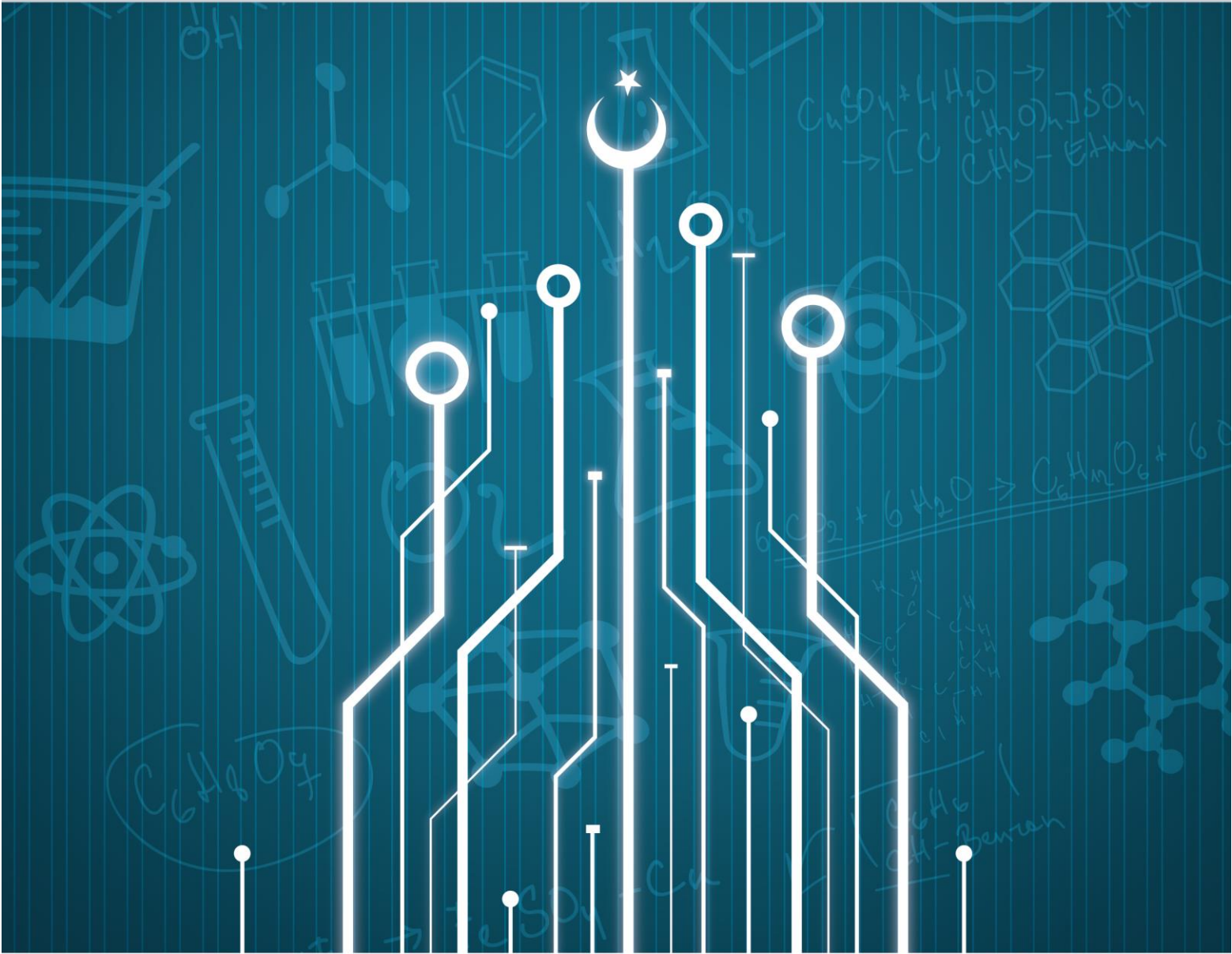




TURKIC WORLD SCIENCE AND TECHNOLOGY QUIRILTAI

“Science and Technology Ecosystem of the Future and Turkic World”





VISION DOCUMENT

TURKIC WORLD SCIENCE AND TECHNOLOGY QUIRILTAI **“Science and Technology Ecosystem of the Future and Turkic World”** **(2023, Istanbul)**

In the 21st century, raising the welfare level of the Turkic world to the standards of developed countries and having a voice in the world depends on the preparation and implementation of an effective R&D strategy. Although there have been certain developments in science and technology in Azerbaijan, Kazakhstan and Türkiye in recent years, our R&D infrastructure is still far behind developed countries.

