DIGITAL TECHNOLOGIES.

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Annotation: Technologies can help make our world fairer, more peaceful, and more just. Digital advances can support and accelerate achievement of each of the 17 Sustainable Development Goals – from ending extreme poverty to reducing maternal and infant mortality, promoting sustainable farming and decent work, and achieving universal literacy. But technologies can also threaten privacy, erode security and fuel inequality. They have implications for human rights and human agency. Like generations before, we – governments, businesses and individuals – have a choice to make in how we harness and manage new technologies.
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Digital technologies have advanced more rapidly than any innovation in our history – reaching around 50 per cent of the developing world's population in only two decades and transforming societies. By enhancing connectivity, financial inclusion, access to trade and public services, technology can be a great equaliser.

In the health sector, for instance, AI-enabled frontier technologies are helping to save lives, diagnose diseases and extend life expectancy. In education, virtual learning environments and distance learning have opened up programmes to students who would otherwise be excluded. Public services are also becoming more accessible and accountable through blockchain-powered systems, and less bureaucratically burdensome as a result of AI assistance.Big data can also support more responsive and accurate policies and programmes.

However, those yet to be connected remain cut off from the benefits of this new era and remain further behind. Many of the people left behind are women, the elderly, persons with disabilities or from ethnic or linguistic minorities, indigenous groups and residents of poor or remote areas. The pace of connectivity is slowing, even reversing, among some constituencies. For example, globally, the proportion of women using the internet is 12 per cent lower than that of men. While this gap narrowed in most regions between 2013 and 2017, it widened in the least developed countries from 30 per cent to 33 per cent.

The use of algorithms can replicate and even amplify human and systemic bias where they function on the basis of data which is not adequately diverse. Lack of diversity in the technology sector can mean that this challenge is not adequately addressed.

Throughout history, technological revolutions have changed the labour force: creating new forms and patterns of work, making others obsolete, and leading to wider societal changes. This current wave of change is likely to have profound impacts. For example, the International Labour Organization estimates that the shift to a greener economy could create 24 million new jobs globally by 2030 through the adoption of sustainable practices in the energy sector, the use of electric vehicles and increasing energy efficiency in existing and future buildings.

Meanwhile, reports by groups such as McKinsey suggest that 800 million people could lose their jobs to automation by 2030, while polls reveal that the majority of all employees worry that they do not have the necessary training or skills to get a well-paid job.

There is broad agreement that managing these trends will require changes in our approach to education, for instance, by placing more emphasis on science, technology, engineering, and maths; by teaching soft skills, and resilience; and by ensuring that people can re-skill and up-skill throughout their lifetimes. Unpaid work, for example childcare and elderly care in the home, will

need to be better supported, especially as with the shifting age profile of global populations, the demands on these tasks are likely to increase.

Today, digital technologies such as data pooling and AI are used to track and diagnose issues in agriculture, health, and the environment, or to perform daily tasks such as navigating traffic or paying a bill. They can be used to defend and exercise human rights – but they can also be used to violate them, for example, by monitoring our movements, purchases, conversations and behaviours. Governments and businesses increasingly have the tools to mine and exploit data for financial and other purposes.

However, personal data would become an asset to a person, if there were a formula for better regulation of personal data ownership. Data-powered technology has the potential to empower individuals, improve human welfare, and promote universal rights, depending on the type of protections put in place.

Social media connects almost half of the entire global population. It enables people to make their voices heard and to talk to people across the world in real time. However, it can also reinforce prejudices and sow discord, by giving hate speech and misinformation a platform, or by amplifying echo chambers.

In this way, social media algorithms can fuel the fragmentation of societies around the world. And yet they also have the potential to do the opposite.

How to manage these developments is the subject of much discussion – nationally and internationally – at a time when geopolitical tensions are on the rise. The UN Secretary-General has warned of a 'great fracture' between world powers, each with their own internet and AI strategy, as well as dominant currency, trade and financial rules and contradictory geopolitical and military views. Such a divide could establish a digital Berlin Wall. Increasingly, digital cooperation between states – and a universal cyberspace that reflects global standards for peace and security, human rights and sustainable development – is seen as crucial to ensuring a united world. A 'global commitment for digital cooperation' is a key recommendation by the Secretary-General's High-level Panel on Digital Cooperation.

