Science, Technology and Innovation in Iran: A Brief Review

IRAN 2024

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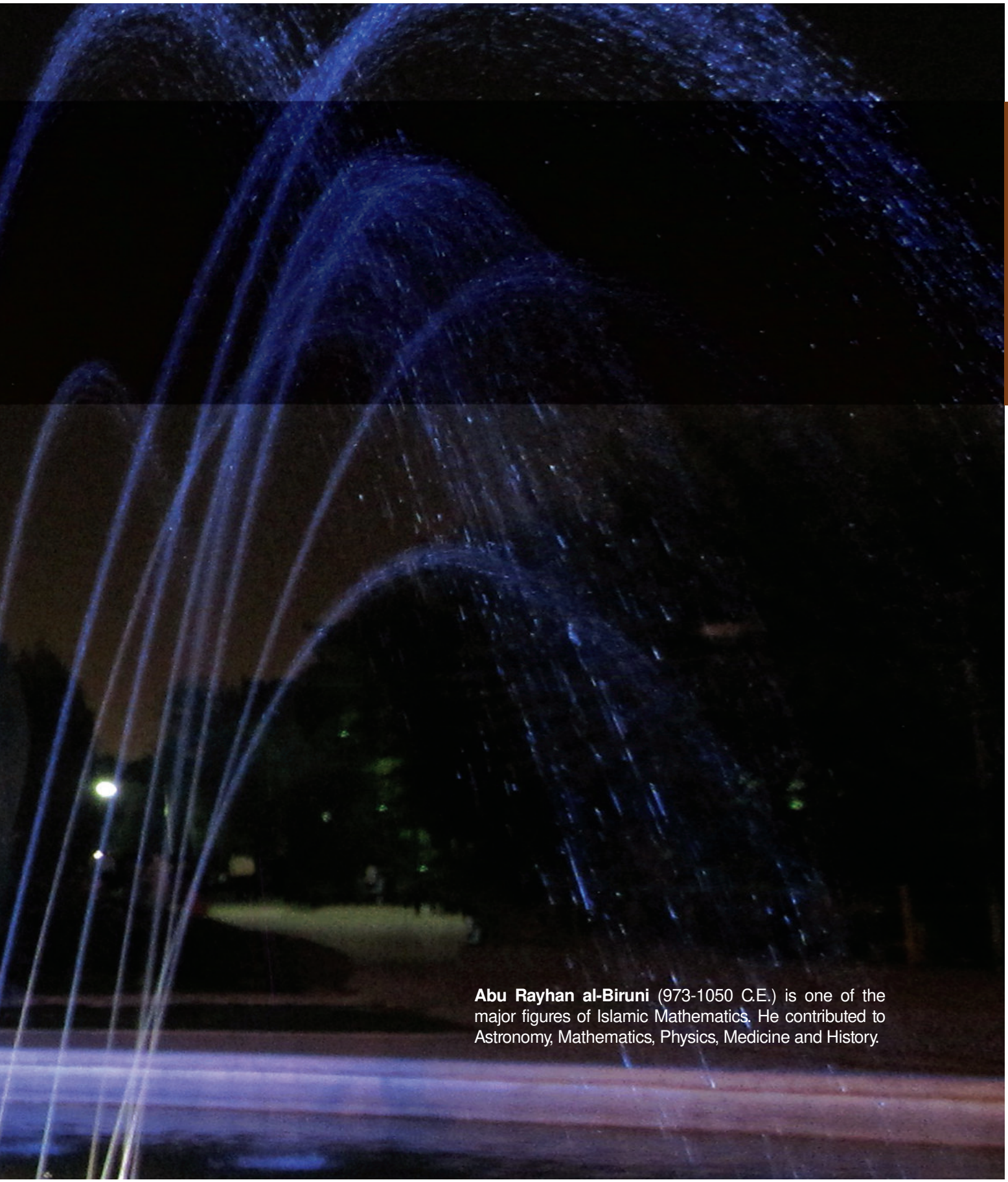


Abu Rayhan al-Biruni (973-1050 C.E.) is one of the major figures of Islamic Mathematics. He contributed to Astronomy, Mathematics, Physics, Medicine and History.

Iran, Cradle of Civilization

The Islamic Republic of Iran enjoys a rich and lavish history and boasts one of the world's oldest civilizations. Iran is located in southwest Asia, in the Middle East and is the 18th largest country by area in the world, spanning from as far north as Armenia or Turkmenistan to as far south as the Persian Gulf. The country's size and position have historically made it a strategic bridge for east-west and north-south trade routes which indicates its potential to be a regional hub for commerce and an attractive tourist destination.

Iran is one of the rare countries in the world which enjoys four distinctive seasons. In the north, the evergreen forests draw a parallel line to the beautiful serene waters of the Caspian Sea which makes the country's climate most pleasant. In the south, Iran borders the Persian Gulf with gorgeous and appealing palm trees and a hot and humid climate. To the east of Iran, one can find hot desserts with running sand and starry nights. On the west, this vast land is endowed with mountains high in the sky catching the eye of every visitor.

Iran has an abundance of various tourist attractions, from the ski slopes within a short car ride of Tehran to the 2,500-year-old ruins of the Achaemenid Empire at Persepolis and the harmonious gardens of the Bagh-e-Eram Palace in Shiraz, just to name a few. Iran is home to 26 UNESCO World Heritage sites (24 cultural and 2 natural sites) -more than Greece- plus a rugged coastline on the Caspian Sea that makes it one of the best countries for hiking, 20 mountain resorts for winter sports, beaches on the Persian Gulf, and the holy shrine (Imam Reza) in Mashhad.

According to the World Bank's Iran Economic Monitor, the country's GDP grew by 3.8 percent in 2022/23, driven by expansions in services and manufacturing. Despite sanctions, the oil sector also expanded, aided by the tighter global oil markets. It also has 88,550,570 million people in 2022. Persian is the official language and Islam is the official religion of the country.

The country has a wealth of natural resources, including the first and fourth natural gas reserves and oil reserves, respectively, with the least economic dependence on oil incomes among oil-rich countries in the MENA. Iran is well-positioned to exercise a significant influence in basic materials sectors; especially cement, stone, and steel. The country is already the top cement exporter in the world and the largest cement producer in the Middle East. Iran is a net exporter of electricity to its neighbors and has an ample mineral wealth, including large cooper, lead, and zinc reserves. Iran's pistachios, saffron and of course caviar have brought great fame for its agriculture. It also produces a wide range of crops and is among the top five producers of eggplant, onions, and a range of fruits including quince, figs, and watermelons.

Science, Technology and Innovation in Iran at a glance

Enrolment in and Graduation from Higher Education in Iran

	2021-2022	2022-2023
Students	-	2087524
Graduates	413870	-
Enrolments	-	617378

• No data is available for students of Islamic Azad University

Gender Balance in Higher Education

2022-2023

High level of gender equality in both secondary and tertiary education compared to other countries in the Middle East

Source: IRPHE, https://irphe.ac.ir/

Knowledge - intensive Employment Rate

Year	%	Rank
2021	19/93	76

Source: GII 2023, https://www.wipo.int

	Year	Rank
Iran's rank in GII	2023	62nd among the 132 economies
Graduates in science and engineering %	2020	3
Gross Expenditure on R&D (GERD), % GDP	2019	46
High-tech Manufacturing of Total Manufacturing Output, %	2019	44

Source: GII 2023, https://www.wipo.int

Knowledge-Based Firms

	2024
Startup	6,779
Technology	795
Innovative	1,985

Source: https://pub.daneshbonyan.ir/dashboard,updated: Jan,23,2024

The Number of S&T parks in Iran

33 (2012) → 54 (2023)

The Number of Incubators in Iran

131 (2012) → 290 (Sept. 2023)

The Number of Knowledge-based Firms → 9,559 (Jan. 2024)

The Number of Creative companies → 1,914 (Jan. 2024)

The Number of Innovation Centers → 419 (Jan. 2024)

The Number of Accelerators → 159 (Jan. 2024)

Source: https://isti.ir; https://www.msrt.ir; https://pub.daneshbonyan.ir/dashboard

Global Network Readiness Index

2023 → 87th out of the 134 economies

Source: NRI 2023, https://networkreadinessindex.org

Trends in Science Governance: A new generation of STI policies

The year 2010 was a turning point for science, technology and innovation (STI) policy in Iran. Up until this point, the emphasis had been on developing higher education and increasing the number of academic publications (1990–2000), followed by support for emerging technologies (2000–2010). The main result of this first generation of STI policies was greater academic productivity in emerging technologies, in particular, coupled with the creation of the first science and technology parks.

The founding of the Nanotechnology Initiative Council (2002) was a landmark of this period. These years also saw the adoption of Law on Facilitation of Competition and Prohibition of Monopoly (2007), followed by the establishment of the Competition Council in 2009 to serve as the main pillar of the law's implementation in the marketplace.

The second generation of STI policies dates from 2010 when the Vice-Presidency for Science, Technology and Knowledge-based Economy drafted a bill that was subsequently enacted by parliament as the Law on Support for Knowledge-based Institutions/Firms and Commercialization of Innovation and Inventions (2011). This explicit focus on the knowledge economy was a first for Iran.

The Iran National Innovation Fund (INIF) was a practical expression of this law. Initially, the aim was to support university spin-offs but this support has gradually expanded to encompass tech-based startups and some eligible large enterprises such as CinnaGen or PersisGen, which are privately owned.

The third generation of STI policies dates from 2015 when parliament gave another boost to entrepreneurship and innovation through the Law on Removing Barriers to Competitive Production and Promoting the Financial System. It is this law which led to the first innovation centers and accelerators in 2015.

This law was followed by the Local Content Requirement Policy (2016). It introduced a clause requiring international agreements and major national projects to 'include local technology and training.' This clause is now being implemented in national projects.

Another milestone has been the Law on the Expansion of Nanotech Utilization till 2025 (2017). This law established a ten-year plan for transitioning from the stage of knowledge creation (technology push) to that of market expansion through the diffusion of nanotechnology in local industry and society (demand pull).

Notable in 2019 was the attempt to modernize public procurement procedures to leverage higher levels of local production through Law on Maximum Utilization of Manufacturing and Service Capabilities to Satisfy the Country's Requirements and Strengthen them in the Course of Export.

Iran's judiciary established Dispute Settlement Council to Address Knowledge-based Firms' Disputes in January 2020. It is based in Pardis Technology Park. A second council has been set up to address the legal problems faced by digital businesses.

The Law on Knowledge-based Production Leap was another milestone in this period. The Law was approved by Iran Parliament on 1st May 2022. The Law was passed with the objective to facilitate knowledge-based activities, assist innovative companies and to prepare the ground for investment in elite human resources and eliminate obstacles in obtaining business licenses and permits by knowledge-based enterprises.

