



**AL-FARABI KAZAKH NATIONAL UNIVERSITY**  
**Faculty of Geography and Environmental Science**  
**Training Course “ Organization and planning of**  
**scientific research” Master level**

# The role of science in the modern world

Lecture 1

**Lecturer – Ass.Prof.Tazhibayeva T.L.**

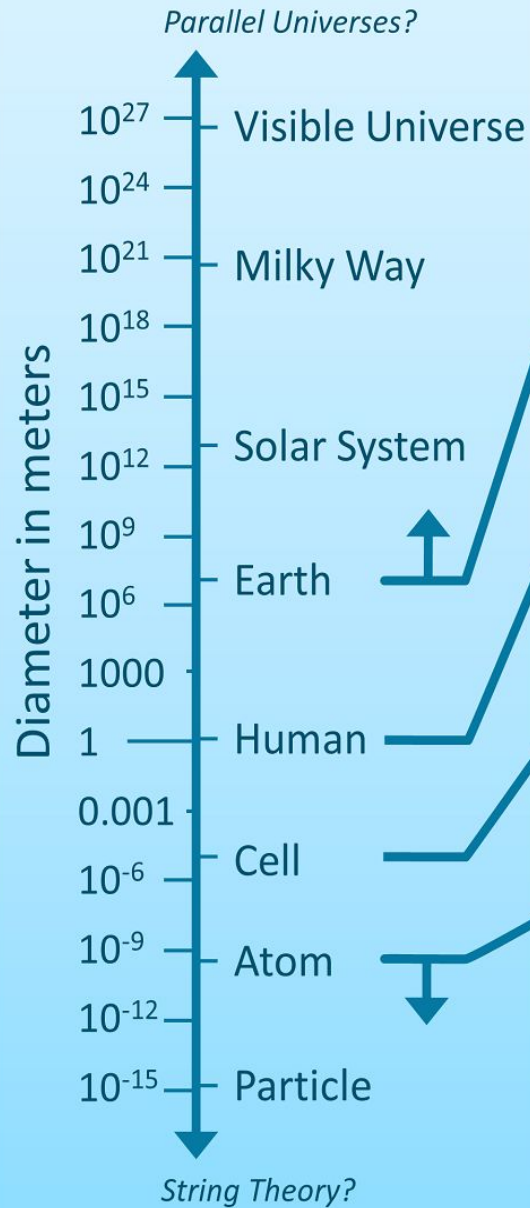
# What is the science?

Science is the knowledge about study of the natural world based on facts learned through experiments and observation. Over the years the world has slowly evolved into what it is today. Most of what we have now in the world we have science to thank for. Without science, we wouldn't have computers, cars, modern medicine and even the knowledge about the world we live in. To many the study of science is what makes "the world go round." To others, its just a subject they were forced to take in school. No matter how you look at science, won't change the fact that its what helped shape the way you live, and what you do today.

