

Draft USAID Digital Strategy

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Executive Summary

Countries around the world are in the midst of an historic digital transition. The rapid development and adoption of technology is transforming industries, governments, economies, and cultures. Digital technology¹ holds immense potential to help women and men live freer and more prosperous lives. Digital ecosystems are helping to drive economic empowerment and financial inclusion; advance national security; support accountability and transparency in governance; and make development and humanitarian assistance more efficient and effective.

At the same time, this change comes with the risk of growing inequality, repression, and instability. Despite the global prevalence of mobile phones and the internet, the reality in many communities does not yet reflect the potential of a digital ecosystem that drives sustainable and equitable growth. Vulnerable or marginalized groups are often excluded from the digital ecosystem. This can happen because of inadequate infrastructure; a lack of affordable or relevant products, services, and content; or because political, social, environmental, or economic factors inhibit equitable uptake.

In light of this, USAID's Digital Strategy (2019-2024) will position the Agency to advance its mission—to end the need for foreign assistance—through digitally supported programming that fosters partner countries' self-reliance and maximizes the benefits, while managing the risks, that digital technology introduces into the lives of our beneficiaries.

The Digital Strategy centers around two core, mutually-reinforcing objectives:

- Improve USAID development and humanitarian assistance outcomes through the responsible use of digital technology; and,
- Strengthen openness, inclusiveness, and security of country digital ecosystems²

These objectives, and USAID's approach to achieving them, support the goals and principles outlined in key policy documents, including USAID's Policy Framework, the National Security Strategy, the National Cyber Strategy, and the State-USAID Joint Strategic Plan.

USAID will work to **improve the efficiency and effectiveness of our programming through consistent, responsible use of digital technology**. And through our programmatic investments, USAID will work to **strengthen the critical components of digital ecosystems that enable sustainable growth in a digital age**: a sound enabling environment and policy commitment; robust and resilient digital infrastructure; capable digital service providers and workforce; and ultimately, empowered end-users of digitally-enabled services.

¹ In this Strategy, we use the term "digital technology" to not only describe a type of technology but also to refer to the platforms, processes, and range of technologies that underpin modern information and communications technologies (ICT), including the internet and mobile phone platforms as well as advanced data infrastructure and analytical approaches.

² A digital ecosystem comprises the stakeholders, systems, and enabling environment that together empower people and communities to use digital technology to access services, engage with each other, or pursue economic opportunities. See Annex I: Glossary for examples of the critical components of a digital ecosystem.

As we seek to become a more responsive, field-oriented Agency that fosters self-reliance across the globe, USAID must consider partner countries' capacity and commitment to capitalize on the opportunities and address the risks inherent in digital systems. Ultimately, USAID investments in country-level digital infrastructure and systems must lead to sustainable ownership and management by partner countries themselves. Where capacity is lacking, we can build our partners' technical capability to oversee these systems and fully leverage the data they produce to inform their own decisions. Where commitment is low, USAID can empower and equip civil society to navigate complex and rapidly evolving digital ecosystems and hold governments accountable. **For countries to reach self-reliance in the digital age, a clear vision for open, inclusive, and secure digital ecosystems that preserve and protect the rights and agency of individuals is critical.** Proper use, understanding, and application of technology is a development imperative.

The launch of the Digital Strategy will be followed by the release of a detailed Implementation Plan, as well as a Monitoring and Evaluation Plan that will enable evaluation of the Strategy's impact over the next five years. To achieve the objectives of the Digital Strategy, USAID will take a three-pronged approach. We will work to **strengthen digital ecosystems**; we will **default to the use of digital technology** in our humanitarian and development assistance programming; and we will invest in our significant human capital to continue to **build the USAID of tomorrow**. Strategy implementation will start with a subset of target countries and extend to all USAID operating units over the five-year span of the Strategy.

Guiding Practices

Embed American Values, Civil Liberties, and Universal Human Rights. “[The U.S. Government’s] approach to cyberspace is anchored by enduring American values, such as the belief in the power of individual liberty, free expression, free markets, and privacy.”³ Digital technologies can be tools of surveillance, discrimination, or social control. USAID will support systems and policies that encourage freedom of thought and action, equal opportunity, and self-determination. These values are in accordance with the civil liberties enshrined in the U.S. Constitution’s Bill of Rights⁴ and the universal human rights enshrined in the Universal Declaration of Human Rights.⁵

Partner with the Private Sector. In alignment with the agency’s [Private Sector Engagement Policy](#), USAID will partner with the private sector to build long-lasting, equitable digital infrastructure while lowering risk for investors. USAID will also promote private sector-led innovations that reduce costs for end users and support local technology entrepreneurs’ access to regional and global markets.

Foster Adoption of U.S.-aligned International Standards. USAID will work with stakeholders to align with and apply appropriate international standards, where relevant, or best practices related to the digital ecosystem (for example, on interoperability, competition, and cross-border data flows⁶). Such standards and practices can increase investment in and growth of local digital ecosystems and improve the quality of services available to communities.

Support In-Country Alignment. USAID will strive to align with and strengthen the digital strategies and priorities of host-country governments.⁷ Missions should encourage data systems funded by USAID to be linked with national systems when protections can be guaranteed, and we should seek opportunities to coordinate funding with other investors in the digital ecosystem. We must also oppose digital integration in instances when it is clear digital technology and data are becoming unwitting tools of repression.⁸

Strengthen Local Systems and Capacity. In line with the USAID Policy Framework, which highlights sustaining results as a key principle that underpins our approach to fostering self-reliance, we will apply

³ White House, "[National Cyber Strategy](#)," p. 2.

⁴ U.S. National Archives, "[The Constitution of the United States: Bill of Rights](#)."

⁵ United Nations, "[Universal Declaration of Human Rights](#)."

⁶ Given the consensus view that data flows present singular challenges and opportunities, multiple organizations have developed principles, guidelines, frameworks, or white papers to inform policymakers and other stakeholders on how to navigate this environment safely. See, for example, CSIS, "[Data Governance Principles for the Global Digital Economy](#)," (2019); CIGI, "[Data Is Different: Why the World Needs a New Approach to Governing Cross-border Data Flows](#)," (2018); USTR, "[The Digital 2 Dozen](#)."

⁷ See, for example, the Principles of Donor Alignment for Digital Health: <https://digitalinvestmentprinciples.org/>

⁸ Vietnam: Euan McKirdy, "‘Stalinist’ Vietnamese cybersecurity law takes effect, worrying rights groups and online campaigners," CNN.com (January 2, 2019), <https://www.cnn.com/2019/01/02/asia/vietnam-cybersecurity-bill-intl/index.html>; Thailand: TechCrunch.com, "

Thailand passes controversial cybersecurity law that could enable government surveillance" (n/d), <https://techcrunch.com/2019/02/28/thailand-passes-controversial-cybersecurity-law/>; China: Jack Wagner, "China's Cybersecurity Law: What You Need to Know," *The Diplomat* (June 1, 2017), <https://thediplomat.com/2017/06/chinas-cybersecurity-law-what-you-need-to-know/>

a systems lens to our digital efforts. USAID must strengthen local workforce development, use local systems whenever possible, promote digital literacy, improve access to digital tools and services, promote local data protection, and strengthen privacy regulations.⁹

Meet Countries Where They Are Along the Journey to Self-Reliance. Rather than imposing an inflexible set of global goals, USAID’s aim is to help each partner country progress on its unique journey to self-reliance.¹⁰ This means USAID will adapt its engagements based on the opportunities and risks presented by any given digital ecosystem. As capacity and commitment reach more advanced levels, we will consider adjusting the nature of our partnership with host countries on issues of digital development. Where capacity is low, we will work with host countries to train their workforces.

Strengthen Cybersecurity. To ensure coherence and alignment with existing U.S. government policy (including E.O. 13800 - *Strengthening Cybersecurity of Federal Networks and Critical Infrastructure*), USAID will promote an **open, interoperable, reliable, and secure internet** that strengthens and extends American values and protects and ensures cybersecurity for the United States and its allies. This will entail supporting adoption of policies globally that promote free flow of data and intellectual property protection; deterrence of cyber behaviors by state and non-state actors inconsistent with these values; protection of internet freedom; and development of a cyber-ready workforce.

Protect Privacy and Use Data Responsibly. As our programs rely increasingly on digital tools and the personal data they generate, USAID needs additional attention on privacy and data protection, and on the complex ethical and legal issues that may not be consistently covered by policy. As we increasingly turn to data to inform decision making, we must consistently strive for all data assets to be high-quality, standardized, and machine-readable.

Take Calculated Risks and Embrace Innovation. A key element of our ability to sustain results is to take balanced risks and manage those risks comprehensively. USAID’s Risk-Appetite Statement, developed and maintained by the Risk-Management Council (RMC), calls on the Agency to be bold, work with different partners, and innovate around novel procurement systems^{11 12}; this is particularly relevant to investments in digital ecosystems. The rapidly evolving landscape of digital technology requires a high tolerance for risk, with a commitment to understand and minimize avoidable risks as we promote innovation. Simultaneously, the rights, protections, and safety of our beneficiaries and recipients must always be our foremost priority.

⁹ USAID, “Local Systems: A Framework for Supporting Sustained Development” (April 2014), <https://www.usaid.gov/sites/default/files/documents/1870/LocalSystemsFramework.pdf>.

¹⁰ USAID, “Policy Framework.”

¹¹ USAID, “Risk Appetite Statement” (June 2018), <https://www.usaid.gov/policy/risk-appetite-statement>.

¹² USAID, “Governance Charter for Enterprise Risk Management and Internal Control at USAID: A Mandatory Reference for ADS Chapter 596,” (August 2017), <https://www.usaid.gov/sites/default/files/documents/1868/596mab.pdf>

USAID's Vision: Development in a Digital Age

The world has changed dramatically since USAID's founding in 1961, and the pace of change is accelerating. Digital technology increasingly pervades daily life. In recent years, the proliferation of digital technology has transformed the ways in which the world's economies, governments, and people interact and engage with one another.¹³

Community leaders engage their constituents via popular mobile platforms like WhatsApp. Power grids and other infrastructure are operated and secured via computers. Powerful tools such as artificial intelligence (AI) offer tremendous promise to better tailor goods and services to meet individual needs. Some small and medium-sized enterprises (SMEs) and motivated entrepreneurs are becoming micro-multinationals, opening up their shops and skill sets to online global markets and the burgeoning gig economy.¹⁴

Whereas mobile phones and the internet were once limited to wealthy countries, the rapid diffusion of digital technology holds the promise of a new digitally-enabled global society, with the potential to spur economic growth, improve development outcomes, lift millions out of poverty, and ultimately move us closer to ending the need for foreign assistance. For example, expanding the availability of fast internet in Africa has been shown to increase employment levels and average income, especially for high-skilled jobs and workers.¹⁵ When properly deployed and regulated, advanced communications networks enable smart city applications that could mitigate the negative effects of urban population growth, improve natural resource management, and increase agricultural productivity.^{16 17}

However, these same systems can have undesirable consequences when not developed with respect for the individual rights of users. Authoritarian governments and malign actors can wield digital tools to suppress political dissent, quash individual freedoms, limit competition in the marketplace, or take advantage of individuals who lack digital literacy. Digital tools justified on analytical support, social engagement, or civil protection grounds can be deployed as instruments of intimidation, surveillance, theft, and control—effectively silencing, rather than amplifying, critical voices.^{18 19 20} Digitally-augmented

¹³ World Bank Group, *World Development Report 2016: Digital Dividends* (Washington, DC: World Bank Group, 2016), <http://www.worldbank.org/en/publication/wdr2016>.

¹⁴ The gig economy is a system in which individuals or organizations engage independent workers on short-term assignments, often via online platforms, such as Amazon Mechanical Turk, TaskRabbit, Uber, etc.

¹⁵ Jonas Hjort and Jonas Poulsen, "The Arrival of Fast Internet and Employment in Africa," *American Economic Review* 109, no. 3 (March 2019): 1032-79, <https://doi.org/10.1257/aer.20161385>.

¹⁶ Jonathan Woetzel, et al., "Smart Cities: Digital Solutions for a More Livable Future", McKinsey Global Institute (2018), <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/smart-cities-digital-solutions-for-a-more-livable-future>

¹⁷ Sarah Rotz, et al., "Automated pastures and the digital divide: How agricultural technologies are shaping labour and rural communities", *Journal of Rural Studies*, Vol. 68, (May 2019), pp. 112-122 <https://www.sciencedirect.com/science/article/pii/S0743016718307769?via%3Dihub>

¹⁸ Erica Naone, "Why Crisis Maps Can Be Risky When There's Political Unrest," *MIT Technology Review*, (2011), <https://www.technologyreview.com/s/424944/why-crisis-maps-can-be-risky-when-theres-political-unrest/>.

¹⁹ Robert Chesney and Danielle Citron, "Deepfakes and the New Disinformation War," *Foreign Affairs* (Jan/Feb 2019), <https://www.foreignaffairs.com/articles/world/2018-12-11/deepfakes-and-new-disinformation-war>.

²⁰ USAID, "Reflecting the Past, Shaping the Future: Making AI Work for International Development" (2018), <https://www.usaid.gov/digital-development/machine-learning/AI-ML-in-development>.

programming that ignores geographic or gender disparities in mobile access or use may end up failing the most vulnerable or marginalized populations.²¹

How society evolves in the digital age does not depend only on new technology and innovation, but on non-digital building blocks that comprise the digital ecosystem—elements such as domestic and international regulatory environments, institutional capacity, and individuals’ skills, protections, and agency. While digital ecosystems can and should evolve according to market forces, donors such as USAID can help ensure digital ecosystems serve all citizens, especially the most marginalized and vulnerable. American values of inclusion, rights, freedom, and accountability must guide our digital investments. Our role should not be to export predetermined models of digital development, but to adapt our approaches to local conditions and ensure the foundational ecosystem components and necessary guardrails are put in place to guarantee that digital technology benefits and protects all citizens.

