

# INTERNATIONAL FORUM AND EXHIBITION ON ATTRACTING OF HIGH TECHNOLOGY AND INNOVATIONS INTO THE ECONOMY OF TURKMENISTAN

September 4 - 6, 2024, Ashgabat, Turkmenistan



Chamber of Commerce and  
Industry of Turkmenistan



**HI-TECH**  
2024 TURKMENISTAN



"Oguzabat"  
Economical society

September 4 - 6, 2024,  
Ashgabat, Turkmenistan





## ORGANIZER



## CO-ORGANIZER



## PARTNERS



## MEDIA PARTNERS



## PARTICIPANTS OF THE FORUM AND EXHIBITION



Ministry of Energy of Turkmenistan



Ministry of Construction and Architecture of Turkmenistan



Ministry of Environmental Protection of Turkmenistan



Ministry of Industry and Construction Materials of Turkmenistan



Ministry of Trade and Foreign Economic Relations of Turkmenistan



Ministry of Health and Medical Industry of Turkmenistan



Ministry of Agriculture of Turkmenistan



Ministry of Education of Turkmenistan



State Committee for Water Resources



Agency of Transport and Communications under the Cabinet of Ministers of Turkmenistan



Agency «Turkmennetworking»



Turkmenbashi complex of oil refineries



State Concern "Turkmenoil"



State concern "Turkmengaz"



State Concern "Turkmenchemistry"



Turkmenbashi International Sea Port



Agency «Turkmenairlines»



CE "Turkmentelecom"



Ashgabat city telephone network



Ashgabat Stock Exchange

# INTERNATIONAL FORUM AND EXHIBITION ON ATTRACTING OF HIGH TECHNOLOGY AND INNOVATIONS INTO THE ECONOMY OF TURKMENISTAN

Taking into account the high dynamics of development of innovative technologies in Turkmenistan and around the world, the intensification of digitalization in all areas of the state structure and life in general, in order to establish and develop business relations with the world's leading companies, manufacturers specializing in the development of high technologies and innovations 4 -September 6, 2024 in Ashgabat International Forum and Exhibition on attracting high technologies and innovations to the economy of Turkmenistan "HI-TECH TURKMENISTAN 2024".

Participation of the Vice-Premiers of Turkmenistan, heads of ministries and departments of Turkmenistan, general directors of state enterprises and international IT companies, huge international financial institutions, representatives of various agencies, associations and unions, research and design institutions, heads of the country's leading specialized universities are planned.

At the upcoming International Forum and Exhibition, the main focus will be on expanding and developing business relations between foreign and Turkmen companies, attracting investment in the implementation of mutually beneficial projects, cooperation in trade, economic and other priority areas.

## MAIN ORGANIZERS OF THE EXHIBITION AND FORUM

- ◆ Chamber of Commerce and Industry of Turkmenistan
- ◆ Economic Society "Oguzabat"

## OBJECTIVES OF THE FORUM AND EXHIBITION:

International Exhibition and Forum to attract high technologies and innovations to the economy of Turkmenistan will stimulate the growth of digital technology, online commerce and will unite professionals in the digital sector, manufacturers of high-tech products and marketplaces. :

### The main goals of the Exhibition and Forum

1. Encouraging Innovation: Stimulating the development and presentation of the latest technologies in various industries to promote innovative thinking and technological progress in Turkmenistan.
2. Creating a platform for the exchange of experience: providing participants with the opportunity to exchange knowledge, experience and best practices in the field of high technologies, which contributes to the development of the professional community.
3. Attracting investments: attracting the attention of investors and potential partners from different countries for cooperation and investment in promising projects and technologies, contributing to the economic growth and development of the country.
4. Support for youth and startups: providing a platform for young entrepreneurs and startups so that they can present their ideas and projects, receive feedback from experts and the opportunity to attract investments or partners.

5. Establishing partnerships: facilitating the establishment of business contacts and partnerships between companies, institutions and organizations, promoting increased cooperation and the exchange of resources.
6. Promotion of digitalization and information technology: encouraging the introduction of digital technologies in various sectors of the economy and public life of Turkmenistan, which helps to increase the efficiency and competitiveness of the country.
7. Education and training: organization of educational events, master classes and conferences to increase the level of knowledge and competencies of participants in the field of high technologies and their application in various fields of activity.

## MAIN CHARACTERISTICS OF THE EXHIBITION AND FORUM:

### SCOPE:

The Forum and Exhibition "HI-TECH TURKMENISTAN 2024" is the first and largest event in the IT field in Turkmenistan, which will attract participants from various countries and regions, as well as representatives of various high-tech industries.