For this third generation of STI policies, the Vice-Presidency for Science, Technology and Knowledge-based Economy has shifted from a national innovation system approach, whereby government actors are the focal points of innovation, to developing an innovation ecosystem approach, whereby hubs of knowledge-based firms and tech-based start-ups are given support and their innovative capacity is linked to addressing national and industrial needs.

3 Waves of STI policies in Iran

Wave 1: Developing higher education and scientific publications (1990- 2000) followed by support for emerging technologies (2000–2010)	• An increase in academic productivity in emerging technologies; • Creation of the first science and technology parks; • Founding of the Nanotechnology Initiative Council (2002); • Adoption of Law on Facilitation of Competition and Prohibition of Monopoly; and • Establishment of the Competition Council in 2009.
Wave 2: Developing research and emerging technologies (from 2010)	• Approvement of the Law on Support for Knowledge-based Institutions/Firms and Commercialization of Innovation and Inventions (2011); • Creation of the National Innovation Fund; and • Provision of support for university spin-offs and tech-based startups and some eligible large enterprises such as CinnaGen or PersisGen;
Wave 3: Transition towards innovation and a knowledge-based economy (from 2015).	• Approvement of the Law on Removing Barriers to Competitive Production and Promoting the Financial System; • Establishment of the first innovation centers and accelerators in 2015; • Approvement of the Local Content Requirement Policy (2016); the Law on the Expansion of Nanotech Utilization till 2025 (2017); and Law on Maximum Utilization of Manufacturing and Service Capabilities to Satisfy the Country's Requirements and Strengthen them in the Course of Export; • Establishment of Dispute Settlement Council to Address Knowledge-based Firms' Disputes in 2020; • Approvement of the Law on Knowledge-based Production Leap (2022) • Development of an innovation ecosystem approach to support hubs of knowledge-based firms and tech-based start-ups and linking their innovative capacity to addressing national and industrial needs.

National Policy Documents on Science, Technology and Innovation (STI)

The governance model for the innovation system is inspired by the policy documents. These include the 2005 document, Vision 2025, drafted by The Expediency Discernment Council of the System (EDCS), the 2011 NMPSE (National Master Plan for Science and Education; also commonly called the Comprehensive Scientific Roadmap), and other important policy documents listed in table 1. Together, these serve to guide the national STI policy agenda, with stipulated objectives, milestones and processes for implementation. Here, some of the overall policies on science and technology advised by the Supreme Leader and the National Policy for a Resilient Economy are presented, respectively.

Table 1
Iran's Key Policy Documents on STI

Policy Measures/Documents	Year Approved
The 5-Year Development Plan (FYDPs) (containing STI-related articles)	The 7th FYDP approved in 2023
Law for Knowledge-based Production Leap	2022
Comprehensive Document of International Scientific Relations of IRI	2018
The 5-Year Development Plan (FYDPs) (containing STI-related articles)	The 6th FYDP approved in 2017
The Development Plans' Permanent Regulations Act	2016
The Law on the Maximum Utilization of Local Capabilities and Technology Annex	2016
Law on Removing Barriers to Competitive Production and Promoting the Financial System	2015
Amendments to Government Financial Regulations Act	2015
National Policy for S&T	2014
National Policy for a Resilient Economy	2014
Law on Maximum Utilization of Manufacturing and Service Capabilities to Satisfy the Country's Requirements and Strengthen them in the Course of Export	2012
National Master Plan for Science and Education (NMPSE) (Iran Comprehensive Scientific Roadmap)	2011
The Law on Support for Knowledge-based Institutions/ Firms and Commercialization of Innovation and Inventions (2011)	2010
Act on Patents, Industrial Designs and Commercial Signs	2006
Vision 2025 Document: 20-year Vision Plan	2005
Law for Establishment of Ministry of Science, Research and Technology (MSRT)	2004
Foreign Investment Promotion and Protection Act	2002

Main National Policies on STI

• Local content and technology transfer policies

"The Law on Maximum Utilization of Manufacturing and Service Capabilities to Satisfy the Country's Requirements and Strengthen them in the Course of Export" and "the Technology Annex" are two policy measures aimed at increasing local content in Iran. The former was originally enacted in 1996 and revised in 2012. The latter, which was approved in September 2016 after nearly two years of discussion, parallels efforts to aid the development of knowledge-based products. It applies to those international contracts (including, inter alia, inward foreign investment and technology licensing) to which the government is a party or for which the government is providing support for building domestic STI capabilities. Its main purpose is to ensure that contracts, including purchase of technologies, are accompanied by collaboration with the foreign firm(s) to contribute to local learning and promote other spillovers.

The Technology Annex seeks to leverage international contracts to foster STI capacity-building and is aligned with – indeed complementary to – the MULC law. The law aims at enhancing local firms' capabilities in terms of R&D, design and engineering, to be stipulated in international infrastructure and industrial contracts. The general regulations and requirements in each contract are similar to the Technology Annex. The MULC law requires at least a 51 percent share of inputs by local parties in international contracts, with respect not only to raw materials and construction, but also to technology and skills. Effective industrial development will depend on how industrial policy is designed and implemented, keeping in mind the need to ensure sufficient transparency to avoid capture of policymakers by vested interests.

Key objectives of the national policy on science and technology promulgated by the Supreme Leader in september 2014 are as follows:

- Continuous scientific strives to get the authority of science and technology in the world with an emphasis on:
  - Developing science and innovation and theorizing;
  - Promoting global position in science and technology and becoming the scientific and technological hub in the Muslim world;
  - Developing basic science and fundamental research; and
  - Achieving advanced science and technology through special policymaking and planning.

- Optimizing performance and structure of the education and research system in an effort to achieve the objectives specified in the Vision 2025 Document in line with scientific development with an emphasis on:
  - Knowledge management and integration of strategic policymaking, planning and monitoring in science and technology domains and continuous promotion of the S&T indices and updating comprehensive scientific roadmap given global and regional scientific and technical developments;
  - Supporting establishment and expansion of science and technology parks and districts;
  - Identifying elites, developing exceptional talents, and retaining and attracting human capital; and
  - Increasing research expenditure to at least 4% of GDP by the end of 2025 with a focus on optimal resource utilization and productivity promotion.

- Improving the relationship between higher education, research and technology systems and other strategic sectors with an emphasis on:
  - Increasing the share of science and technology in the national income and economy, and improving national strength and efficiency;
  - Providing monetary and non-monetary support for idea-to-product process and increasing the share of high technology products and services and domestic technology in GDP as much as 50%; and
  - Developing and strengthening national and international communication networks between universities, research centers and the domestic and foreign technology development and innovation enterprises, as well as improving institutional cooperation in public levels given priorities of the Islamic countries.

- Developing active, constructive and inspiring cooperation in the field of science and technology with other countries and accredited scientific and technical centers throughout the world and the region, especially in the Islamic world along with strengthening the independence of the country, with an emphasis on:
  - Developing industries and services based on modern sciences and technologies and providing support for manufacturing and export of knowledge-based and indigenous technological products especially in priority areas through improving export and import capacity in the country;
  - Taking necessary measures for technology transfer and acquiring knowledge to design and manufacture products in the country enjoying the capacity of the national market in consuming imported products;
  - Taking benefit of the scientific and technical capabilities of the Iranian expatriates and attracting prominent researchers and experts from other countries, especially the Islamic countries; and
  - Achieving authority in evaluating scientific contributions and providing opportunities for uptaking national and international research results, particularly from the Islamic world.

• Comprehensive Document of International Scientific Relations of IRI

The “Comprehensive Document of the International Scientific Relations of IRI” was approved at meeting No. 805, dated March, 6, 2018 by the Supreme Council of Cultural Revolution.

The most important macro-level objectives:

- Realizing active scientific diplomacy for acquiring new knowledge and emerging technologies in the required and prioritized fields;
- Coordinated and coherent use of scientific capacities of the country to promote science and technology in other aligned societies and countries; and
- Promoting, disseminating, and transferring the country’s scientific and technological achievements with a focus on the national interests and macro-level policies of the country.

The most important strategies:

- Creating coordination and synergy between the related bodies and coherent policymaking with a view to developing international scientific cooperation;
- Developing transnational networks among scientists, students, academic researchers, research centers, S&T parks, and KBFs at home and abroad; and
- Intelligent development of scientific relations with other countries focused on comparative advantages of the country.

The most important measures:

- Strengthening and exploiting the capacity of the embassies and other active entities in the international arena for intelligent development of an international scientific relation system;
- Developing scientific and technological product/ service markets, especially the knowledge-based ones, in the target countries via purposeful diplomacy; and
- Developing international scientific cooperation through holding educational courses, projects, research centers and KBFs.

The Center for International Science and Technology Cooperation (CISTC) as the functional wing of the Vice-Presidency for Science and Technology and Knowledge-based Economy (VPSTKE) is responsible for implementing this document.

• National Policy for a Resilient Economy: Technology and Innovation as the Key Factors of Economic Growth

The National Policy for a Resilient Economy has been promulgated by the Supreme Leader in February 2014 to push forward the policy agenda on local capabilities through adoption of a more outward-oriented development policy approach. Some of the main goals of the Resilient Economy are:

- Providing the necessary conditions and harnessing all facilities and financial resources as well as scientific and human capital to develop entrepreneurship;
- Creating a highly knowledge-based economy, implementing the NMPSE, and improving the NIS to increase proportion and production of knowledge-based products and exports;
- Promoting the financial system of the country to support the influential parts of the national economy, including S&T;
- Increasing exports of innovative and technological goods and services with an emphasis on their added value;
- Developing economic free zones in order to foster advanced technologies; and
- Expanding the discourse on the Resilient Economy, particularly in scientific, educational and media circles.

In order to implement the Resilient Economy policy, the government established a dedicated secretariat in mid-2015. The Supreme Economy Council (SEC) had already been selected in mid-2014, as the main body which approves Resilient Economy plans and projects. In this line, the secretariat approved 27 national plans, 10 of which are relevant to STI considering the national priorities:

- Designing, organizing, implementing and monitoring the package of production and employment in 2018;
- Designing, organizing, implementing, and monitoring the supporting package of non-oil export development;
- Producing and broadcasting special programs by IRIB (Islamic Republic of Iran Broadcasting) aimed at removing barriers to manufacturing, encouraging investors, promoting domestic consumption and strengthening the resistance economy discourse;
- Developing market for knowledge products;
- Providing support for development of indigenous content and creating digital businesses on the platform of the National Information Network;
- Designing, organizing, implementing and monitoring the package for promoting business environment in 2018;
- Designing and implementing a mechanism for obligating Iran's foreign import partners (in selected fields) to transfer part of their production chain to the country;
- Providing support for creation and development of private specialized exporting companies;
- Providing support for Iranian cultural, artistic, and media products focused on developing domestic market and export; and
- Designing and implementing the water crisis transition program.

