Arab Republics of Egypt

Ministry of Scientific Research

Towards Policy & Strategy of IP and Innovation in Universities & Public Research & Development for Technology Transfer to Industrial Sectors

Development Industry/
Agriculture / services

Research And Technology

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Technical office of ASRT and TICO offices

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Science & Technology (ST)

Is the knowledge generator throw R&D affected by:

1. **Qualified Human resources**
2. **Laboratories**
3. **Technologies**
4. **Legislations**
5. **Financing**

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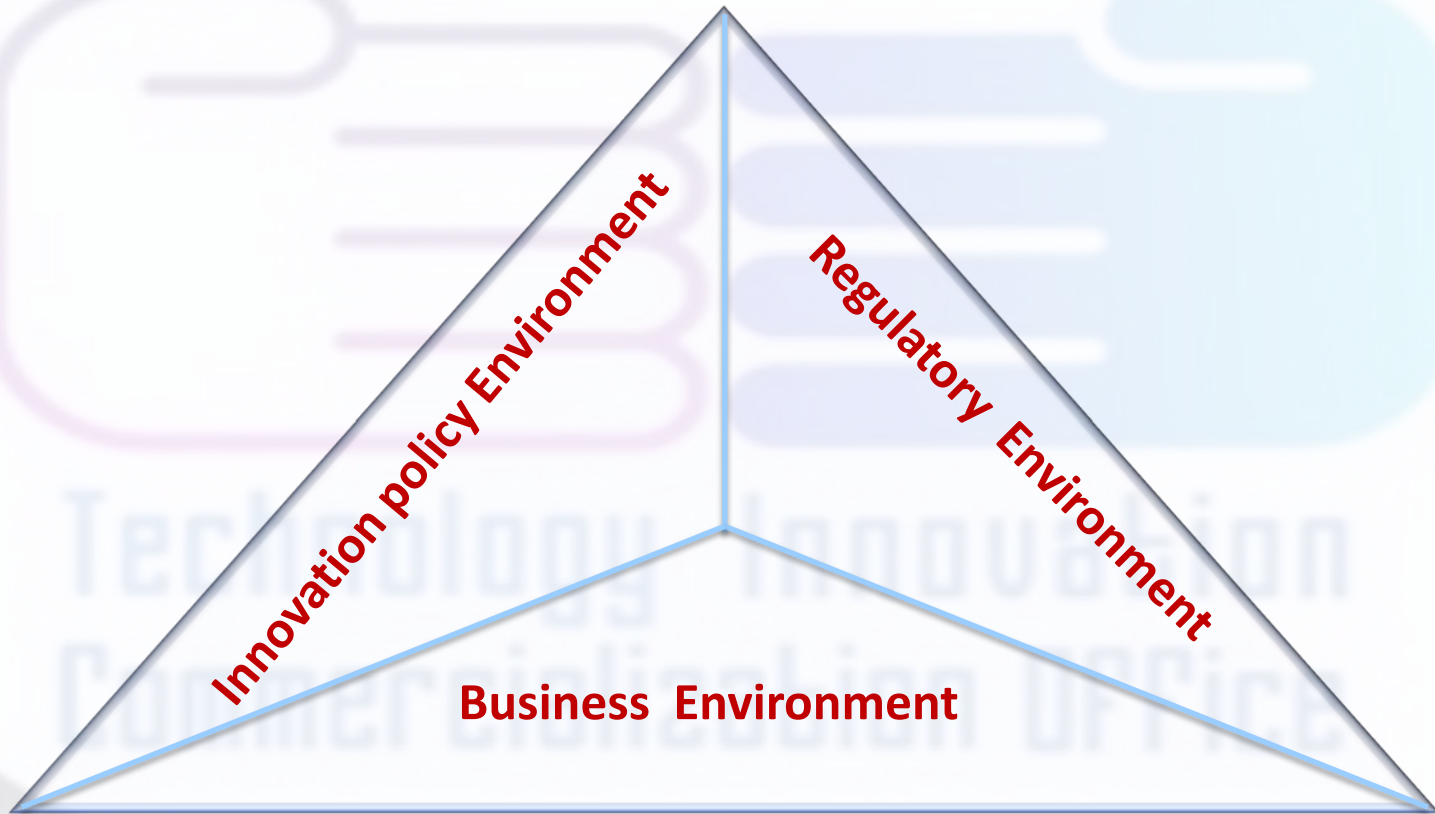Academy of Scientific Research and Technology

Science, Technology and Innovation (STI)

The network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and develop new technologies as well as commercialization throw ST substrates besides All economic, political, social institutions (nation's financial system, organization of private firms, pre university and university education, Vocational education, labor market, regulatory polices …..etc.)

