ignored by the digital development community.

Yet the examples above illustrate how the world's largest digital companies are playing an important, albeit complex, role in the world's advancement towards an inclusive digital economy.

To frame a closing challenge, though, note the absence of Goal 1—ending poverty in “all its forms, everywhere”—from this list. The digital giants were built to advertise to the first billion, to bring groceries or airport rides

to the first billion, etc. Given the lack of purchasing power among the world's most poor, vulnerable digital businesses, large and small, will struggle to find business rationales to directly and profitably serve the last billion.⁴¹ Even the gig workers and microenterprises finding new digital livelihoods are not (yet) members of the last billion—they are still mostly urban, and mostly young. Of course, the digital giants have the advantage of scale, and may be better positioned to offer digital connectivity and services 'for free' to the poor, but this is not the same as offering services tailored to or for the poor.

Thus, continued innovation by the digital giants that extends transactional business models and lowers the cost of acquiring and serving customers is required to include and serve the last billion. Innovations like Reliance Jio (nearly free internet) and MPESA (sachet-based financial services) are promising and important exceptions to tech's focus on middle-and high-income users. But there remains a risk of technologies continuing to exacerbate separation between those who are able to take advantage of these technologies and those who are not, and, in the case of the current digital giants, those who are valuable to advertise to and those who are not. In the longer run, a failure to make technologies work for everyone, even outside the market incentives to do so, may end up leaving a subset of our world on the outside looking in, and perhaps even poorer for it. It is precisely the job of the digital development community to be aware of this tension and the persistence of a digital divide, and not to put all its faith and eggs in the (market) basket of the business logics of the giants, while working productively with them to build a better and more inclusive digital economy for everyone.

²³ ITU, "Individuals Using the Internet (% of Population)," World Bank Data Bank, 2021, <https://data.worldbank.org/indicator/IT.NET.USER.ZS>.

²⁴ There are overlapping lists of digital giants.

²⁵ ITU Development Sector, "Measuring Digital Development: Facts and Figures 2020" (Geneva: International Telecommunication Union, 2020), <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2020.pdf>.

²⁶ Ariel Ezrachi and Maurice Stucke, "The E-Scraper and E-Monopsony," Oxford Business Law Blog (blog), April 10, 2017, <https://www.law.ox.ac.uk/business-law-blog/blog/2017/04/e-scraper-and-e-monopsony>; David Porteous and Olga Morawcynski, "Inclusive Digital Ecosystems of the Future," FIBR Whitepaper #2 (Somerville, MA: Bankable Frontier Associates and Mastercard Foundation, December 2017), https://bfaglobal.com/wp-content/uploads/2020/01/BFA_FIBR_Nov8_WhitePaper_20171220.pdf.

²⁷ Murali Krishna Gumma et al., "Agricultural Cropland Extent and Areas of South Asia Derived Using Landsat Satellite 30-m Time-Series Big-Data Using Random Forest Machine Learning Algorithms on the Google Earth Engine Cloud," *GIScience & Remote Sensing* 57, no. 3 (April 2, 2020): 302–22, <https://doi.org/10.1080/15481603.2019.1690780>.

²⁸ Ida Sim, "Mobile Devices and Health," *New England Journal of Medicine* 381, no. 10 (September 5, 2019): 20, <https://doi.org/10.1056/NEJMr1806949>.

²⁹ Theresa Kuchler, Dominic Russel, and Johannes Stroebel, "JUE Insight: The Geographic Spread of COVID-19 Correlates with the Structure of Social Networks as Measured by Facebook," *Journal of Urban Economics*, January 9, 2021, 103314, <https://doi.org/10.1016/j.jue.2020.103314>.

³⁰ Carlo Ratti, "We Need More Urban Innovation Projects like the 'Google City'. This Is Why," WEF Global Agenda (blog), September 23, 2020, <https://www.weforum.org/agenda/2020/09/google-smart-cities-urban-innovation-technology/>.

³¹ Marne Levine, "Helping to Close the Gender Data Gap," Facebook Newsroom (blog), March 10, 2020, <https://about.fb.com/news/2020/03/closing-the-gender-data-gap/>.

³² (A listing where the government/entity/organization Google is listed as a partner, 2021; Google, 2021); United Nations, "A Listing Where the Government/Entity/Organization Google Is Listed as a Partner," SDGs partnerships platform, 2021, <https://sustainabledevelopment.un.org/partnership/partners?id=10449>; "Google," Business for 2030: Forging a Path for business in the UN 2030 development agenda, 2021, <https://www.businessfor2030.org/google>.

³³ Brad Smith, "Microsoft Will Be Carbon Negative by 2030," January 16, 2020, <https://blogs.microsoft.com/blog/2020/01/16/microsoft-will-be-carbon-negative-by-2030/>.

³⁴ Alliance for Affordable Internet, "Members," 2021, <https://a4ai.org/who-we-are/members>.

³⁵ Caribou Digital and Qhala, "The Quality and Experience of Platform Livelihoods: A Literature Review for Digital Development" (Farnham, Surrey, UK, October 2020), <https://www.platformlivelihoods.com/wp-content/uploads/2020/10/QYDEL-v1.01.pdf>.

³⁶ International Labour Organization, "The Role of Digital Labour Platforms in Transforming the World of Work" (International Labour Organization, February 23, 2021), https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_771749.pdf.

³⁷ Jonathan Donner et al., "Platform-Led Upskilling: Marketplace Platforms as a Source of Livelihoods Training," in Proceedings of the 2020 International Conference on Information and Communication Technologies and Development, ICTD2020 (New York, NY, USA: Association for Computing Machinery, 2020), 1–12, <https://doi.org/10.1145/3392561.3394629>.

³⁸ Siva Vaidhyanathan, *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy* (Oxford University Press, 2018).

³⁹ Emily M. Bender et al., "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? & #x1f99c;," in Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, FAccT '21 (New York, NY, USA: Association for Computing Machinery, 2021), 610–23, <https://doi.org/10.1145/3442188.3445922>.

⁴⁰ (UNCTAD, 2019) UNCTAD, "Digital Economy Report 2019: Value Creation and Capture: Implications for Developing Countries" (Geneva: United Nations Conference on Trade and Development, 2019), 20, https://unctad.org/en/PublicationsLibrary/der2019_en.pdf.

⁴¹ Jake Kendall, "Fortune at the Middle of the Pyramid: The Contours of African Consumer Purchasing Power and the Opportunities for the Tech Industry," DFS Lab Blog (blog), December 9, 2020, <https://medium.com/dfs-lab/fortune-at-the-middle-of-the-pyramid-3a6886eb97f3>.