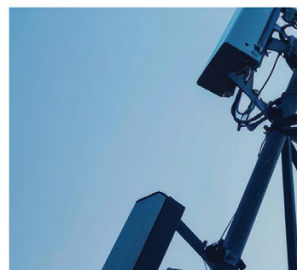
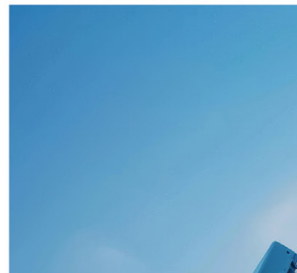
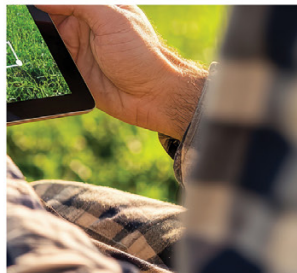
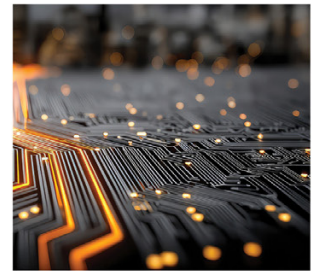


Connecting humanity action blueprint

Advancing sustainable, affordable
and innovative solutions

September 2025



Executive Summary

In 2020, under the direction of the G20 during the presidency of the Kingdom of Saudi Arabia, the International Telecommunication Union (ITU) published the *Connecting Humanity by 2030* report, establishing the goal of achieving universal, affordable broadband connectivity for all of humanity by the end of this decade. At that time, approximately three billion people remained unconnected to the Internet. Since then, an additional 400 million people are now online, shrinking the connectivity gap to 2.6 billion in 2024. This report updates and builds upon the original 2020 Connecting Humanity report.

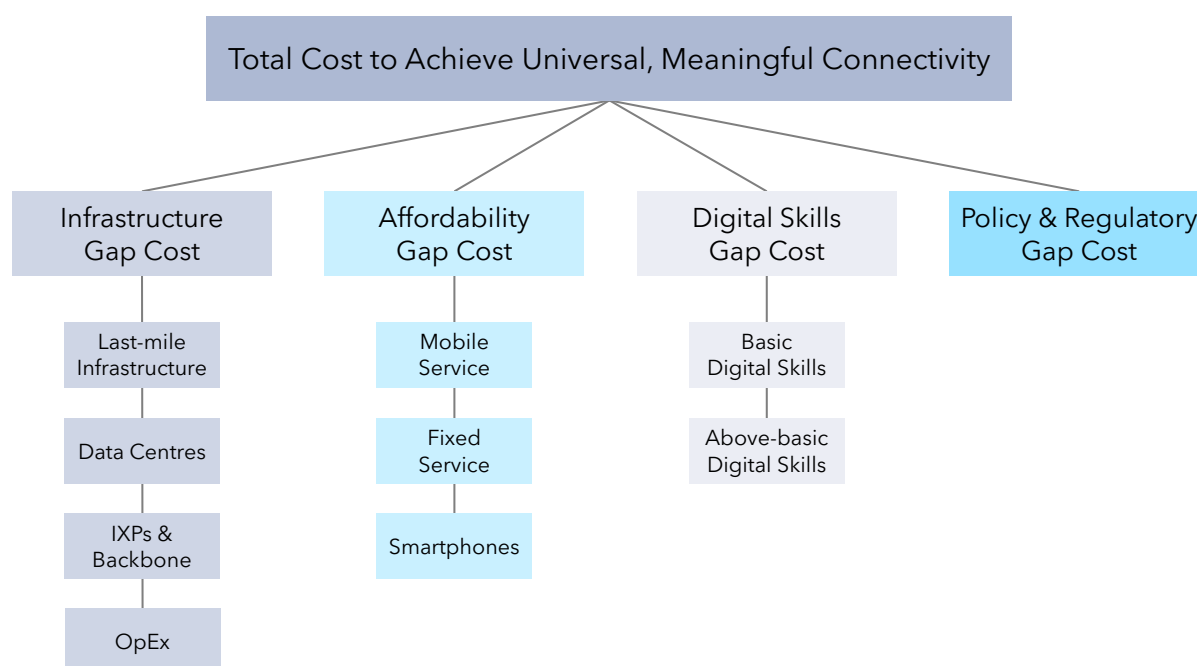
Since publication of the 2020 report, the world's understanding of meaningful Internet connectivity has improved. Changes in social, economic and technological conditions, as well as the availability of more granular