As transition to KBE is a collective effort, it requires engagement of different bodies, particularly the Ministry of Industry, Mine and Trade (MIMT) and MSRT. In this line, the Vice-Presidency for Science and Technology and Knowledge-based Economy, as the main body for overseeing transition to KBE, is in charge of two important projects, broken down into two action plans:

- Developing technological interactions with the world economy and exporting knowledge-based goods and services through:
  - Creating 8493 supported Knowledge-Based Firms taking advantage of the facilities provided under the Law on Support for Knowledge-based Institutions/Firms and Commercialization of Innovation and Inventions;
  - Designing and implementing pro-market policies to promote development of knowledge-based ecosystem in selected sectors (e.g. aerospace, biotechnology and nanotechnology, ICT, environment and oil and gas);
  - Creating and promoting development of markets, and using KBFs' capacities to provide at least 15 percent of the required local material and equipment; and
  - Promoting development of financing mechanisms (e.g. Venture Capital Funds (VCFs) and collateral) and offering insurance coverage for knowledge-based production;

- Strengthening manufacture of innovative products through:
  - Developing infrastructures for export of knowledge-based products; and
  - Designing a holistic system for technology transfer as well as an efficient implementation plan.

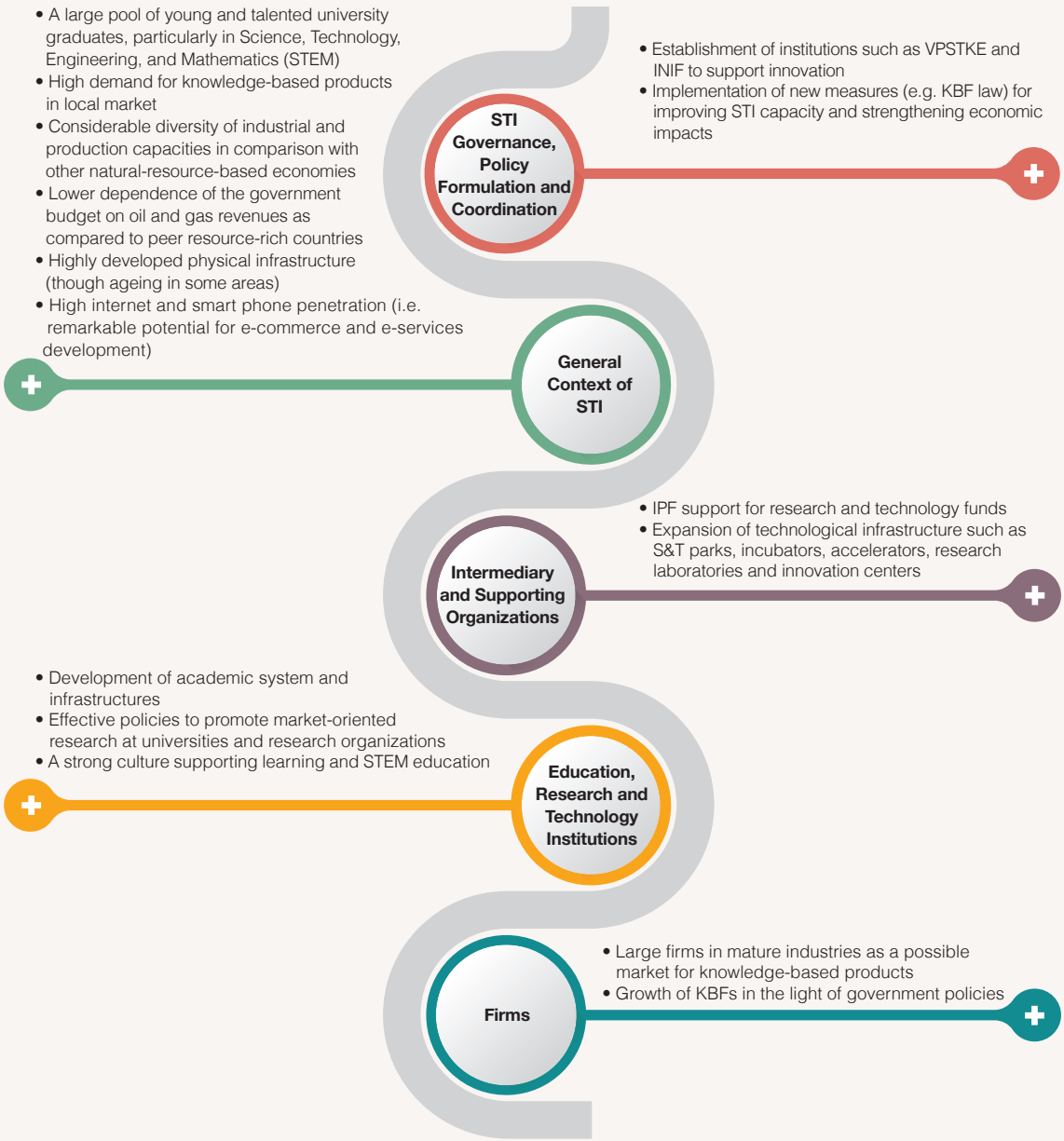
• The Law on Knowledge-based Production Leap

The Law on Knowledge-based Production Leap was approved by Iran Parliament on 1st May 2022. The Law has defined three categories of incentives for knowledge-based companies:

- Facilitation of financial support to knowledge-based companies and institutions as well as supporting research and innovation funds;
- Facilitating issuance of licenses and permits for knowledge-based companies; and
- Enabling use of their capacities in various sectors including capital market, banks, financial institutions, etc in order to direct cash flows towards innovative industries.

The Law also provides for a specific dispute resolution procedure for knowledge-based companies in specialized branches of the judiciary. There are many other changes in the afore-mentioned law compared to the previous regulations governing this sector. Article 11 of the Law not only sets certain tax exemptions for knowledge-based companies in the form of credit, it also allows for such credit to be transferred to later fiscal years of such companies. The exemption will be equal to the cost of R&D incurred by knowledge-based companies and institutions. In previous years, knowledge-based companies were obliged to own their administrative office and this was hurdle to their operation, whereas this requirement has eased out in the new Law. According to the Law on Knowledge-based Production Leap, should such companies produce special goods or services within the country, public and governmental organizations will be banded from importation of such products/services. This will be a significant step forward in utilization of local products and services.

Iran's Strengths/ Opportunities in Transitioning to Knowledge-Based Economy



Source: UNCTAD

Iran's Status on the Global "Innovation Map"

In Iran, innovation ecosystem represents one of the main components of the digital economy in recent years. Review of Iran's global digital and innovation indexes and indicator ratings shows very promising improvements in the field.

• Global Network Readiness Index (NRI)

Iran is trying to keep pace with the world in the field of ICT. Today, 98.5% of villagers and 100% of Iranians [in cities] have access to the Internet. By June 2022, Iran's Mobile broadband (MBB) and Fixed broadband (FBB) penetration rates have reached 116% and 13% respectively. As per Statista, the Internet penetration in Iran is estimated to amount to 94.45% in 2024.

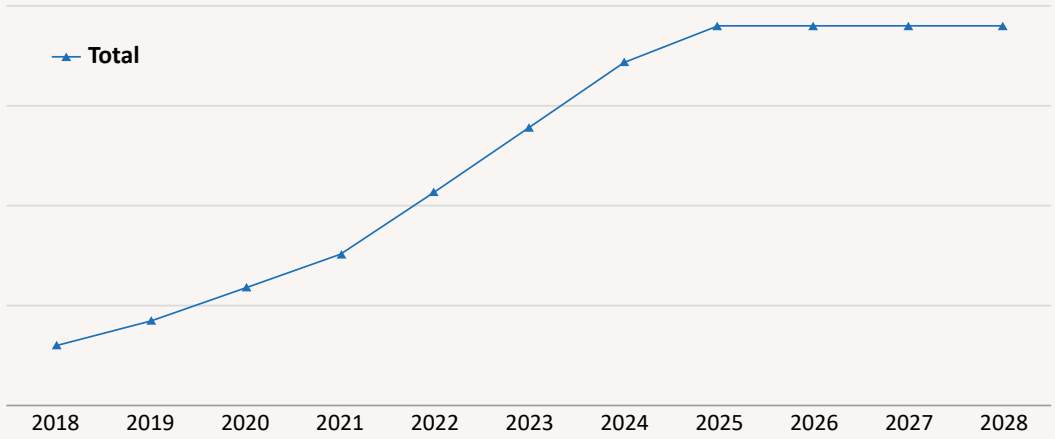


Figure 1: Internet Penetration Rate in Iran

Source: Statista Market Insights, International Telecommunication Union (ITU)

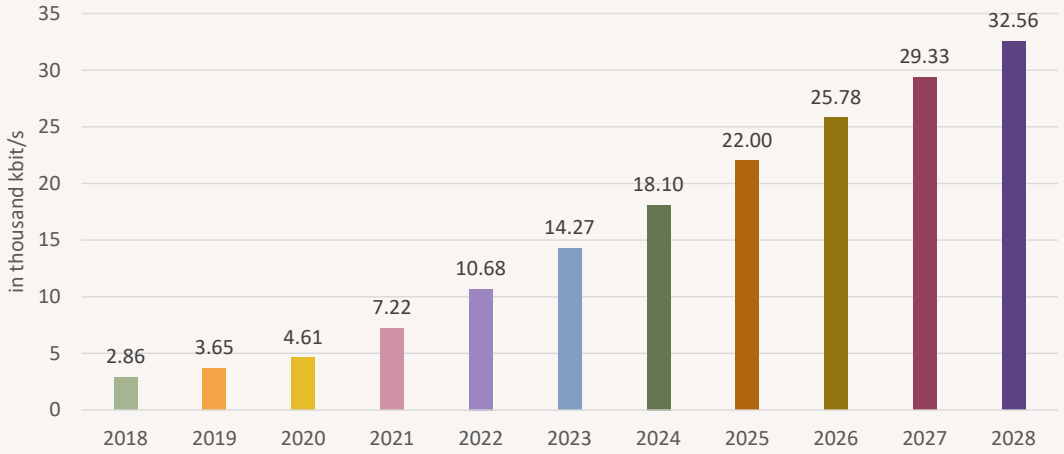


Figure 2: Average Broadband Connection Speed

Source: Statista Market Insights, World Bank, Open Signal

By November 2022, Iran has deployed 71315km of fiber network through Telecommunication Infrastructure Company of Iran; its international bandwidth has reached 5489Gbps. In terms of quality and price indices, Iran has one of the cheapest broadbands in the world. Currently, 76,000 schools are connected to Iran's National Information Network (NIN), and more than 95% of them are receiving service free of charge. With the development of infrastructure, the innovation and entrepreneurship movement has started in Iran. Over the years, the number of applications has grown to 345,000.

