What is Technology?

Going by the Etymology of the word “Technology”, which has its root origin from the Greek language, the word Technology is made up of two words which are “techne” and “logos”

Techne means art, skill, craft, or the way, manner, or means by which a thing is gained. Logos means word, the utterance by which inward thoughts are expressed, like a saying, or an expression.

Going by this etymological translation of these two words “techne” and “logos” literally, technology can be easily concluded to mean words or discourse about the way, art, skills and craft are gained.

In a recent time, the word technology has come to host a lot more than what was portrayed by its etymological translation and this is due to the ever changing world which is function of time.

In the 17th century, the word technology was used to mean a discussion of applied arts only. Gradually, these “arts” themselves came to be the object of the [designation](https://www.merriam-webster.com/dictionary/designation).

Also in the 20th century, the term has been used to embrace a growing range of means, processes, and ideas in addition to [tools](https://www.britannica.com/technology/tool) and [machines](https://www.britannica.com/technology/machine).

By mid of the 20th century, [technology](https://www.britannica.com/technology/technology) was defined by such phrases as the means or activity by which humans seeks to change or manipulate their environment.

In the 21st century, technology is best described as the set of knowledge, skills, experience and techniques through which humans change, transform and use their environments in order to create tools, machines, products and services that meet their needs and desires. It is the sum of [techniques](https://en.wikipedia.org/wiki/Art_techniques_and_materials), [skills](https://en.wikipedia.org/wiki/Skill), [methods](https://en.wikipedia.org/wiki/Scientific_method), and [processes](https://en.wikipedia.org/wiki/Business_process) used in the production of [goods](https://en.wikipedia.org/wiki/Good_(economics)) and [services](https://en.wikipedia.org/wiki/Service_(economics)) and in the accomplishment of objectives.

Advancement Of Technology

The advancement of technology with its origin dated back to about 2 million years ago will be examined according to the ages of the evolution and revolution of man which are listed below:

1. Pre-historic age
2. Ancient age
3. Medieval age
4. 1st Industrial age (1760-1830)
5. 2nd industrial age (1860-1914)
6. 3rd Industrial age (1950-2000)
7. 4th Industrial age (2001 – present)

Pre-Historic Age

The pre-historic age which is also the stone age was about 1.8 million years ago where virtually every tool needed by man was made and shaped from stones. Tools for hunting, weapons and for making fire were crafted out of stones and these were the technological development of this time as all these were not achieved before the pre-historic age.

Ancient Age

This ancient age was characterized with the discovery of copper ores and bronze on smelting metallic ores. The concentration of these elements increase with depth in copper ore deposits and smelting of these ores yields  [bronze](https://en.wikipedia.org/wiki/Arsenical_bronze), which can be hardened to be suitable for making tools. [Bronze](https://en.wikipedia.org/wiki/Bronze) is an alloy of copper with tin and being found in relatively few deposits globally caused a long time to elapse before true tin bronze became widespread. [Bronze](https://en.wikipedia.org/wiki/Bronze) was a major advance over stone as a material for making tools basically because of its mechanical properties like strength and ductility and because it could also be cast into molds to make intricately shaped objects.

### Medieval Age

One of the most significant development of the Medieval age was the development of economies where water and wind power were more significant than animal and human muscle power. Most water and wind power was used for milling grain. Water power was also used for blowing air in [blast furnace](https://en.wikipedia.org/wiki/Blast_furnace), pulping rags for paper making and for felting wool.

1st Industrial Age (1760-1830)

The 1st industrial age was driven by cheap energy in the form of [coal](https://en.wikipedia.org/wiki/Coal) which was produced in ever-increasing amounts from the abundant resources of [Britain](https://en.wikipedia.org/wiki/Great_Britain). This age was characterized by developments in the areas of textile machinery, [mining](https://en.wikipedia.org/wiki/Mining), [metallurgy](https://en.wikipedia.org/wiki/Metallurgy) and [transport](https://en.wikipedia.org/wiki/Transport) through the [steam engine](https://en.wikipedia.org/wiki/Steam_engine) and the invention of [machine tools](https://en.wikipedia.org/wiki/Machine_tool).

2nd industrial age (1860-1914)

The 2nd industrial age saw astonishing developments in transportation, construction, manufacturing and communication technologies originating in Europe. The [Second Industrial Revolution](https://en.wikipedia.org/wiki/Second_Industrial_Revolution) was a period of rapid innovation and industrialization that began in the 1860s or around 1870 and lasted until [World War I](https://en.wikipedia.org/wiki/World_War_I). It included rapid development of chemical, electrical, petroleum, and steel technologies connected with highly structured technology research.

3rd industrial Age (1950-2000)

This age was identified with the [Mass production](https://en.wikipedia.org/wiki/Mass_production) of [automobiles](https://en.wikipedia.org/wiki/Automobile) and other high-tech goods to masses of consumers. [Military research](https://en.wikipedia.org/wiki/Military_research) and development advances which included electronic [computing](https://en.wikipedia.org/wiki/Computing) and [jet engines](https://en.wikipedia.org/wiki/Jet_engine), energy and engine technology improvements which included [nuclear power](https://en.wikipedia.org/wiki/Nuclear_power). [Rocket](https://en.wikipedia.org/wiki/Rocket) development which led to long range missiles and the first [space age](https://en.wikipedia.org/wiki/Space_age) that lasted from the 1950s with the launch of Sputnik to the mid-1980s.