The vision of USAID’s Digital Strategy is to advance partner countries’ progress on their journeys to self-reliance through efficient, effective, and responsible digital initiatives that enhance security and economic prosperity, consistent with the American values of respect for individual rights, freedom of expression, and the promotion of democratic norms and practices.

In support of this vision, USAID will work toward two mutually reinforcing strategic objectives:

- Improve USAID development and humanitarian assistance outcomes through the responsible use of digital technology; and,
- Strengthen openness, inclusiveness²², and security of country digital ecosystems

A Virtuous Cycle: Healthy digital ecosystems enable better development programming across sectors. When a country’s digital ecosystem is strong, gaps in the health workforce can be mitigated through telemedicine services, or supply chain issues informed by real-time SMS reporting of stock-outs. In countries with trusted digital ID systems²³, development or humanitarian assistance programming can make use of digital ID infrastructure to more effectively and efficiently reach intended beneficiaries.

The strategic use of digital technology in USAID programming should not only help us achieve our development and humanitarian assistance outcomes. It should also strengthen the critical components of the digital ecosystem that both helps us achieve our own goals and empowers all individuals to

²¹ OECD, “Bridging the Gender Digital Divide: Include, Upskill, Innovate,” (Paris: OECD, 2018), <https://www.oecd.org/internet/bridging-the-digital-gender-divide.pdf>.

²² There are 3 principle drivers of digital inclusion: access, affordability, and adoption. Inclusive digital ecosystems describe systems in which digital infrastructure, technology and services are not only equally accessible and available to everyone, but that are also affordable to all members of society and designed in a way as to account for the cultural, contextual, and other barriers (e.g., gender, education) that must be overcome in order to become a regular user of the internet.

²³ One example of such a broadly-trusted digital ID system is Peru’s RENIEC—a 2006 survey found that Peruvians trust the civil registration agency more than the Catholic Church.

Bettina Boekle-Giuffrida and Mia Elisabeth Harbitz, “Democratic Governance, Citizenship, and Legal Identity: Linking Theoretical Discussion and Operational Reality,” *IDB Working Paper* (2009), <https://publications.iadb.org/en/democratic-governance-citizenship-and-legal-identity-linking-theoretical-discussion-and-operational>.

achieve their own aspirations. We must aspire to leave countries' digital ecosystems healthier than we found them. USAID's digital interventions must go beyond the activity level and when possible, address the systemic gaps and market failures within a digital ecosystem that make the need for donor interventions a persistent reality.

The Digital Strategy is clearly connected to broader U.S. foreign policy objectives. In particular, the 2018-2022 State-USAID Joint Strategic Plan that calls on the U.S. Department of State and USAID to "[t]ransition nations from assistance recipients to enduring diplomatic, economic, and security partners" (Strategic Objective 3.1).²⁴ As USAID looks forward to the day when foreign assistance is no longer necessary, we must understand the potential for digital technology to accelerate or undermine a country's journey to self-reliance.

The Digital Journey to Self-Reliance

A country's commitment and capacity to respond to the unique opportunities and challenges posed by the digital age is directly linked to its ability to become self-reliant. In alignment with existing U.S. policies and frameworks^{25 26}, USAID has an integral role to play in supporting countries along their *digital* journey to self-reliance.

In doing so, USAID must help to strengthen the security and resiliency of partner countries' digital ecosystems, which increasingly will serve as the foundations of open and accountable governance, inclusive development, and widespread economic growth. USAID must provide opportunities to train the workforce of tomorrow in the developing world. The tools required for this training are key to its successful rollout.

By their very nature, digital issues often transcend national boundaries: Digital businesses operate in international markets; cyberthreats cross borders with ease; and landlocked nations depend on fiber-optic cables that run through their neighbors' territory. Each country's journey to self-reliance is linked to a digital ecosystem that is part of a regional or global whole, and may be benefited or constrained by international policies and markets.

The Digital Journey to Self-Reliance

The following are examples of how digital technology can promote self-reliance.

Open and Accountable Governance: In Ukraine, the pilot of the USAID-supported e-procurement

²⁴ U.S. Department of State and U.S. Agency for International Development, *Joint Strategic Plan FY 2018 - 2022*, (Washington, DC: U.S. Government, 2018), https://www.usaid.gov/sites/default/files/documents/1870/JSP_FY_2018_-_2022_FINAL.pdf.

²⁵ White House, "National Cyber Strategy of the United States of America" (2018), 24-26, <https://www.whitehouse.gov/wp-content/uploads/2018/09/National-Cyber-Strategy.pdf>.

²⁶ USAID, "USAID Policy Framework: Ending the Need for Foreign Assistance" (2019), <https://www.usaid.gov/policyframework/documents/1870/usaaid-policy-framework>.

platform, ProZorro, helped the government cut costs by 12 percent (amounting to \$1.4 billion by 2018).²⁷ Perceived corruption went from 59 percent to 29 percent from 2016-2017, and the percentage of suppliers who are SMEs went from 24 to 80 percent from 2015-2018.²⁸

Inclusive Development: 74 percent of women in low- and middle-income countries say having a mobile phone saves them time; 60 percent say it saves them money; 68 percent of women report feeling safer with a mobile phone; 58 percent feel more independent.²⁹

Economic Policy: By increasing productivity and reducing trade costs, digital trade is credited with increasing U.S. gross domestic product (GDP) between an estimated 3.4 percent to 4.8 percent and with creating up to 2.4 million jobs in 2013.³⁰

Government Capacity: Economic opportunities are enhanced by digital technology and data. In Mexico, the Better Than Cash Alliance reports that the Mexican government saves \$1.27 billion each year through the use of digital payments.

Citizen Capacity: Thanks to digital tools like mobile money, communities are more stable and self-reliant. In Kenya, the mobile money system, M-PESA, has lifted 194,000 households, or two percent of Kenyan households, out of poverty.³¹

Capacity of the Economy: By increasing mobile phone adoption and fully enabling digital financial services, the GDP of emerging economies could increase by over \$3.5 trillion, or six percent, by 2025.³²

Civil Society Capacity: Digital technology enables civil society to hold government and service delivery providers accountable. Following the highly contested 2014 presidential election in Indonesia, a group of volunteers quickly built a website and digitized voting tabulations, many of them handwritten, to enable better monitoring and tracking of the election result and to address accusations of vote rigging.³³

Advancing National Security and Economic Prosperity

As America's economy becomes increasingly dependent on digital technology, and as Americans rely more heavily on a secure cyberspace, investments toward the development of robust, resilient digital

²⁷ Mara Lemos Stein, "Ukraine Looks to Unmask Corruption with ProZorro E-Procurement," *Wall Street Journal*, May 19, 2016, <https://blogs.wsj.com/riskandcompliance/2016/05/19/ukraine-looks-to-unmask-corruption-with-prozorro-e-procurement/>.

²⁸ Rowland Manthorpe, "From the Fires of Revolution, Ukraine is Reinventing Government," *Wired*, August 20, 2018, <https://www.wired.co.uk/article/ukraine-revolution-government-procurement>.

²⁹ GSMA Connected Women Global Development Alliance, *Bridging the Gender Gap: Mobile Access and Usage in Low- and Middle-Income Countries*, (London: GSMA, 2015), <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf>.

³⁰ The estimated increase in GDP is based on 2011 data from the Global Trade Analysis Project. United States International Trade Commission, *Digital Trade in the U.S. and Global Economies, Part 2* (Washington, DC: USITC, 2014), <https://www.usitc.gov/publications/332/pub4485.pdf>.

³¹ Tavneet Suri and William Jack, "The Long-Run Poverty and Gender Impacts of Mobile Money," *Science*, Vol. 354, Issue 6317 (Dec 9, 2016), pp. 1288-1292 <http://science.sciencemag.org/content/354/6317/1288>.

³² James Manyika, Susan Lund, Marc Singer, Olivia White, and Chris Berry, "How Digital Finance Could Boost Growth in Emerging Economies," McKinsey Global Institute (2016), <https://www.mckinsey.com/featured-insights/employment-and-growth/how-digital-finance-could-boost-growth-in-emerging-economies>

³³ Stefaan G. Verhulst and Andrew Young, "Open Data in Developing Economies" The GovLab (July 2017), pp45 <http://odimpact.org/files/odimpact-developing-economies.pdf>

economies and global cyber capacity-building are intrinsically linked to national security and economic prosperity. Recognizing the cybersecurity and supply-chain risks of digital networks, pillar IV of the National Cyber Strategy calls on U.S. government agencies to, “promote an open, interoperable, reliable, and secure internet,” and to build the cyber capacity of our allies and partners.³⁴

Networks present cybersecurity and supply-chain risks. This is especially urgent as countries around the world begin the shift from 3G and 4G (third/fourth generation) to 5G communications networks.³⁵ Authoritarian donor governments entice developing countries to take on debt to build government fiber optic networks and buy insecure network equipment, including technology that can be used to monitor populations and restrict citizens’ access to information. These efforts promote strategies for authoritarian regimes to dominate the telecommunications industry and to control digital tools that can increase censorship and repression. As stated in the U.S. National Security Strategy, “America’s response to the challenges and opportunities of the cyber era will determine our future prosperity and security.”³⁶

Digital Connectivity and Cybersecurity Partnership (DCCP)

In support of the U.S. government’s cybersecurity priorities, Secretary of State Michael Pompeo launched the Digital Connectivity and Cybersecurity Partnership (DCCP) in July 2018, a whole-of-government initiative to promote access to an open, interoperable, reliable, and secure internet to counter authoritarian influences on communications infrastructure development. The DCCP interagency working group, co-chaired by USAID and the U.S. Department of State, supports the development of communications infrastructure through private sector engagement, promotes transparent regulatory policies for open, competitive markets, and builds partners’ cybersecurity capacity to address shared threats. DCCP will help partner countries realize the tremendous economic and social benefits of the digital economy, while creating new commercial opportunities for U.S. and local technology companies.

REALIZING BENEFITS: DIGITAL AS AN ENABLING FORCE FOR DEVELOPMENT

Digital technology is transforming the way people access information, goods, and services, paving the way for improved well-being and livelihoods. For example, digital technology helps:

Make Development More Effective and Efficient

- **Strengthening government systems.** During the 2014-16 Ebola crisis in West Africa, USAID supported a mobile phone-based system to disseminate information from Liberia’s Ministry of Health to frontline health workers³⁷ and worked to streamline salary payments to health

³⁴ White House, “National Cyber Strategy” (September 2018), 24-26, <https://www.whitehouse.gov/wp-content/uploads/2018/09/National-Cyber-Strategy.pdf>.

³⁵ GSMA, “The Mobile Economy 2019,” (2019), <https://www.gsmaintelligence.com/research/?file=b9a6e6202ee1d5f787cfebb95d3639c5&download>.

³⁶ White House, “National Security Strategy of the United States of America” (December 2017), <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>.

³⁷ USAID, “Mobile Phones & Ebola: Preventing Disease Outbreaks with Information,” YouTube (2017), <https://www.youtube.com/watch?v=Ysuv7D348kk>

workers using mobile money.³⁸ In Sierra Leone, digitized payments are estimated to have contributed to saving 2,000 lives by ensuring community response workers were paid.³⁹

- **Prioritizing investments through geospatial analysis.** In Uganda, geospatial data creation and analysis supported USAID's Saving Mothers Giving Life program. In just eight weeks, university students trained by USAID digitally mapped the entire transportation network of three districts in Western Uganda. The mapping data was used to help model physical accessibility to health services in the region and prioritize the allocation of new facilities. As a result of the improved allocation, maternal mortality in the area declined by at least 30 percent.⁴⁰ In the Philippines, USAID's Biodiversity and Watersheds Improved for Stronger Economy and Ecosystem Resilience (B+WISER) harnessed technology alongside a geographic, data-driven approach to support the government's effort to improve natural and environmental resource management and mitigate deforestation.^{41,42}

Drive Economic Empowerment, Financial Inclusion, and Trade

- **Improving resilience through relevant financial services.** This can make transactions cheaper, more secure, and more transparent and help the poor weather financial shocks to lead more resilient lives.⁴³ Families who do not use M-Pesa in Kenya—the largest mobile money system in the world—suffer a seven percent drop in consumption when hit with a negative income shock, while the consumption of families who use M-Pesa remains unaffected.⁴⁴
- **Increasing economic activity and reducing barriers to international trade by using digital systems.** The Ethiopian Commodity Exchange (ECX) is an online platform that provides real-time prices on agricultural products over SMS, telephone hotlines, a website, and traditional media channels. It offers smallholder farmers a fair opportunity to participate in international markets. Improved knowledge about coffee prices reduced trader margins by almost half, with increased revenue going to farmers.⁴⁵ Similarly, the USAID-supported Regional Trade and Market Alliance (RTMA) worked with customs and other border-control agencies in Central America to reengineer trade processes to eliminate downtime and improve coordination across all agencies. This reengineering process was critical to support the implementation of radio-frequency identification (RFID) tags at two main border crossings.⁴⁶

³⁸ Jonathan Kourgialis, "Learning from Ebola: How Mobile Money Can Prevent Health Crises." *Closing the Digital Divide (mSTAR blog)* (July 2, 2018) <https://mstarproject.wordpress.com/2018/07/02/how-mobile-money-can-prevent-health-crises/>

³⁹ Joe Abass Bangura, "Saving Money, Saving Lives: A Case Study on the Benefits of Digitizing Payments to Ebola Response Workers in Sierra Leone," Better Than Cash Alliance (2016), <https://www.betterthancash.org/tools-research/case-studies/saving-money-saving-lives-a-case-study-on-the-benefits-of-digitizing-payments-to-ebola-response-workers-in-sierra-leone>.

⁴⁰ Saving Mothers Giving Life, "2018 Final Report: Results of a Five-Year Partnership to Reduce Maternal and Newborn Mortality" (2018), <http://www.savingmothersgivinglife.org/docs/smgl-final-report.pdf>.

⁴¹ The technology has now been adopted and scaled up by the Philippine government, using their own resources.