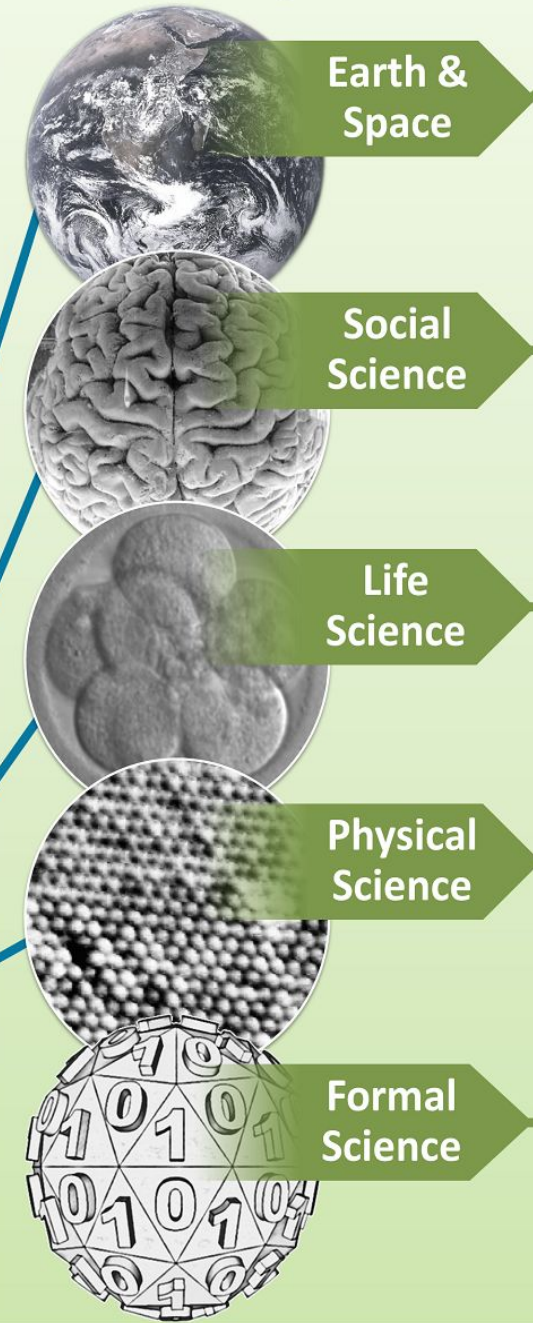




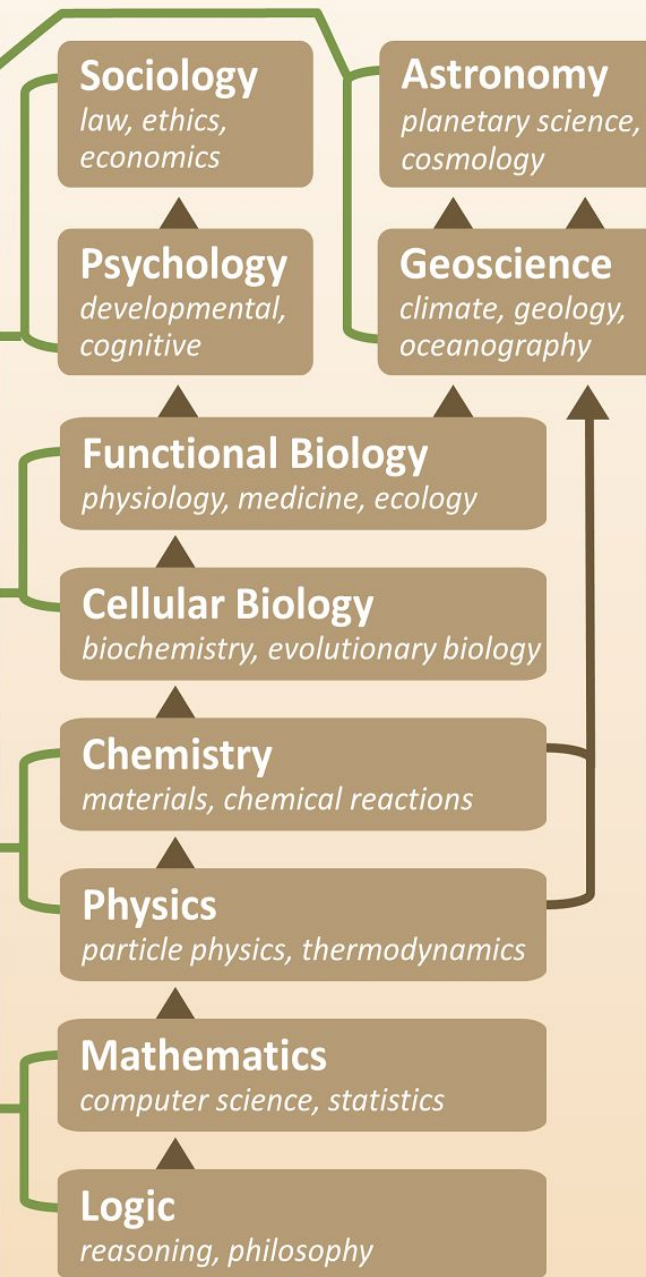
## Scale of the Universe



## Branches of Science



## Hierarchy of Science



# Physics

Do not stand still chemistry and physics. These sciences are developing in two directions - both fundamental science (the creation and study of the theoretical foundations of physical and chemical knowledge) and how applied science (the solution of practical problems of application in various spheres of human life).