Innovation success triangle

Innovation policy Environment

Regulatory Environment

Business Environment

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Business Environment

- **Marketing firm structure**
  1. Management talent
  2. Time horizon and risk appetite of firms
  3. ICT adoption
- **Business financing system**
  1. Venture and risk capital
  2. Firm finance (debt and equity)
- **Culture factors**
  1. Nature of customer demand
  2. Risk taking and entrepreneur ship
  3. Attitude towards science and technology
  4. Collaborative culture
  5. Time horizon and willingness to invest in the future
  6. Trade, tax and regulatory environment

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Regulatory Environment

- **Industry structure and the nature of Competitiveness Regulatory system for entrepreneurship**

- **Role and form of regulation**

- **Transparency and rule of law**

- **Tax, trade and economy policy:**
  1. **Macroeconomic environment**
  2. **Tax policy**
  3. **Trade policy**
  4. **Intellectual property**
  5. **Standards**

Innovation policy Environment

- **Support for research in universities, research centers, labs and institutions**
- **Technology transfer systems**
- **Technology commercialization**
- **System of knowledge flows:**
  1. **Innovation clusters**
  2. **Industry collaboration system (with academia and research institute)**
  3. **Acquiring foreign technology and exporting developed technology**
  4. **Technology adoption and diffusion**
- **Human capital system**
  1. **education / training**
  2. **Higher education**
  3. **Skill / technical training**
  4. **Immigration policy**

Nations compete to win the global innovation race for economical development. The nations that can put together all three sides of the innovation success triangle most effectively is likely to be the nation that wins the race and reaps the rewards in grater economic vitality and prosperity.

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Intellectual Property Strategy

1. Creation of Intellectual Property

2. Protection of Intellectual Property

3. Exploitation of Intellectual Property

4. Developing Human Resources and Improving Public Awareness

1.Creation of Intellectual Property

- Promoting Integration and Collaboration between University Intellectual Property Offices and TLOs

- Expanding the Scope of Availability of Patent Fee Reduction

- Supporting International Patent Filing

- Developing the Integrated Search System for Patent and Literature Information

- Promoting Industry-Academia-Government Collaboration on a Global Scale

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2. Protection of Intellectual Property

I. Strengthening the Protection of Intellectual Property

- Promoting the Initiatives under the Lead of the Headquarters for Expeditious and Efficient Patent Examination

- Improving Access to Industrial Property Information via the Intellectual Property Digital Library

- Promoting Foreign Patent Applications

- Developing an Environment That Prevents Leakage of Technology through Patent Applications

- Promoting the Initiatives under the Lead of the Intellectual Property Policy Headquarters of the Ministry of Agriculture, Forestry and Fisheries

- Aiming to Achieve the Mutual Recognition of Patents among the Trilateral Patent Offices

- Contributing to the Establishment of International Rules with Due Consideration to International Public Policies

II. Strengthening Measures Against Counterfeits and Pirated Copies

3. Exploitation of Intellectual Property

I.   **Strategically Exploiting Intellectual Property**

II. **Supporting International Standardization Activities**

III. **Supporting SMEs and Venture Companies**

IV. **Developing Local Areas with the Use of Intellectual Property**

4. Developing Human Resources and Improving Public Awareness

- Implementing the Comprehensive Strategy for Fostering Intellectual Property Experts

- Supporting the Council for Promoting the Development of Intellectual Property Experts

- Developing International Intellectual Property Experts

- Strengthening Activities for Increasing Public Awareness of Intellectual Property

5- National policy on IP and university – industry TT .

6- University Policy on IP TT .