### FINANCIAL STABILITY OF THE COUNTRY:

Turkmenistan ranks the 4th in the world in terms of natural gas reserves (15 trillion cubic meters) and supplies gas to Asian countries. The country is seeking to increase gas exports and production.

Turkmenistan is the largest gas producer in Central Asia (80 billion cubic meters per year) and the main supplier of gas to China (40 billion cubic meters via three pipelines). In 2023, China imported Turkmen gas more than \$9 billion, and in the first quarter of 2024, \$2.4 billion. Negotiations are underway on the construction of a fourth pipeline to increase supplies to 50 billion cubic meters to the southern regions of China.

Turkmen gas is also exported to Russia, Uzbekistan, Azerbaijan and Iran. Work is underway on the Turkmenistan-Afghanistan-Pakistan-India pipeline project for future supplies of 33 billion cubic meters of gas. Construction of this pipeline is nearing completion. These efforts strengthen the country's financial stability.

## MARKET INTERESTS AND DIRECTIONS:

Digital transformation is a priority in Turkmenistan. Concept for the Development of the Digital Economy for 2019-2025 and the State Program for the Development of the Digital Economy for 2021-2025, the National Program for the Socio-Economic Development of Turkmenistan for 2011-2030, the Program of the President of Turkmenistan for the Socio-Economic Development of the Country for 2019-2025 are being implemented. covering digital transformation, renewable energy, agricultural technologies, transport and logistics, building smart cities, sustainable development, industrial technologies.

The pace of digitalization and IT development has accelerated thanks to the efforts of the Government and the President. Young talents and innovations are supported, technology parks are created for the development of IT projects.

Turkmenistan is actively developing digital infrastructure, including telemedicine and electronic services, etc. Foreign specialists are invited to introduce advanced technologies into all institutions of the country.

Work is being systematically carried out to introduce new digital technologies for environmental monitoring and environmental protection; in particular, tenders are being announced among leading foreign and domestic companies specializing in this area.

International cooperation in the environment is an important area of government policy aimed at creating sustainable cities, reducing emissions and effectively managing waste. These measures contribute to the long-term socio-economic development of Turkmenistan.

## YOUR OPPORTUNITIES:

Turkmenistan is actively developing modern infrastructure and technological projects, offering ample opportunities for partnerships and investments

### 1. TRANSPORT AND INFRASTRUCTURE:

- **Metro in Ashgabat:** it is planned to build a modern metro system that will ensure the comfort and safety of passengers.
- **High-speed railway line:** transport links will connect Ashgabat with the Arkadag smart city and accelerate the development of the regions.

### 2. RENEWABLE ENERGY:

- **Combined solar and wind power plant:** construction of a 10 MW plant and several solar power plants throughout the country.
- **Hydrogen energy:** Turkmenistan, having large reserves of natural gas, is actively developing hydrogen production.

### 3. DIGITAL ECONOMY:

- **Electronic government:** implementation of the X-Road information exchange system and creation of a unified information Data Center. \$2.5 million project is fully funded by the state.
- **Digital document flow:** creation of an “e-government” system for interaction between various branches of government (G2G), government and citizens (G2C), government and business (G2B).

#### 4.CONSTRUCTION AND DEVELOPMENT OF CITIES:

- **Ashgabat city:** preparation for the construction of a residential complex with a budget of \$15 billion.
- **Arkadag city:** new smart city with full control of electronic systems. The first stage of construction is worth \$3.4 billion, the second stage is \$1.5 billion.

#### 5.INVESTMENTS:

- In 2024, it is planned to attract \$11 billion in investments. Annual investments amount to 18-19% of GDP, the share of foreign investments reaches 12%.

#### 6. INDUSTRY:

- **Oil refining and chemical industry:** Turkmenbashi and Seydi oil processing complexes, chemical plants, urea production enterprises.
- Construction materials: Cement factories and enterprises “Demirbetononumleri”.
- Textile industry: more than 15 textile and cotton spinning factories, production of medical cotton wool and other textile products.

#### 7. INNOVATION AND AUTOMATION:

- Implementation of automation and control systems (ACS), digital solutions for oil refining, efficient gas transportation and storage systems, hydropower solutions, micro-hydroelectric power stations and other areas indicated in the exhibition sections

Turkmenistan is actively looking for partners to implement these projects in the areas covered in the sections of the exhibition, which creates excellent opportunities for doing business and attracting investors. Important industrial facilities are already operating in the country, and work is underway to increase their production efficiency and competitiveness.