⁴² "Philippines Biodiversity and Watersheds Improved for Strong Economy and Ecosystem Resilience (B+WISER) Program," USAID <https://www.usaid.gov/philippines/energy-and-environment/bwiser>

⁴³ Jack, William, and Tavneet Suri, "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution," *American Economic Review*, 104 (1) (2014): 183-223

⁴⁴ http://www.mit.edu/~tavneet/Jack_Suri.pdf.

⁴⁵ Data Impacts, "Improving Farmers' Income Through Market Price Information," *Agriculture and Environment, Case #9* (n/d), <https://dataimpacts.org/wp-content/uploads/2015/06/market-data-raise-farmer-income.compressed.pdf>.

⁴⁶ "USAID Regional Trade and Market Alliances Project," Our Work, Nathan Associates, <https://www.nathaninc.com/usaid-regional-trade-and-market-alliances-project/>.

Support Accountability and Transparency in Governance

- **Improving access to government information.** Open data improves governance, empowers citizens, creates opportunity and solves public problems.⁴⁷ USAID’s existing commitment to open data can be exemplified by the International Aid Transparency Initiative (IATI), which aims to address development challenges by making information about aid spending easier to access, use, and understand, as well as the Development Data Library (DDL), an online repository of Agency-funded, machine-readable data. Released in 2018, the DDL “strives to preserve and accelerate the re-use of valuable data to advance international development and improve program development and performance.”⁴⁸
- **Reducing waste in public benefit distribution.** A trial of smartcard-enabled benefit payments in India found that the leakage of funds decreased by 40 percent, and demands for bribes were 47 percent lower for card users than for those in the control group.⁴⁹ Overall, the reductions in leakage for the program were estimated to be \$38.7 million per year—9 times the cost of implementation.⁵⁰
- **Strengthening land tenure systems.** USAID's Mobile Applications to Secure Tenure (MAST) initiative has combined innovative technology tools with inclusive, community-based methods to document and formalize land use and empower youth.⁵¹ MAST maps and documents land tenure in a number of countries, trains local youth to collect and validate land data as empowered “intermediaries” and is a part of ongoing randomized control trials in Zambia and Tanzania. The source code for MAST's mobile applications and backend database systems has been made free and open source, so the technology can be adapted and used as broadly as possible.⁵²

Create a Platform for Innovation and Inclusion

- **Providing the economic infrastructure for innovative businesses to offer services to underserved communities.** The combination of inexpensive solar panels and mobile money platforms is enabling pay-as-you go business models for off-grid energy.⁵³ One such company, M-Kopa, powers 300,000 homes in Kenya, Tanzania, and Uganda. This technology is not only delivering electricity, but broadening the reach of digital services for savings, credit, and payments.⁵⁴

⁴⁷ Stefaan G. Verhulst and Andrew Young, *Open Data in Developing Economies: Toward Building an Evidence Base on What Works and How*, (Washington, DC: USAID, 2017), <http://odimpact.org/files/odimpact-developing-economies.pdf>.

⁴⁸ “USAID Announces Launch of New Improved Data Repository,” Press Release, USAID, November 13, 2018, <https://data.usaid.gov/stories/s/DDL-Launch-Press-Release/2div-gru5>.

⁴⁹ Karthik Muralidharan, Paul Niehaus, and Sandip Sukhtankar, “Improving Governance Through Biometric Authentication and Secure Payments in India,” J-PAL (n/d), <https://www.povertyactionlab.org/evaluation/improving-governance-through-biometric-authentication-and-secure-payments-india>.

⁵⁰ Ibid.

⁵¹ <https://www.land-links.org/tool-resource/mobile-applications-to-secure-tenure-mast/>

⁵² <https://github.com/MASTUSAID>

⁵³ USAID, “Pay-As-You Go Solar as a Driver of Financial Inclusion” (2017), <https://www.usaid.gov/digital-development/paygo>.

⁵⁴ Jake Bright, “Solar startup M-KOPA leapfrogs Africa’s electricity grid,” TechCrunch.com (n/d), <https://techcrunch.com/2016/04/28/solar-startup-m-kopa-leapfrogs-africas-electricity-grid/>.

- **Creating new opportunities for persons with disabilities.** Digital reading platforms allow for accessible audio and visual supplements. Since 2011, the USAID-funded *All Children Reading: A Grand Challenge for Development* project has used competitions to create and scale technological solutions to improve the literacy skills of early-grade learners in developing countries.⁵⁵ Its *Sign On for Literacy* prize targets the estimated 25 million deaf children around the world who lack access to education.⁵⁶ In 2019, the Kenya-based prize finalist, eKitabu, translated Kenyan Sign Language (KSL) into a visual glossary, produced KSL videos for integration into accessible books, and created visual storybooks to introduce KSL to early-grade readers.
- **Empowering youth to drive change in their communities.** Young entrepreneurs and youth leaders are using digital innovation to help solve development challenges at home and abroad. Across the globe, more than 5,000 student mappers in over 150 university chapters are generating open-source geospatial data for humanitarian and development use through YouthMappers. The USAID-funded program creates geospatial data for Agency programs that need it most, while strategically empowering youth to define their world by mapping it.

Deliver Information and Actionable Insights

- **Enabling government access to data.** In Pakistan, a country plagued by chronic electricity shortages, USAID installed 9,000 smart meters, which used the country's mobile network to relay electricity usage data back to headquarters every 15 seconds. With increased access to data, the government was able to provide better electricity service to over 120 million people, to increase revenue by \$62 million, and reduced losses by an estimated \$180 million.⁵⁷
- **Aiding in strategy formulation, project and activity design, and implementation by using powerful emerging approaches like machine learning (ML) and artificial intelligence (AI).** In Colombia, efforts to increase smallholder crop yields have been aided by ML approaches that make recommendations based on historical yield data and updated climate models.⁵⁸ For development efforts to expand electricity access, computer vision algorithms can map electric grids by picking out electric towers and power lines from satellite images.⁵⁹ Similar approaches can map road networks, helping to identify underserved regions.⁶⁰

⁵⁵ "Project Evaluations," All Children Reading (n/d), <https://allchildrenreading.org/research/project-evaluations/>.

⁵⁶ "Sign on for Literacy Prize," All Children Reading (n/d), https://allchildrenreading.org/challenge/sign-literacy-prize/?utm_source=Test&utm_campaign=0bf0d4c180-EMAIL_CAMPAIGN_2019_05_20_07_17&utm_medium=email&utm_term=0_e92f60061e-0bf0d4c180-97894227.

⁵⁷ U.S. Global Development Lab, "Turning Data into Action," USAID (n/d), <https://www.usaid.gov/sites/default/files/documents/15396/Data2Action.pdf>.

⁵⁸ Amy Paul, Craig Jolley, and Aubra Anthony, "Reflecting the Past, Shaping the Future: Making AI Work for International Development" (September 2018), <https://www.usaid.gov/digital-development/machine-learning/AI-ML-in-development>.

⁵⁹ Mark Wronkiewicz, "Mapping the Electric Grid." *Development Seed Blog*, February 14, 2018, <https://medium.com/devseed/mapping-the-electric-grid-fe29f041d54e>.

⁶⁰ Jun Wang, Jingwei Song, Mingquan Chen, and Zhi Yang, "Road network extraction: a neural-dynamic framework based on deep learning and a finite state machine." *Int. J. Remote Sensing* 36 (12) (June 2015):3144-3169, <https://www.tandfonline.com/doi/abs/10.1080/01431161.2015.1054049>.

ACCOUNTING FOR RISKS: A NEED FOR SAFEGUARDING IN DIGITAL ECOSYSTEMS

The emergence and adoption of digital technology leads to benefits, but it also introduces risks. If left unaddressed, these vulnerabilities can lead to extensive political, social, and economic damage and, ultimately, derail a country's journey to self-reliance.

The Persistent Digital Divide

A stubborn divide exists between those who have access to digital products and services and those who do not. Too often, digital gains are won by those already in positions of privilege. There are many “digital divides”—between urban and rural, indigenous and nonindigenous populations, young and old, male and female, and persons with or without disabilities. Closing these divides is key to achieving USAID's goals.

Online forms of harassment can exacerbate existing inequalities and conflict dynamics. Private sector investments in digital infrastructure often exclude areas and populations where the business case cannot be readily justified or the risk is too burdensome. Marginalized populations may require public investment to aggregate demand, lower the cost of market entry, and extend connectivity to previously unreached areas—a role USAID is well positioned to play through the use of its funds, flexible authorities, partnerships with technology companies, and technical expertise to mitigate risk and to “crowd in” public and private resources.

WomenConnect Challenge: Bridging the Gender Digital Divide

1.7 billion women in low- and middle-income countries do not own mobile phones, and the gap between men and women using the internet has grown in recent years.⁶¹ In 2018, USAID launched the WomenConnect Challenge to address this gap. With a goal to enable women and girls' access to and use of digital technologies, the first call for solutions brought in over 530 ideas from 89 countries, with nine organizations selected to receive \$100,000 awards. In Mozambique, a development finance institution, GAPI, is lowering barriers to women's mobile access by providing offline internet browsing, rent-to-own options, and tailored micro-entrepreneurship training for women by region. Another awardee, AFCHIX, creates opportunities for rural women in Kenya, Morocco, Namibia, and Senegal to become network engineers and build their own community networks or internet services. The entrepreneurial and empowerment program helps women establish their own companies, provides important community services, and positions these individuals as role models.

At the same time, emerging technologies can pose new challenges to inclusion. Since machine learning algorithms use historical data to detect patterns and make predictions, they can reproduce or amplify biases, which may be present in those data.⁶² The February 2019 *Executive Order on Maintaining*

⁶¹ EQUALS Research Group, “Taking Stock: Data and Evidence on Gender Equality in Digital Access, Skills and Leadership”, EQUALS Global Partnership, (2019), <https://www.itu.int/en/action/gender-equality/Documents/EQUALS%20Research%20Report%202019.pdf>

⁶² Sarah Myers West, Meredith Whittaker, and Kate Crawford, “Discriminating Systems: Gender, Race, and Power in AI,” AI NOW Institute (2019), <https://ainowinstitute.org/discriminatingystems.html>.

American Leadership in Artificial Intelligence states, “[t]he United States must foster public trust and confidence in AI technologies and protect civil liberties, privacy, and American values in their application.”⁶³ We must balance the adoption of new technologies with a careful assessment of their ethical, fair, and inclusive use in development.⁶⁴ If host-country governments or USAID partners adopt tools that exacerbate existing inequities, they will harm already-marginalized people and undermine trust in the organizations that deploy these tools.

Threats to Internet Freedom and Human Rights

As articulated in the U.S. National Cyber Strategy, the United States is committed to ensuring all individuals have the right to access an internet that is open, interoperable, reliable, and secure, and where human rights—such as freedom of expression, association, and peaceful assembly—are represented and protected.⁶⁵ For many people across the globe, reality does not reflect this ideal state. According to Freedom House, in 2018 the global state of internet freedom has declined for the 8th consecutive year, presenting challenges to democracy worldwide.⁶⁶ These threats are not new, but they are taking on new forms in a digital age.

One major threat to emerging digital ecosystems is what some have termed *digital authoritarianism*, where the government controls the internet, using censorship, surveillance, and data/media laws or regulations to restrict or repress freedom of expression, association, and peaceful assembly at scale. The rise of digital authoritarianism is especially concerning during times of complex emergencies when lack of access to information can hinder the delivery of humanitarian assistance. In the face of this decline in internet freedom, USAID has a role to play in driving multi-stakeholder conversations related to internet governance and in supporting commitment to internet freedom around the globe.

The Spread of Hate Speech and Violent Extremism Online

The same digital tools that allow governments, businesses, and civil society to connect efficiently and at scale enable individuals and organizations with hateful ideologies to reach potential followers and recruits. The United States is clear in its commitment to exposing violent extremism online and working with local partners and technology platforms to communicate alternatives.⁶⁷ This includes the creation of a development response to violent extremism in a forthcoming USAID policy⁶⁸ and an explicit call to better understand how it can be countered through digital platforms.⁶⁹

⁶³ White House, “Executive Order on Maintaining American Leadership in Artificial Intelligence,” February 11, 2019, <https://www.whitehouse.gov/presidential-actions/executive-order-maintaining-american-leadership-artificial-intelligence/>; Will Knight, “America and its Economic Allies Have Announced Five “Democratic” Principles for AI,” *MIT Technology Review* (2019), <https://www.technologyreview.com/f/613573/america-and-its-economic-allies-announce-a-democratic-vision-for-ai/>.

⁶⁴ USAID, “[Reflecting the Past](#), Shaping the Future: Making AI work for International Development” (May 2018)

⁶⁵ White House, “[National Cyber Strategy](#).”

⁶⁶ Adrian Shahbaz, “Freedom on the Net 2018: The Rise of Digital Authoritarianism,” Freedom House (2018), <https://freedomhouse.org/report/freedom-net/freedom-net-2018/rise-digital-authoritarianism>.

⁶⁷ White House, “National Strategy for Counterterrorism of the United States of America” (2018), <https://www.whitehouse.gov/wp-content/uploads/2018/10/NSCT.pdf>.

⁶⁸ Forthcoming USAID Policy.

⁶⁹ U.S. Department of State and USAID, “Joint Strategy on Countering Violent Extremism” (May 2016), <https://www.usaid.gov/sites/default/files/documents/1866/FINAL%20--%20State%20and%20USAID%20Joint%20Strategy%20on%20Countering%20Violent%20Extremism%20%28May%202016%29.pdf>.

USAID Partner Organizations Counter Online Hate Speech

Experience from USAID programs suggests that media literacy and content monitoring by themselves are not efficient tools to address the volume of hate speech circulated on online platforms. Beginning in 2015, USAID has supported partners in Southeast Asia to reduce the impact of hate speech on underlying community tensions—tensions which can ultimately lead to riots, forcible displacement, and death. First, USAID partner organizations actively monitor social media and websites to understand the format and context of hate speech. Second, USAID partner organizations produce and distribute messages to raise awareness about hate speech, both locally and with relevant authorities on global platforms. And third, USAID partner organizations work closely with local leaders to build their awareness of hate speech and tailor online and offline interventions to community dynamics. USAID's experience indicates no one is better positioned than local partner organizations to publicly demand independent audits and apply the pressure necessary to hold platforms accountable to the values of their users and communities writ large.