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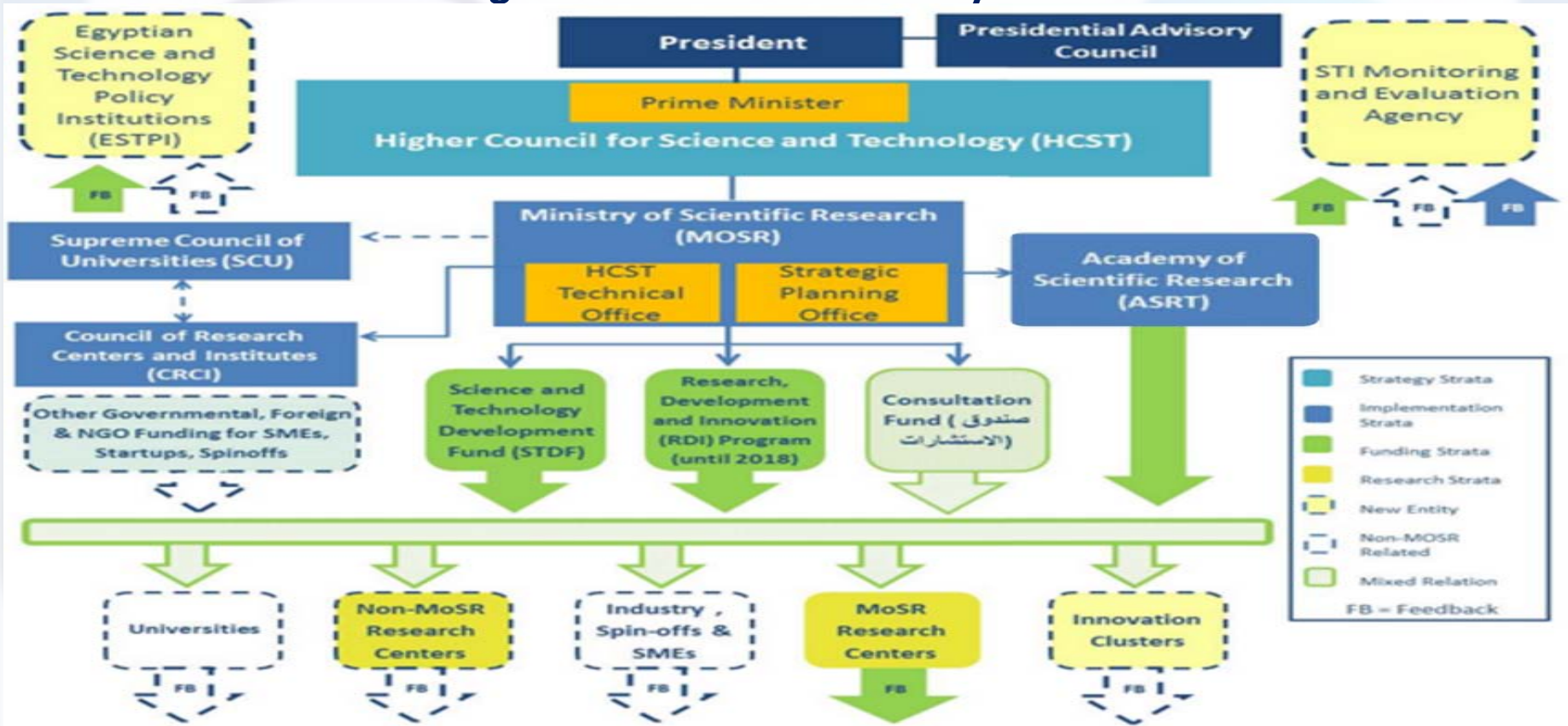Academy of Scientific Research and Technology

The Egyptian Experience

Industrial setup and practical aspects for TTO from Universities to Industry

1. Organization of innovation system

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2. Establishing national network of Technology Innovation commercialization offices (TICO)

- **To activate the role of scientific research, and connect it with industry, agricultural& services in a relationship based on trust for the purpose of finding solutions for problems and issues related to the demands (Demand& Delivery).**

- **To support innovation and technology in the areas having priority, according to the national vision, down to entrepreneurship by developing the business for existing firms. (Spin off),and establish small and medium projects.**

- **All of that were the main motives behind the initiative of the Academy of Scientific Research and Technology (ASRT) to create a network consists of specialized offices aiming to support innovation, technology transfer and commercialization (TICO) in industry, agriculture & services communities . This network includes:**

  - **Technology Transfer Office, TTO**

  - **Grant and International Cooperation Office , GICO**

  - **Technology Innovation Support Center , TISC**

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1. Activate and support the role of universities, research centers, research and developing centers at the industrial ,,agricultural & services communities affiliated to the government and private sector, and centers of excellence for the purpose of solving the problems facing such communities and developing technology.