Iran ranks 87th out of the 134 economies included in the NRI 2023 (Figure 3). Its main strength relates to Technology.

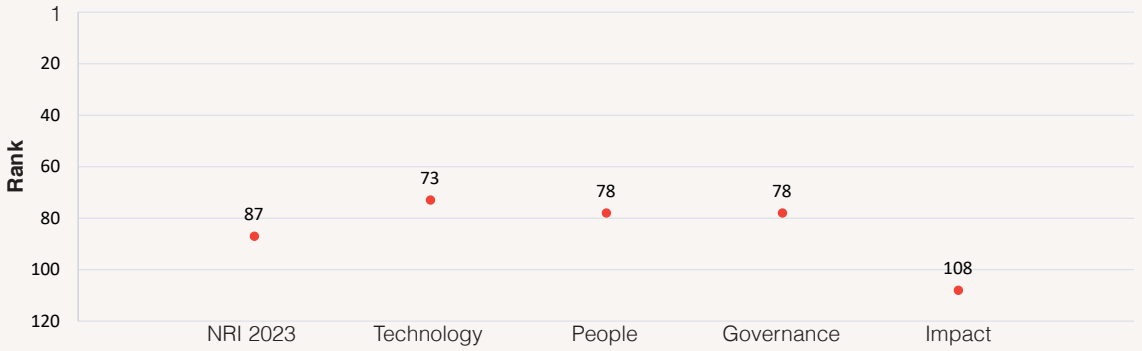


Figure 3: Iran, Islamic Rep. global ranking, overall and by pillar

Source: NRI 2023, https://networkreadinessindex.org

The table below shows Iran's performance against its income group and region, overall and by pillar.

Table 2: Iran, Islamic Rep. scores vs. averages of its income group and region, overall and by pillar

Dimension	Iran, Islamic Rep.	Lower-middle-income countries	Asia & Pacific
NRI	42.83	38.41	53.28
Technology	38.86	32.12	47.34
People	39.99	34.38	48.95
Governance	51.58	43.27	59.22
Impact	40.91	43.89	57.62

Source: NRI 2023, https://networkreadinessindex.org

• Global Innovation Index (GII)

The Global Innovation Index 2022 examines 132 economies worldwide regarding their innovative strength. Based on the 80 selected criteria, a wide range of different subject areas are examined in the respective countries to create a ranking based on the results obtained.

Iran ranks 62nd among the 132 economies featured in the GII 2023. Iran ranks 6th among the 37 lower-middle-income group economies and 2nd among the 10 economies in Central and Southern Asia.

Iran's Ranking in the Global Innovation Index (GII) 2023

> Iran (Islamic Republic of) ranks 62nd among the 132 economies featured in the GII 2023.

> Iran (Islamic Republic of) ranks 6th among the 37 lower-middle-income group economies.

> Iran (Islamic Republic of) ranks 2nd among the 10 economies in Central and Southern Asia.

> Iran (Islamic Republic of) GII Ranking (2020-2023)

The table shows the rankings of Iran (Islamic Republic of) over the past four years. Data availability and changes to the GII model framework influence year-on-year comparisons of the GII rankings. The statistical confidence interval for the ranking of Iran (Islamic Republic of) in the GII 2023 is between ranks 57 and 75.

	GII Position	Innovation Inputs	Innovation Outputs
2020	67th	90th	50th
2021	60th	86th	44th
2022	53rd	73rd	38th
2023	62nd	87th	48th

Iran (Islamic Republic of) performs better in innovation outputs than innovation inputs in 2023.

This year Iran (Islamic Republic of) ranks 87th in innovation inputs.

Iran (Islamic Republic of) ranks 48th in innovation outputs.

Global Innovation Leaders in 2023

Top three innovation economies by region

Europe	Northern America	Latin America and the Caribbean	Central and Southern Asia
1. Switzerland	1. United States	1. Brazil ↑	1. India
2. Sweden	2. Canada	2. Chile ↓	2. Iran (Islamic Republic of)
3. United Kingdom		3. Mexico	3. Kazakhstan ☆

South East Asia, East Asia, and Oceania	Northern Africa and Western Asia†	Sub-Saharan Africa*
1. Singapore ↑	1. Israel	1. South Africa
2. Republic of Korea ↓	2. United Arab Emirates	2. Botswana
3. China	3. Türkiye	3. Senegal ☆

Top three innovation economies by income group

High-income	Upper middle-income	Lower middle-income	Low-income group
1. Switzerland	1. China	1. India	1. Rwanda
2. Sweden ↑	2. Malaysia ↑	2. Viet Nam	2. Madagascar
3. United States ↓	3. Bulgaria ↓	3. Ukraine ☆	3. Togo ☆

☆ Indicates a new entrant into the top three in 2023.

↑↓ Indicates movement in ranking (up or down) within the top three, relative to 2022.

* Top three in Sub-Saharan Africa (SSA) – excluding island economies. The top five within the region, including all economies, comprise Mauritius (1st), South Africa (2nd), Botswana (3rd), Cabo Verde (4th) and Senegal (5th).

† Top three in Northern Africa and Western Asia (NAWA) – excluding island economies. The top four within the region, including all economies, comprise The Occupied Palestinian Territory (1st), Cyprus (2nd), United Arab Emirates (3rd) and Türkiye (4th).

Source: Global Innovation Index Database, WIPO, 2023.

Notes: World Bank Income Group Classification (July 2022). Year-on-year GII rank changes are influenced by performance and methodological considerations; some economy data are incomplete (see Appendix I).

Global Innovation Index 2023 rankings

GII rank	Economy	Score	Income group rank	Region rank
1	Switzerland	67.6	1	1
2	Sweden	64.2	2	2
3	United States	63.5	3	1
4	United Kingdom	62.4	4	3
5	Singapore	61.5	5	1
6	Finland	61.2	6	4
7	Netherlands (Kingdom of the)	60.4	7	5
8	Germany	58.8	8	6
9	Denmark	58.7	9	7
10	Republic of Korea	58.6	10	2
11	France	56.0	11	8
12	China	55.3	1	3
13	Japan	54.6	12	4
14	The Occupied Palestinian Territory	54.3	13	1
15	Canada	53.8	14	2
16	Estonia	53.4	15	9
17	Hong Kong, China	53.3	16	5
18	Austria	53.2	17	10
19	Norway	50.7	18	11
20	Iceland	50.7	19	12
21	Luxembourg	50.6	20	13
22	Ireland	50.4	21	14
23	Belgium	49.9	22	15
24	Australia	49.7	23	6
25	Malta	49.1	24	16
26	Italy	46.6	25	17
27	New Zealand	46.6	26	7
28	Cyprus	46.3	27	2
29	Spain	45.9	28	18
30	Portugal	44.9	29	19
31	Czech Republic	44.8	30	20
32	United Arab Emirates	43.2	31	3
33	Slovenia	42.2	32	21
34	Lithuania	42.0	33	22
35	Hungary	41.3	34	23
36	Malaysia	40.9	2	8
37	Latvia	39.7	35	24
38	Bulgaria	39.0	3	25
39	Türkiye	38.6	4	4
40	India	38.1	1	1
41	Poland	37.7	36	26
42	Greece	37.5	37	27
43	Thailand	37.1	5	9
44	Croatia	37.1	38	28
45	Slovakia	36.2	39	29
46	Viet Nam	36.0	2	10
47	Romania	34.7	40	30
48	Saudi Arabia	34.5	41	5
49	Brazil	33.6	6	1
50	Qatar	33.4	42	6
51	Russian Federation	33.3	7	31
52	Chile	33.3	43	2
53	Serbia	33.1	8	32
54	North Macedonia	33.0	9	33
55	Ukraine	32.8	3	34
56	Philippines	32.2	4	11
57	Mauritius	32.1	10	1
58	Mexico	31.0	11	3
59	South Africa	30.4	12	2
60	Republic of Moldova	30.3	13	35
61	Indonesia	30.3	5	12
62	Iran (Islamic Republic of)	30.1	6	2
63	Uruguay	30.0	44	4
64	Kuwait	29.9	45	7
65	Georgia	29.9	14	8
66	Colombia	29.4	15	5
67	Bahrain	29.1	46	9
68	Mongolia	28.8	7	13
69	Oman	28.4	47	10
70	Morocco	28.4	8	11
71	Jordan	28.2	16	12
72	Armenia	28.0	17	13
73	Argentina	28.0	18	6
74	Costa Rica	27.9	19	7
75	Montenegro	27.8	20	36
76	Peru	27.7	21	8
77	Bosnia and Herzegovina	27.1	22	37
78	Jamaica	27.1	23	9
79	Tunisia	26.9	9	14
80	Belarus	26.8	24	38
81	Kazakhstan	26.7	25	3
82	Uzbekistan	26.2	10	4
83	Albania	25.4	26	39
84	Panama	25.3	48	10
85	Botswana	24.6	27	3
86	Egypt	24.2	11	15
87	Brunei Darussalam	23.5	49	14
88	Pakistan	23.3	12	5
89	Azerbaijan	23.3	28	16
90	Sri Lanka	23.3	13	6
91	Cabo Verde	23.3	14	4
92	Lebanon	23.2	15	17
93	Senegal	22.5	16	5
94	Dominican Republic	22.4	29	11
95	El Salvador	21.8	17	12
96	Namibia	21.8	30	6
97	Bolivia (Plurinational State of)	21.4	18	13
98	Paraguay	21.4	31	14
99	Ghana	21.3	19	7
100	Kenya	21.2	20	8
101	Cambodia	20.8	21	15
102	Trinidad and Tobago	20.7	50	15
103	Rwanda	20.6	1	9
104	Ecuador	20.5	32	16
105	Bangladesh	20.2	22	7
106	Kyrgyzstan	20.2	23	8
107	Madagascar	19.1	2	10
108	Nepal	18.8	24	9
109	Nigeria	18.4	25	11
110	Lao People's Democratic Republic	18.3	26	16
111	Tajikistan	18.3	27	10
112	Côte d'Ivoire	18.2	28	12
113	United Republic of Tanzania	17.4	29	13
114	Togo	16.9	3	14
115	Nicaragua	16.9	30	17
116	Honduras	16.7	31	18
117	Zimbabwe	16.5	32	15
118	Zambia	16.4	4	16
119	Algeria	16.1	33	18
120	Benin	16.0	34	17
121	Uganda	16.0	5	18
122	Guatemala	15.8	33	19
123	Cameroon	15.3	35	19
124	Burkina Faso	14.5	6	20
125	Ethiopia	14.3	7	21
126	Mozambique	13.6	8	22
127	Mauritania	13.5	36	23
128	Guinea	13.3	9	24
129	Mali	12.9	10	25
130	Burundi	12.5	11	26
131	Niger	12.4	12	27
132	Angola	10.3	37	28

Source: Global Innovation Index Database, WIPO, 2023.