## Constructions for renewable energy sources



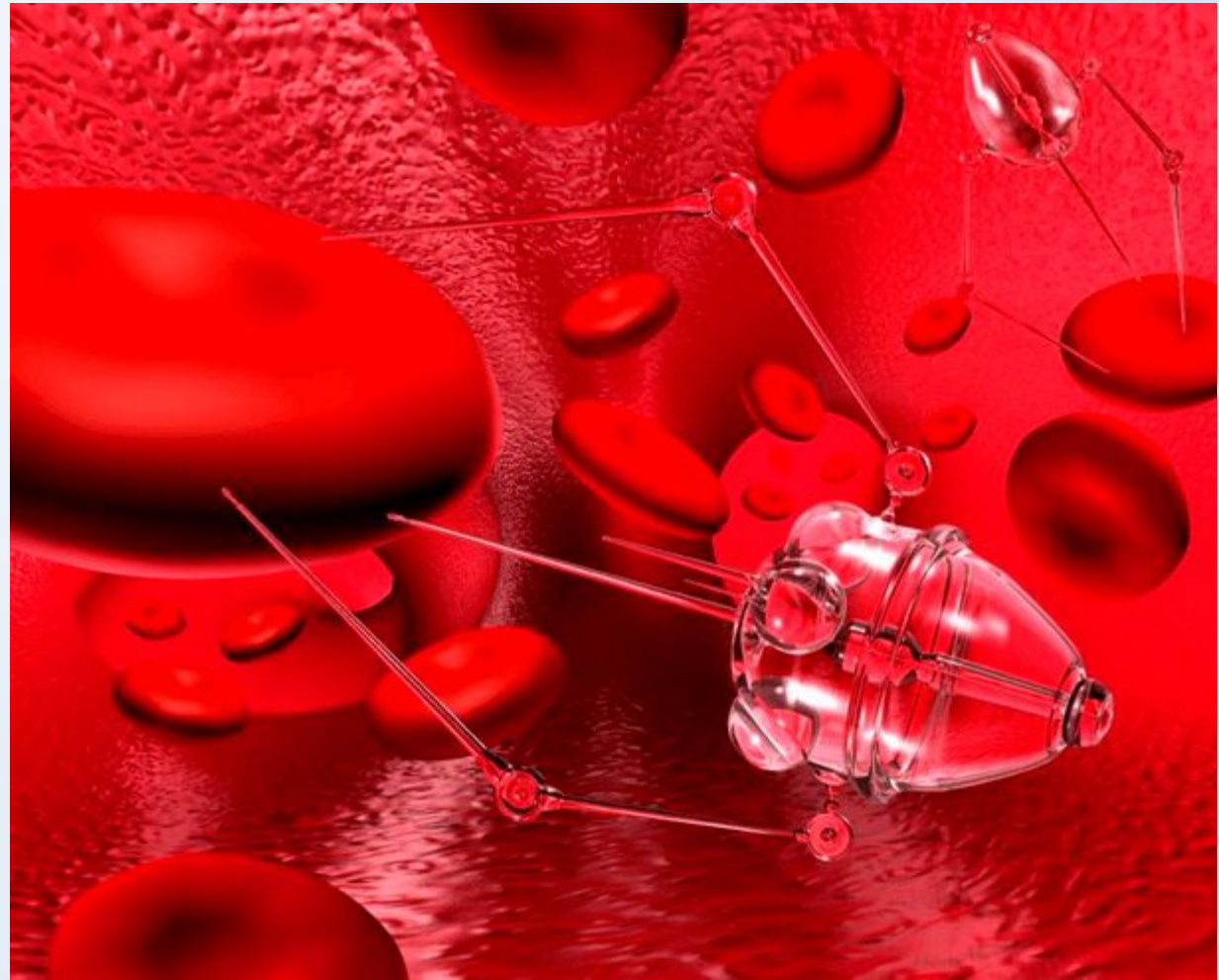
# Medicine



Thanks to the development of medicine, biology, genetics, embryology, mankind has been able to find the "antidote" to many ailments. Our ancestors could not imagine that in the XXI century will be possible to grow new human organs to replace them are not functioning in the body of patients.

