Chairman Blumenauer, Ranking Member Buchanan, and Members of the Subcommittee, my name is C.J. Mahoney. I serve as Deputy General Counsel at Microsoft where I lead our international trade compliance and policy work. I am honored to appear before the Ways and Means Trade Subcommittee this morning on behalf of the company to testify on a topic that is of vital importance to Microsoft and to our country: The U.S.-Africa trade and investment relationship.

Microsoft is a U.S. company with a global mission: to empower every person and every organization on the planet to achieve more. This mission has led us to play a key role in Africa’s digital transformation over three decades and has allowed us to experience firsthand the vitality and entrepreneurial spirit that characterize this fast-growing, dynamic region of the world. Our experience has also given us a unique vantage point on the many challenges that have prevented the U.S. and African nations from fully realizing the potential in their economic relationship.

Microsoft has been an enthusiastic supporter of the African Growth and Opportunity Act (AGOA) and urges the U.S. government to continue robust trade engagement with African governments and the African Union (AU) to reduce market access barriers, encourage regional economic integration, and provide support for trade facilitation. But we also urge the U.S. government to supplement traditional trade policy tools with new initiatives to help African countries close the digital divide, increase skilling, and uphold the rule of law. The U.S. private sector—and the technology sector in particular—has a key role to play in advancing each of these priorities and can act as a force multiplier, complementing work done by the U.S. government and its African partners.

In my testimony I will focus on (I) Microsoft’s experience in Africa, (II) how we see the challenges and opportunities in the U.S.-Africa trade and investment relationship, and (III) the importance of connectivity, skilling, and anticorruption efforts in driving the U.S.-Africa trade and investment relationship forward.

I. Microsoft in Africa

Over the past three decades, Microsoft has made substantial investments in Africa’s technology ecosystem including in cloud infrastructure, development centers, skilling, and capacity building. We have offices in 11 countries and over a thousand employees in the region. In addition, Microsoft’s commercial partner network in Africa encompasses over 12,000 local enterprises. We rely heavily on those local and regional businesses to scale our commercial
reach across the Continent, and we partner on technology solutions to accelerate and increase value to our customers. According to a recent IDC study, Microsoft partners earn $9 USD for every $1 USD of revenue Microsoft generates in Africa.

Africa is also a great source of talent and innovation. Microsoft’s Africa Development Center (ADC), with sites in Kenya and Nigeria, serves as a premier center of engineering development for the company where world-class talent can create innovative solutions fueled by AI and machine learning to benefit their communities in areas including healthcare, agriculture, and finance. A key ADC initiative is the Microsoft Africa Research Institute, which brings together researchers, engineers, designers, and community stakeholders to drive productivity in the areas of work, health, and society.

Africa is home to eight of the 10 fastest-growing cities in the world and six of the 10 fastest-growing economies. A critical part of that growth will rely on connectivity—yet internet access remains out of reach for more than half of the population. Microsoft’s Airband Initiative is working to close the connectivity gap in Africa and across the world, adopting a human-centered and technology agnostic approach to leveraging connectivity as a foundation for digital transformation. Through partnerships with local and regional internet and energy access providers, telecom equipment makers, nonprofits, as well as governmental and non-governmental organizations, our hope is to advance access to affordable internet and relevant digital skills to unlock the power of connectivity. Microsoft’s goal is to extend high-speed internet access to 40 million people around the world by July 2022.

Africa has been a key focus area for the Microsoft Airband Initiative, with 7 active broadband projects across Africa serving more than 5 million people. In fact, one of our first Airband connectivity projects was in Kenya. As part of our work on the Continent, we are focused on improving access to education, increasing digital literacy and skills, and driving economic empowerment through small business enablement.

Microsoft is also partnering with African governments, companies, and NGOs to develop technology-enabled solutions to help make environmental ecosystems more sustainable and resilient. For example, through Microsoft AI for Earth which puts AI technology into the hands of the world’s leading ecologists and conservation technologists, we support local researchers and organizations working to monitor and find solutions to pressing problems on the ground.

Examples of projects in the region include intelligent water management solutions and precision agriculture efforts in Kenya, conservation efforts in Uganda through intelligent analysis of aerial imagery, and work on early nutrition warning systems in sub-Saharan Africa.