#### POTENTIAL CUSTOMERS:

##### STATE SECTOR:

- Ministry of Agriculture of Turkmenistan
- Ministry of Environmental Protection of Turkmenistan
- Ministry of Energy of Turkmenistan
- Ministry of Construction and Architecture of Turkmenistan,
- Ministry of Health and Medical Industry of Turkmenistan
- Ministry of Trade and Foreign Economic Relations of Turkmenistan
- Ministry of Industry and Construction Materials of Turkmenistan
- Ministry of Education of Turkmenistan
- Agency of Transport and Communications under the Cabinet of Ministers of Turkmenistan



- Agency “Turkmendemiryollary”
- Agency “Turkmenavtoulaglary”
- Agency “Turkmenhowayollary”
- Agency “Turkmendenizderyayollary”
- State Committee for Water Resources
- State service for hydrometrology
- State concern “Turkmengas”
- State concern “Turkmennebit”
- Turkmenbashi oil processing complex
- State concern “Turkmenhimiya”
- Joint venture “Turkmenderman Ajanta Farma Limited”
- Production association “Lukmanchylyk enjamlary”
- Association “Turkmendermansenagat”
- Agro-industrial complex “Buyan” named after S.A. Niyazov
- Seydi oil processing complex
- Baherden, Balkan and Lebap cement plants
- “Demirbetonnumleri” enterprises in Ashgabat and Buzmeyin district
- Turkmenabat chemical plant named after S.A. Niyazov
- “Marykarbamid”, “Garabogazkarbamid” and “Tedzhenkarbamid” Plants
- Iodine plant “Bereket”
- Potassium mining complex
- Kiyanly polymer plant
- In the textile industry - 6 textile complexes, more than 15 textile, cotton spinning, silk-winding, weaving factories, 2 factories for the production of medical cotton wool and others.
- Pharmaceutical company “Tenekar”
- Pharmaceutical enterprise “Saglyk”
- Technology Park of the Academy of Sciences of Turkmenistan
- Telecommunication company “Turkmen Telecom”
- JSC “AGTS”
- JSC “Altyn Asyr”
- JSCB “Halkbank”
- JSCB “Rysgalbank”
- Mayor’s Office of Ashgabat and regions
- Mayor’s Office Arkadag City
- Directorate of Ashgabat city
- All universities of Turkmenistan

#### **INDIVIDUAL SECTOR:**

- Members of the Union of Industrialists and Entrepreneurs of Turkmenistan (over 30,000 companies)
- Members of the Chamber of Commerce and Industry of Turkmenistan (over 400 companies)
- JSC “Mive”
- RS “Ter Onum”
- JSC “Turkmen Avtoban”
- ES “Hazar Logistik”
- ES “Meno Logistics Turkmen”
- Great Silk Road Network



- Individual enterprise “Nusay yollary”
- JSC “Nur Mimar”
- Individual enterprise “Nur bina Gurlushyk”
- Turkmen processing enterprise IE “Jepbar Kompaniyyasy”
- Trading platform “Herekli”
- Trading platform “Inamdar”
- Trading platform “100Haryt”
- Trading platform “Hyper”

Sections of the HI-TECH TURKMENISTAN 2024 exhibition cover the main areas of high technology and the interests of participants. In particular:

#### Information technology and digital transformation

- Development of software and IT services
- Implementation of digital solutions in public administration and business
- Data protection

#### Энергетика и возобновляемые источники энергии

- Инновационные технологии в добыче и переработке нефти и газа
- Проекты в области солнечной, ветровой и гидроэнергетики

#### Ecology and sustainable development

- Technologies for environmental protection and pollution reduction
- Waste recycling and resource saving technologies
- Energy efficient and environmentally friendly technologies

#### Marketplaces

- Platforms and solutions for marketplaces
- Logistics and order fulfillment
- Payment systems

#### Agriculture and agrotechnology

- Modern methods of agricultural management production
- Automation and mechanization of agricultural processes
- Smart irrigation and farming systems

#### Industrial technology

- Smart integration systems (IoT)
- Automation and robotization
- Management and data analysis systems

#### Transport and logistic

- Development of transport infrastructure
- Logistics technologies and solutions to improve transport
- Electric transport and its infrastructure

#### Educational technologies

- Distance learning (e-learning)
- New technologies in the field of education
- Personnel training in the era of Artificial Intelligence

## Smart city and construction

- Smart city technologies
- Innovative building materials and new methods in construction
- Energy efficient and environmentally friendly buildings

## Medicine and biotechnology

- New diagnostic and treatment methods
- Technologies of telemedicine and remote health care

## Financial technology

- Electronic payment systems
- Banking and financial services

## Water saving technologies

- Modern water-saving technologies in industry
- Water saving technologies in agriculture
- Water-saving technologies in everyday life and urban management

## 1. Information technology and digital transformation

### 1.1. Development of software and IT services

- Software solutions for business and government agencies.
- Introduction of cloud technologies.
- Development of mobile applications and web services.