2. Achieve the scientific management of these offices. This management should work on adapting and transferring the results of researches , studies , innovations , and inventions to the execution bodies, nearby at first , then across the country through the network that connecting different offices via the Academy of Scientific Research and Technology.

3. **Support the (industry, agricultural & services) effectively in order to build trust and reach to the active partnerships with the scientific research through mutual interaction , which can happen by adopting and publishing success stories.**

4. **Promote successful examples in the field of scientific research to take advantage from them.**

5. **Coordination , follow-up, and continuous evaluation through the head office of TICO.**

6. **33 offices where established since 2013**
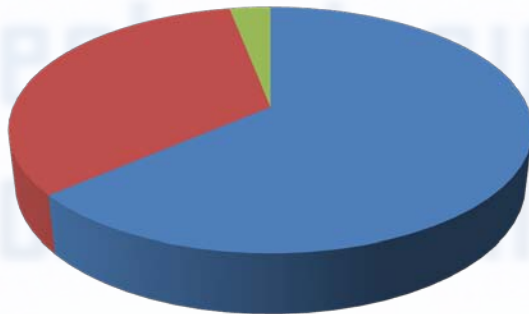
■ 21 in Universities

■ 11 in Research Centers and Institutions

■ 1 in technological centers in the Ministry of Industry

▪ **The main website is http://www.asrt.sci.eg/index.php/key-departments/iida/tico**

Linking with the websites of the 33 offices.

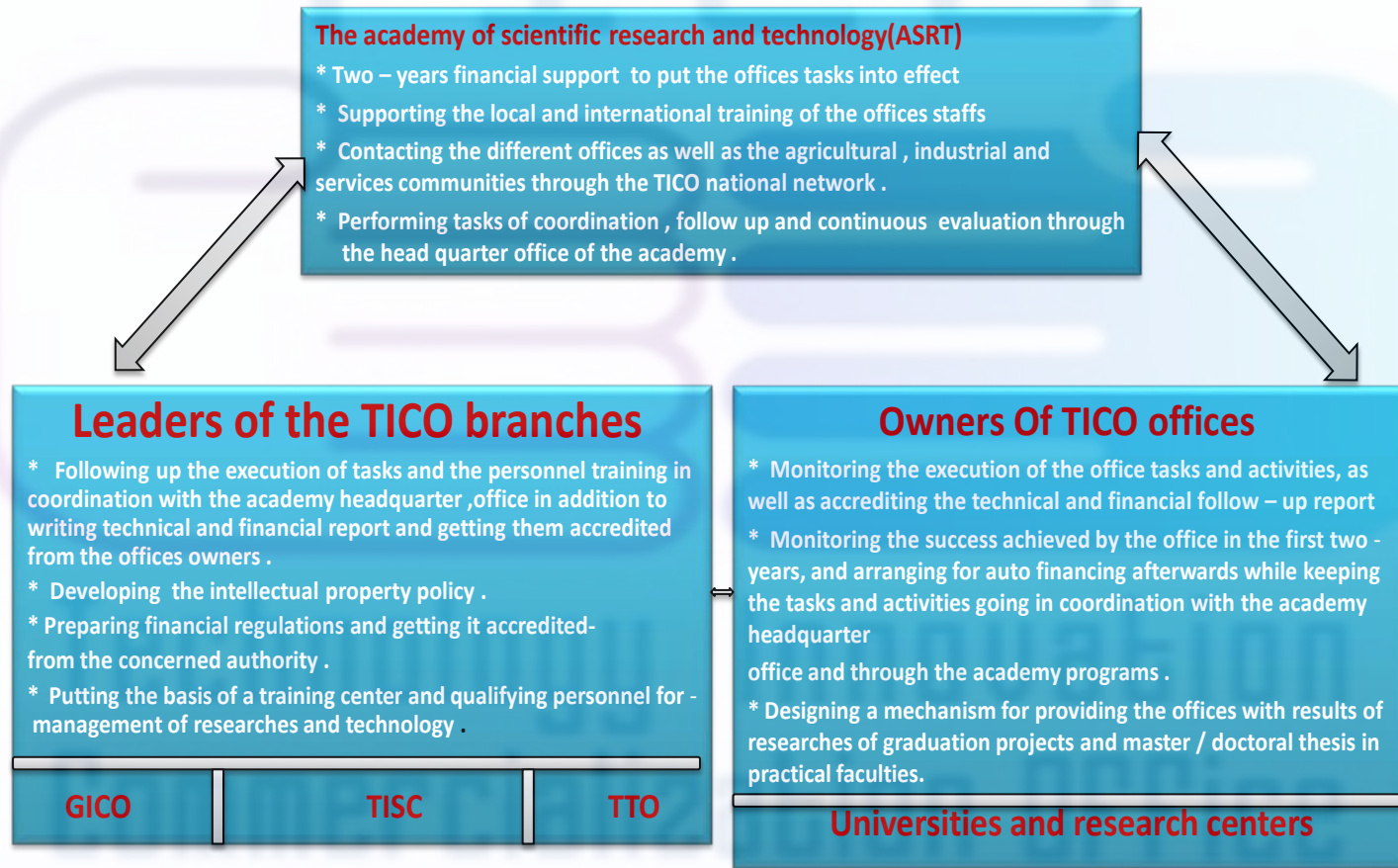أكاديمية البحث العلمي والتكنولوجيا
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Management of The Program Of Technology Innovation Commercialization Offices (TICO)