The Influence of Online Misinformation and Disinformation on Democratic Processes

Recent events have shown the ability of misinformation and disinformation campaigns to sow distrust and undermine democracy. Particularly during periods of political transition, *misinformation*⁷⁰ can create as much harm as *disinformation*⁷¹. As USAID programs work to increase the digital influence of local partners, the Agency must prepare staff and partners to anticipate and respond to coordinated disinformation campaigns against their work.

Efforts to pollute the information arena through sophisticated digital tactics are being adopted by both state and non-state actors. In addition to traditional methods (for example, using fake accounts and websites to spread divisive messages), these actors can buy followers, employ automated bot networks, manipulate search engines and adopt other tactics used by counterfeiters to confuse and persuade. Furthermore, technologies that enable “deep fakes” may not only deepen societal divisions, shape public perceptions, and create “false facts” and “truths,” but also lead to actual conflict and lend significant advantages to violent non-state adversaries.⁷² The United States is committed to countering misinformation and disinformation generated by state and non-state actors⁷³ and funding supply- and demand-side interventions to reach those ends.⁷⁴

New Risks to Privacy and Security

Digital information systems increase the availability of data and the ease of data storage and transfer, breaking down the “transaction costs” that have historically served as de facto protections of data

⁷⁰ Factually inaccurate content distributed regardless of whether there is an intent to deceive

⁷¹ Factually inaccurate content distributed intentionally for political, economic, or other gain

⁷² Peter Warren Singer, “Insurgency in 2030: A Primer on the Future of Technology and COIN” (Washington, DC: New America, 2019).

⁷³ White House, “[National Cyber Strategy](#).”

⁷⁴ U.S. Department of State and U.S. Agency for International Development, “[Joint Strategy Plan FY 2018-2022](#).”

privacy.⁷⁵ This increased ease of access compels us to reassess how we conceptualize privacy protections in a digital age. With many communities USAID and its partners serve coming online for the first time, it is critical that USAID enhance the safeguarding of personally identifiable information (PII) and other sensitive information. However, datasets that have been scrubbed of PII may, when merged and analyzed together, expose individuals to re-identification.⁷⁶ It is now possible to discern someone's political ideologies or sexual orientation simply through tracking their online behaviors or mobile devices.⁷⁷ As it becomes easier to create a "mosaic" from disparate pieces of digital data, norms and definitions of privacy are proving anything but static.

Privacy risks are particularly acute in humanitarian crises, where displacement and uncertainty increase vulnerability, and aid recipients may feel pressured to share personal data in exchange for urgent assistance. Threats to privacy can come from nefarious actors who can engage in doxing⁷⁸ and digital intimidation, but they can also come from unwittingly harmful actors—groups who may not have proper security protocols in place, for example. And conversations related to the responsible protection and use of data cannot be separated from conversations related to the benefits of open data for transparency and the flow of information for international trade.

Considerations for Using Data Responsibly at USAID

Responsible data use requires balancing three key factors, which can sometimes be in tension. **Data use** helps maximize the effectiveness and efficiency of our programs. **Privacy and security** help avoid unintentional harm to both data subjects (people described by data) and data stewards (organizations that collect, store, and analyze data). **Transparency and accountability** require sharing data as broadly as possible with host-country governments, U.S. taxpayers, and the people directly affected by our work. The possible tensions between these three thematic areas, and the policies and best practices that can help USAID staff navigate these complex issues, are discussed more fully in [Considerations for Using Data Responsibly at USAID](#).

Cybersecurity risks can jeopardize a country's infrastructure and services at a national level. Ukraine experienced the first known cyber attack on a power grid in December 2015 when 225,000 people lost power.⁷⁹ The country experienced another cyberattack in June 2017, which affected computer systems, ATMs, the airport, and even the radiation-monitoring system at the Chernobyl nuclear plant, before spreading worldwide.⁸⁰ In 2016, \$81 million was stolen from Bangladesh's central bank by hackers who infiltrated the bank's computer systems and used the SWIFT payment network to initiate the transfer.⁸¹

⁷⁵ Harry Surden, "Structural Rights in Privacy," *SMU Law Review*, Vol. 60 (December 2007), pp. 1605-1629, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1004675.

⁷⁶ Latanya Sweeney, "Simple demographics often identify people uniquely," Carnegie Mellon University, Data Privacy Working Paper 3 (2000), <https://dataprivacylab.org/projects/identifiability/paper1.pdf>.

⁷⁷ Frank Luerweg, "The Internet Knows You Better Than Your Spouse Does," *Scientific American* (March 14, 2019), <https://www.scientificamerican.com/article/the-internet-knows-you-better-than-your-spouse-does/>.

⁷⁸ To publicly identify or publish private information about (someone) especially as a form of punishment or revenge (<https://www.merriam-webster.com/dictionary/dox>)

⁷⁹ <https://www.reuters.com/article/us-ukraine-cyber-attack-energy-idUSKBN1521BA>

⁸⁰ <https://www.nytimes.com/2017/06/27/technology/ransomware-hackers.html>

⁸¹ <https://www.washingtonpost.com/news/powerpost/paloma/the-cybersecurity-202/2019/02/05/the-cybersecurity-202-a-bank-wants-to-recover-the-81-million-north-korea-stole-it-won-t-be-easy/5c58842f1b326b66eb09860f/?noredirect=on>

These examples demonstrate the potential economic impact and damage to trust in public institutions due to cybersecurity failures. Much like terrorist attacks, high-profile cyber attacks can undermine the legitimacy of governments by highlighting their inability to protect their citizens from harm.

In a digital ecosystem, the frontlines of defense against cyber threats and data breaches (and often also the most vulnerable points) are the country's workforce: Engineers, bank managers, government officials, or development practitioners. Yet despite the critical role the workforce plays in maintaining cybersecurity and recovering from cyber attacks, it often lacks adequate digital skills, the right processes, policies, or systems, and an appropriately protective legal and regulatory environment. USAID has a role to play, alongside other U.S. government agencies, in building the cyber capacity of governments and industry, promoting regulations and laws that protect privacy and freedom of expression, building a cyber-ready workforce, and increasing the digital literacy and digital security of citizens.

The 2018-2022 State-USAID Joint Strategic Plan mandates international cooperation to, “secure an open, interoperable, reliable, and stable cyberspace and strengthen the capacity of the United States and partner nations to detect, deter, rapidly mitigate, and respond to international cyber threats and incidents.”⁸²

WHY DIGITAL REQUIRES US TO REFINE OUR APPROACH TO DEVELOPMENT

USAID needs to revisit how it responds to development challenges in the face of dynamic and rapidly growing digital ecosystems. Both the rate of change and complexity in the evolution of digital ecosystems are unprecedented. Yet institutional structures and processes of development organizations have been slow to adapt, and often struggle to keep up. As a result, **institutions lack the capacity to effectively design, implement, and monitor projects and activities that engage with or use the digital ecosystem.**

Even if staff had the skills and capacity to use technology and data to redesign development projects and activities, the norms and incentives that shape their decisions and actions make it difficult to do so. Staff must be trained to understand the appropriate use of digital tools for development programming. Otherwise, digitally-enabled programming will be less effective, and efforts to reinforce digital ecosystems will be hamstrung.

Although the digital systems we use in development are traditionally bound by sector, they need not be.

⁸³ For example, an inventory management system may work in the same way regardless of whether it is tracking school books or agricultural inputs. But rather than investing in one system, donors will often (wastefully) build two separate systems, because those projects are managed by two different teams.

⁸² U.S. Department of State and U.S. Agency for International Development, “[Joint Strategy Plan FY 2018-2022](#),” pg. 31.

⁸³ Technologists refer to this as Conway's Law, which states that organizations tend to produce technology systems whose structure mirrors their own communications structure. Melvin Conway, “How Do Committees Invent?” (April 1968), <http://www.melconway.com/Home/pdf/committees.pdf>.

Even when digital systems are created separately, they can and should be built to “interoperate.” Lack of interoperability undermines sustainability and growth, burdens partner governments, and can be used to stifle competition. For example, the lack of interoperable health systems during the 2014-2016 Ebola epidemic in West Africa led to decision makers manually comparing information from separate databases, slowing the response.⁸⁴ In other countries, lack of interoperability has limited the scale of digital payments.⁸⁵

If our digital investments are siloed and unsustainable, we risk undermining the digital ecosystems we should be trying to build, and ultimately the people and countries with whom we are working. Not only is this an inefficient use of taxpayer funds, it will ultimately obstruct countries’ longer-term efforts toward self-reliance.

The Principles for Digital Development

In 2013, USAID, along with a group of donor and multilateral organizations, co-drafted the Principles for Digital Development⁸⁶, nine areas of best practice in the application of digital technologies to global development. The Digital Principles articulate guidance to help address challenges such as digital development pilots that failed to scale, or were built without sufficient engagement with the target users. USAID became the first organization to officially endorse the Principles in 2015, and we continue to promote them today.⁸⁷ More than 175 organizations have now endorsed the Principles, including the Bill & Melinda Gates Foundation, the World Bank Group, Sida, GIZ, and DFID.

Strategic Framework: Fostering an Inclusive Digital Future

By working to pioneer new approaches and learn from both success and failure, USAID can help its partner countries to embrace the potential of the digital transformation and avoid many of its dangers. USAID will pursue initiatives that, collectively, will enable us to achieve the Strategy’s goal.

⁸⁴ “Lifting the Fog of Information,” [digitaldevelopment.org](http://www.digitaldevelopment.org) (n/d), <http://www.digitaldevelopment.org/lifting-fog-information>.

⁸⁵ Thomas Lammer, Jose Antonio Garcia, and Sacha Polverini, “Establishing Payments Interoperability: Coordination Is Key,” World Bank Blogs (September 26, 2016), <http://blogs.worldbank.org/psd/establishing-payments-interoperability-coordination-key>; Massimo Cirasino, Thomas Lammer, and Harish Natarajan, “Solving Payments Interoperability for Universal Financial Access,” World Bank Blogs (February 25, 2016), <http://blogs.worldbank.org/psd/solving-payments-interoperability-universal-financial-access>; Charles Niehaus and William Cook, “Balancing the Economics of Interoperability in Digital Finance,” CGAP Blog (January 23, 2018), <https://www.cgap.org/blog/balancing-economics-interoperability-digital-finance>.

⁸⁶ “Homepage,” Principles for Digital Development (n/d), <https://digitalprinciples.org/>.

⁸⁷ Adele Waugaman, “From Principle to Practice: Implementing the Principles for Digital Development,” Principles for Digital Development (Washington, DC: The Principles for Digital Development Working Group, January 2016), https://digitalprinciples.org/wp-content/uploads/From_Principle_to_Practice_v5.pdf.

Digital Strategy Goal: To achieve and sustain open, secure, and inclusive digital ecosystems that contribute to development and humanitarian assistance outcomes and increase partner countries’ self-reliance.

Achieving this goal requires a multi-faceted, systems-oriented approach. Two core, interrelated issues—*how* we use digital technology and the *context* in which we use it—are key to achieving this Digital Strategy’s two objectives:

- **Strategic Objective 1: Improve USAID development and humanitarian assistance outcomes through the responsible use of digital technology**
- **Strategic Objective 2: Strengthen openness, inclusiveness, and security of country digital ecosystems**

These objectives will be achieved through a set of mutually-reinforcing Intermediate Results (IRs); because the Digital Strategy employs a systems-oriented approach to digital-related programming, many activities will lead to gains under multiple IRs. Illustrative targets are listed following the results framework.

VISION				
<i>Contribute to partner countries' self-reliance through efficient, effective, and responsible development initiatives that enhance security and economic prosperity, consistent with American values of respect for individual rights, freedom of expression, and the promotion of democratic norms and practices.</i>				
GOAL				
<i>Open, secure, and inclusive digital ecosystems contribute to development and humanitarian assistance outcomes and increase partner countries' self-reliance.</i>				
SO 1: Improve USAID development and humanitarian assistance outcomes through the responsible use of digital technology		SO 2: Strengthen openness, inclusiveness, and security of partner country digital ecosystems		
IR 1: Secure and appropriate use of digital technology across USAID programming improves development and humanitarian outcomes	IR 2: USAID partners use effective approaches to responsibly engage with the digital ecosystem	IR 3: Communities adopt, and have the capacity to securely use and contribute to, digital ecosystems for improved services, economic opportunities, and civic engagement	IR 4: Partner government commitment and capacity fosters digital ecosystems that align with established best practices	IR 5: Private sector-led digital economies are competitive, innovative, and inclusive
Sub-IR 1.1: Insights from digital ecosystem assessments and advanced data analysis used across the program cycle (to inform strategic planning and design)	Sub-IR 2.1: USAID partners demonstrate digital awareness and alignment with established digital best practices	Sub-IR 3.1: Vulnerable or underserved groups are capable of using, contributing to, and benefiting from digital ecosystems	Sub-IR 4.1: Established digital best practices implemented by public institutions	Sub-IR 5.1: Private sector investments in digital infrastructure and services align with established best practices
Sub-IR 1.2: Established digital best practices integrated into Mission strategies, programming, monitoring and evaluation	Sub-IR 2.2: Information exchange between USAID and its partners expands established digital best practices	Sub-IR 3.2: Secure and responsible use of digital ecosystems increases effectiveness of civil society and the media, including women- and youth-led organizations	Sub-IR 4.2: Enabling environment for digital ecosystems improved through collaboration with USAID, governments, the private sector, and civil society	Sub-IR 5.2: Private sector skills, incentives, and capabilities contribute to development and promote inclusive service delivery in the digital economy
Sub-IR 1.3: Increase Mission cross-sector investments in components of the digital ecosystem, such as infrastructure, services, policies, organizational commitment and capacity, etc.	Sub-IR 2.3: Multi-stakeholder engagements improve alignment with partner government digital strategies and systems	Sub-IR 3.3: Individuals and micro, small, and medium enterprises (MSMEs) engage with the digital ecosystem to access markets, information, and finance	Sub-IR 4.3: Policymakers and regulators engage with, and provide responsible oversight of, digital ecosystems	Sub-IR 5.3: Local innovators, including women and youth, participate in the digital economy
Sub-IR 1.4: Agency staff demonstrate digital awareness, competence, and capabilities				

Illustrative Targets (2019 - 2024)

- 30 Missions will have implemented at least one activity designed to address one or more gaps in their country's digital ecosystem
- 50 implementing partners have consistently⁸⁸ demonstrated alignment with the Principles for Digital Development in programming
- 75 new Mission activities utilize digital technology to achieve desired development outcomes
- 30 percent average increase in internet inclusion⁸⁹ in target countries
- 20 percent increase in private sector digital investment leveraged in underserved markets
- 60 percent of local digital innovators supported by USAID will receive non-USAID follow-on funding

STRATEGIC OBJECTIVE 1

Strategic Objective 1: Improve USAID development and humanitarian assistance outcomes through the responsible use of digital technology

Rationale

The rapid evolution of digital ecosystems presents USAID with opportunities to leverage digital technology in our programming. Effective and responsible use of digital technology requires strategic planning, analysis of the implications the digital age poses for key development challenges, and sustained engagement with a broad cross-section of stakeholders. USAID will position itself to make responsible programming decisions that, in turn, promote sustainable, healthy growth of countries' digital ecosystems.