[Electrification](https://en.wikipedia.org/wiki/Electrification) also was characterized with this age which spread rapidly. At the beginning of the century electric power was available for the most part but only to wealthy people.

[Birth control](https://en.wikipedia.org/wiki/Birth_control) also became widespread during this. [Electron microscopes](https://en.wikipedia.org/wiki/Electron_microscopes) were very powerful by the late 1970s and genetic theory and knowledge were expanding, leading to developments in [genetic engineering](https://en.wikipedia.org/wiki/Genetic_engineering).

4th Industrial Age (2001-present)

In the early part of the 4th industrial age, research went ongoing into [quantum computers](https://en.wikipedia.org/wiki/Quantum_computers), [nanotechnology](https://en.wikipedia.org/wiki/Nanotechnology), [bioengineering](https://en.wikipedia.org/wiki/Bioengineering)/[biotechnology](https://en.wikipedia.org/wiki/Biotechnology), [nuclear technology](https://en.wikipedia.org/wiki/Nuclear_technology), [advanced materials](https://en.wikipedia.org/wiki/Materials_science) (e.g., graphene), the [scramjet](https://en.wikipedia.org/wiki/Scramjet) and [drones](https://en.wikipedia.org/wiki/Unmanned_combat_air_vehicle) (along with [railguns](https://en.wikipedia.org/wiki/Railgun" \o "Railgun) and high-energy laser beams for military uses), [superconductivity](https://en.wikipedia.org/wiki/Superconductivity), and green technologies such as [alternative fuels](https://en.wikipedia.org/wiki/Alternative_fuel) (e.g., [fuel cells](https://en.wikipedia.org/wiki/Fuel_cells), self-driving electric and plug-in hybrid cars), [augmented reality](https://en.wikipedia.org/wiki/Augmented_reality) devices and [wearable electronics](https://en.wikipedia.org/wiki/Wearable_electronics), [artificial intelligence](https://en.wikipedia.org/wiki/Artificial_intelligence), and more efficient and powerful [LEDs](https://en.wikipedia.org/wiki/LEDs), [solar cells](https://en.wikipedia.org/wiki/Solar_cells), [integrated circuits](https://en.wikipedia.org/wiki/Integrated_circuits), [wireless power](https://en.wikipedia.org/wiki/Wireless_power) devices, engines, and [batteries](https://en.wikipedia.org/wiki/Battery_(electricity)).

Genetic engineering technology continues to improve, and the importance of [epigenetics](https://en.wikipedia.org/wiki/Epigenetics) on development and inheritance has also become increasingly recognized.

New [spaceflight](https://en.wikipedia.org/wiki/Spaceflight) technology and [spacecraft](https://en.wikipedia.org/wiki/Spacecraft) are also being developed. New more capable [space telescopes](https://en.wikipedia.org/wiki/Space_observatory), such as the [James Webb Telescope](https://en.wikipedia.org/wiki/James_Webb_Space_Telescope), to be launched to orbit in late 2021, and the [Colossus Telescope](https://en.wikipedia.org/wiki/Extremely_large_telescope#Colossus_Telescope) are being designed. The [International Space Station](https://en.wikipedia.org/wiki/International_Space_Station) was completed in the 2000s, and [NASA](https://en.wikipedia.org/wiki/NASA) and [ESA](https://en.wikipedia.org/wiki/ESA) plan a [human mission to Mars](https://en.wikipedia.org/wiki/Human_mission_to_Mars) in the 2030s. The [Variable Specific Impulse Magnetoplasma Rocket](https://en.wikipedia.org/wiki/Variable_Specific_Impulse_Magnetoplasma_Rocket) (VASIMR) is an electro-magnetic thruster for spacecraft propulsion and is expected to be tested in 2015.

[Breakthrough Initiatives](https://en.wikipedia.org/wiki/Breakthrough_Initiatives), together with famed physicist [Stephen Hawking](https://en.wikipedia.org/wiki/Stephen_Hawking), plan to send [the first ever spacecraft to visit another star](https://en.wikipedia.org/wiki/Breakthrough_Starshot), which will consist of numerous super-light chips driven by [Electric propulsion](https://en.wikipedia.org/wiki/Electric_propulsion) in the 2030s, and receive images of the [Proxima Centauri](https://en.wikipedia.org/wiki/Proxima_Centauri" \o "Proxima Centauri) system, along with, possibly, the [potentially habitable planet](https://en.wikipedia.org/wiki/List_of_potentially_habitable_exoplanets) [Proxima Centauri b](https://en.wikipedia.org/wiki/Proxima_Centauri_b" \o "Proxima Centauri b), by midcentury.

Technology Advancement In Nigeria