



Intel Corporation

Input to the Global Digital Compact

Intel Corporation (Intel) welcomes the opportunity to provide input to the Global Digital Compact.

At Intel, our purpose is to build world-changing technology that improves the life of every person on the planet. We strive every day to make a positive global impact and be good corporate citizens. Increasingly central to every aspect of human existence, technology is transforming our world at an accelerated pace. And at the heart of that technology: semiconductors. Semiconductors are the foundation of all innovation as the world becomes more digital, from powering our ability to work remotely, to staying connected with friends and family, to providing enhanced healthcare and autonomous vehicles. Intel's more than 121,000 employees worldwide are shaping the future with computing and connectivity technologies. The transistor is the engine that powers every Intel processor. To build a modern computer chip, our engineers place billions of these tiny switches into an area no larger than a fingernail.

The world is becoming more digital and computing more pervasive. Semiconductors are the underlying technology powering the digitization of everything, which is being accelerated by four superpowers: ubiquitous compute, cloud-to-edge infrastructure, pervasive connectivity, and artificial intelligence (AI). Together these superpowers reinforce and amplify one another and will exponentially increase the world's need for computing by packing even more processing capability onto ever-smaller microchips. We intend to lead the industry by harnessing these superpowers for our customers' growth and our own. Our product offerings provided end-to-end solutions, scaling from edge computing to 5G networks, Wi-Fi 6, the cloud, and the emerging fields of AI and autonomous driving.

As part of our integrated device manufacturer (IDM 2.0) strategy, Intel announced in 2021 and 2022 plans to invest \$40 billion to build new factories and expand in the US and Malaysia, and as much as 80 billion euros in the European Union for R&D and manufacturing expansion. We believe our IDM 2.0 strategy will enable us to deliver leading process technology and products to meet growing demand, while providing superior capacity and supply resilience and an advantageous cost structure.

Intel formed an alliance with 50 partners from Fortune 500 companies, NGOs, and academia—including Dell, World Wide Technology, and African Mobile Networks—to build the [N50 Project](#). The project, part of the [Intel RISE 2030 strategies and goals](#), aims to bring access to affordable digital content, applications, and services to the next 3.9 billion people to provide health, social, and financial benefits to marginalized communities.

Intel CEO Pat Gelsinger has supported UN General Assembly "[High-Level Thematic Debate on Digital Cooperation and Connectivity](#)" on 27 April 2021 and delivered a [speech](#).

Intel has also chaired the United Nations “Global Alliance for Information and Communication Technologies (ICT) and Development”.

Aligned with Intel’s corporate purpose and RISE 2030 strategies and goals, Intel has rolled out “[Intel Digital Readiness Programs](#)” globally in partnership with governments, academia, civil society, and industry stakeholders as a shared-value initiative to demystify and democratize emerging technologies—including AI for Citizens, AI for Youth, AI for Future Workforce, AI for Current Workforce, and Digital Readiness for Leaders—aimed at empowering citizens, students, professionals, and leaders to participate in and benefit from a digital economy.

We believe that the achievement of the SDGs will be critical to creating a life of dignity and opportunity for all, and we believe technology will play a key role in achieving the SDGs. We use the goals below to inform the ongoing development of our strategies, initiatives, and long-term priorities, including our 2030 strategy and goals. Information communications technology (ICT) can play an enabling role in the implementation of all of the SDGs. Intel, Nethope, and the UN Foundation developed an [SDG ICT Playbook](#) that outlines technology trends, opportunities, and innovative case studies that global leaders can reference as they develop their strategies and actions to address the SDGs.

Connect all people to the internet

We need to bridge the digital divide, thereby creating a more accessible and inclusive future for all. This requires us to not only connect people to the internet (deployment), but also providing the tools and skills so they can effectively use the internet (adoption). Students need computers both in schools and at home for their education and digital equal opportunity. New UN targets include the connection of all households, schools, and digital skills by 2030. According to UNESCO, Half of the total number of learners – some 826 million students – kept out of the classroom by the COVID-19 pandemic, do not have access to a household computer and 43% (706 million) have no internet at home.

Not only students but all household members can benefit from the computer at home. It will provide the connection of all household members and people in world. Digital literacy and ICT skills are requirements for success in today’s knowledge economy and society. Integration of ICT in Education is a key enabler for digital skill development and broadband demand creation. Computers are essential for the realization of all SDGs such as e-learning, e-health, e-commerce, e-agriculture, remote work and meetings, digital skill development programs for young generation on new ICT technologies like AI, programming, coding, and projects to empower women, girls, and other applications.