### 1.2. Implementation of digital solutions in public administration and business

- Automation of document flow.
- Electronic government (e-Government) and services for citizens.
- Digital economy and trade.

### 1.3. Data protection

- Solutions for protecting information systems from cyber-attacks.
- Encryption and secure data storage technologies.
- Monitoring and management of information security risks.

## 2. Energy and renewable energy sources

### 2.1. Innovative technologies in oil and gas production and processing

- New methods of hydrocarbon production.
- Technologies for improving oil refining.
- Efficient gas transportation and storage systems.

### 2.2. Solar, wind and hydropower projects

- Solar panels and photovoltaic systems.
- Wind power plants and farms.
- Hydropower solutions and micro-hydroelectric power plants.

### 3. Agriculture and agrotechnology

#### 3.1. Modern methods of agricultural production management

- Automation and mechanization of agricultural processes.
- Farm management software.
- Yield monitoring and analysis systems.

#### 3.2. Smart irrigation and farming systems

- Drip irrigation systems.
- Precision farming technologies.
- Automatic moisture and nutrient control systems.

### 4. Transport and logistic

#### 4.1. Development of transport infrastructure

- Construction of new roads and bridges.
- Development of the railway network.
- Improvement of port infrastructure.

#### 4.2. Logistics technologies and solutions to improve transport services

- Supply chain management systems.
- Real-time cargo tracking technologies.
- Innovations in warehouse logistics.

#### 4.3. Electric transport and its infrastructure

- Development of a network of charging stations for electric vehicles.
- Introduction of electric buses and other types of public electric transport.
- Battery and energy storage technologies.

### 5. Smart city and construction

#### 5.1. Smart city technologies

- Intelligent city management systems.
- Smart networks and infrastructure.
- Traffic and public transport management systems.

#### 5.2. Innovative building materials and new construction methods

- Eco-materials and energy saving technologies.
- New construction methods such as 3D printing of buildings.
- Use of robotics and automation in construction.

#### 5.3. Energy efficient and environmentally friendly buildings

- Buildings with zero energy consumption.
- Passive house technologies.
- Climate and lighting control systems.

## 6. Medicine and biotechnology

### 6.1. New diagnostic and treatment methods

- Personalized medicine.
- Technologies of molecular and genetic diagnostics.
- New methods of therapy and pharmaceutical developments.

### 6.2. Technologies of telemedicine and remote healthcare

- Platforms for remote consultations.
- Remote health monitoring systems.
- Virtual reality technologies for rehabilitation.

## 7. Ecology and sustainable development

### 7.1. Projects to protect the environment and reduce pollution

- Air and water purification systems.
- Technologies for processing industrial waste.
- Programs for the protection of natural resources.

### 7.2. Waste recycling and resource saving technologies

- Solutions for recycling plastics and other materials
- Disposal and recycling of electronic waste
- Development of biodegradable materials

### 7.3. Energy efficient and environmentally friendly technologies

- Technologies to reduce carbon footprint.
- Development and implementation of environmentally friendly production processes.
- Projects to improve the energy efficiency of industrial enterprises.

## 8. Marketplaces

### 8.1. Platforms and solutions for marketplaces:

- Demonstration of popular platforms
- Local and regional marketplaces.
- Solutions for creating and managing marketplaces

### 8.2. Logistics and order fulfillment:

- Warehouse management systems (WMS).
- Logistics companies offering storage, packaging and delivery services
- Technologies for tracking and supply chain management.

### 8.3. Payment systems and fintech:

- Integration of various payment methods (credit cards, electronic wallets).
- Solutions for fraud protection and secure transactions.
- Financial technologies that support the operation of marketplaces.



## 9. Industrial technology

### 9.1. Smart systems (IoT)

- Demonstration of smart sensors, devices and systems that provide real-time data collection and analysis to improve the efficiency of production processes.
- Cyber-physical systems (CPS): Integration of physical processes with computer systems to improve production control and automation.

### 9.2. Automation and robotization:

- Industrial robots: Robots for assembly lines, welding, packaging and other production tasks.
- Automated control systems (ACS): Modern systems for managing production processes, including SCADA and MES.
- Industrial 3D printing: Equipment and materials for the additive production of complex parts and prototypes.