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Developing skilling and capacity building programs to serve youth and underserved communities is a critical part of growing an innovation economy. Microsoft is working with nonprofits and governments in the region to support computer science education and digital skills:

• Earlier this year, Microsoft established the Women Techsters initiative, designed for girls and women between ages 16 and 40 in 54 African countries. The initiative aims to bridge the digital and technology divide and ensure equal access to opportunities across the Continent by enabling 5 million women across Africa to gain coding and deep tech skills by 2030.

• Microsoft has partnered with the Nigerian Federal Government and the African Development Bank on the Digital Nigeria initiative with the goal of providing access to skills training for 5 million young Nigerians and creating economic opportunities for over 20,000 individuals by 2023. The initiative will also digitally transform skilling and employability services on the federal and state level. To date, eight platforms on a federal and regional level have been launched with over 250,000 beneficiaries.

• Microsoft partnered with the African Development Bank to launch the digital training platform Coding for Employment. The platform launched in 2019 and aims to reach 50 million people in Africa. Coding for Employment is a crucial part of the African Development Bank’s strategic agenda to create 25 million jobs by 2025, and to equip 50 million African youth with competitive skills.

These efforts illustrate the tremendous potential for private sector investments and collaboration to help support economic growth and digital transformation for communities and countries across the Continent.

Microsoft’s President Brad Smith will chair the Private Sector Forum at the United Nations’ Fifth Conference on Least Developed Countries, taking place in Doha next January. The 46 Least Developed Countries include 14% of the world’s population, but just 1.6% of the global economy. Africa is home to 33 Least Developed Countries. Microsoft believes that the private sector, working together with local governments, development agencies, and donor nations can accelerate economic growth and opportunity through innovative public-private financing and partnerships.

II. The U.S.-Africa Trade Relationship

Africa has the youngest population of any continent and will be a major driver of future global economic growth. One in five of the world’s consumers will live in Africa by 2030, household

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consumption will reach $2.5 trillion, and 43 percent of Africans are projected to be in the middle to upper classes. These factors will make Africa a critical market for agricultural goods, technology, and other products and services that the U.S. has to offer.

Unfortunately, the U.S. is not well positioned at present to take advantage of this opportunity. In fact, relative to other leading economies, the U.S. has lost ground in Africa in recent years when it comes to trade and investment. U.S. Foreign Direct Investment flows to Africa have been declining since 2014. Only 6 percent of Africa’s total imports came from the U.S. in 2020, putting the U.S. a distant third in market share behind the EU (28%) and China (16%) and just barely ahead of India (5%).

While geography explains some of this, attention and focus matter as well. The U.S. has free trade agreements with countries in North, Central, and South America; North Africa; the Middle East; and the Asia-Pacific regions; but none in Sub-Saharan Africa. By contrast, the EU and UK have negotiated favorable Economic Partnership Agreements (EPAs) throughout the Continent; these agreements increasingly will provide EU and UK companies with reciprocal duty-free market access to African countries that American companies lack. China has signed several agreements in recent years with the African Union to promote infrastructure, broadband, the Internet of Things, cloud computing, 5G and artificial intelligence, and even the construction of AU facilities. The EU and China have also been active in providing technical assistance to the AU in the implementation of the Africa Continental Free Trade Area (AfCFTA). The net result is that America’s economic competitors are consolidating their already dominant position in Africa, while the U.S. is falling behind.

None of this is to say that the U.S. has been absent in Africa. The President’s Emergency Plan for AIDS Relief, launched with bipartisan support during the Bush Administration, has been an enormous success, saving over 20 million lives and helping to prevent the spread of HIV on the Continent. The U.S. private sector and philanthropies have led the way in helping to eradicate preventable diseases like smallpox, polio, and measles. The U.S. military plays a key role in combating terrorism on the Continent, in close partnership with African governments. U.S. government development agencies fund billions of dollars in African projects every year, and the Office of the U.S. Trade Representative has been a staunch supporter of regional economic integration efforts in Africa, including through an agreement negotiated in 2019 to provide technical assistance to support implementation of the AfCFTA.