Note: For an explanation of classifications, see Economy profiles, endnote 1.

High-income
Upper middle-income
Lower middle-income
Low-income

Europe
Northern America
Latin America and the Caribbean

South East Asia, East Asia, and Oceania
Northern Africa and Western Asia
Sub-Saharan Africa
Central and Southern Asia

Iran (Islamic Republic of)

GII 2023 rank **62**

Output rank	Input rank	Income	Region	Population (mn)	GDP, PPP$ (bn)	GDP per capita, PPP$
48	87	Lower middle	CSA	88.6	1,599.2	18,663

		Score/Value	Rank
Institutions		**20.6**	**131** ○◇
1.1	**Institutional environment**	**15.2**	**127** ○◇
1.1.1	Operational stability for businesses*	17.4	126 ○◇
1.1.2	Government effectiveness*	13.1	121
1.2	**Regulatory environment**	**38.0**	**121**
1.2.1	Regulatory quality*	0.0	132 ○◇
1.2.2	Rule of law*	12.0	118
1.2.3	Cost of redundancy dismissal	23.1	100
1.3	**Business environment**	**8.7**	**128** ○◇
1.3.1	Policies for doing business† ⏲	13.7	124 ○◇
1.3.2	Entrepreneurship policies and culture†	3.6	83 ○◇
Human capital and research		**32.6**	**60** ◆
2.1	**Education**	**41.5**	**96**
2.1.1	Expenditure on education, % GDP ⏲	3.2	100
2.1.2	Government funding/pupil, secondary, % GDP/cap	16.0	72
2.1.3	School life expectancy, years	14.6	64 ◆
2.1.4	PISA scales in reading, maths and science	n/a	n/a
2.1.5	Pupil–teacher ratio, secondary ⏲	19.0	96
2.2	**Tertiary education**	**41.8**	**31** ●◆
2.2.1	Tertiary enrolment, % gross	58.2	55 ◆
2.2.2	Graduates in science and engineering, %	39.0	3 ●◆
2.2.3	Tertiary inbound mobility, %	0.8	96
2.3	**Research and development (R&D)**	**14.5**	**49** ◆
2.3.1	Researchers, FTE/mn pop. ⏲	1,659.5	45 ◆
2.3.2	Gross expenditure on R&D, % GDP ⏲	0.8	46 ◆
2.3.3	Global corporate R&D investors, top 3, mn USD	0.0	40 ○◇
2.3.4	QS university ranking, top 3*	27.0	44 ◆
Infrastructure		**29.3**	**97**
3.1	**Information and communication technologies (ICTs)**	**51.2**	**97**
3.1.1	ICT access*	77.5	80
3.1.2	ICT use*	75.3	61 ◆
3.1.3	Government's online service*	35.9	115
3.1.4	E-participation*	16.3	127 ○◇
3.2	**General infrastructure**	**25.0**	**74**
3.2.1	Electricity output, GWh/mn pop. ⏲	3,867.6	58 ◆
3.2.2	Logistics performance*	9.1	106 ○
3.2.3	Gross capital formation, % GDP	40.1	9 ●◆
3.3	**Ecological sustainability**	**11.8**	**120**
3.3.1	GDP/unit of energy use	4.7	118 ◇
3.3.2	Environmental performance*	26.4	95
3.3.3	ISO 14001 environment/bn PPP$ GDP	0.2	108
Market sophistication		**52.9**	**19** ●◆
4.1	**Credit**	**27.7**	**70**
4.1.1	Finance for startups and scaleups†	33.8	61
4.1.2	Domestic credit to private sector, % GDP ⏲	60.3	59
4.1.3	Loans from microfinance institutions, % GDP	n/a	n/a
4.2	**Investment**	**83.3**	**[3]**
4.2.1	Market capitalization, % GDP	221.5	5 ●◆
4.2.2	Venture capital (VC) investors, deals/bn PPP$ GDP	n/a	n/a
4.2.3	VC recipients, deals/bn PPP$ GDP	n/a	n/a
4.2.4	VC received, value, % GDP	n/a	n/a
4.3	**Trade, diversification and market scale**	**47.8**	**90**
4.3.1	Applied tariff rate, weighted avg., %	12.1	126 ◇
4.3.2	Domestic industry diversification ⏲	87.3	59
4.3.3	Domestic market scale, bn PPP$	1,599.2	20 ●

		Score/Value	Rank
Business sophistication		**17.7**	**117**
5.1	**Knowledge workers**	**18.8**	**[102]**
5.1.1	Knowledge-intensive employment, % ⏲	19.9	76
5.1.2	Firms offering formal training, %	n/a	n/a
5.1.3	GERD performed by business, % GDP ⏲	0.2	53
5.1.4	GERD financed by business, %	n/a	n/a
5.1.5	Females employed w/advanced degrees, % ⏲	7.6	85
5.2	**Innovation linkages**	**11.4**	**113**
5.2.1	University–industry R&D collaboration† ⏲	12.2	124 ○◇
5.2.2	State of cluster development† ⏲	33.1	87
5.2.3	GERD financed by abroad, % GDP	n/a	n/a
5.2.4	Joint venture/strategic alliance deals/bn PPP$ GDP	0.0	126 ○◇
5.2.5	Patent families/bn PPP$ GDP	0.0	85
5.3	**Knowledge absorption**	**22.9**	**116**
5.3.1	Intellectual property payments, % total trade	0.2	89
5.3.2	High-tech imports, % total trade ⏲	5.1	114
5.3.3	ICT services imports, % total trade	0.7	96
5.3.4	FDI net inflows, % GDP	0.5	112
5.3.5	Research talent, % in businesses ⏲	19.2	54
Knowledge and technology outputs		**25.9**	**55** ◆
6.1	**Knowledge creation**	**32.0**	**29** ●◆
6.1.1	Patents by origin/bn PPP$ GDP	7.0	13 ●◆
6.1.2	PCT patents by origin/bn PPP$ GDP	0.2	41 ◆
6.1.3	Utility models by origin/bn PPP$ GDP	n/a	n/a
6.1.4	Scientific and technical articles/bn PPP$ GDP	25.9	27 ●◆
6.1.5	Citable documents H-index	23.4	40 ●◆
6.2	**Knowledge impact**	**35.2**	**40** ●
6.2.1	Labor productivity growth, %	0.4	82
6.2.2	Unicorn valuation, % GDP	0.0	48 ○◇
6.2.3	Software spending, % GDP	0.6	16 ●◆
6.2.4	High-tech manufacturing, % ⏲	28.6	44 ◆
6.3	**Knowledge diffusion**	**10.5**	**107**
6.3.1	Intellectual property receipts, % total trade	0.0	88
6.3.2	Production and export complexity	44.4	84
6.3.3	High-tech exports, % total trade ⏲	0.2	109
6.3.4	ICT services exports, % total trade	0.2	122
6.3.5	ISO 9001 quality/bn PPP$ GDP	1.0	108
Creative outputs		**33.1**	**43** ◆
7.1	**Intangible assets**	**55.7**	**13** ●◆
7.1.1	Intangible asset intensity, top 15, %	n/a	n/a
7.1.2	Trademarks by origin/bn PPP$ GDP	349.8	1 ●◆
7.1.3	Global brand value, top 5,000, % GDP	0.0	73
7.1.4	Industrial designs by origin/bn PPP$ GDP	9.6	11 ●◆
7.2	**Creative goods and services**	**4.3**	**90**
7.2.1	Cultural and creative services exports, % total trade	0.2	74
7.2.2	National feature films/mn pop. 15–69	1.6	52
7.2.3	Entertainment and media market/th pop. 15–69	2.8	51
7.2.4	Creative goods exports, % total trade ⏲	0.1	96
7.3	**Online creativity**	**16.8**	**86**
7.3.1	Generic top-level domains (TLDs)/th pop. 15–69	2.0	85
7.3.2	Country-code TLDs/th pop. 15–69	6.9	47 ◆
7.3.3	GitHub commits/mn pop. 15–69	1.6	105
7.3.4	Mobile app creation/bn PPP$ GDP	56.6	91

NOTES: ● indicates a strength; ○ a weakness; ◆ an income group strength; ◇ an income group weakness; * an index; † a survey question. ⏲ is used when the available economy data are older than the base year; see appendices for details, including the year of the data, at wipo.int/gii-ranking. Square brackets [ ] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.

Iran's Digital Economy

Iran has made considerable progress in providing opportunities to support the growth of the digital economy and innovation ecosystem in the country. In Iran, moving towards digitalization and the development of the digital economy has been on the agenda of the government since the Third Development Plan. Government support measures have resulted in a clear rise in the number of institutes and corporations engaging in the innovation ecosystem and the proliferation of players in the funding and support space in the country.

As said before, ICT infrastructure as the core layer of the digital economy has proved to make acceptable progress in recent years. By June 2022, the country has MBB penetration rate of 116% and FBB penetration rate of 13%. As per Statista, the Internet penetration in Iran is estimated to amount to 94.45% in 2024. The share of the digital economy in Iran's GDP is currently around 7%, which is far from its average value in the world economy. According to the Ministry of Communication and Information Technology, the share of the digital economy in GDP is supposed to reach 15% by the end of the 7th Development Plan.

• Digital Government

Iran has made considerable progress by expanding e-government services to enhance efficiency, accessibility, transparency, and accountability in the government sector. The government of Iran offers 201 general services and 734 specific services electronically from judiciary and agriculture to education, health, and culture.

The United Nations E-Government Development Index (EGDI) assesses e-government development at the national level. It is a composite index based on the weighted average of three normalized indices of Telecommunications Infrastructure Index (TII), Human Capital Index (HCI) and Online Service Index (OSI). In the 2022 UN E-Government Survey Report, Iran ranked 91st out of 193 countries and was among the "high EGDI" group.

