



المجلس الوطني للتطوير الاقتصادي و الاجتماعي

National Economic & Social Development Board

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Executive Summary

Technology Oasis Project



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➤ Overview:

Science and technology parks are effective means of stimulating the culture of innovation and developing knowledge-based entrepreneurship, as they provide a distinct ecosystem that attracts talents, investors and leading companies to create partnerships, in which efforts are combined and capabilities are integrated to contribute to enhancing the role of "Knowledge economy" in diversifying national income.

In addition to the distinguished infrastructure, science and technology parks require sound management, stimulating regulations and laws, and a comfortable work environment in which the best services and facilities are available to meet the needs of companies, employees, students and workers.

The economic benefits of technology parks extend to include accompanying services such as shopping malls, cafes, restaurants, gyms, childcare centers and accommodation facilities, all of which lead to improving job opportunities and developing the surrounding areas.

The idea of studying a project to establish science and technology parks in Libya came from the desire of the National Economic and Social Development Board to prepare a national strategy to enhance economic and social development by innovating new activities to diversify the Libyan economy by investing in the knowledge-based economy.

This document presents a national strategy for establishing technology parks in Libya based on three main pillars: Education, Entrepreneurship and Economy, symbolized by the "EEE" strategy.



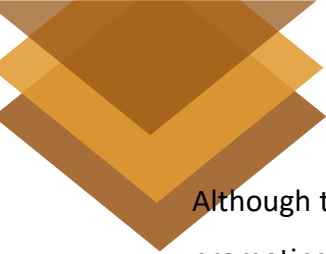
Introduction:

Techno parks are areas dedicated to developing and promoting technology-based products and services by providing infrastructure, facilities and services that support innovation and entrepreneurship.

The concept of technology parks emerged in the 1960s when some universities and research institutes in the United States of America began to establish partnerships with private companies to enhance cooperation and transfer technology.

The first technology park was officially established in 1969 at Stanford University, which later became to be known as the Silicon Valley. Since then, technology parks have spread around the world, especially in Asia, where countries such as Japan, South Korea, China, India and Singapore have invested heavily in establishing technology parks to enhance their economic growth and competitiveness. Tech parks have been credited with generating good jobs, increasing income and exports, encouraging patents and startups, and promoting regional development and social welfare. The concept of tech parks has evolved over time to adapt to the changing needs and challenges of the global economy. In the 1980s and 1990s, tech parks focused on establishing strong links with universities, industry and governments to promote and facilitate technology transfer and commercialization. They also focused on stimulating regional development and competitiveness by attracting foreign investment and creating more jobs. Some examples of tech parks from this period are Hsinchu Science Park in Taiwan, Tsukuba Science City in Japan, and Cambridge Science Park in the United Kingdom. Over the past three decades, technology parks have become more diverse and complex due to the emergence of new technologies and sectors, such as biotechnology, nanotechnology, renewable energy, and artificial intelligence, with digital technologies increasingly integrated into all areas of life, which in turn has led to the expansion of the scope and functions of technology parks to include incubators, entrepreneurship, education, social innovation, and sustainability. With this continuous and increasing expansion, technology parks or oasis have become platforms for fostering creativity, communication, learning, and problem solving among various stakeholders.

Some examples of technology parks in this era are the Skolkovo Innovation Center in Russia, Cyberport in Hong Kong, and Silicon Valley in the United States.



Although technology parks have played an important role in advancing science and technology, promoting innovation and entrepreneurship, and enhancing economic and social development, they still face various challenges and constraints, such as governance issues, funding constraints, cultural barriers, environmental impacts, and ethical dilemmas. As technology clusters continue to develop and adapt to the changing world, these challenges must be addressed and accumulated experience must be leveraged to create added value for communities and countries.

➤ Project Objectives:

- Laying the foundation for a knowledge-based national economy by building joint projects between technical and academic universities, research centers, and the private sector.
- Supporting startups and small and medium-sized enterprise owners (entrepreneurs).
- Enhancing cooperation between the public and private sectors.
- Encouraging research and development in universities and research centers.
- Creating an appropriate climate to attract international companies and research organizations.
- Creating a new digital market by expanding various applications.
- Contributing to providing job opportunities outside the public sector.

➤ Project Partners:

- Ministry of Higher Education
- Atomic Energy Corporation
- National experts.

➤ Outputs:

Preparing strategies for establishing technology oases.

Mechanism of Project Action:

A working team was formed by Resolution No. 24 of 2022, headed by Dr. Mustafa Ghaith Abu Shaqour, and the membership of /

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1. Dr. Saleh Khalifa Al-Ghoul Undersecretary of the Ministry of Higher Education for Scientific Research
 2. Dr. Wajdi Muhammad Al-Rutimi ... Chairman of the Board of Directors of the Libyan Atomic Energy Corporation
 3. Dr. Al-Haramain Muhammad Al-Haramain Expert
 4. Eng. Muhammad Ahmad Al-Aswad Expert
 5. Dr. Ahmed Khalifa Al-Maqrmad Expert
 6. Dr. Mohamed Idris Mahmoud Tarina Expert
 7. Dr. Mustafa Ghaith Abu Shaqour Expert
 8. Dr. Abdul Hamid Al Sharif Expert
 9. Eng. Abdul Razzaq Omar Al Tabib .. Director of Institutional Development and Capacity Building Department at the NESD Board.