But when it comes to promoting greater trade with and investment in Africa, the centerpiece of the U.S. government’s efforts in recent years has been AGOA. AGOA has been successful in stimulating trade in certain sectors like textiles. But overall AGOA utilization has remained

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4 Brookings. “Africa’s emerging economies to take the lead in consumer market growth,” April 3, 2019, Africa’s emerging economies to take the lead in consumer market growth (brookings.edu).

disappointingly low, and there is increasing acknowledgement that fulfilling the potential in the U.S.-Africa trade and investment relationship will require policymakers to look beyond AGOA.

Microsoft has been a strong supporter of AGOA and is a member of the Trade Advisory Committee on Africa (TACA). But after two decades, it is clear there are limits to what a one-way trade preference program can achieve. We encourage this subcommittee—and the U.S. government as a whole—to think creatively about the relationship and employ new tools and strategies. A focus on connectivity, skilling, and technology-enabled tools to promote good government, human rights, and the rule of law, would help to differentiate the U.S. and could have a transformative effect on the lives and livelihoods of Africans.

III. The Path Forward: Connectivity, Skilling, and Anticorruption

**Connectivity.** The digital divide presents a considerable barrier not only to inclusive and sustainable growth in Africa, but also to deeper trade ties between Africa and the U.S. For Africans, lack of connectivity means fewer economic opportunities and less access to digital goods and services that improve quality of life. For the U.S., it means less demand for U.S. technology and technology-enabled services and makes the Continent a less attractive destination for U.S. capital. These are sectors where the U.S. maintains a competitive edge and could be successful in a fully connected Africa.

As noted, Microsoft, along with other U.S. companies, already is partnering with others in African countries to make internet access more widely available and affordable. But universal connectivity should be the goal, and that will require multistakeholder action. Stakeholders in government, industry, civil society, and international organizations have repeatedly expressed their willingness to act. Any path forward must harness the capabilities and experience of all these groups. The U.S. government is ideally suited to take a leading role in such an effort, and we urge that it do so as part of a broader trade and development strategy for Africa.

Connectivity is not simply about internet access, but also access to cloud computing networks. African business leaders and governments already recognize the benefits of cloud computing, including improved speed, reliability, and performance, all at a lower cost than using traditional onsite datacenters. With access to robust cloud infrastructure, organizations do not need to own computing infrastructure or datacenters. Instead, they can rent access to storage and applications from a cloud service provider, allowing them access to sophisticated capabilities on demand. Cloud computing also allows businesses to leverage these digital tools on platforms that are secured by state-of-the-art cybersecurity measures, ensuring that the data processed is protected against increasingly sophisticated cyberthreats.

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Cloud infrastructure is also the most promising platform for enabling 5G service, including through Open Radio Access Network (O-RAN technology). Moreover, the cloud is increasingly the platform through which valuable software and productivity services are delivered to individuals, companies, and governments. In short, cloud infrastructure is becoming for the 21st century what interstate highways and flight paths were to the 20th, and what sea lanes and railroads were to the 19th.

The U.S. currently enjoys a substantial advantage in cloud computing. It is home to the leading providers: Microsoft’s Azure, AWS, Google, Oracle, and IBM. These companies are investing billions to build out cloud infrastructure in the U.S. and throughout the world. But if there is one place where Chinese cloud competitors are investing more than their American counterparts, it is Africa.

U.S. cloud companies have built or announced data centers in only three Sub-Saharan African countries—South Africa, Nigeria, and Kenya—while Alibaba, Huawei, and Tencent have cloud projects in over a dozen. Chinese cloud providers, with the backing of the Chinese government, have been particularly active in Africa and focused on winning government cloud contracts around the Continent. Huawei has signed at least 70 deals in 41 countries around the world with governments and state-owned entities for cloud infrastructure or e-government services. Over time, these investments could create an enormous advantage for Chinese cloud companies operating on the Continent, diminish U.S. influence, and inhibit the ability of U.S. technology companies to serve the region.

As part of a comprehensive trade and investment strategy, Microsoft urges the U.S. government to work with African governments to ensure level competition for U.S. cloud providers on the Continent. The Development Finance Corporation, USAID, and other U.S. government development agencies can also play a role not only in providing resources for African cloud and connectivity projects but also in generating greater private sector interest and support for such initiatives. U.S. government-led efforts to promote the growth of responsible cloud infrastructure in Africa will help secure a place for the U.S. in Africa’s digital and economic future and provide African countries better access to world class U.S. technology to promote growth and improve standards of living.