USAID has already begun to systematize digital approaches within Agency-funded projects and activities. These include: Guidance for electronic payments under USAID awards⁹⁰, updates to operational policy that promote a systematic method for collecting geolocation data⁹¹, an ICT Adoption metric and other secondary data and analyses that help shed light on a country's level of self-reliance, and USAID's leadership in the co-creation of the Principles for Digital Development. To maximize the impact of taxpayer dollars, USAID must further optimize its policies and procurement processes for the digital age, so that USAID-funded programming uses interoperable, open-source, open-standard systems that are designed for reusability and sustainability across sectors.

⁸⁸ Here, consistent means three or more activities over a five-year time period.

⁸⁹ Internet inclusion is a proxy for digital inclusion which can be measured through an index score comprising four dimensions: availability, affordability, relevance, and readiness.

⁹⁰ USAID, "Procurement Executive's Bulletin No. 2014-06" (August 6, 2014), https://www.usaid.gov/sites/default/files/peb2014_06.pdf.

⁹¹ USAID, "ADS 579mab: Activity Location Data" (July 31, 2018), <https://www.usaid.gov/ads/policy/500/579mab>.

Measuring the Digital Journey to Self-Reliance: As the Agency charts countries' economic capacity through relevant metrics of self-reliance, the Information and Communication Technology (ICT) Adoption metric will help USAID Operating Units (OUs) recognize strengths, weaknesses, challenges and opportunities related to ICT adoption in their host countries. The ICT Adoption indicator is a key measure of economic capacity and, when combined with secondary data and Mission-level analyses, can serve as an entry point to explore ICT adoption and integration.

USAID has also supported staff capacity in the effective use of digital technology in USAID programming. Since 2010, the U.S. Global Development Lab (Lab) has trained over 2,300 USAID staff and partners and has conducted over 705 engagements with 80 USAID OUs (e.g., direct technical assistance, strategic consultations, and advanced data and geographic analysis). The Lab also supports a network of Mission-based Digital Development Advisors and GIS Specialists. These and other models will be extended to the whole Agency, as the Agency must continue to equip its staff with modern digital tools and enable them to cultivate digital project management skills.

STRATEGIC OBJECTIVE 2

Strategic Objective 2: Strengthen openness, inclusiveness, and security of country digital ecosystems

Rationale

USAID will pursue programming that strengthens the critical components that enable an open, inclusive, and secure digital ecosystem to flourish: sound enabling environment and policy commitment; robust and resilient digital infrastructure; capable digital service providers and workforce (e.g., both public and private institutions); and empowered end-users of digitally-enabled services. This programming will enable the digital ecosystem to be an effective conduit for achieving sustainable development outcomes. USAID will likewise work to clarify how ecosystem-oriented programming can be supported through the appropriate use of legislatively directed or sector-specific funding.

USAID has extensive experience with programming that strengthens the key components of digital ecosystems, including improvements to sector-specific digital systems, legal frameworks, national strategies, and in-country capacities. Through implementation of this Digital Strategy, USAID will continue to invest in these components, recognizing that our approach must be informed by rigorous understanding of the gaps, dynamics, and opportunities presented by each country context. Country Roadmaps will complement our understanding of how a country's technological readiness can inform strategies, programming, and partnerships to help foster self-reliance.

Digital ecosystems are strongest when all players are free to exercise choice and agency in a balanced way.⁹² Governments and civil society rely on private companies to build and operate complex digital

⁹² Vital Wave & Caribou Digital, "Digital Economies In Emerging Markets," Digital Economies in Emerging Markets (December 2014), <http://vitalwave.com/wp-content/uploads/2015/09/Digital-Economies-In-Emerging-Markets-20141218.pdf>.

infrastructure. Government then plays a critical role in regulating the delivery of digital services, protecting consumer interests, and addressing market failures. Citizens rely on the public and private sectors to offer fair access to digital technology, the internet, and digital information. Donors such as USAID can help foster robust digital ecosystems by strengthening capacity, promoting policy reform, catalyzing the market, and mitigating risks that hinder sustainable investment.

Conclusion

Today's digital transformation, with all of its potential benefits and risks, may appear rapid, unprecedented, and even disorienting. It is, however, only the beginning. We ultimately don't know what new technologies will arise in the coming years, or how people will use them in our world's changing demography, governance, and environment. What we know with far more certainty is USAID's mission. Until the need for foreign assistance has ended, we will continue to promote and demonstrate democratic values abroad and advance a free, peaceful, and prosperous world. This Digital Strategy is an important step toward imagining this role in an emerging digital era.

Fortunately, we are not alone on this journey. This is a moment of opportunity for governments and citizens around the world to engage in an earnest public discussion about topics like digital access, data ownership and privacy, and the effects of algorithms on society.⁹³ The potential for the misuse of digital tools also creates opportunities for USAID to lead by anticipating and mitigating digital risks to promote democracy and human rights.

USAID's programming must ensure that laws, policies, actions, and informal governance mechanisms funded by U.S. taxpayers all contribute to a more open, inclusive, and secure digital ecosystem and digitally-enabled society. Governments with political will and technical capacity will be able to take steps that are ultimately in the interest of, and democratically guided by, their citizens to make clear and informed choices about digital infrastructure, develop national strategies and plans to guide investments, strengthen cybersecurity systems, ensure digital services are inclusive, and deliver more reliable, higher-quality data. As a responsible steward of American taxpayer dollars, USAID will work to identify and appropriately budget for long-term costs associated with building, operating, and maintaining digital infrastructure and systems, as well as foster sustainable ownership and management of these systems by partner countries.

⁹³ Nicholas Diakopoulos, et al. "Principles for Accountable Algorithms and a Social Impact Statement for Algorithms" (n/d), <https://www.fatml.org/resources/principles-for-accountable-algorithms>; Diego Molano Vega, "Colombia's Digital Agenda: Successes and the Challenges Ahead," in *The Global Information Technology Report 2013*, World Economic Forum (Geneva: World Economic Forum, 2013), http://www3.weforum.org/docs/GITR/2013/GITR_Chapter2.1_2013.pdf (although this plan has changed since the election in 2018, yet funding is still going towards this initiative); Data protection-India's evolving data protection debate/laws, Sindhuja Balaji, "India Finally Has A Data Privacy Framework -- What Does It Mean For Its Billion-Dollar Tech Industry?" Forbes.com (August 3, 2018), <https://www.forbes.com/sites/sindhujabalaji/2018/08/03/india-finally-has-a-data-privacy-framework-what-does-it-mean-for-its-billion-dollar-tech-industry/#1c0a620470fe> and <https://www.pwc.in/assets/pdfs/publications/2018/privacy-in-the-data-economy.pdf>; Privacy-GDPR, Matt Burgess, "What is GDPR? The Summary Guide to GDPR Compliance in the UK," Wired.com (January 21, 2019), <https://www.wired.co.uk/article/what-is-gdpr-uk-eu-legislation-compliance-summary-fines-2018> and <https://ethicsinaction.ieee.org/>.

We have a role to play in whether technology and digital ecosystems are built and used to enable women and men to live freer, healthier, more prosperous lives, rather than serve as tools and weapons for the powerful. We envision a world where there is a global convergence toward democratic governance and higher living standards, rather than a chasm between the digitally-enriched and an unemployable underclass.

This strategy envisions a world where open, secure, and inclusive digital ecosystems contribute to development and humanitarian assistance outcomes that increase self-reliance. By engaging with and investing in robust digital ecosystems, we can help today's aid recipient countries grow into tomorrow's helping hands, ending the need for foreign assistance.

Annexes

ANNEX I: IMPLEMENTATION PLAN, PART I

EXECUTING THE STRATEGY -- INTERMEDIATE RESULTS UNDER THE STRATEGIC FRAMEWORK

The following are the intermediate results proposed under the Strategic Framework for the *Digital Strategy* of the U.S. Agency for International Development (USAID);

Intermediate Result 1: Secure and appropriate use of digital technology across USAID programming improves development and humanitarian outcomes

- **Sub-IR 1.1:** Insights from digital ecosystem assessments and advanced data analysis used across the program cycle (to inform strategic planning and design)
- **Sub-IR 1.2:** Established digital best practices integrated into Mission strategies, programming, monitoring, and evaluation
- **Sub-IR 1.3:** Missions make cross-sectoral investments in components of the digital ecosystem, such as infrastructure, services, policies, organizational commitment, etc.
- **Sub-IR 1.4:** Agency staff demonstrate digital awareness, competence, and capabilities

USAID staff and partners need to be able to identify and take advantage of opportunities to integrate digital tools and systems into development programming. This will require increased capacity, knowledge of and commitment to the Principles for Digital Development and established digital best practices, and understanding the sustainability of our digital investments. USAID will build on sectoral successes in digital programming while focusing new attention on cross-sectoral investments.

Programming will improve as Missions and other OUs recognize the value of integrating digital technology into their programs and operations and responsibly adopt digital technologies and approaches. In turn, Missions and OUs will have increased access to data they can use to make more timely and better-informed decisions about program management.⁹⁴ Simultaneously addressing the emerging risks and potential for misuse of digital technology will be critical.

Sub-IR 1.1: Insights from digital ecosystem assessments and advanced data analysis used across the program cycle (to inform strategic planning and design)

The development implications of digital ecosystems can be positive or negative, and they may be unique to specific sectors or communities. Digital ecosystem assessments are intended to enable sound

⁹⁴ USAID, "Discussion Note: Adaptive Management" (January 2018), https://usaidlearninglab.org/sites/default/files/resource/files/dn_-_adaptive_management.pdf

consideration of digital issues in USAID programming. In some cases, assessments might surface reasons to limit the use of digital technology. In others, they can reveal unrecognized opportunities to harness the digital ecosystem to further development gains. Assessment and analysis results, in addition to consideration of Country Roadmaps and relevant self-reliance metrics, should be woven, as relevant, into each phase of programming. This involves including the development of sector- or issue-specific strategies, project and activity design, procurement and solicitation, and monitoring and evaluation. Advanced data analysis methods (e.g., geospatial analysis, data visualization, early warning and futures analysis) can equip USAID staff with insights that can inform programmatic decisions.

Sub-IR 1.2: Established digital best practices integrated into Mission strategies, programming, monitoring and evaluation

Over the past 20 years, the development community has learned crucial lessons about what works in digitally-enabled programming. Some high-level best practices are codified in the Principles for Digital Development [see box]. In many cases more detailed guidance and examples may be needed.⁹⁵ USAID will continue to translate established best practices into concrete guidance for Mission programming, strategies, and technical evaluations, and disseminate this guidance through training, publications, and other avenues. In addition, USAID will work to grow the evidence base for digitally-enabled programming, using rigorous evaluations to test the efficacy of both existing and emerging digital approaches.

Sub-IR 1.3: Missions make cross-sectoral investments in components of the digital ecosystem, such as infrastructure, services, policies, organizational commitment, etc.

Cross-sector investments can improve efficiency, enhance investment in “public good” technology, and promote interoperability. An ecosystem approach will include greater support for common digital platforms and building blocks, including those that are being developed at the international level. USAID should push for software developed with U.S. taxpayer money to be open source, in order to derive the broadest possible benefit for our partner countries by enabling the extension, reuse, and customization of these platforms in a way that reduces waste and vendor lock-in.⁹⁶ USAID will encourage interdisciplinary approaches to project design in pursuit of cross-sectoral opportunities.

Sub-IR 1.4: Agency staff demonstrate digital awareness, competence, and capabilities

USAID staff must continue to appreciate the impact of digital technology on development outcomes, regularly receive digital technology training, and be empowered to apply digital skills to their work. Improving the skills and capabilities of staff will require more than formal, classroom-based learning. It will involve better incentives for continuous, on-the-job learning about digital issues, including staff rotations and details with the private sector, technology firms, or through interagency collaborations. It will also mean rewarding and recognizing staff that demonstrate initiative and leadership on responsibly harnessing digital technology in pursuit of development gains.

⁹⁵ Waugaman, “[From Principle to Practice](#).”

⁹⁶ DIAL Research, “SDG Digital Investment Framework and Call to Action,” Digital Impact Alliance (September 2018), <https://digitalimpactalliance.org/resource/dial-itu-sdg-digital-investment-framework/>.

Intermediate Result 2: USAID partners use effective approaches to responsibly engage with the digital ecosystem

- **Sub-IR 2.1:** USAID partners demonstrate digital awareness and alignment with established digital best practices
- **Sub-IR 2.2:** Information exchange between USAID and its partners expands established digital best practices
- **Sub-IR 2.3:** Multi-stakeholder engagements improve alignment with partner government digital strategies and systems

Digitally-enabled implementing partners will contribute to more efficient and effective development outcomes in several ways. They will leverage opportunities to integrate digital technology and services into their work with civil society, higher education institutions, governments, and others; help to mitigate risks to privacy and security; and support mutually beneficial information sharing. This will occur as partners build capacity for digital expertise, regularly integrate digital technology into programming and operations, support systems that are aligned with national strategies and best practices, and share information and learning.