Table 3: Iran's performance in E-Government Development Index 2022 and benchmarking

	2022	OSI	TII	HCI
Iran	**89**	**130**	**71**	**79**
China	43	15	47	101
Malaysia	53	53	53	87
Türkiye	48	24	85	43
Saudi Arabia	31	32	27	48

Source: UN

• E-commerce

E-commerce, as one of the main components of the digital economy, have a significant role in the economic development of countries. According to UNCTAD estimation, global online retail sales share of total retail sales from 16% to 19% in 2020, compared to a 2% rise between 2018-2019.

Due to Covid-19, the world witnessed a spike in demand for online goods ordering: when overall retail sales declined by 1% in 2020, online retail grew by 22%. Iran ranked 44 out of 152 countries around the world in terms of B2C E-commerce performance 2020, indicating a significant potential for e-commerce development.

Table 4: B2C E-commerce index, 2020, world

2020 Rank	Economy	Share of individuals using the Internet (2019 or latest)	Share of individuals with an account (2017 ,+15)	Secure Internet servers (normalized, 2019)	UPU postal reliability score (2019 or latest)	2020 (Index value)
6	Germany	93	93	93	93	93
30	Malaysia	84	84	84	84	84
44	Iran	70	70	70	70	70
49	Saudi Arabia	96	96	96	96	96
55	China	61	61	61	61	61
57	Türkiye	74	74	74	74	74

Source: UNCTAD

Iran has also experienced a growing trend in the field of E-commerce in recent years. According to the UNCTAD report in 2019, Iran's rank in the field of E-commerce was 42 among 152 countries, which has improved by 7 places compared to previous years. What's more, the nominal ratio of e-commerce transactions to GDP (without oil) was achieved 36% in 2020, increased by 205% compared to the previous year, and the number of new licenses issued for online businesses also tripled, which shows that many Iranians have changed their shopping methods to online shopping, and traditional and offline businesses have tried to sell online. It is notable that the nominal value of E-commerce transactions was 1,237 thousand billion tomans, which has grown by 13% compared to the previous year.

- The amount of each electronic purchase is estimated at 343 thousand Tomans on average.
- The total number of e-commerce transactions was 3 billion 60 million items, which has grown by 14% compared to the previous year.
- The value of government electronic transactions was 302 thousand billion tomans, which has grown by 65% compared to the previous year.
- The number of government electronic transactions was 345,000, which has grown by 2% compared to the previous year.

Iran Center for E-Commerce Deployment under the Ministry of Industry, Mine and Trade depicted the E-Commerce landscape in Iran. By September 2020, most E-commerce units prefer to shop through social networks and ship through Post Company of Iran. As for payment methods, value of transactions via internet payment gate has reached almost 70% of total E-commerce turnover, increased by 230% compared to the end of 2019. Among the E-commerce units with e-namad license, most active fields are sales of goods, education, programming and computer, and advertising and marketing.

E-namad is issued exclusively by the Iran center for E-commerce development. This sign is granted to authorize online businesses (Internet and mobile business) for the purpose of organizing, authenticating, and qualifying. The total number of active e-namad at the end of 2021 has grown by 35% compared to the previous year by reaching more than 120 thousand.

• Online shopping and the eccentrically prominent share of social media platforms

Currently, the largest social commerce in Iran has been formed on Instagram. 415 thousand stores operate on Instagram, and the volume of financial transactions on this platform is estimated at 18 to 32 thousand billion tomans in 2021. Approximately, 310 to 470 thousand buying and selling orders are made on Instagram every day, which has provided direct employment opportunities for one million people. The distribution of various businesses on Instagram has shown in figure 2-16 in more detail.

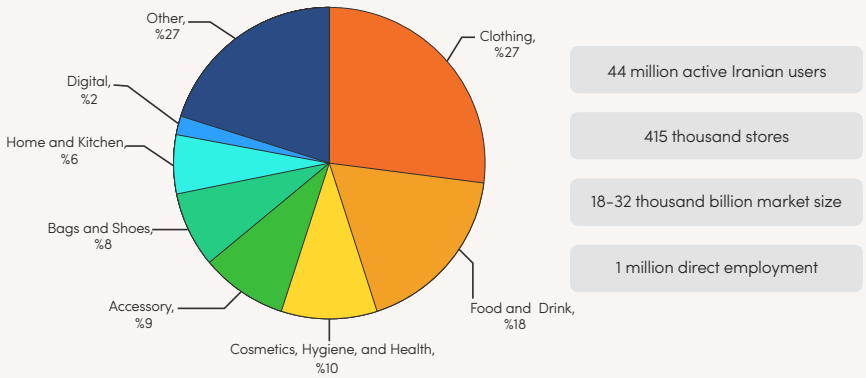


Figure 4: The distribution of businesses on Instagram in 2022

Source: Techrasa Report

More than 70 Iranian platforms are social business enablers. In addition to the social commerce industry, these platforms also serve the traditional E-commerce industry. For this reason, social media led by Instagram and the activity of 415,000 Instagram stores can be considered the main player in Iran's social commerce industry. The penetration rate of 71% of social media and messengers among the people of Iran and the presence of 44 million active Iranian users on Instagram confirm this.

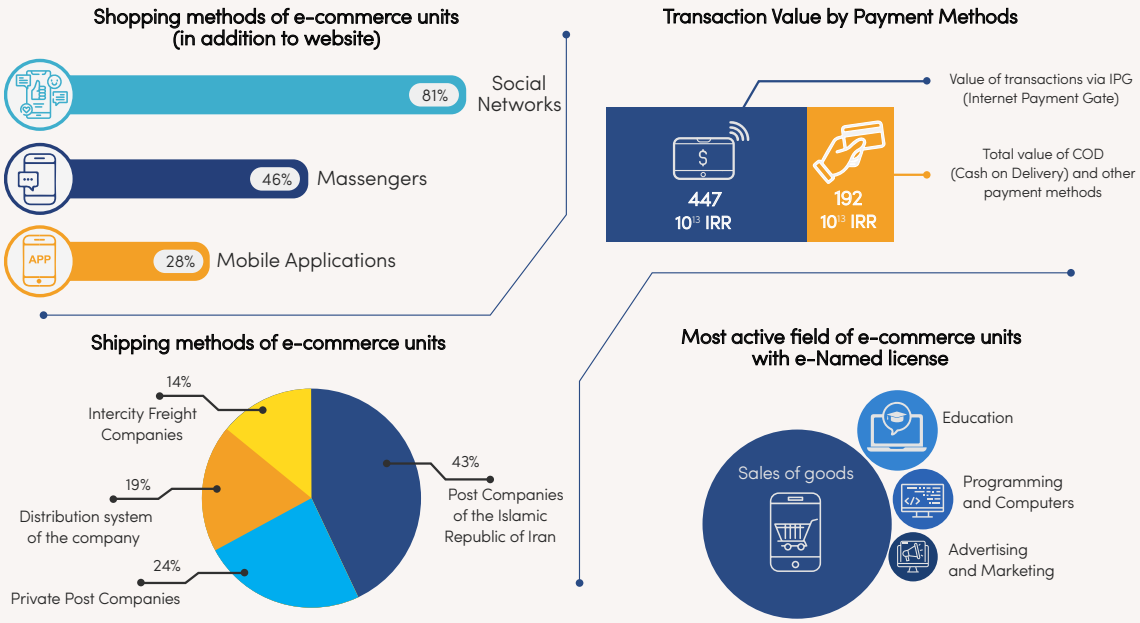


Figure 5: Current situation of E-commerce in Iran

Source: Iran Center for E-Commerce Deployment

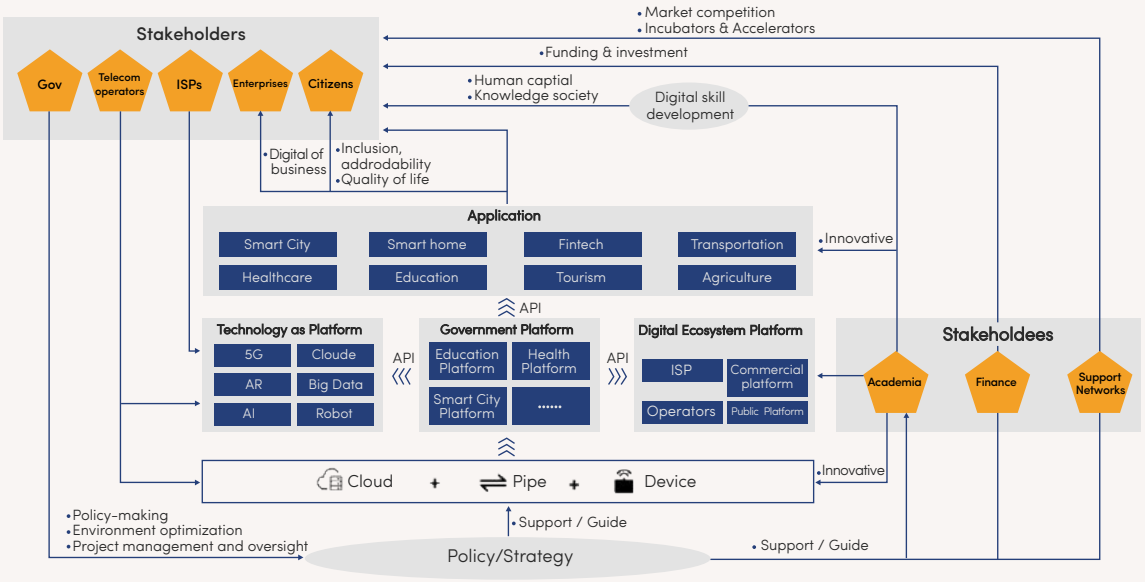
Iran's Startup Ecosystem

ICT firms in Iran continue to innovate in software, hardware, digital platforms, network services, mobile Internet applications, artificial intelligence, etc. Some SMEs have developed localized digital productions, for example, Sky Room in online education, DigiKala in e-commerce, Café Bazaar in the app store, and tens of companies in digital healthcare, financial technology, and smart city. However, most of the ICT innovation companies are startups and SMEs. The diagram presented below provides a comprehensive overview of the various activity areas within Iran's startup ecosystem. It is important to highlight that this categorization has been conducted solely to showcase the diverse fields in which Iran's startup ecosystem operates, and a detailed enumeration has not been carried out in this particular domain.

Digital landscape of Iran

The digital ecosystem encompasses the policies & strategies, infrastructure, technologies, applications and finance. How this system is constructed and operates is an aspect of emerging paradigms considering the interplay between ICT multi-level usage by various stakeholders. Ministry of Information and Communications Technology (MICT) plays a key role in this ecosystem.