data, have necessitated this *Connecting Humanity Action Blueprint*, a reexamination of the size and cost of the connectivity gap, as well as pathways to closing it. The ITU has also published updated aspirational targets for universal and meaningful Internet connectivity for 2030, which address availability and adoption barriers.¹ Progress towards achieving these targets has been relatively slow, particularly in least developed countries (LDCs) with limited financing, a workforce lacking sufficient technical expertise, unreliable infrastructure and lower-income communities.

Achieving universal, meaningful Internet connectivity will require a collaborative, multipronged effort among stakeholders. It will involve a constant cycle of setting goals, identifying and working collaboratively to address

¹ <https://www.itu.int/hub/2022/04/new-un-targets-chart-path-to-universal-meaningful-connectivity/>

Figure 1: Cost estimate components



Source: ITU

gaps and measuring progress to assess impact and identify new priority regions, barriers or projects. To help address this challenge, this report aims to redefine the targets for each component of universal, meaningful connectivity; establish a methodology to estimate the cost of closing identified gaps; highlight strategies that could be used to close different aspects of the digital divide; and make recommendations around establishing successful long-term partnerships. Case studies and examples of Digital Inclusion Transformative Projects are also included to help further inform and inspire.

An Advisory Group comprising over 20 experts from development finance institutions, private industry, international organizations and civil society was established to provide advice and guidance on the development of the report.² Between September 2024 and June 2025, the ITU convened six formal meetings of the Advisory Group, as well as over 30 one-to-one conversations with individual experts and stakeholders. In addition, the report went through extensive internal consultation within the ITU.

The *Connecting Humanity Action Blueprint* is divided into two parts.

Part I presents the most up-to-date overview of the global digital divide and estimates costs associated with achieving the 2030 aspirational targets, moving the world toward universal, meaningful Internet connectivity. Building on the methodology developed in the *Connecting Humanity 2020* report, this report evaluates the global digital divide in terms of digital infrastructure gaps; policy and regulatory gaps; affordability gaps; and the digital skills gap.

The report develops a methodology to assess each gap and estimate the overall cost. **The estimated cost to achieve universal, meaningful Internet connectivity through 2030 is USD \$2.6 to \$2.8 trillion at current prices.**