Additionally, it is important for the U.S. government to work closely with African governments to ensure that Africa’s digital infrastructure is resilient against cyberattacks. As cyberattacks by state and non-state actors proliferate, African governments and businesses need access to state-of-the-art cyber security tools that U.S. technology companies like Microsoft have to offer. Coordinated efforts between the public and private sectors can ensure that Africa’s emerging digital infrastructure is built in a way that protects citizens and property from increasingly sophisticated cyber threats.

Partnership across public and private stakeholders is also needed to ensure that digital infrastructure is deployed in a way that respects privacy, human rights, and the rule of law, and
that it does not become a means to enable authoritarianism and division. In September 2021, Microsoft joined with AWS, Google, IBM, Salesforce, SAP, Cisco, Atlassian, and others in the industry to announce the Trusted Cloud Principles. This initiative allows leading cloud computing and cloud infrastructure companies to speak with one voice on our collective commitment to basic protections for our customers. These protections are more important than ever as digital transformation expands into emerging markets and the international community works to build norms and legal frameworks to govern our future.

**Skilling.** The World Bank predicts that the AfCFTA could boost regional income by 7% or $450 billion and lift 30 million people out of extreme poverty by 2035. At the same time, however, lack of skills could stand in the way of progress. As the World Bank’s Chief Economist has noted, “successful implementation will be key, including careful monitoring of all workers – women and men, skilled and unskilled – across all countries and sectors, ensuring the agreement’s full benefit.” And with more than 12 million young people entering the African labor force each year, investing in the digital skills of students and workers will be pivotal for growth and expanded opportunity.

Digital skilling will be key to providing Africa’s growing population with the tools to secure a better future, which, in turn, will help to create the political stability needed to attract foreign investment. A digitally skilled African workforce will also create new demand for imports of U.S. goods and services.

As part of a comprehensive trade and investment strategy for Africa, the U.S. government should work with African partners, the U.S. private sector, and NGOs to support increased digital literacy on the Continent. The annual AGOA forum would be an ideal venue for the U.S. government to bring together private and public sector stakeholders to identify areas for action, set priorities, and obtain commitments in this area.

**Anticorruption.** Governments around the world are looking for innovative solutions to address corruption, a persistent challenge across the globe, particularly in emerging markets. Transparency International ranked Sub-Saharan Africa as the lowest performing region on its 2020 Corruption Perception Index and found little improvement from the prior year. While the African Union and several African governments have taken steps to tackle corruption, it remains a challenge across the Continent. Corruption not only leads to misuse of public funds

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and lower quality government services, but also impedes investment—particularly from the U.S. and other jurisdictions that have strong anti-foreign corruption laws like the FCPA.

The U.S. has long used programs like AGOA to encourage countries to take action to combat public corruption. In considering new anticorruption efforts that could be part of a renewed U.S.-Africa trade strategy, Microsoft urges the U.S. government to consider ways in which technology can help governments identify and address corruption and increase transparency and accountability.

Microsoft is working to help empower governments and other stakeholders in their fight against corruption with Anti-Corruption Technology and Solutions (ACTS)—cloud-based solutions that can improve governments’ ability to identify, prevent, and deter corruption.\(^\text{10}\) We are launching an open data platform and piloting a “red flags” public procurement monitoring system using machine learning.\(^\text{11}\) Microsoft is also working with agencies across Africa and the African Development Bank to increase transparency and accountability and to provide customized Proofs of Concept for these technologies.

As part of a comprehensive strategy to increase U.S. trade and investment in Africa, the U.S. government should work with African governments and the private sector to bolster Africa’s ability to fight corruption with technology. The U.S. government might, for example, encourage African governments to adopt anticorruption technology strategies as part of their AGOA utilization plans and work to pair private sector partners with African governments that wish to pursue such initiatives.

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Realizing the full potential in the U.S.-Africa trade and investment relationship will require looking beyond traditional trade policy tools like AGOA. Leveraging the U.S. private sector and in full partnership with African governments, the U.S. should pursue initiatives to increase connectivity, enhance skilling, and fight corruption on the Continent. These efforts—combined with full engagement on the trade front—could enable the U.S. to differentiate itself from global competitors and help to establish a mutually beneficial economic partnership between the U.S. and Africa that will endure for decades to come.

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