Digital Ecosystem of Iran



In the past decade, Iran's startup ecosystem has experienced significant growth, driven by many factors, including a large pool of educated young people, government support for entrepreneurship, and increasing investment in the tech sector. The number of startups in Iran has grown rapidly, focusing on local solutions to problems such as transportation, e-commerce, and healthcare. The ecosystem has also seen the emergence of several startup accelerators, venture capital firms, and co-working spaces to support the growth of startups.




Science, Technology and Innovation Statistics

According to the 20-year Vision document, the most important goals in science and technology domains include:

- Achieving the first place in science and technology in the region in terms of realization of the knowledge-based economy with an emphasis on software movements and scientific productions; and
- Acquisition of advanced knowledge and S&T capacity.

Here, the descriptive and quantitative data on science, technology and innovation trends in Iran within the recent years are presented.

• Number of Higher Education Students by Educational Level

Totally 2704902 students were studying in Iranian universities in 2022-2023, of whom 50.5% were woman, showing a better gender balance in Iran than in other comparable countries within the region. The figure below depicts the distribution trends in different educational levels.

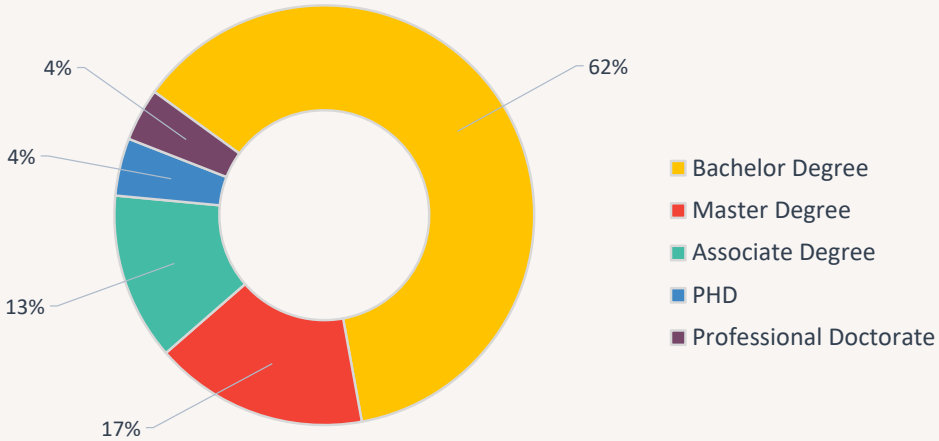


Figure 6: Students in Higher Education Students by Educational Level (2022-2023)
Note: Number of students in Islamic Azad University is not included.
Source: Institute of Research and Planning in Higher Education

• Number of Researchers by Major Research Fields

In 2023, a total of 938 Iranian researchers have been recognized among the world's top one percent most-cited researchers by the Islam World Science and Technology Monitoring Institute (ISC), showing a growth of approximately 12% compared to the previous year. The figure below illustrates the upward trend in the number of Iranian researchers among the world's top one percent most-cited researchers over the past decade.

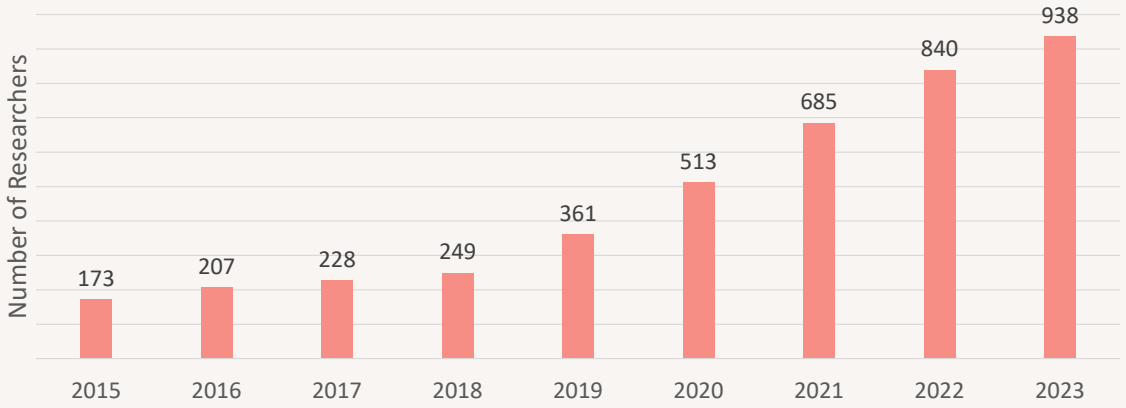


Figure 7: Frequency of Iranian researchers among the world's top one percent most-cited researchers, categorized by year

Breaking down the major research fields, the distribution of researchers is as follows: medicine and health (33%), multidisciplinary (23%), engineering (20.5%), basic sciences (12%), agriculture and environment (10%), and humanities and social sciences (1.7%).

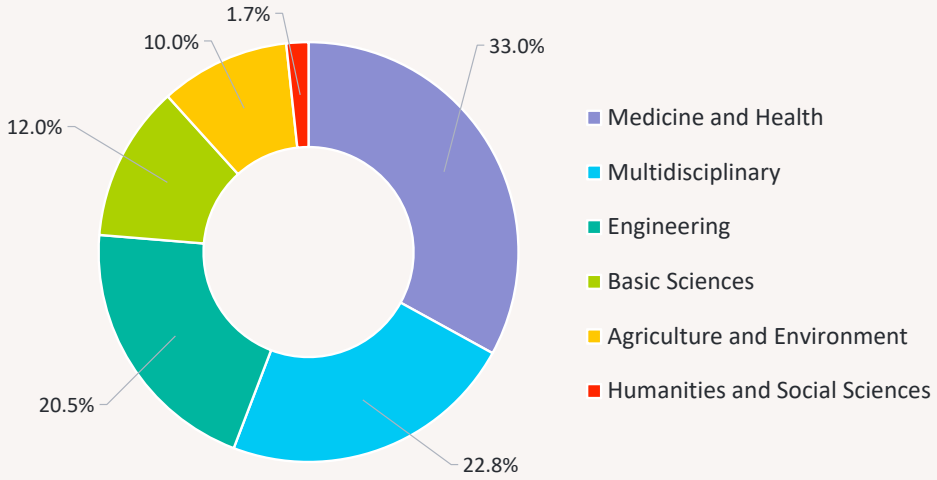


Figure 8: The share of Iranian researchers among the world's top one percent most-cited researchers, categorized by major research fields

• Trends in Iran's Scientific Production

Iran has kept its scientific campaign run smoothly despite the international sanctions. Scimago, Scopus, and Web of Science statistics indicate that volume of national and international scientific publications of the Iranian researchers has been constantly expanding over the past two decades. According to Scimago Journal Bank, Iran occupied 15th place in 2022 in publishing citable scientific articles. Iran holds the 41st rank in terms of H-index on Scimago (the H-index for Iran is 445).

Iran's International Status in Scientific Productions

Country	Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1 China	1004745	985085	1127536	812793	1.12	1210
2 United States	697695	623186	721657	290361	1.03	2880
3 India	273913	248644	250590	107713	0.91	795
4 United Kingdom	234085	205867	301116	72233	1.29	1815
5 Germany	201649	183077	221383	61757	1.10	1584
6 Italy	151743	136051	183759	60066	1.21	1255
7 Japan	139382	130095	113886	31248	0.82	1236
8 Canada	129698	117417	152735	31480	1.18	1460
9 Australia	123575	111601	173208	38009	1.40	1276
10 France	122826	112159	134613	28891	1.10	1420
11 Spain	119503	110360	131837	30866	1.10	1127
12 Russian Federation	108038	104433	60959	23180	0.56	702
13 South Korea	102265	98876	112558	25771	1.10	863
14 Brazil	92890	86987	73790	19518	0.79	729
15 Iran	77641	75091	95536	29537	1.23	445
16 Netherlands	72361	65872	97734	17357	1.35	1284
17 Türkiye	71443	67256	73465	18420	1.03	562
18 Saudi Arabia	58258	56864	104929	35319	1.80	517
19 Poland	58179	54711	58833	15061	1.01	687
20 Switzerland	56243	51311	78915	13851	1.40	1212

Source: https://www.scimagojr.com/countryrank.php?year=2022

According to Web of Science database, Iran attains 15th rank in terms of global publication output in 2023. Actually, Percentage share of Iran's scientific publications of total global scientific publications is 1.93% in 2023. Iran ranks 1st in terms of scientific production output among the Islamic countries in 2023. As per Web of Science data, the leading research areas for Iran include Engineering, Chemistry and Materials Science.

Iran's Ranking in the Global Scientific Production Output

Web of Science	Ranking					Number					Percentage				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Global Scientific Production Output	16	16	17	17	15	64395	73084	77406	75562	53013	1.83	2	1.99	1.94	1.93
Scientific Production Output among Islamic Countries	1	1	2	2	1	64395	73084	77406	75562	53013	20.32	20.37	19.15	18.22	17.65
Citations *	17	16	16	17	17	918568	850380	555540	205435	19865	1.34	1.38	1.42	1.39	1.28
Hot Papers	0	0	32	27	23	0	0	17	73	42	0	0	2.51	2.93	2.70
Highly-Cited Papers	22	18	18	18	19	419	594	683	758	389	2.13	2.71	2.79	3.13	2.75
Top Papers	22	18	18	18	19	419	594	685	766	397	2.13	2.71	2.80	3.14	2.76
Top Papers (Cumulative)[1]	28	25	24	23	23	1643	2226	2884	3586	3944	1.44	1.64	1.81	1.97	2.01
Conference Papers	40	38	39	40	48	3430	2325	1841	1719	550	0.46	0.44	0.41	0.39	0.26
Conference Papers Percentage[2]											5.33	3.18	2.38	2.27	1.04
International Partnership*	24	22	21	22	22	18038	22311	25354	23894	14190	0.89	1.04	1.09	1.09	1.10
International Partnership Percentage*											28.03	31.78	35.87	37	37.81
H-Index						313	347	389	432	"The H-index for Iran as of November 15, 2023, is 455."					
Leading Research Areas						"Engineering, Chemistry, and Materials Science"	"Engineering, Chemistry, and Materials Science"	"Engineering, Chemistry, and Materials Science"	"Engineering, Chemistry, and Materials Science"	"Engineering, Chemistry, and Materials Science"					
Leading Partner Countries						Canada, Australia and USA	Canada, China and USA	China, Canada and USA	China, Canada and USA	China, Canada and USA					

* Data on citations, international participation, and its percentage is sourced from the InCite database, taking into account ESCI."

** The data in this report was last updated on 21 November 2023; Iran's scientific position in the world in 2023 has not been determined yet, making it unreliable for comparison with recent years.