## Nanobots in Blood

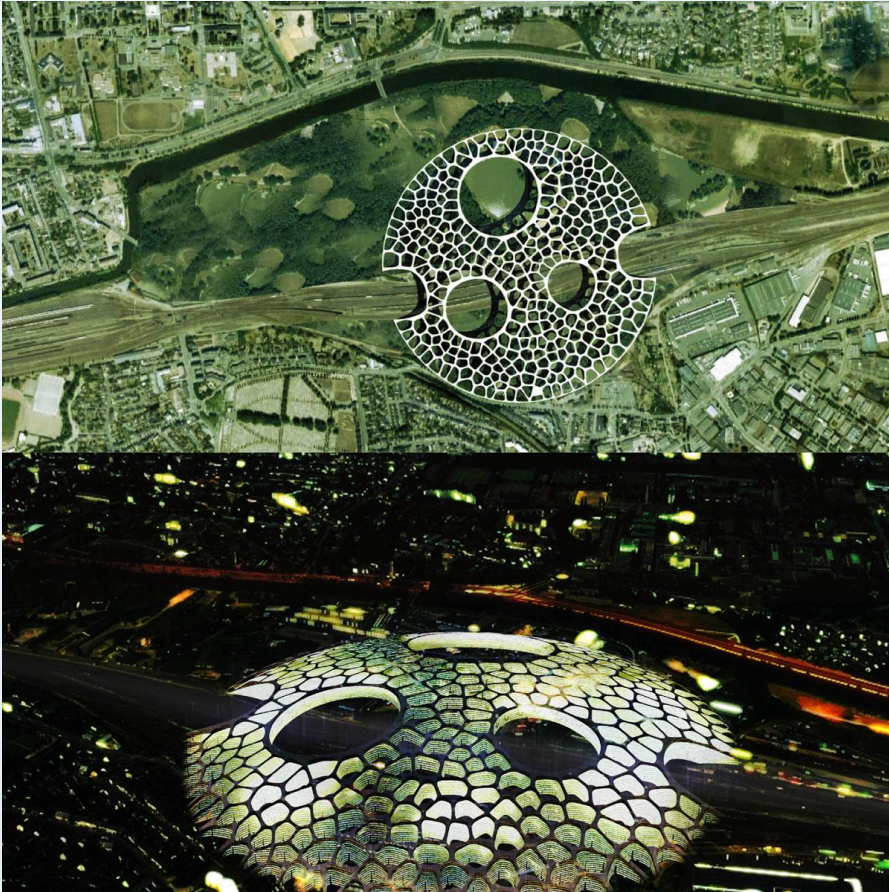
Although nanobots are far from being utilized today, but the future is coming where these tiny robots can function like our own white blood cells and destroy bacteria and other pathogens.



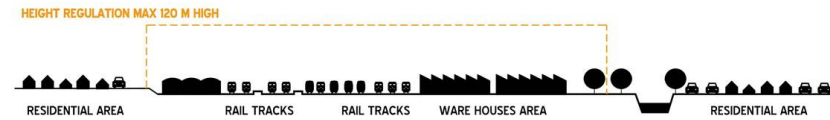


# Engineering

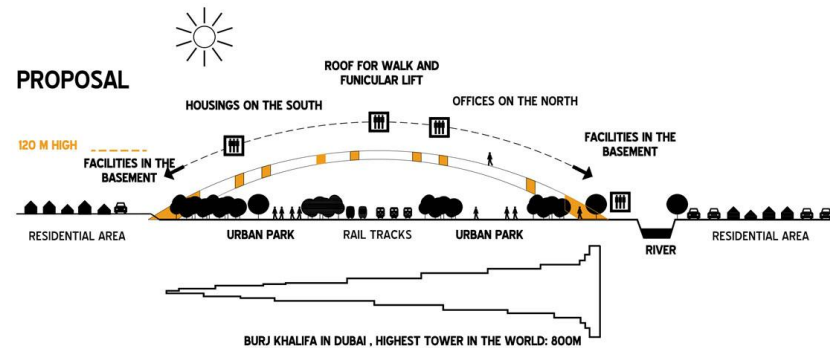
## FLAT TOWER: INNOVATIVE ARCHITECTURAL SOLUTION