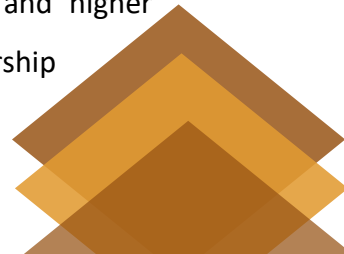
The team held seventeen meetings, and relied, during its work on the project, on establishing three strategies that would be the main component of the comprehensive strategy known as (EEE) Education /Entrepreneurship / Economy. By studying the current status of the three areas; Higher education, Entrepreneurship and encouraging the talented, and the State economy, the team reached to specifying the following main points:

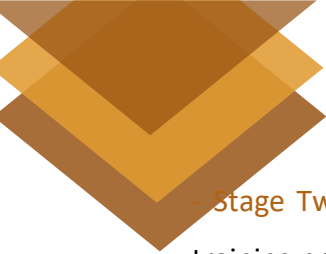
- The inefficiency of current higher education to keep pace with what the project requires from the elite youth.
- The absence of a private or public entity that adopts the pioneers and the talented in Libya.
- An economy based on resources not on knowledge.

➤ Project Outputs:

Developing an (EEE) strategy based on the basic rules, consisting of the following:

((Education Strategy))

- It aims to: Establish a modern independent university on the model of prestigious American universities. It consists of the following stages:
 - Stage One: Establishing a rehabilitation center for graduates of universities and higher institutes in the fields of information technology, business administration and leadership
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- **Stage Two:** Cooperating with some foreign universities to localize some of their specialized training programs (certifications) as well as part of their graduate studies courses.
 - **Stage Three:** Establishing a university specialized in limited fields in partnership with universities that have experience in transforming knowledge into economy.
 - **Stage Four:** Establishing a comprehensive university with the goal of being ranked among the top 100 universities in the world.

((Entrepreneurship Strategy))

Long-term goal: Establish a group of global companies in the fields of advanced technology and services.

- **First Stage:**

Establishing a business incubator that provides the necessary capabilities for training and providing the means to stimulate creative ideas for young people and transfer ideas into products.

- **Second Stage:**

Providing technical and material support to establish a group of small companies in the fields of information technology and services that will be the nucleus of companies that provide services to international companies.

- **Third Stage:**

Providing technical and material support to establish a group of medium-sized companies.

- **Fourth Stage:**

Supporting and establishing companies that compete in the global market.

((Economic Strategy))

- **Long-term goal:** Establish free economic development zones capable of attracting national and foreign companies and expertise to build a knowledge-based economy.

- **First Stage:**

Develop a plan to benefit from the Free Zones Law and the Alternative Cities Law. As well as studying and adopting the structures and laws of distinguished economic development zones in the world.

-Second Stage:

Cooperate with legislative councils and executive bodies to issue laws and regulations that establish these zones.

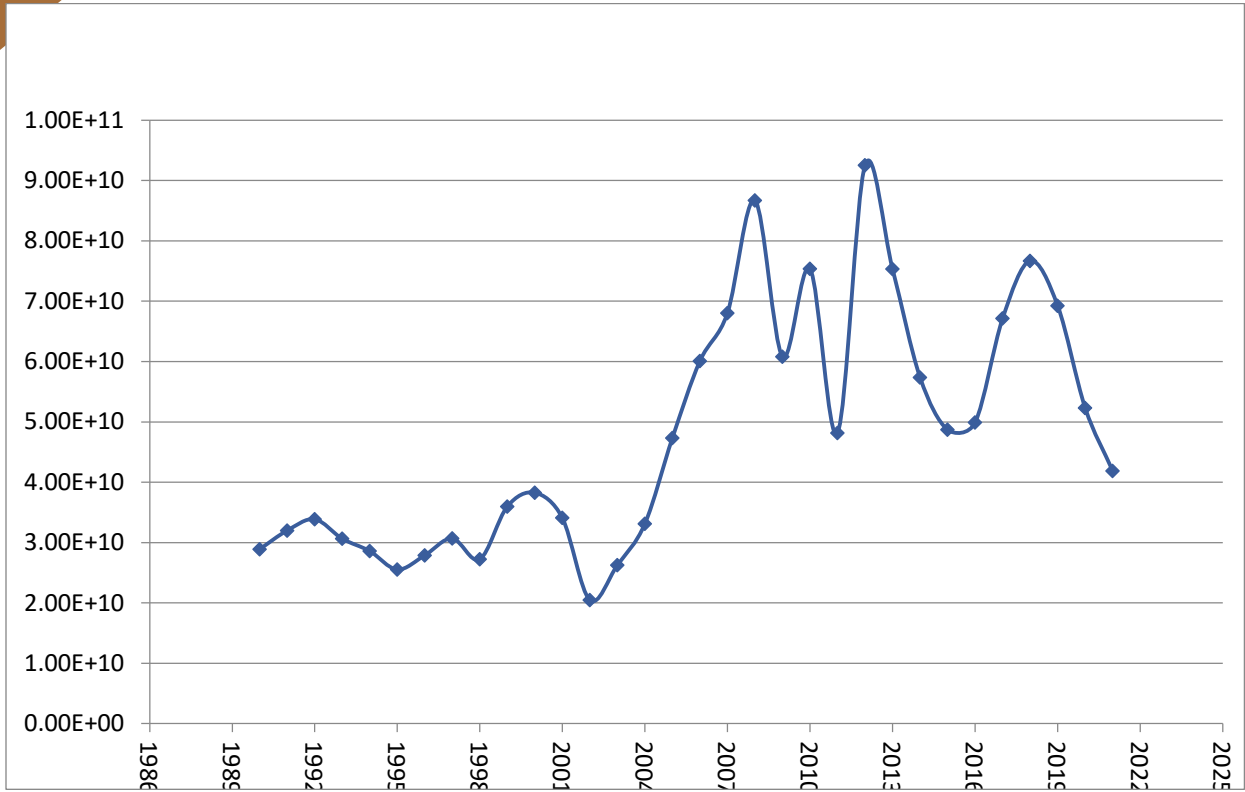
The team held regular meetings during the period from the end of January, the date of the first team meeting (26/01/2022) until the end of October (31/10/2022), Then the team paused its direct communication due to the health conditions of the team leader. At the end of March 2023, the team resumed its activity and a team was formed to review the comprehensive strategy for establishing technology oasis. The strategy was approved at the seventeenth and final meeting and referred to senior management in order to set a date for a workshop to discuss the strategy with stakeholders.