Sub-IR 2.1: USAID partners demonstrate digital awareness and alignment with established digital best practices

USAID partners' alignment with international standards or widely adopted practices, such as the Principles for Digital Development (or those espoused by the National Institute of Standards and Technology, National Spatial Data Infrastructure, and International Organization for Standardization), for example, can foster the growth of digital ecosystems that offer more value to local communities. USAID can support this by creating better feedback loops with partners on the effective use of digital tools, including partners in USAID-sponsored training on digital development, incentivizing the sharing of data and digital content, and using procurement and solicitation language that incentivizes application of the Principles for Digital Development. While building the capacity of our international partners is important, strengthening the capacity of local implementers and non-governmental organizations (NGOs) is especially crucial. Digitally-aware local partners can help increase digital literacy more broadly and will yield long-term benefits as people and ideas diffuse through the public and private sector.

Sub-IR 2.2: Information exchange between USAID and partners expands established digital best practices

As technology evolves, so will the benefits and risk associated with its use. While we work to leverage technological innovation for development gains, we cannot afford to cement best practices or adhere to static guidelines. Our approaches, workforce, and procurement and management practices should constantly adapt. No single actor can have complete visibility into all the development implications of this rapidly-changing landscape. USAID will use tools like academic partnerships and global alliances with the private sector to engage with stakeholders across the development community to identify and refine best practices in digital development. Higher education institutions can play a key role in both building the evidence base for digital best practices and disseminating them to the next generation of public and private-sector leaders. USAID will prioritize the generation and exchange of insights with both global and

local partners around how an ever-evolving digital ecosystem can and should augment development.

Sub-IR 2.3: Multi-stakeholder engagements improve alignment with partner government digital strategies and systems

By collaborating with the broader development community, USAID will encourage partners to align with host-country government digital strategies where doing so aligns with applicable standards and best practices. Local partners are particularly well-positioned to understand and engage with their governments' digital priorities. By broadening the coordinated, responsible use of digital technology across the development community, USAID will reinforce similar efforts pursued by host-country governments to improve public accountability, transparency, and efficiency.

Intermediate Result 3: Communities adopt, and have the capacity to securely use and contribute to, digital ecosystems for improved services, economic opportunities, and civic engagement

- **Sub-IR 3.1:** Vulnerable or underserved groups are capable of using, contributing to, and benefiting from digital ecosystems
- **Sub-IR 3.2:** Secure and responsible use of digital ecosystems increases effectiveness of civil society and the media, including women- and youth-led organizations
- **Sub-IR 3.3:** Individuals and micro, small, and medium enterprises (MSMEs) engage with the digital ecosystem to access markets, information, and finance

The dividends of an open, inclusive, and secure digital ecosystem manifest in how communities derive benefits from engagement in it—not merely as users of digitally-enabled services, but as creators and developers of those services as well. USAID programming can support a digital ecosystem that reflects these characteristics to provide a source of household resilience, improve responsive governance, deliver critical services efficiently, protect natural resources, and foster inclusive economic growth and trade.

Sub-IR 3.1: Vulnerable or underserved groups are capable of using, contributing to, and benefiting from digital ecosystems

Programming designed to strengthen household resilience, improve educational outcomes for girls⁹⁷, or find employment opportunities for at-risk youth can use digital technology to deliver useful information and improve financial well-being. Across all communities with whom we work, USAID will adapt programming to increase equitable participation in the digital ecosystem. Achieving equitable participation requires working with these groups to not only build digital familiarity or enhance service delivery and uptake, but to prepare for and respond to dynamic cycles of mis/disinformation, hate speech, and violent extremism.

Sub-IR 3.2: Secure and responsible use of digital ecosystems increases effectiveness of civil society and the media, including women- and youth-led organizations

Citizens must be equipped for citizenship in a digital era. This means being aware of available digital technology and tools, as well as having the skills to effectively use them. It also means citizens can

⁹⁷ USAID Education Policy, Washington, D.C., 2018.

advocate for access when needed, and they can understand their rights related to evolving technologies that might introduce new threats. Academic institutions and the media play a critical role in informing the public through independent, fact-based research and reporting. Civil society organizations, particularly those representing disenfranchised groups such as women and young people, can use this information to generate feedback loops to increase community engagement, and collectively push back against the rise of digital authoritarianism or exploitative use of digital technology. USAID can support this by funding educational programs, increasing the digital literacy and security of USAID partners, and supporting public workshops that include women and youth to discuss government services or policies related to internet freedom, human rights, and new digital technologies.

Sub-IR 3.3: Individuals and micro, small, and medium enterprises (MSMEs) engage with the digital ecosystem to access markets, information, and finance

Digital ecosystems have the potential to equip informal merchants, women entrepreneurs, smallholder farmers, and SMEs engaged in cross-border trade with access to markets, information, and finance. These diverse users require trustworthy services that reflect their needs. The needs of rural shop owners and smallholder farmers are distinct from those of formal SMEs that transact purely on e-commerce platforms. Similarly, digital trade that spans borders depends on free data flows, digitized customs, and innovations in trade finance made possible by new approaches to lending. Just as needs differ, so too do the barriers to using the digital ecosystem as an enabler of economic empowerment and trade. To address these barriers, USAID will build upon existing MSME programming to provide training and support to individuals, entrepreneurs, and enterprises along with policy-level interventions to make digital trade and finance more hospitable for MSMEs.

Intermediate Result 4: Partner government commitment and capacity fosters digital ecosystems that align with established best practices

- **Sub-IR 4.1:** Established digital best practices implemented by public institutions
- **Sub-IR 4.2:** Enabling environment for digital ecosystems improved through collaboration with USAID, governments, the private sector, and civil society
- **Sub-IR 4.3:** Policymakers and regulators engage with, and provide responsible oversight of, digital ecosystems

Sub-IR 4.1: Established digital best practices implemented by public institutions

It is vital that public sector institutions are responsible in their use of digital technology. The public sector has an outsized influence on the trust placed in the digital ecosystem; a trust that is hard-won and easily lost. USAID will collaborate with public sector institutions, academia, and civil society to apply widely adopted standards and best practices related to digital technology. Whether public services are delivered via digital technology or public administration is shifted onto digital platforms, USAID will foster greater commitment to sound system governance, respect for data privacy and inclusive practices, and investment in data security. Likewise, USAID will foster a greater commitment to the use of data for evidence-based decision-making.

Sub-IR 4.2: Enabling environment for digital ecosystems improved through collaboration with USAID, governments, the private sector, and civil society

Laws, regulations, and policies play a critical role in fostering the development of an open, inclusive, and secure digital ecosystem. Of particular importance are policies that foster competition and innovation, a multi-stakeholder approach to internet governance, and the establishment of robust frameworks for consumer protection, data privacy⁹⁸, and cybersecurity. Certain sectors will present issues that merit a specific policy response (such as data-privacy rules for medical records or data-use rules for lending decisions). USAID will encourage policymakers to align with international standards and favor a private sector-led model for digital ecosystems, and engage on policies and regulatory approaches at multiple levels, including through global alliances, multi-stakeholder partnerships, and direct technical assistance.

Sub-IR 4.3: Policymakers and regulators engage with, and provide responsible oversight of, digital ecosystems

Governments that are better able to use digital systems and maintain digital infrastructure can more effectively serve their citizens and strengthen the private sector. Increased digital capacity and understanding can help governments to both be better partners in digitally-enabled donor programming and more effectively deploy digital tools by taking a whole-of-government approach.⁹⁹ This will not only promote more effective programming, but also spur better alignment and coordinated investments within the donor community. By working with private-sector and interagency partners, USAID will help governments understand the financial and security risks of some of the insecure, closed digital systems offered by China and other authoritarian actors. USAID will provide technical assistance, training, and advisory services to government actors and institutions on digitization strategies, cybersecurity, and regulatory improvements.

Intermediate Result 5: Private sector-led digital economies are competitive, innovative, and inclusive

- **Sub-IR 5.1:** Private sector investments in digital infrastructure and services align with established best practices
- **Sub-IR 5.2:** Private sector skills, incentives, and capabilities contribute to development and promote inclusive service delivery in the digital economy
- **Sub-IR 5.3:** Local innovators, including women and youth, participate in the digital economy

The private sector is key to extending the reach and quality of the infrastructure and services that underpin the digital economy. In addition to mobile and internet connectivity, this includes other prerequisites to information exchange and economic activity, such as secure, interoperable, government-led data, digital ID, and payment systems. Unequal digital access can further reinforce the strongest private and public sector actors, which can impair innovation, competitive entry and exits of

⁹⁸ Regulations governing privacy should not be imposed in a manner which limits consumer choice or is used as a disguised trade restriction. In order to advance the growth of global e-commerce, development efforts should ensure that data can be transferred cross-border, and that limits on where data can be stored and processed are minimized when possible, thereby enhancing and protecting the global digital ecosystem.

⁹⁹ International Telecommunication Union, "SDG Digital Investment Framework: A Whole-of-Government Approach to Investing in Digital Technologies to Achieve the SDGs," ITU and DIAL (2019), https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-DIGITAL_02-2019-PDF-E.pdf.

firms, and consumer protection. USAID will continue to work to ensure that the poor and marginalized are included in the digital economy by fostering the right market conditions and encouraging private sector-led investment.

Sub-IR 5.1: Private sector investment in digital infrastructure and services align with established best practices

When aligned with international standards and best practices, digital infrastructure and services can enhance trust, security, and efficiency. USAID will promote investment at various levels, such as integrating network expansion with projects targeting community institutions (such as schools and hospitals); building the capacity of the local workforce to responsibly build and manage digital infrastructure; identifying and testing innovative business models for sustainably serving underserved communities; and de-risking investment through development finance initiatives. In alignment with the agency's [Private Sector Engagement Policy](#), USAID will pursue private-sector engagement to address adoption of USG-aligned international standards, industry norms for responsible conduct, skills and capacity-building, and the application of human-centered design.

Partnering to Strengthen Connectivity Infrastructure in Liberia

To help Liberia rebuild after the 2014–2016 Ebola outbreak and prepare for future emergencies, USAID launched a first-of-its-kind partnership with CSquared and Google in 2017, to bring high-speed metro fiber communications infrastructure to Monrovia. It is a \$12 million (cash and in-kind) 50/50 co-investment between CSquared and USAID that is connecting government offices, health clinics, and businesses to high-speed internet service for the first time. Without USAID's co-investment, CSquared would not have entered Liberia, likely leaving the country without this connectivity for many years.

Sub-IR 5.2: Private sector skills, incentives, and capabilities contribute to development and promote inclusive service delivery in the digital economy

To develop useful, trustworthy services for all stakeholders, the private sector must understand digital-first business models that can reach underserved users. For example, the rapidly growing global youth population combined with the rise of digital technologies provides a unique opportunity for governments, higher education institutions, and development practitioners to support, protect, prepare, and engage young people around the world. When used properly, technology promotes civic engagement, expands learning and workforce development opportunities, and sparks innovative solutions to societal and developmental challenges.

Sub-IR 5.3: Local innovators, including women and youth, participate in the digital economy

Communities need a healthy environment for entrepreneurship and talent development. Progress toward self-reliance requires investment in a pipeline of innovators with the skills, incentives, and capabilities to develop services that rely on sophisticated technologies (e.g., smartphones, AI/ML, big data, IoT). This requires a multi-stakeholder approach including universities and vocational and trade schools, local innovation hubs and start-up networks, and industry associations. USAID will engage with

country-level stakeholders across the innovation ecosystem, with particular attention to fostering inclusion of women, youth, people with disabilities, and other traditionally marginalized groups.

Building off of the Strategic Framework, the following Appendix outlines the mandates, recommendations and considerations USAID will employ to achieve the overall strategy objectives. A more detailed Implementation Plan will follow this strategy document, with efforts prioritized according to constraints around resourcing and urgency for each individual country context.

ANNEX II: IMPLEMENTATION PLAN, PART II

EXECUTING THE STRATEGY-- HOW THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID) WILL IMPLEMENT THE *DIGITAL STRATEGY*

Strengthening Digital Ecosystems

USAID will meet countries where they are along the digital evolution spectrum in the following ways:

- **USAID Bureaus and Independent Offices (IOs) Should Develop Digital Visions that Align with the *Digital Strategy*.** USAID Bureaus and IOs should use the Digital Strategy to help articulate how digital technology will be integrated into their programming (e.g., on agriculture, education, energy, cross-border trade), while remaining aligned with the Agency's overall strategy. Visions should be developed through a consultative, collaborative process and should be completed within one year of the launch of the USAID Digital Strategy.
- **Strategy Development and Project/Activity Design Will Be Informed by Digital Ecosystem Country Assessments.** USAID will work with partners to conduct a standardized assessment of the local digital ecosystem as an input into regional and country-level strategic plans, project appraisal documents, and activity design. Digital ecosystem country assessments (DECAs) will typically be conducted by outside experts (with technical support from Washington), in consultation with Mission staff. These assessments will examine aspects of the ecosystem including the enabling environment, digital infrastructure, required technical standards, the local marketplace of digitally-enabled services, and the end-user context. DECAs will emphasize a holistic approach to identifying gaps, constraints, and areas for potential intervention based on where a country currently sits on its digital journey to self-reliance. In countries where extensive gaps in digital ecosystems exist, Missions will either build responses into sector-level programming or develop cross-cutting efforts to address these gaps at a country-wide level. By taking a holistic view of ecosystem challenges and U.S. engagements in-country, DECAs can facilitate interagency collaboration at U.S. Embassies to strengthen the digital ecosystem. Due to the rapid pace of change within digital ecosystems, the assessments should be updated every three years and when possible, synchronized with Missions' strategic planning efforts.