Intel’s global broadband objectives are the same as that of most governments and consumers: we want to enable high-speed and high-quality, widespread, affordable broadband in all countries extending computing technology to connect and enrich the lives of every person on

earth. High-speed and high-quality intelligent broadband networks can provide digital equity for SDGs to close the gaps, for example in education, health.

Resolution 70/125 of the UN General Assembly and ITU Plenipotentiary 2022 Resolution 139 underline the importance of high-speed broadband connectivity to bridge the digital divide. Schools and households need both high-speed broadband connectivity and computers. High-speed broadband networks are also very important for the successful implementation of AI and other new applications such as video-based e-health (telemedicine), e-learning. Therefore, it is also important to prioritize high-speed broadband connectivity for the economic development and digital equity. Intel is a leading supplier for 5G, Wi-Fi and other telecommunications equipment and devices. Making high-quality broadband more widespread and affordable and improving the cost and quality of data-rich applications will spur economic growth in many ways. Intel actively supports UN efforts such as ITU and Broadband Commission for accelerating new high-speed broadband technologies like 5G, Wi-Fi 6, G.fast (DSL), fiber that are key for school, household connectivity and new digital services and skills.

Many ministers and other executives have also underlined the importance of high-speed broadband connectivity and introduced their strategies and projects including rural areas during ITU PP 22 Conference.

Actions on Connectivity

- Develop affordable national computer and broadband connectivity programs especially for students, households (through subsidies and incentives including sound tax policies).
- Allocate enough licensed and unlicensed frequency spectrum for new high-speed broadband wireless technologies (like 5G and Wi-Fi 6) and accelerate the implementation of networks.
- Effectively use Universal Service Fund and other financing mechanisms (such as development banks) for the high-speed broadband connectivity, computer programs for schools, universities, students, and digital skill development programs.
- Connect all schools and classrooms with high-speed broadband technologies and establish computer labs according to need of digital skill programs such as on AI and coding.
- Promote market-based broadband policies for widespread, high-speed, high-quality, affordable broadband.
- Benefit from the experience of other successful countries such as following Universal Service Fund projects.

Internet Fragmentation

Governments and private sectors have invested trillions of US dollars for the existing and emerging interconnected, interoperable Internet networks and services (provided by open

standards and formats, standardized by the Internet Engineering Task Force - IETF). IETF operates under the auspices of the Internet Society as an international non-profit organization. Internet Society, IETF, ICANN have very important leading roles on the development and interoperability of existing and future Internet for the world's economy and SDGs. We need to increase our support to these organizations and their leading role on Internet to prevent the fragmentation.

Actions on Internet Fragmentation

All organizations and governments should continue to support the activities of ISOC, IETF, ICANN and work together to prevent Internet fragmentation.

Protect data

The goal of Intel's data privacy policy approach is to enrich trust in technology through the responsible access and use of data to add value to society and consumers' lives. To accomplish this goal, Intel encourages governments to focus on harmonized approaches to privacy protection that will continue to foster information technology innovation and economic growth.

Intel's security objective is in direct alignment with the goal of global governments: to promote trust in technology by enabling governments, businesses, and individuals to better secure their data, networks, and infrastructure. To accomplish this goal, we encourage governments to focus on non-partisan approaches to security that will foster information technology innovation and economic growth. Governments should promote policies that are globally scalable and flexible enough to address the evolving security landscape by focusing on robust and transparent security solutions, encompassing the full stack. We believe they should develop risk-based, evidence-driven, design-neutral approaches to security policy and be informed by consensus-driven processes. We also believe that Digital Trust – as a larger, evolving framework incorporating cyber security - is a human right for all consumers of technologies, and should be promoted by raising all users' awareness of principles of security and building trust in technology and the organizations providing them.

At Intel, we believe in the enormous potential of Artificial Intelligence (AI) to improve people's lives. AI is also a technology that must prioritize effective data protection to mitigate harms. Two trends that are influencing AI and digital developments globally are: 1. Data analytics from the edge to the cloud, and 2. Increased mechanisms for data collection and creation.

Actions on Protect Data

a) Data privacy policy:

1- Privacy legislation should promote innovation and free flow of data. Privacy legislation and policy should not restrict the movement of data.

2- Privacy legislation should allow for flexibility rooted in a risk-based approach. Intel supports the passage of privacy legislation that addresses the challenges and risks raised by technologies.

Legislation should promote Privacy by Design and organizational accountability to weigh privacy risks throughout the data lifecycle.

3- Security is essential to good privacy. As digital devices connect to the internet, sharing data among devices and the need to store data will grow. Robust security of networks and devices is critical. Any privacy law must recognize the need to process data for network and information security purposes.

4- To align consumer expectations, enforcement of data privacy legislation must be predictable and consistent.

b) AI privacy policy

Success of innovation depends upon trust in emerging technologies, like AI and autonomous driving.