### EXISTING SITUATION



### PROPOSAL



### FLAT TOWER FOR MEDIUM SIZED METROPOLIS

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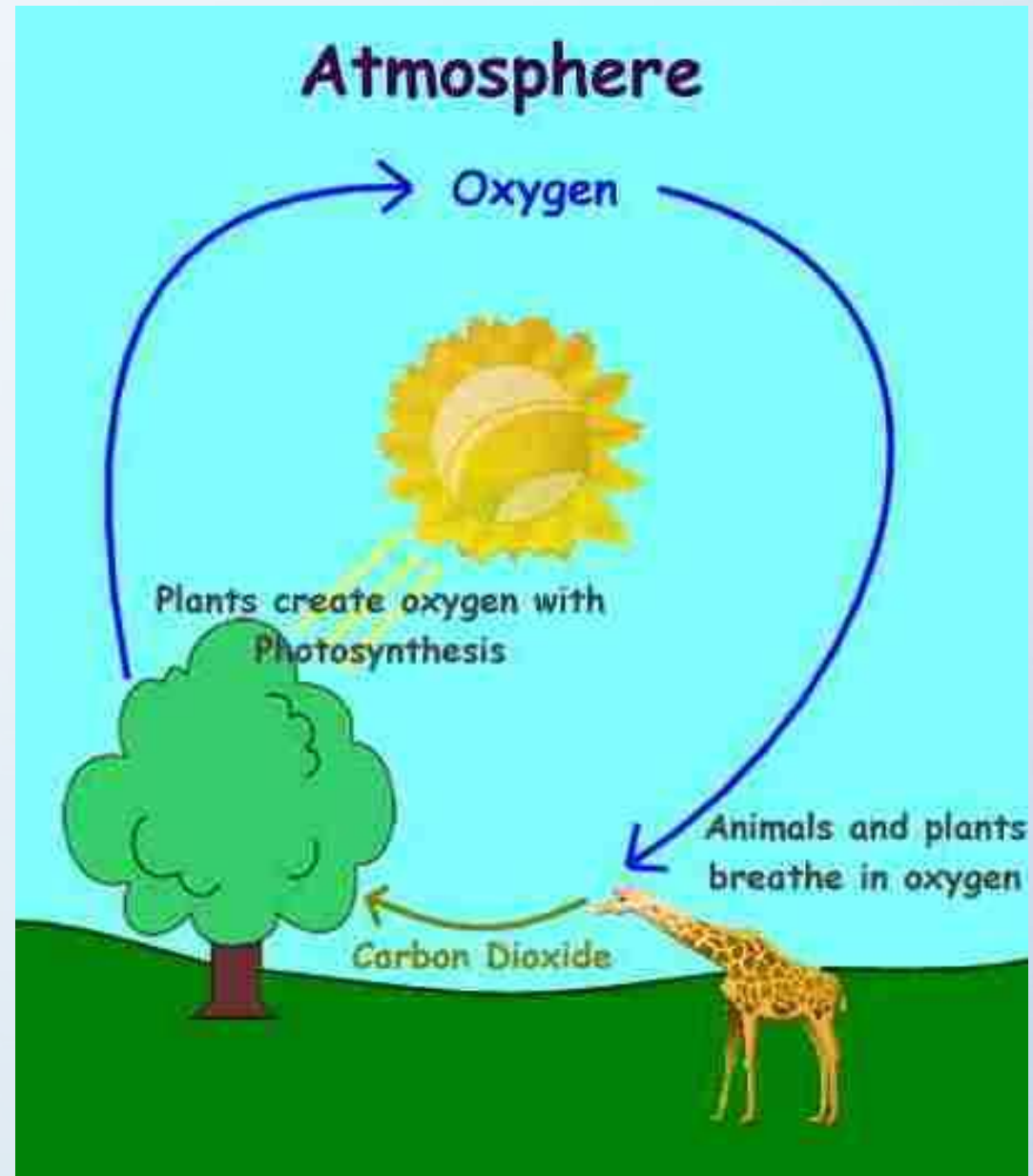
It is a commendable idea for combining height – growing more vertically – and for its small footprint without hogging precious soil which is at a premium in most cities. But sporadic eruptions of skyscrapers do not add to the beauty of the skyline of any city nor does it add any way to the locale topographical charm. The solution seems to be structures that solve housing problem for the populace without spoiling the beauty of the city.



# Ecology

New Way to Make  
Oxygen Doesn't Need  
Plants

One-of-a-kind  
instrument was built to  
split up carbon  
dioxide, using  
ultraviolet light in a  
vacuum. The device  
consists of two lasers —  
one to split the  $\text{CO}_2$ ,  
and one to detect the  
fragments produced.



# Geography

Geography - one of the oldest sciences. Many of its foundations were laid in the Hellenistic era. The object of study of geography - the laws and patterns of distribution and interaction of the components of the geographical environment and their combinations at different levels.