### 9.3. Management and data analysis systems:

- Big Data and Analytics: Tools for collecting, storing and analyzing large volumes of data to make informed decisions.
- Artificial intelligence and machine learning: Application of AI and ML to optimize production processes and predict equipment breakdowns.

## 10. Educational technologies

### 1. Distance learning (e-learning):

- Platforms for online courses and distance learning.
- Virtual classrooms and learning management systems (LMS).

### 2. New technologies in the field of training:

- Educational programs and simulators based on AR/VR.
- Examples of using AR/VR for practical exercises and trainings.

### 3. Personnel training in the era of Artificial Intelligence

- Robotics, programming and engineering for schoolchildren and students.
- Science and technology labs and hands-on kits.

## 11. Financial technology

### 1. Electronic payment systems:

- Payment gateways and processors for online transactions.
- Electronic wallets and mobile payments.

### 2. Banking and financial services:

- Digital banks and neo-banks.
- Platforms for financial management (PFM).

## 12. Water saving technologies

### 1. Modern water-saving technologies in industry:

- Models and diagrams of closed water cycles in industrial enterprises.
- Working samples of filters and membrane technologies for wastewater treatment.
- Video presentations and case studies of the successful implementation of water-saving technologies at manufacturing enterprises.

### 2. Water-saving technologies in agriculture:

- Working models and demonstration videos showing the effectiveness and efficiency of drip irrigation.
- Examples of sensors and monitoring systems that help optimize irrigation and reduce water consumption.
- Information stands and models demonstrating methods for improving soil water-holding capacity using agroforestry.

### 3. Water-saving technologies in everyday life and urban management:

- Samples of water-saving faucets, shower heads and low-flow toilets.
- Examples of rainwater collection and storage systems for domestic and gardening use.
- Demonstration of software and devices for monitoring and managing water supply in cities, including mobile applications and smart water meters

## Participants diversity

Exhibition and forum will attract both large international corporations and small start-ups, academic institutions, innovation centers, government organizations and other interested parties.

## Technology exposition

Exhibition will present the latest achievements in the field of information technology, industrial technology, energy, mechanical engineering, transport, medicine, agriculture and other sectors.

## Conferences and panel discussions

Forum includes a series of conferences, seminars and panel discussions, which will discuss key topics, challenges and opportunities in the field of high technology and innovation.

## Demonstrations and presentations

Participants will present their products, projects and ideas through demonstrations, presentations and practical master classes to attract the attention and interest of potential investors and partners.

## Networking

Event will be an excellent platform for establishing new business contacts, concluding partnership agreements and conducting negotiations between participants.

## Educational events

Within the framework of the forum, educational courses, trainings and master classes will be organized to improve the skills of specialists and support young talents.

## Innovative atmosphere

Overall, the exhibition and forum will create a stimulating and inspiring atmosphere for the development and promotion of innovation in Turkmenistan and beyond.

## EVENTS PROGRAM: (PRELIMINARY)

### Day 1: Ceremonial opening:

- ◆ Ceremonial opening of the International Forum and Exhibition on attracting high technologies and innovations to the economy of Turkmenistan (Participants: Deputy Chairmen of the Cabinet of Ministers of Turkmenistan, heads of ministries and departments, heads of public and private enterprises, others)
- ◆ Gala dinner

### Day 2: Continuation of the exhibition and forum:

- ◆ Presentations at the exhibition
- ◆ Programming discussion panels
- ◆ Business Seminars
- ◆ Bilateral meetings
- ◆ Presentation of Startup projects

### Day 3: Closing of the exhibition:

- ◆ Summing up the results of the Hackathon International competition
- ◆ Selecting the best Startup projects
- ◆ Ceremonial presentation of diplomas
- ◆ Signing of documents

Примечание: Расписание может быть подвержено изменениям.



## EVENTS FOR VISITORS

Variety of activities will be organized to ensure an interesting and productive experience for visitors to the Hi-tech Turkmenistan 2024 Exhibition and Forum:

Technology Demonstrations

Interactive zones

Master classes

Seminars

Robot competition

Information stands and resources

### STATEMENT

Hi-tech Turkmenistan 2024 will highlight the importance of innovation in various sectors of the economy, including information technology, energy, medicine and others.

Exhibition and forum will provide a platform for exchanging experiences, concluding partnership agreements and presenting advanced technological solutions. Participants of the event will be able to discuss the prospects for digitalization of the economy, the introduction of artificial intelligence and the role of new technologies in achieving the strategic goals of Turkmenistan.

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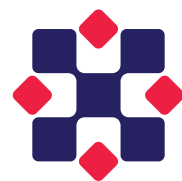
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