1- New legislative and regulatory initiatives should be comprehensive, technology neutral, and support free flow of data: horizontal legislation can encompass both data uses and technologies that fall outside existing sectoral laws and that are still unforeseen.

2- Organizations should embrace risk-based accountability approaches, putting in place technical (privacy-by-design) or organizational measures (product development lifecycles and ethics review boards) to minimize privacy risks in AI.

3- Automated decision making should be fostered while augmenting with safeguards to protect individuals: legitimate interest should be acknowledged as legal basis for AI data processing. Industry and governments should work together on algorithm explainability and risk-based degrees of human oversight to minimize potential adverse impacts for citizens from automated decision-making.

4- Governments should promote access to data, such as, opening government data, supporting reliable datasets available to all, fostering incentives for data sharing, investing in the development of voluntary international standards, and promoting diversity in datasets.

5- Funding research in security is essential to protect privacy: in areas like homomorphic encryption, access to personal data can be minimized and protection enhanced.

6- It takes data to protect data: to detect biases or cyber threats and to protect personal data, AI needs to process personal data.

Regulation of Artificial Intelligence

Artificial Intelligence (AI) is driving a new wave of economic progress with the ability to solve some of the world's most difficult problems in healthcare, climate, and education. AI is projected to add more than \$15 trillion to global GDP by 2030. To realize the potential of AI, governments need to create a public policy environment that fosters AI innovation, while also mitigating

negative societal consequences. The main drivers of public policy towards AI should be solving large societal problems and fostering economic progress. Accordingly, public policy must support industry efforts to bring AI benefits to the economy, to raise awareness and address citizens' concerns, and to identify needs for regulatory intervention. Oversight by regulators will be essential for society to *trust* AI. At the same time, regulations should not create additional, unnecessary barriers to the positive social impacts of AI.

Democratizing and demystifying AI as a technology, and closing the current digital skills gap, will be key to realizing its full potential. At Intel, we believe in furthering “Digital Readiness” for all. Digital Readiness comprises of the digital skills, trust, and understanding of responsible usages of emerging technologies including AI. Governments should prioritize building digital readiness and educational programs on AI with public-private partnerships. These efforts should also emphasize the importance and potential of AI to help achieve the 17 SDGs.

Intel Digital Readiness Programs aim to skill 30 million people in 30 countries in partnership with 30,000 institutions for current and future jobs by 2030. To date, we have reached 27 countries, 4 million people, and 23,000 institutions. With the AI for Youth program, we've provided AI curriculum and resources to nearly 1 million middle and high school students and continue to scale the program globally. Through AI for Future Workforce program, we are providing AI educational content to community colleges and higher educational institutions to prepare technical and non-technical students for the jobs of tomorrow. Through our AI for Citizens program, we provide public awareness and understanding of AI for all, non-technical audiences.

We also organize “Intel® AI Global Impact Festival” annual Digital Readiness celebration for next-generation technologists and educators, with governments, academia, and communities, to showcase AI innovation and impact, aligned with UN Sustainable Development Goals.

Actions on Artificial Intelligence

Remove barriers and create a legal and policy environment that supports AI so that the responsible development and use of AI is not inadvertently derailed. Promote risk-based accountability approaches combined with flexible regulatory guidelines to allow organizations to adopt the most appropriate internal processes and policies. Expand general legal principles to AI to assess if existing laws and regulations that may prevent autonomy in certain tasks are still justified.

Foster Innovation and Open Development: To better understand the impact of AI and explore the broad diversity of AI implementations, public policy should encourage investment in AI R&D. Governments should support the controlled testing of AI systems to help industry, academia, and other stakeholders improve the technology.

Create New Human Employment Opportunities and Protect People's Welfare: AI will change the way people work. Public policy in support of adding skills to the workforce and promoting employment across different sectors should enhance employment opportunities while also protecting people's welfare.

Implement AI Digital Skill programs for youth, citizens, and workforce. Integrate AI skills programs across educational levels and establish AI labs equipped with the proper resources for students to explore and build AI.

Liberate Data Responsibly: AI is powered by access to data. While maintaining security and data privacy, machine learning algorithms improve by absorbing more data over time; data acquisition is imperative to achieving more enhanced model development and training. Keeping data moving will help machine learning and deep learning reach its full potential.

Rethink Privacy: Privacy approaches like The Fair Information Practice Principles and Privacy by Design have withstood the test of time and the evolution of new technology. But with innovation, we have had to "rethink" how we apply these models to new technology.

Require Accountability for Ethical Design and Implementation: The social implications of computing have grown and will continue to expand as more people have access to implementations of AI. Public policy should work to identify and mitigate discrimination caused by the use of AI and encourage designing in protections against these harms.