Digital Technology and production processes. Communication - Digital technology provides a simple, efficient, and cheap method for communication. For example, employees from different parts of the world can communicate, collaborate and give feedback with one another's work with applications such as Slack, Google Drive, and Zoom. The extranet also allows companies to exchange data and strengthen bonds with their business partners and other stakeholders.

Production - The application of digital technology can automate many logistical processes to make the product available faster. For example, activities like invoicing, payments, picking/tracking, inventory updates can be automated to save time and free the human workforce from tedious, repetitive tasks. This also allows them to focus on high-priority tasks and gain more job satisfaction. In other cases, technology can help managers to analyze the individual employee's performance and create more effective training programs. Digital Technology and human relations. **Customer relationship** - Most customers nowadays search for product information on the Internet before making a purchase. This presents both opportunities and challenges for the business. On the one hand, they can convey their messages at relatively cheap costs across various channels. On the other hand, negative reviews can spread quickly on these platforms and wreck the brand image. Technology provides a way for companies to efficiently manage the relationship with the customer and improve customer satisfaction. Digital Technology: Resistance from employees. New technology may face resistance from employees who feel uneasy about technology monitoring their activities. Some older employees may find it difficult to get used to the new system and suffer from low productivity. Moreover, there is fear that advanced technology will drive them out of jobs.

Digital Technology: Security of data. Companies with technological systems are exposed to a variety of threats. For example, there's the risk of leaking customer information, which can hamper the company's reputation. Some cybercriminals will try to break into the system to steal information or manipulate the data. At the same time, the cost of data security software is rather expensive for most small and medium-sized companies. Furthermore, as more businesses initiate digitalization within their organisation, firms that refuse to make the change will lag behind and lose their competitive advantage. By contrast, digitalizing can bring the firm multiple benefits. For example, the production will speed up since machines are replacing humans with repetitive tasks. The coordination of data into one system allows everyone to collaborate on a task in real-time. Digital technology encompasses digital devices, systems, and resources that help to create, store, and manage data. It is a crucial part of modern business to improve the workflow and customer experience.

- Digital technology is important as it allows companies to provide timely support for customers throughout their buying journey. Also, the adoption of technology within an organization can bring together data and systems for a smaller workflow.
- The advantages of digital technology come from enterprise source planning, increased customer communication, and improved productivity.
- Disadvantages of digital technology include high costs of installation, resistance from employees, and security of data.

Importance of digital technology. Consumer behaviour is changing, from searching and sharing information to shopping for actual products. To adapt, companies must adopt digital technology to assist customers through their buying journey.

Many businesses have a website and social media accounts to inform and educate customers about their products and services. A lot of them also accompany their brick-and-mortar business model with an eCommerce store to offer customers a more flexible shopping experience. Some innovative enterprises even make use of advanced technology like virtual reality and augmented reality to attract and engage their target groups.

Companies also adopt digital technology to increase their profitability. Since one advantage of technology is limitless communication, companies can extend their reach beyond domestic boundaries and access millions of customers worldwide.

Finally, digital transformation is not just important but a requirement for all modern businesses, as the majority of firms automate their processes, firms who refuse to make the change will lag behind and lose their competitive advantage. On the other hand, there are various incentives for companies to digitize. For example, production will run faster since machines are replacing humans in repetitive tasks. So, the coordination of corporate data in one system Allows everyone to work together more seamlessly.

Digital technology has also grown into gaming world. Nowadays due to advancement of technology, games are far easier to play, they have become more mobile than ever.

In digital world, words and pictures are represented in binary code, which is made up of combinations of the numbers 0 and 1, commonly known as bits. Huge volumes of data may be compressed using digital technology and stored on tiny storage devices that can be readily protected and transferred. Data transmission speeds are also increased as a result of digitization.