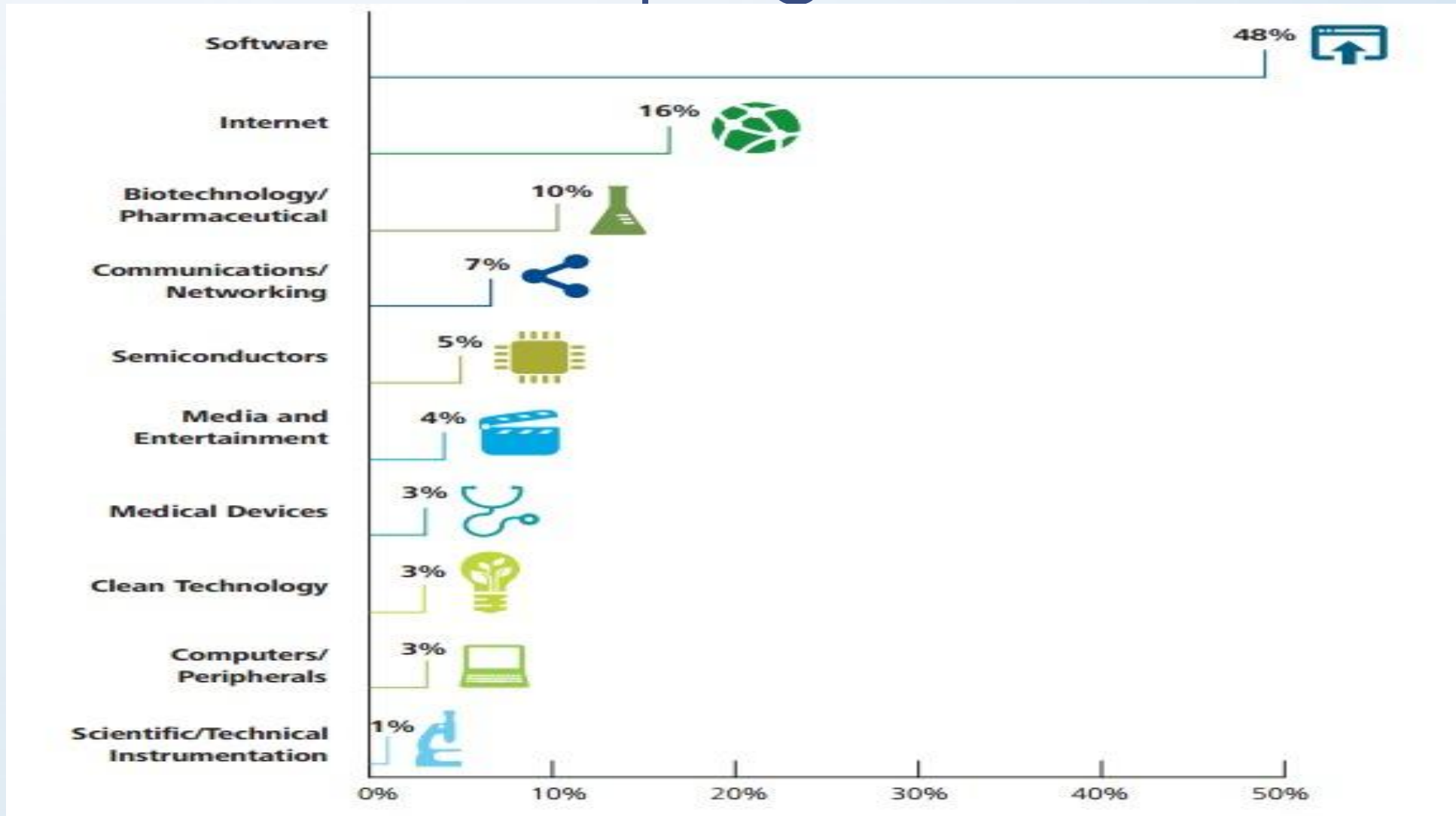




The complexity of the object of study and breadth of the subject area led to the differentiation of a single geography on a number of specialized (branch) of scientific disciplines, forming a system of geographical sciences. In the framework of its allocated natural (physiographic) and public (social and economic) geography. Sometimes separately allocate geographic cartography as a separate geographical discipline.



# The percentage of technological developing in 2014





# The conclusion

Of course, science is - one of the most important forms of the culture of society and its development - the most important factor update all spheres of human activity. Modern science forms the human world, is closely linked to technological progress, helps to create forecasts of development of society and to develop programs to solve the problems facing humanity.

Thank you for  
attention!