Using Digital Ecosystem Country Assessments to Strengthen Digital Health Building Blocks

The ability of a country's digital ecosystem to flourish is directly related to national-level assessments of, and planning for, the strategic integration of digital technologies across sectors. USAID's Global Health Bureau has begun to standardize these assessments in the Global Digital Health Index¹⁰⁰, a publicly-accessible platform that

¹⁰⁰ At the time of publication, USAID was supporting the conducting of these assessments via the publicly-accessible Digital Health Index platform, see www.digitalhealthindex.org.

uses digital ecosystem “building blocks” identified by the World Health Organization and the International Telecommunications Union¹⁰¹, including: Leadership and governance; strategy and investment; infrastructure, standards and interoperability, and services and applications; legislation, policy, and compliance; and workforce.

Assessing a country’s progression in this manner enables a nuanced stock-taking of areas requiring dedicated support to strengthen the overall national digital ecosystem. Creating a baseline and regularly updating this data in a commonly-accessible public platform enables the tracking of impact of related efforts, supports funders’ ability to target investments, and facilitates cross-learning among countries. The USAID Global Health Bureau is complementing these assessments with support for the capture of digital tools and systems used at the country level in a platform managed by the World Health Organization called the Digital Health Atlas. The Atlas aims to ensure consistent description, inventorying, and tracking of digital technologies deployed at the country level.¹⁰²

- **USAID Will Establish a Digital Ecosystem Fund for *Emerging Opportunities and Strategic Initiatives*.** USAID must present a vision for open, inclusive, and secure digital ecosystems by making robust investments that align with development priorities and counter aggressively pursued authoritarian visions for the digital age. Subject to the approval of funds, this fund provides the means for USAID Missions to make strategic investments in opportunities that may emerge in short time-horizons that might not coincide with USAID’s strategic planning processes. Even when Missions incorporate digital ecosystem activities into planning documents, implementation is often rigidly tied to a narrow interpretation of underlying earmarks. We must increase understanding of the valuable role digital technology plays in achieving objectives attached to the vast majority of directives in the Agency’s budget. This field-facing fund enables Missions to take action as opportunities arise and in a manner that responds to local digital ecosystem assessments.
- **USAID Should Augment Its Commitment to Close the Gender Digital Divide and Build Digital Literacy for All People.** A country’s progress toward self-reliance will be stymied if members of that country’s citizenry cannot benefit equally from the gains of a global digital ecosystem. To this end, USAID programming that involves digital technology should address digital inequities and digital literacy needs of targeted communities. We encourage digital literacy training to be built into every activity that has a digital tool, technology and/or component, regardless of sector or geography; this includes training of partner staff and community members, particularly youth, women, and other marginalized groups. Further, digital ecosystem assessments should be used to better understand and target existing digital divides and the capabilities and needs of the communities. Missions should consider how to support and stimulate activities that build a continuum of digital literacy, engagement and innovation with young people, women and marginalized groups in particular.

¹⁰¹ WHO and International Telecommunications Union. *National eHealth Strategy Toolkit* (2012) p. 8
https://www.itu.int/pub/D-STR-E_HEALTH.05-2012

¹⁰² At the time of publication, discussions were underway to support the sharing of data between these two platforms.

- **USAID Should Align Mission-led Work such that Programming Reinforces and Contributes to Country-led Digital Ecosystem Development.** When national digital strategies are not in place, USAID will work with willing government partners to develop a country-specific vision for open, secure, and inclusive digital ecosystems that facilitate interoperability, enable the exchange of ideas, and the trade of goods and services across borders. In addition, USAID should collaborate with our interagency colleagues in-country to ensure that U.S. agencies are working in coordination on digital ecosystem issues. When government commitment is lacking, USAID will work with other donors, civil society, and private sector stakeholders to help build this commitment and ensure that digital development is implemented in a secure, inclusive manner that respects rights, safeguards against digital exploitation, and encourages country data-use for decision-making.

Digital by Default

USAID must transform our approach to maximize the effectiveness and efficiency of every U.S. taxpayer dollar that we manage. The use of digital technology allows us to reap efficiency rewards in our programming, and digitally-savvy staff can better protect the individuals with whom we work. We must move toward a future where our Agency's default is responsible data collection with digital tools, inclusive digital payments, and continuous digital feedback loops that amplify the voices of the most marginalized members of society for decision makers. While digital approaches will not always be appropriate, USAID will shift to a default position of using digital technology unless there is a compelling reason not to. This vision will become a reality as we take the following actions:

- **The Principles for Digital Development will be Incorporated in the Solicitation and Evaluation of all USAID Awards (RFIs, RFPs, RFAs) as Appropriate.** USAID must meaningfully incorporate established, empirically-rooted best practices into digitally-enabled development programming. USAID will strengthen its commitment to the Principles for Digital Development and ensure their ongoing alignment with existing, pending, and future USAID policies and award requirements.
- **USAID will Develop Cybersecurity and Privacy Protective Measures and Technical Capabilities that Guide USAID Programming.** While USAID has historically established policies to safeguard its internal systems, there exists a need to incorporate guidance for our partners for developing better safeguards and protections in our programming. As digital threats persist and even expand, it is critically important that USAID, in coordination with the interagency, increases its ability to help governments, local private sector, civil society organizations, and media understand, develop, and manage their own cyber security and protect individuals' privacy rights. In doing so, USAID will work with implementing partners to establish informed consent mechanisms and policies on privacy protections of individuals at an activity level, while safeguarding the collection, sharing, and use of data.¹⁰³

¹⁰³ See ADS 579 for guidance around programmatic data use at USAID. See ADS 201 for guidance on data-informed planning throughout the Program Cycle. See ADS 200mbe on guidance around informed consent. See ADS 508 for guidance around data privacy.

- **USAID will Mandate that Programmatic Data Are Collected Digitally.** In lieu of paper-based collection methods, all programmatic data must be collected and shared digitally in a responsible manner that is consistent with existing USAID data requirements and standards and, when applicable, submitted for inclusion in the Development Data Library (DDL).¹⁰⁴ As USAID adapts to dynamic digital ecosystems, we will continue to promote responsible data collection practices and standards that fuel advanced data analytics, such as AI for development, and allow USAID—and by extension, the broader development community—to maximize the potential of digital data. Ultimately, our goal must be to make the most sense of the data we collect for better decision-making, adaptive programming, and strategy development, while also protecting data subjects from harm and empowering end-users and communities with actionable information that is useful for their livelihood needs. In the event that an exception is granted for this requirement, USAID will work to ensure obstacles to responsible digital data collection are not only surfaced, but addressed where possible.
- **USAID will Mandate that all Payments Made by Implementing Partners Must be Digital.** Building off of Procurement Executive’s Bulletin No. 2014-06¹⁰⁵, USAID will revise and extend guidance on electronic payments and make it mandatory under all under contracts, grants, and cooperative agreements as appropriate. In the event that an exception is granted for this requirement, USAID will enhance its visibility over waivers to ensure obstacles to digitizing payments are not only surfaced, but addressed where possible.

When *Not* to go Digital

While technology can improve many development and humanitarian projects, it is not a panacea. For example, in some cases (such as natural disaster relief) damage to digital infrastructure may disrupt connectivity and make low-tech tools more reliable. Data about some extremely vulnerable populations may be too sensitive to store digitally, regardless of the security measures employed. Deployment of some digital tools may also be unwise in countries with repressive and digitally-sophisticated governments that can subvert or disrupt systems more easily than our partners can protect them. These and other “non-permissive digital environments” require careful consideration of when and whether to use digital methods.

USAID of Tomorrow

USAID will invest in people, processes, and tools to ensure that our workforce is positioned to succeed in the digital age, while achieving this Strategy’s goal. In line with USAID’s Policy Framework, the Digital Strategy will enable Agency staff to become digital leaders in development, increase coherence between our digital practice and policy, and align existing digital priorities with budgetary backing. We will strengthen USAID for the future in the following ways:

¹⁰⁴ USAID, “ADS Chapter 579: USAID Development Data” (2018), <https://www.usaid.gov/ads/policy/500/579>.

¹⁰⁵ USAID, “[Procurement Executive’s Bulletin No. 2014-06](#).”

- **USAID Must Hire and Upskill Mission-based Digital Development Specialists.** Missions must hire or create a position for a Digital Development Specialist who can regularly assess the country's evolving digital ecosystem and guide Missions through anticipating, recognizing, and reacting to changes and opportunities in that ecosystem. The Digital Development Specialist will facilitate the Digital Ecosystem Country Assessments and support all sectors in incorporating digital tools into programming with an emphasis on interoperability. The Specialist will support applications to the Digital Ecosystem Fund and other digitally-related financing available through priority initiatives, and will work with the interagency on digital issues at post. Initially, USAID will identify up to fifteen Missions to pilot this position, subject to the availability of funds, and after assessing and improving upon the pilot as possible, will roll out the program Agency-wide.
- **USAID will Establish a Digital Learning Agenda.** Digital technology is in a constant state of evolution, with emerging technologies like AI and the IoT challenging established models of user interaction, service delivery, and more. USAID must maintain an active research portfolio investigating both possible and current applications of digital technology and advanced analytics in our work, and responsibly mapping implications and impacts of the use of digital technology across country contexts. This research will be bolstered by strong partnerships with the academic community and other relevant thought leaders. USAID currently lacks systematic visibility over programmatic investments in digital tools, systems, and platforms. We must address this blind spot in order to build an evidence base to inform future programming. Having better visibility over these programmatic investments will also be critical to establishing a baseline by which to measure targets and impact of the Digital Strategy.
- **Digital Development Skills Should be Integrated Across Technical and Programmatic Backstops.** Ultimately, digital approaches cannot be divorced from sectoral work. On the contrary, we must work to incentivize and empower all sectoral backstops to integrate digital technology into their work in a manner consistent with established digital best practices. Accomplishing this vision does not require that all foreign service officers become digital experts. Instead, we aspire to become a workforce that can act on opportunities and identify risks posed by the digital age. Fulfilling this target will call for backstops to incorporate digital development trainings into technical conferences and as part of the on-boarding process for all new hires. Missions will also need to support field-based digital development trainings.
- **Private Sector Fellowship Should be Established for USAID Staff.** The Digital Strategy calls for a fellowship with key private sector partners to provide USAID staff with opportunities to acquire the skills to apply an innovative digital approach to development, while incentivizing them to fully embrace the digital revolution. If successful, and contingent on the availability of funds, the fellowship program will be expanded to include exchanges with academia, donors, and other NGOs.
- **A Chief Digital Development Officer (CDDO) Position Should be Established.** The transition from piecemeal, retail efforts scattered across the Agency's programming to systematic, smart investments in Digital Development will require sustained leadership overseeing this change.

Pending approval and the availability of funds, USAID will create a new position that will be responsible for maintaining cross-Agency coherence in the implementation of the Digital Strategy and adaptation of the Agency's programs as the digital landscape evolves. Although focused on Agency programming, this CDDO position would liaise with the interagency. The CDDO would also coordinate with Agency's Chief Information Officer (CIO) and Chief Data Officer (CDO) to the extent their respective domains intersect or complement each other. At the same time, USAID should continue to invest in the authority of the CIO, CDO, and Chief Technology Officer to determine operational policy and technology and data requirements and guidance.

ANNEX III: GLOSSARY

For the purposes of this document, the following definitions are being used. Certain terms lack a universally recognized definition.

Adoption

Changes that happen when people or institutions begin using a new technology and incorporating it into their existing routines or processes. For example, people who use a mobile money account to receive remittances and pay bills would be considered adopters, while those who make a one-time withdrawal to empty a cash-transfer account would not.

Artificial Intelligence (AI)

Computer-based automated decision-making, inspired by human-like intelligence. Automated decisions might be directly implemented (e.g., in robotics), or suggested to a human decision-maker (e.g., product recommendations in online shopping). AI often incorporates machine learning (ML), in which predictions are based on patterns “learned” from existing data.

Censorship

The suppression of free speech by state governments or private institutions based on the assumption that said speech is objectionable or offensive. In addition to hard forms of censorship (handed down officially through laws and regulations), there are soft forms of censorship (applied through financial and/or reputational pressure).

Civil Liberties

Individual rights protected from unjust interference by governmental or other actors. In the U.S., these rights are encoded in the first ten amendments to the U.S. Constitution and known collectively as the Bill of Rights. Civil liberties include the right to freedom of expression and association and peaceful assembly, which are also recognized as universal human rights.

Cybersecurity

The protection of computer systems from theft, damage, disruption, or exploitation. Protected aspects can include hardware, software, data, and services provided. Cybersecurity is a broader concept than information security, which focuses on the protection of data from unauthorized use or access. As the DHS Cybersecurity Strategy emphasizes: “Cybersecurity is not an end unto itself, and efforts to mitigate cybersecurity risks must also support international commerce, strengthen international security, and foster free expression and innovation.”¹⁰⁶

Digital Authoritarianism

¹⁰⁶ U.S. Department of Homeland Security, “Cybersecurity Strategy” (2018), <https://www.dhs.gov/publication/dhs-cybersecurity-strategy>.

A model of internet governance in which governments employ censorship, surveillance, and data/media laws or regulations to restrict or repress freedom of expression, association and peaceful assembly at scale.

Digital Divide

The gap disparity between specific groups of people (between, for example, men and women, or those living in urban or rural areas) with regard to digital technologies. Often, one can point to multiple and overlapping digital divides, stemming from inequities in access, literacy, cost, or relevance of services. Digital divides are often exacerbated by factors such as high cost and limited infrastructure.

Digital Economy

The use of digital and internet infrastructure by individuals, businesses, and government to interact with each other, engage in economic activity, and access both digital and non-digital goods and services. As the ecosystem supporting it matures, the digital economy can grow to encompass all sectors of the economy, a transformation driven by both the rise of new services and entrants, as well as backward linkages with the traditional, pre-digital economy.

Digital Ecosystem

Stakeholders, systems, and enabling environment that together empower people and communities to use digital technology to access services, engage with each other, or pursue economic opportunities. A digital ecosystem can be thought of as conceptually similar to, but broader than, a digital economy. Although certain aspects of the digital ecosystem have country-wide reach, other features may differ across geographies or communities. The critical components of a digital ecosystem include: (a) sound enabling environment and policy commitment; (b) robust and resilient digital infrastructure; (c) capable digital service providers and workforce (e.g., both public and private institutions); and (d) empowered end-users of digitally-enabled services.