To transfer messages, telecommunications has depended on digital techniques. Enhanced fiber optics facilitated the development of digital communication networks in the early 1980s. For many types of communications, such as cellular phones and cable lines, digital technology has superseded analog transmissions. Pulse code modulation (PCM) was used to transform analog data to digital signals in analog-to-digital converters. Digitized signals were less distorted and easier to replicate than analog broadcasts.

The effect of digital technology and connectivity, robots, stabilized production, and digital reality: the interconnection of these high-tech innovations creates a cyber-physical

environment that necessitates a thorough rethinking of how resources and manufacturing techniques of labor are used.

In the digital revolution and virtual era, the impact of digital technology will be seen in every industry that is capable of producing more rapidly, effectively, efficiently, safely, and precisely. The three primary effects of digital technology on the industrial sector are increased productivity and flexibility, massive supply chain restructuring, and mass customization.

Multi-functional devices such as the wristwatch and smartphone have been made possible by recent technological advancements. Computers and laptops are becoming faster, more convenient, and more powerful than they have ever been. Technology has made our life easier, faster, more convenient, comfortable, accurate, and pleasurable as a result of all of these advancements.

Here are some of the examples of Digital Technology:

1. Websites. Websites are one of the most popular methods for individuals to access the web, which is a result of several pieces of digital technology. Websites provide us with a wealth of information and have grown increasingly interactive—for example, you may not only view what's playing at your local movie theatre but also purchase tickets.
2. Smartphones. Smartphones are the main reason why Digital technology has grown at such a pace. Mobile phones changed the way people communicated, both verbally and through texting. We now have smartphones, which have cameras, calculators, and mapping capabilities, among other digital technologies. Consumer selections are becoming even more diverse as a result of mobile apps.
3. Video Streaming. Streaming videos may be utilized for a variety of reasons. You may view movies and TV shows on the internet. With programs like Skype, you can talk with people online and see them in real-time. Live streaming allows you to watch or stream live events. Other viewing alternatives for knowledge or enjoyment may be found on sites like YouTube. Streaming technology is becoming available on a wide range of devices, including computers, TVs, and smartphones.
4. e-Books. There are now a plethora of digital alternatives to conventional print. Users may now access a wide range of reading materials from a single, portable device, eliminating the need to lug about a large number of bulky, heavy books. It's simple to change the font size and style to fit the preferences of your readers. Furthermore, unlike print books, no trees are chopped down to create them.
5. Blockchain technology is a system that maintains the track records of public transactions, also known as blocks, in multiple records, referred to as "chains," in a system linked by peer-to-peer connections. This type of storage is sometimes referred to as a "digital ledger.

   Each block on the chain comprises several transactions, and whenever a new transaction happens on the blockchain, a record of that transaction is added to the ledger of each participant.

   Distributed Ledger Technology is a decentralized database that is controlled by numerous members (DLT)." Every transaction in this ledger is verified and protected by the holder's digital signature, which confirms and secures the transaction. As a result, the information contained in the digital ledger is very secure. Blockchain is a method of storing data in such a manner that it is difficult or impossible to alter, hack, or defraud it. A blockchain is a digital log of transactions that is copied and distributed throughout the blockchain's complete network of computer systems. A blockchain is a form of distributed ledger technology in which transactions are recorded using an immutable cryptographic signature known as a hash.
6. Digital Currency – Crypto Currency. Bitcoin is the most well-known Cryptocurrency based on the above-mentioned blockchain technology. A cryptocurrency is digital money similar to the US dollar or the Indian rupee, but it is

based on a virtual trading mechanism. To control the creation of financial units and keep track of the exchange of funds, cryptocurrency uses unique encryption technologies. Cryptocurrency is a digital money transfer method that does not require the validation of transactions by banks or other financial institutions.

Future of Digital Technology. The transformation of the digital industry has been on the agenda of businesses for the next few years, and the years 2020-2025 are likely to be a critical time for individuals to prepare for and implement it across the board. For years, digital transformation has been on the agenda of businesses, and the years 2018-2020 are expected to be critical for leaders in the digital information technology sectors to plan for and implement it.

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