A very important point needs to be emphasized here. Azerbaijan, Kazakhstan and Turkmenistan (like some other Islamic countries) have significant oil and natural gas deposits. Although it may seem that a certain level of prosperity can be achieved thanks to this, it is not possible to achieve the level of prosperity of developed countries without creating maximum R&D infrastructure. For example, in order to catch up with the European Union average in terms of gross national product (GNP) per capita, Azerbaijan should increase this indicator by at least 20 thousand dollars. In order to achieve this through oil exports (at a price of \$400 per ton), Azerbaijan must produce an additional 500 million tons per year.

There is no doubt that a well-defined and effective "science and technology strategy" lies at the heart of rapid and sustained development. The main reason for the rise of the Anglo-Saxons and the West in general is the breakthrough they have made in the fields of science and therefore technology in recent centuries. While **Japan and South Korea achieved the phase transition in 15 years, it has been 30 years** since the Turkic Republics gained independence...

When the R&D infrastructures of developed countries are analyzed, three main models emerge: The Anglo-Saxon model (the most effective example is the USA), the Continental European model (the most effective example is Germany) and the Far Eastern model (the most effective examples are Japan and South Korea). The characteristic of the last model is that development is achieved in a short time.

Since 2003, the decisions of the High Council for Science and Technology (BTYK) have stipulated that the share of R&D expenditures in GNP in Türkiye should reach 2% in 5 years and 3% in 10 years. Despite these mandatory decisions, Türkiye has still barely reached the minimum level of the 1970s (1%). In other Turkic and Islamic countries, this value is below 1% (in many cases even below 0.5%).

As important as the expenditures allocated to R&D is the effective execution of these expenditures. The common feature of the three models mentioned here is the large-scale "national research laboratory system". There are tens of "national laboratories" in each of the developed countries and thousands of scientists and engineers work in each of these laboratories.



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For example, the US Oak Ridge National Laboratory has a staff of 4,600 (3,000 scientists and engineers), an annual budget of \$1.65 billion, and hosts 3,000 visiting researchers from around the world each year. In addition to the national laboratory system, there are hundreds of medium-sized laboratories in all developed countries. A similar system should be established urgently in the Turkic world.

Science Cities constitute the main axis (Axis Mundi) of the Far East model. The foundation of Tsukuba Science City was laid in 1964 and the Japanese miracle was realized in the 1970s. Since the 1990s, several new science cities have been established in Japan. The foundation of Daedeok Science City was laid in 1973 and the South Korean miracle was realized in the 1980s. In recent years, South Korea has started to build its second science city in Sejong, with a 5-year budget of over 40 billion dollars.

The aim of the studies envisaged to be initiated with the **Turkic World Science and Technology Quriltai** is to provide support for the action plan to bring the R&D infrastructure of the Turkic world to the level of developed countries as soon as possible. In this context, by examining the R&D infrastructures of developed countries, concrete proposals and models will be identified for the rapid development of modern science and high technology in the member countries of the Organization of Turkic States and in the Turkic world in general. Following the Quriltai, it is aimed to maximize the participation and interaction of all parties at every stage of the work to be carried out through scientific activities, strategic reports and publications.

Main Theme

Science and Technology Ecosystem of the Future and Turkic World

Sub-Themes

Priority Research Areas and Sub-Areas

Strategic Technologies and Sub-Technologies

R&D Infrastructures of Developed Countries

R&D Infrastructures of Turkic States

Turkic World R&D Infrastructure Database

R&D Personnel Database

Model Proposal for R&D Infrastructure in the Turkic World

Model Suggestions for R&D Infrastructures of Turkic States

Recommendations for Science and Technology Cooperation in the Turkic World

Recommendations for Science and Technology Cooperation with Developed Countries

Creating a Common Terminology

Science and Technology Education from 7 to 77