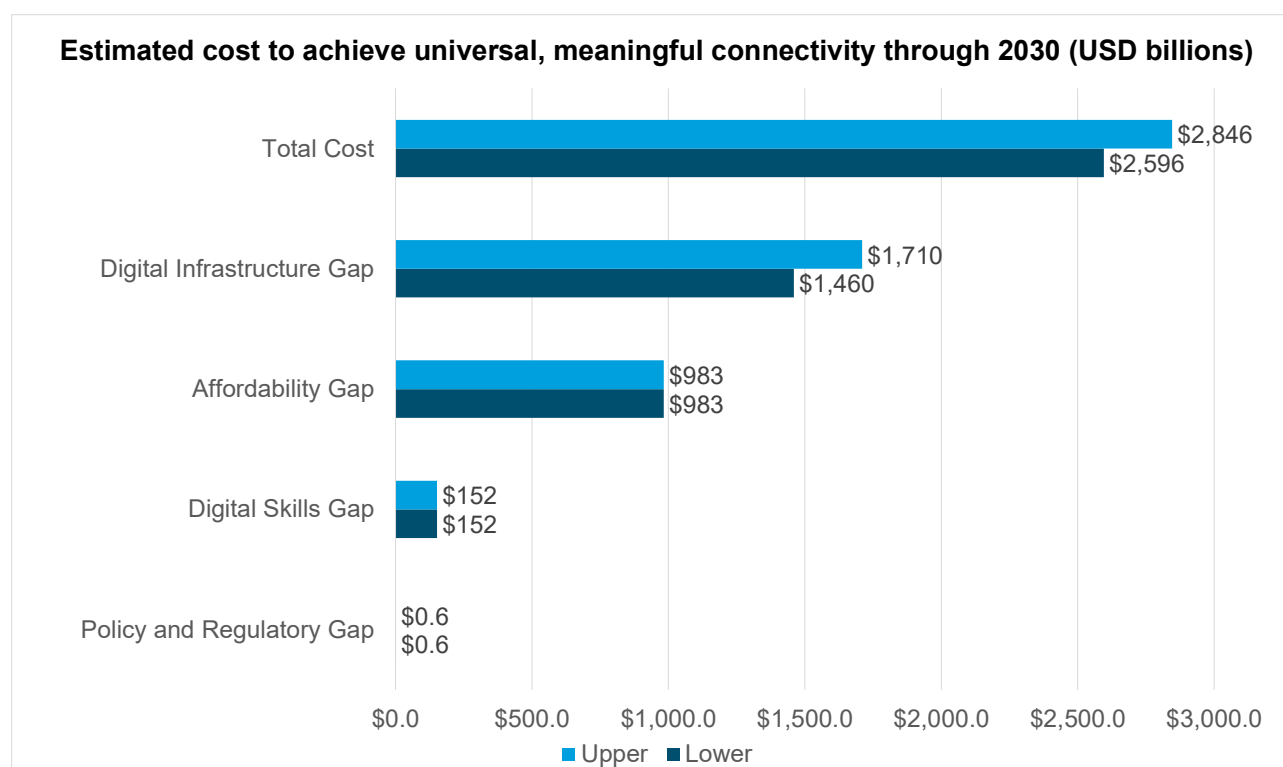
The single largest component of the overall connectivity gap cost is **expanding digital infrastructure** to reach every unserved individual and household and provide reliable download speeds of at least 20 Mb/s. The analysis for this report used geospatial data to analyse population distributions and estimate household distributions within reach of mobile coverage areas and fibre networks. The estimated cost to close the global digital infrastructure gap is between USD \$1.5 trillion and USD \$1.7 trillion, accounting for approximately half of the total estimated cost of achieving universal, meaningful connectivity.³ This represents the additional cost to cover 2.3 to 2.6 billion people, or some 498 to 574 million households.

On **digital skills**, 1.2 billion people worldwide need training in basic digital skills to achieve the ITU's aspirational target of 70 per cent of the population worldwide having basic digital skills. Roughly 311 million people require additional training to achieve above-basic digital skills and meet the 50 per cent goal established in ITU's aspirational targets. The total cost of this training is approximately USD \$152 billion.

Based on benchmarking in the ITU's generations of ICT regulation and ICT Regulatory Tracker, the estimated cost to close **policy and regulatory gaps** is approximately USD \$0.6 billion. While significant, costs for regulatory modernization are, on a per country basis, much lower,

² A list of organizations that participated in the Advisory Group is available on the Acknowledgements page of the full report.

³ Estimates are based on three different technologies and selects the most cost-effective to provide last-mile connectivity: fibre in urban and peri-urban areas; 4G fixed wireless in rural areas; and satellite connectivity in the most remote locations.