Digital Infrastructure

The basic foundational services that enable information technologies. Examples of digital infrastructure include fiber-optic cables, cell towers, satellites, data centers, software platforms, and end-user devices.

Digital Literacy

The ability to effectively and critically navigate, evaluate, and create information using a range of digital technologies

Data Localization Laws

Laws that require data to be stored on a device that is physically present within the borders of the country where the data originated. Many countries are adopting data localization laws to avoid surveillance or interference by foreign governments or corporations. At the same time, data localization laws can leave citizens and businesses with no means to avoid surveillance by the intelligence agencies of their own countries.

Data Privacy

The expectation between data collectors and data subjects on how data relating to the subject will be collected, analyzed, stored, and distributed. In regards to digital platforms, these expectations are often found in terms of service agreements.

Data Protection

The practice of ensuring data is protected from unauthorized access.

Digital Security

The practice of understanding one's digital footprint, identifying localized risks to information systems and taking reasonable steps to protect one's owned assets from loss or capture.

Digital Technology

Platforms, processes, and a range of technologies that underpin modern information and communications technologies (ICT), including the internet and mobile phone platforms, as well as advanced data infrastructure and analytical approaches.

Digital Tool

Application of digital technologies to meet a specific human need. Digital tools differ from infrastructure in that they are geared toward a specific application, while infrastructure tends to be more general-purpose.

Digital Trade

Domestic commerce and international trade in products and services delivered via the internet, hence excluding the commerce of physical goods (aside from the value add provided by internet transactions). Increasingly the distinction between domestic commerce and international trade can be seamless and therefore rendered invisible because of the internet.

Disinformation

A piece of information that is *intentionally* false or misleading and deliberately used by the producer to achieve a specific social, economic and/or political objective. Disinformation is often confused with misinformation which is false or misleading information shared by error or mistake.

Doxing

The act of publishing personally identifiable information online without an individual's consent with the intent to cause harm to that individual's reputation and/or physical safety.

Hate Speech

The use of speech to make direct attacks against an individual or a group of people based on a series of protected characteristics, such as race, ethnicity, nationality, religion, sex, sexual orientation, gender identity, and physical or mental ability.

Inclusive Development

An approach to development that ensures all people are included, can participate fully in, and benefit from development efforts.

Internet Freedom

The right of all individuals to access an internet that is open, interoperable, reliable, and secure and where universal human rights are represented and protected. These values require a multi-stakeholder approach to internet governance that includes the active and ongoing participation of government, industry, academia, and civil society.

Internet of Things

Physical devices and everyday objects that are connected to the internet allowing them to communicate information and data. Internet of Things (IoT) raises opportunities for sophisticated interoperability among devices and end users, but these opportunities often need to be balanced against countervailing concerns about privacy and security.

Machine Learning (ML)

A set of methods for using computers to recognize patterns in data and make future predictions based on these patterns.

Platform

A platform is a group of technologies that are used as a base upon which other technologies can be built or applications and services run. For example, the internet is a platform that enables web applications and services.

Surveillance

The monitoring of private, online communications and/or behaviors without the explicit and informed consent of those being monitored.

Universal Human Rights

A set of rights inherent to all people regardless of place of birth, nationality and/or citizenship, as defined by the Universal Declaration of Human Rights. Includes the right to life, liberty and security of person, freedom from slavery and torture, freedom of expression, association and peaceful assembly, as well as the right to access work and education.

Violent Extremism

The act of advocating, engaging in, preparing for or otherwise supporting ideologically-motivated or justified violence to further a specific social, economic, or political objective. Not to be confused with terrorism, which is the use of intentionally indiscriminate violence to achieve a social, economic, or political objective by inspiring widespread fear.

ANNEX IV: PRINCIPLES FOR DIGITAL DEVELOPMENT



The infographic features a dark blue background with ten circular icons arranged in two columns. Each icon is accompanied by a principle name. The icons include a person with a pencil, a lightbulb in a diamond, a line graph, a brick wall, a bar chart, a globe with a lock, a gear with arrows, a padlock, and a group of people.

- Design with the User
- Understand the Existing Ecosystem
- Design For Scale
- Build For Sustainability
- Be Data Driven
- Use Open Standards, Open Data, Open Source and Open Innovation
- Reuse and Improve
- Address Privacy and Security
- Be Collaborative

Stewarded by  Digital Impact Alliance | digitalprinciples.org | #DigitalPrinciples 

More information on the Principles for Digital Development, including resources, implementation tips, and a current list of endorsing organizations can be found at digitalprinciples.org.

ANNEX V: ACCOUNTING FOR PROMISE AND PERIL IN A DIGITAL AGE

Every country has its own trajectory: some countries are rapidly embracing digital change, while others are just beginning the process. In spite of differences in maturity of digital ecosystems, digital technology presents a range of benefits and risks that should be universally accounted for.

Illustrative Building Blocks of Self-Reliance	Illustrative Benefits Digital Can Provide	Illustrative Risks Digital Can Pose if Unaccounted for	Illustrative Roles for USAID and Partners
Service Delivery	Networked digital information systems allow people, including the underserved or unserved, to more easily access information —for instance, financial services, advice on health, market prices, climate and weather information, job openings, or natural resource management and agricultural best practices. Privacy-protecting approaches can build trust and safeguard individual rights.	Technology companies and authoritarian governments have increasing access to intimate details of people’s lives due to inadequate privacy protections . ¹⁰⁷	Understand the local digital ecosystem and support local government digital strategies; build digital literacy of individuals. Support implementation of effective digital privacy and cybersecurity laws and best practices to strike a balance between driving increased use of open data-sharing and safeguarding personal information.
Economic Growth	Digital connectivity correlates with higher rates of economic growth , accounting for roughly 14 percent of growth in low- and middle-income countries from 1995-2014. ¹⁰⁸ Digital financial services, such as mobile payments, digital banking, and new	A persistent digital divide can undermine inclusive economic growth by excluding marginalized communities or accelerating market concentration and economic inequality. Likewise, under certain conditions, firms that offer digital services built on network effects, large data	Work with local stakeholders, including the business community, to identify drivers of exclusion, whether at the policy, infrastructure, services, or end-user level; and identify factors constraining the private sector from involvement and investment

¹⁰⁷ Cameron Kerry, “Why Protecting Privacy is a Losing Game Today—and How to Change the Game,” Brookings Institution (July 2018), <https://www.brookings.edu/research/why-protecting-privacy-is-a-losing-game-today-and-how-to-change-the-game/>; Iga Kozłowska, “Facebook and Data Privacy in the Age of Cambridge Analytica,” Jackson School of International Studies (April 2018), <https://jsis.washington.edu/news/facebook-data-privacy-age-cambridge-analytica/>.

¹⁰⁸ World Bank Group, *World Development Report 2016: Digital Dividends*, (Washington, DC: World Bank Group, 2016) pg. 55-56, <http://www.worldbank.org/en/publication/wdr2016>.

	lending products, have shown a measurable effect in lifting people out of poverty . ¹⁰⁹	flows, and economies of scale might use those drivers to undermine competition, innovation, and consumer protection. ¹¹⁰	in addressing drivers of exclusion. Facilitate development of an enabling environment and marketplace of firms and entrepreneurs that promote competition, responsible conduct, and human-centered approaches to innovation.
Democracy, Human Rights, and Governance	Digital technology has the potential to democratize the flow of data and enhance the ability of governments to efficiently and effectively respond to citizens' needs . Use of online platforms and partnerships like Open Government Partnership (OGP) and International Aid Transparency Initiative (IATI), can help to hold governments accountable to their citizens through transparency reforms.	Both state and non-state actors have sought to undermine democracy and poison online discussions and social media platforms through sophisticated deception and disinformation. ¹¹¹ Authoritarian regimes use digital technology to monitor, harass, and threaten individuals and organizations that seek transparency and accountability or challenge a government's narrative.	Support human rights organizations and independent media through access to secure data and communications platforms, digital literacy programs, equipment, and state-of-the-art technical assistance in protecting themselves, their families, and their work from cyber attacks and disinformation.
Humanitarian Assistance	Digital data sources, such as social media ¹¹² and mobile phone records ¹¹³ , can be a	Humanitarian agencies in Yemen used biometric registration of aid recipients	Explore innovative methods to more effectively and responsibly target and

¹⁰⁹ Suri & Jack, "[The Long-Run Poverty and Gender Impacts of Mobile Money.](#)"

¹¹⁰ Luigi Zingales and Filippo Maria Lancieri, "[Managing the Economic and Social Impact of the Digital Revolution](#)," University of Chicago ProMarket Blog (May 15, 2019), <https://promarket.org/managing-the-economic-and-social-impact-of-the-digital-revolution/>; OECD, "Rethinking Antitrust Tools for Multi-Sided Platforms 2018" (2018), <https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf>; *The Economist*, "Market concentration can benefit consumers, but needs scrutiny" (2017), <https://www.economist.com/finance-and-economics/2017/08/31/market-concentration-can-benefit-consumers-but-needs-scrutiny>; Michael Pisa and John Polcari, "[Governing Big Tech's Pursuit of the 'Next Billion Users'](#)," Center for Global Development (2019), <https://www.cgdev.org/publication/governing-big-techs-pursuit-next-billion-users>.

¹¹¹ Samuel Woolley and Philip Howard, eds., "Computational Propaganda: Political Parties, Politicians, and Political Manipulation on Social Media" (2018), <https://comprop.oii.ox.ac.uk/research/computational-propaganda-the-book/>.

¹¹² Himashu Zade, et al., "From Situational Awareness to Actionability: Towards Improving the Utility of Social Media Data for Crisis Response," *Proceedings of the ACM on Human-Computer Interaction 2*, CSCW, Article 195, 5 (November 2018), <https://doi.org/10.1145/3274464>

¹¹³ Robin Wilson, et al., "Rapid and Near Real-Time Assessments of Population Displacement Using Mobile Phone Data Following Disasters: The 2015 Nepal Earthquake," *PLOS Currents Disasters*, (Feb 24, 2016), <http://doi.org/10.1371/currents.dis.d073fbcce328e4c39087bc086d694b5c>

	valuable source of real-time information as a crisis unfolds. In humanitarian crises, mobile money transfers can sometimes be faster, more secure, and more transparent than distributing cash. ¹¹⁴	to support monitoring and accountability. However, disagreements over data control and ownership led to a suspension of food aid to over 12 million people. ¹¹⁵	deliver humanitarian assistance using digital tools. Promote discussion with international stakeholders on how to best protect the privacy and identity of vulnerable populations, including refugees.
National Security	Deployment of digital infrastructure that prioritizes national security , while also promoting American values of open and free internet, free expression, and free markets, will determine economic growth and security at home and for our partners and allies. ¹¹⁶	Cybersecurity breaches can destabilize critical networks and sectors, disrupting a country's journey to self-reliance . Violent extremists have employed digital applications—from social media and file sharing to cryptocurrencies—to radicalize and recruit, as well as to promote, coordinate, and fund acts of terror . ¹¹⁷	Strengthen the capacity of partner governments to secure systems against attacks and make informed policy and infrastructure choices. Work with local stakeholders (such as CSOs) to understand and counter extremist narratives online. Work with private sector in key industries (e.g., finance, energy, health) to improve capacity to maintain cybersecurity and preserve trust in digitally-enabled services, countering cyber-related threats to economic growth.
Private Sector & Trade	Digitally-enabled trade , such as through e-commerce platforms or more efficient customs processes, is one of the fastest growing areas in the global economy. ¹¹⁸ Digital	Many governments choose to adopt protectionist digital trade policies (e.g., data localization, forced technology transfer, use of standards that favor domestic industry, and	Build private-sector capacity to adopt digital-first business models and comply with international standards for the conduct of cross-border trade through e-commerce.

¹¹⁴ Sarah Bailey, "Electronic transfers in humanitarian assistance and uptake of financial services: a synthesis of ELAN case studies," (2017), Humanitarian Policy Group,

<https://www.odi.org/publications/10769-electronic-transfers-humanitarian-assistance-and-uptake-financial-services>

¹¹⁵ Teresa Welsh, "Biometrics disagreement leads to food aid suspension in Yemen," (24 June 2019),

<https://www.devex.com/news/biometrics-disagreement-leads-to-food-aid-suspension-in-yemen-95164>

¹¹⁶ White House, "[National Security Strategy](#)," p. 12.

¹¹⁷ Beatrice Berton, "The Dark Side of the Web: ISIL's One-Stop Shop?" *European Union Institute for Security Studies* (2015),

https://www.files.ethz.ch/isn/192064/Alert_30_The_Dark_Web.pdf;

Daniel Byman, "An Intelligence Reserve Corps to Counter Terrorist Use of the Internet." Hoover Institution (2018),

<https://www.hoover.org/research/intelligence-reserve-corps-counter-terrorist-use-internet>.

¹¹⁸ WTO, "World Trade Statistical Review 2018" (2018),

https://www.wto.org/english/res_e/statis_e/wts2018_e/wts18_toc_e.htm.

	<p>technology can reduce the cost and time needed for common business operations.</p>	<p>failure to enforce intellectual property rights). These policies, when combined with inefficient cross-border trade processes and paper-based systems, impair trade that contributes to economic growth.</p>	<p>Work with governments to apply digital tools to streamline regulations and processes that facilitate trade.</p> <p>Strengthen partners' capacities to participate in the development of international regulation related to the digital economy and to comply with future commitments.</p>
<p>Access to Information</p>	<p>Digital technologies can increase access to information in a way that can wield powerful insights for citizens and government stakeholders alike.</p>	<p>Digital technology can create echo chambers in which dissenting views are marginalized, as well as perpetuate rumors or other unintentional falsehoods.</p>	<p>Build capacity of local media to provide fact-based reporting online and counter disinformation efforts. Build digital literacy of all communities.</p>