Partners Of TICO Program and Their Main Tasks

The academy of scientific research and technology(ASRT)

* Two – years financial support to put the offices tasks into effect

* Supporting the local and international training of the offices staffs

* Contacting the different offices as well as the agricultural , industrial and services communities through the TICO national network .

* Performing tasks of coordination , follow up and continuous evaluation through the head quarter office of the academy .

Leaders of the TICO branches

* Following up the execution of tasks and the personnel training in coordination with the academy headquarter ,office in addition to writing technical and financial report and getting them accredited from the offices owners .

* Developing the intellectual property policy .

* Preparing financial regulations and getting it accredited-
from the concerned authority .

* Putting the basis of a training center and qualifying personnel for -
 management of researches and technology .

| GICO | TISC | TTO |

Owners Of TICO offices

* Monitoring the execution of the office tasks and activities, as well as accrediting the technical and financial follow – up report

* Monitoring the success achieved by the office in the first two - years, and arranging for auto financing afterwards while keeping the tasks and activities going in coordination with the academy headquarter

office and through the academy programs .

* Designing a mechanism for providing the offices with results of researches of graduation projects and master / doctoral thesis in practical faculties.

Universities and research centers

Role of TICO Headquarter Office

Role of TICO Branch Offices

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3. Programs supported by ASRT for innovation

- Initiatives for solving challenges
- Technological incubators (ENTLAK)
- Research and industry alliances
- JESOR DEVELOMENT
- Support graduation projects in engineering, science, Pharmacy, medicine and agriculture colleges
- Scientists for Next Generation (SNG)
- Research grants for MSC and PHD degree
- Cairo innovate:
  - Cairo International Exhibition for innovation in November each year
  - Cairo innovate TV program
  - Participation in international innovation exhibitions to market the Egyptian innovation technologies

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The Egyptian Experience

4. The Outputs of Technology Innovation Commercialization Offices TICOs

- 524 Registered Patents
- 50 Issued Patents
- 72 New Technological Ideas
- 81 Prototypes
- 44 industrial models
- Marketing 33 products
- 24 spin-offs and starting companies
- 2 Projects to transfer technology to Zambia and Yemen
- 9 Projects to transfer technology to Industrial Entities in Egypt

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The Egyptian Experience

5. Future vision

- Review all laws and policies that directly and indirectly affect the innovation in universities, research centers, government and private innovation singles
- Linking promotions in universities by solving societal challenges
- Support the participation of the private sector in research and innovation
- Consider the tax breaks for industries that invest in innovation
- Reform of the educational system, including technical education and technical support within the framework of innovation
- Linking the increase in government funding for creative performance of state institutions and the private sector
- Preparation of intellectual property policies for universities in order to promote innovative activity
- Support establishing starting companies in universities and research centers referring to research and innovation succeeded projects

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Thank you for your patience and for your kind attention

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