

Science is a subject and a field that continues to have a significant impact on our understanding of the human body, the environment, the world, and the universe. Science also necessitates that you think analytically and follow systematic procedures to arrive at a conclusion to a question. In current times, science has taken on the role of responding to global challenges and societal needs. Public engagement with science and the popularization of this subject is essential in allowing millions across the globe to make informed personal & professional decisions.

It is not surprising that only for almost two decades of the 21st century many new inventions and technologies in culture, science, economy, medicine and other fields of life have been invented. In addition, humanity does not stop there. More and more important technical solutions are constantly appearing that have a positive effect and promise to change the world in the near future.

There are countless inventions now, but there are those that have powerfully influenced our lives. So, what are they? Here are a few examples.

Face recognition system is a technology capable of identifying or verifying a person in a digital image or video frame. There are many methods used in face recognition systems, but in general they are based on comparing the facial features of a given image with faces stored in a database. Such systems are actively used in the police, for unlocking smartphones and tracking hours worked at factories.

3D printing technology was patented in the 80s of the last century, but gained popularity relatively recently. New, perspective techniques have been developed and the possibilities of 3D technologies have reached a completely new level. 3D printing is a method of manufacturing three-dimensional products based on digital models. Regardless of the specific technology, the essence of the process is the gradual layer-by-layer reproduction of objects. In this process, a special electronic device is used - 3D printer, which prints certain types of materials. 3D printing technology is used in the manufacture of parts for devices, in the building of houses and even for the creation of artificial organs.

ReWalk is a bionic exoskeleton that will help people with complete loss of voluntary movements to walk, stand, climb stairs. The system is powered by a battery and a remote bracelet that is worn on the wrist. The system weighs about 233 kg. Additionally, a backpack is also needed, which holds all the electronics that is based on the Windows operating system. This backpack weighs 23 kg. ReWalk was approved for use in U.S. hospitals, and in June 2014 it was approved for use by patients at home and in public places. The only disadvantages are the very large weight of the device and the significant cost.

Autonomous artificial heart

AbioCor is an artificial heart designed to treat heart failure. The modern invention of the 21st century was developed by Abiomed, Massachusetts, USA. The artificial heart is completely located in the patient's body, has an external battery that is charged through the skin, that is, does not require a wire connection. As of September 2004, the device was implanted in 14 patients. Clinical studies have shown the safety of the heart, which is especially important for those patients with acute heart failure for whom alternative treatments are not possible. People's lives could be prolonged for several months, and the patient could freely communicate with family and friends.

Starlink is a project of the American company SpaceX to develop a high-performance satellite platform for the manufacture of communication satellites and launches of a large number of them (constellations) into space. The system provides access to broadband Internet anywhere in the world. The company was the first to serve Canada and the United States. Currently, this technology is actively used by our military and public services.

All these inventions were once just someone's idea, which eventually became a reality.