➤ The most important data / statistics:

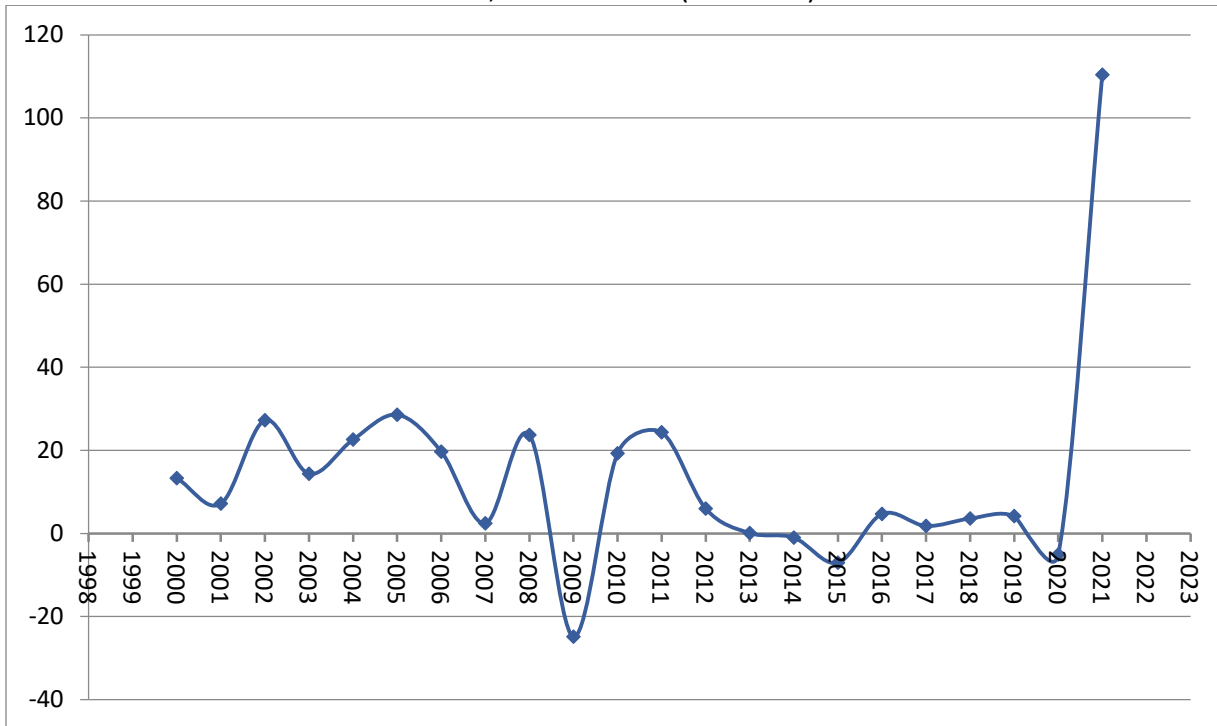
Job seekers statistics in June 2020 (Ministry of Labor and Rehabilitation report)



GDP (current in US Dollar)



Inflation, GDP deflator (annual %)





➤ **Recommendations:**

1. The National Economic and Social Development Board supervises the establishment of the park.
2. The partnership will be between the private and public sectors at a rate of 80% to 20% respectively.
3. applying The laws for encouraging investment and special zones to the park.
4. Providing the opportunity for endowment (Awqaf) investment.
5. The park should be supervised by a Board of Trustees of prominent national and international figures.
6. The park should have an Advisory Committee of academic figures and businessmen.