Figure 2: Estimated cost to achieve universal, meaningful connectivity through 2030⁴

Source: ITU, based on methodology described in the Appendix of the full report

⁴ Upper and lower estimates are the same for the affordability, skills, and policy/regulatory gaps, as the methodology used yields no range in those estimates.

varying between USD \$1.2 – USD \$8.4 million, depending on the country's Small Island Developing States (SIDS) status, size and regulatory maturity. This estimate is just for developing and implementing telecommunications regulations necessary to achieve the aspirational targets; costs would rise considerably if the study extended to digital transformation.

On **affordability**, it may cost approximately USD \$983 billion to close the broadband affordability gap. This reflects the cost of ensuring that smartphones capable of delivering 20 Mb/s speeds and ensuring that monthly service plans for fixed broadband (generally for households) and mobile broadband (generally for individuals) are affordable worldwide for five years.

Part I makes clear that closing the digital divide poses formidable challenges. With Part II, the report outlines a series of targeted efforts that, if sustained and undertaken by all stakeholders, can overcome persistent barriers and close existing gaps to achieve universal, meaningful Internet connectivity. Part II is organized into four sections:

Partnerships: Based on extensive interviews with practitioners who have established partnerships in the connectivity space, the report presents a set of seven key recommendations to help future project leaders maximize the advantages and minimize the disadvantages of partnerships and take into account the on-the-ground realities of what it takes to build and sustain a successful MSP or PPP. These recommendations include:

- Understand and acknowledge political realities

- Ensure that there is a value proposition for every stakeholder organization and deliver on it
- Include organizations that are essential to project success; avoid non-essential stakeholders
- Ensure that the right people (not just organizations) are engaged in the project
- Know the communities you will serve with the project, what benefits they expect from it and build strong relationships
- Align on realistic expectations through clear communication, including with the communities the project serves and funders who have invested in it
- Consider long-term sustainability and scalability from the outset

Case Studies: This section provides eight case studies that identify strategies that countries and international organizations have used to make meaningful progress towards achieving universal, meaningful Internet connectivity that can be tailored to other countries' specific needs or replicated in local contexts. The case studies are:

- Brazil's Connected North Initiative
- Colombia Low-Cost Smartphone Tax Exemption
- Healthcare Electrification and Telecommunications Alliance
- India 4G Saturation Project
- Malaysia Regulatory Intervention
- ITU's Digital Transformation Centre Initiative
- Ghana's Girls in ICT Trust

- Connecting the Kingdom of Saudi Arabia: Advancing Digital Inclusion Through Vision 2030

Digital Inclusion Transformative Projects: The report makes concrete suggestions of eight Digital Inclusion Transformative Projects (DITPs) that could game-change progress in closing the digital divide. The DITPs are as follows:

- Connecting All of the World's Schools through the Giga Initiative
 - Closing the Backbone Infrastructure Gap in 16 African LLDCs
 - Closing the Energy Infrastructure Gap and Converged Energy/Connectivity Off-Grid Solutions Across Africa
 - Last-Mile Connectivity Investment Fund
 - Developing a USD \$20, 4G-capable Smartphone
 - Preparing for AI Proliferation with a Global Digital Skills Campaign
 - Centre of Excellence for Policy and Regulatory Collaboration
- Global Digital Divide Data Observatory

Monitoring and Assessment Mechanisms: A critical element of achieving universal, meaningful Internet connectivity will be tracking progress as global stakeholders continue to work to close the digital divide. This section identifies specific key performance indicators (KPIs) that can be used to measure progress towards achieving the aspirational targets for 2030 as defined by each country.

Supported by up-to-date and comprehensive data, this report takes a hard look at the barriers to progress in achieving universal, meaningful connectivity. That same rigor is applied to the recommendations, strategies and insights offered that can make that goal achievable. The *Connecting Humanity Action Blueprint* offers opportunities for all stakeholders to contribute, from governments and international organizations to funders, companies and civil society. Taken together, there is ample cause for optimism as we work together to make connectivity not only accessible, but truly meaningful for everyone.

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