According to the Scopus database, Iran attains 16th rank in terms of global publication output in 2023. Actually, Percentage share of Iran's scientific publications of total global scientific publications is 1.92% in 2023. Iran ranks 2nd in terms of publication output among the Islamic countries in 2023. As per Scopus data, the leading research areas for Iran include Medicine, Engineering and Materials Science. As the same way, both databases consider China, Canada and USA as the leading partner countries of Iran.

1. In this row, the cumulative frequency of top papers is calculated from the beginning to the desired year. However, in the above row, the number of top papers for each year is included.
2. This refers to the percentage of conference papers out of all papers in the country.

Iran's Ranking in the Global Scientific Production Output

Scopus	Ranking					Number					Percentage				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Global Scientific Production Output	15	15	15	15	16	67811	73957	77260	77881	65212	1.91	1.99	1.94	1.92	1.92
Scientific Production Output among Islamic Countries	1	1	1	1	2	67811	73957	77260	77881	65212	18.41	17.83	17.2	16.50	15.92
Citations *	15	15	14	15	-	781744	670996	372129	95536	-	1.47	1.50	1.57	1.68	-
Conference Papers	37	38	41	43	49	3477	2702	2442	2324	1137	0.61	0.52	0.46	0.47	0.37
Conference Papers Percentage[1]											5.13	3.65	3.16	2.98	1.74
International Partnership	-	-	-	-	-	18015	22285	25654	26905	23020	-	-	-	-	-
International Partnership Percentage[2]											26.57	30.13	33.20	34.55	35.30
H-Index*	Iran holds the 41st rank in terms of H-index on Scimago.					Iran's H-index in Scimago is 445.									
Leading Research Areas						Medicine, Engineering, and Materials Science	Medicine, Engineering, and Materials Science	Medicine, Engineering, and Materials Science	Medicine, Engineering, and Materials Science	Medicine, Engineering, and Materials Science					
Leading Partner Countries						Canada, England and USA	Canada, China and USA	Canada, China and USA	China, Canada and USA	China, Canada and USA					

* The data related to citations and H-index are extracted from the Scimago website: the latest available information is related to 2022.

** Iran's scientific position in the world in 2023 has not been established yet, making it unreliable for comparison with recent years.

1. It is referred to the percentage of conference papers out of all papers in the country
2. The percentage or amount of international partnership (or the share of scientific diplomacy in the country) shows the percentage of international joint papers out of all papers in the country. This data was extracted from the Scopus database.

Iran's global ranking in different fields of technology in terms of publications

Technology	Nanotechnology	Biotechnology	Bioengineering	Agricultural and Biological Sciences
Date	2023	2022	2022	2022
Number of Articles	9889	1264	1000	941
Rank	5th *	10th	11th	17th

Biochemistry, Genetics, and Molecular Biology	Energy Engineering and Power Technology	Computer Science	Energy	Renewable Energy, Sustainability and Environment
2022	2022	2022	2022	2022
1111	3274	1479	881	3038
18th	8th	25th	13th	11th

Fuel Technology	Cognitive Neuroscience	Aerospace Engineering	Ocean Engineering	Water Science and Technology
2022	2022	2022	2022	2022
1232	153	693	559	1821
12th	24th	12th	11th	4th

* https://statnano.com/report/r67
Source: https://www.scimagojr.com/countryrank.php: updated April 2023

• Status of Iran in World University Ranking

The government has sought to expand the higher education system including universities as the main strategy to improve its human capital. In Leiden's 2023 ranking, 46 universities from Iran are among top universities. Similarly, 65 Iranian universities are among the list of best universities by Times Higher Education in 2023. The QS world university rankings in 2023 include 6 universities from Iran as well. The figure below shows Iran's performance in terms of the number of universities listed in Leiden, Times, and QS world university rankings in 2018- 2023.

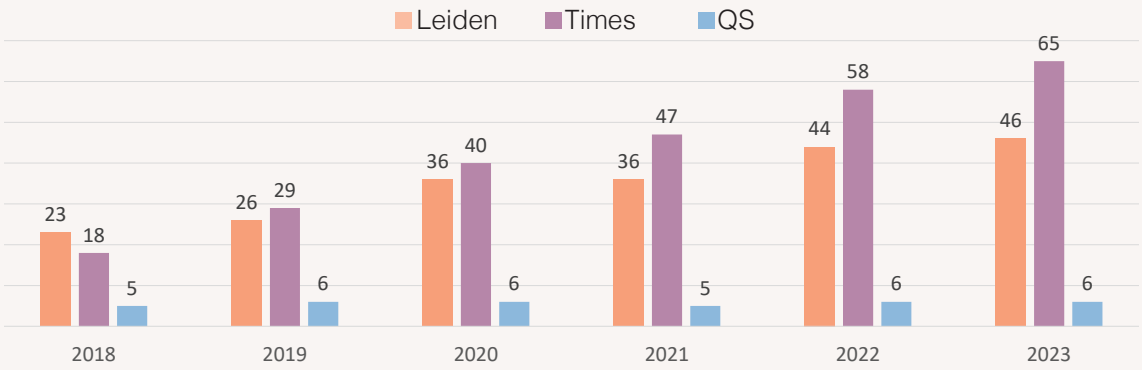


Figure 9: Number of Iran's Universities listed in Leiden, Times and QS World University Rankings

• Science and Technology Parks

According to the Ministry of Science, Research and Technology, as of Sept. 2023, there are 54 Science and Technology Parks (STP) across the country. There is at least 1 STP in each province and there are more than 1 in some provinces including Tehran (12), Razavi Khorasan, Semnan, Markazi, and Hormozgan with (2) STPs each.

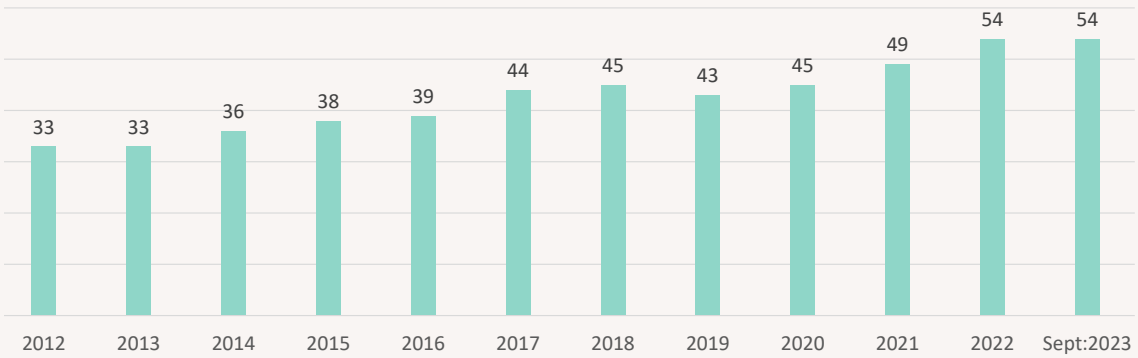


Figure 10: Growth in Number of S&T Parks, 2012-2023
Source: MSRT, www.msrt.ir/fa/techno/Files/.

• Incubators

The first incubator in Iran was established in 2000. The number of incubators has had significant growth in recent years. According to the Ministry of Science, Research and Technology, the total number of incubators in Iran is estimated to be 290 by 2023.

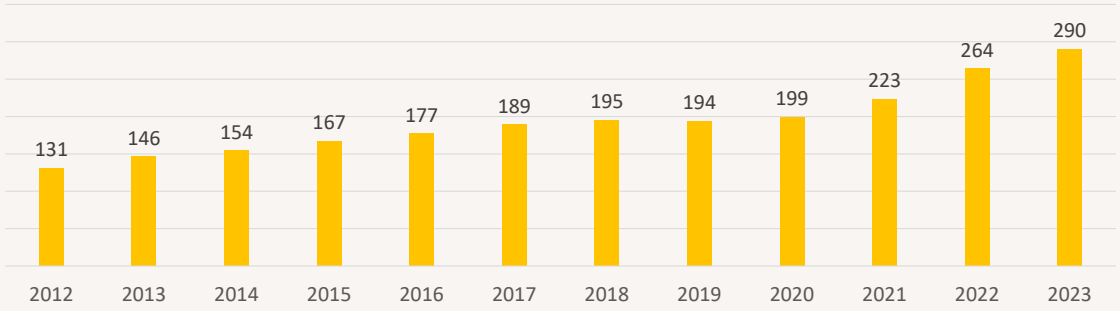
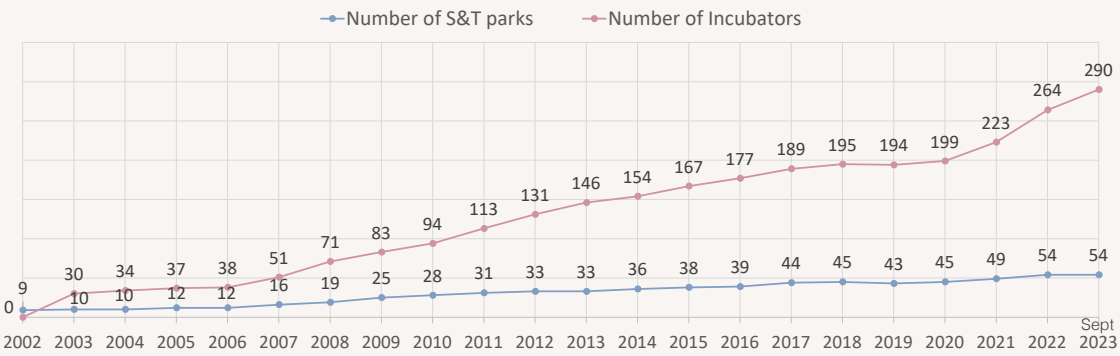


Figure 11: Growth in Number of Incubators, 2012-2023

Source: MSRT, www.msrt.ir/fa/techno/Files/.



Increase in the number of S&T parks from 33 in 2012 to 54 in 2023	Establishment of the first private S&T park in 2017	Establishment of three public parks under the auspices of ICT Ministry, Ministry of Petroleum, and Ministry of Agriculture-Jahad	Increase in the number of incubators from 131 in 2012 to 290 in 2023

Figure 12: Growth Trend of Science and Technology Parks and Incubators

Source: MSRT, www.msrt.ir/fa/techno/Files/.

Incubators may have the general focus or specialized in a specific industry depending on stakeholders' areas of interest. 35% of incubators in Iran are specialized in different industries. The incubators in Iran are mostly affiliated with Science and Technology Parks (61%) and Universities (25%). The dispersion of the 290 incubators in Iran is mapped in the figure below. The incubators are mostly located in the center and west of the country. However, there is no province without at least one incubator. The capital city of Tehran has the highest share in the country.

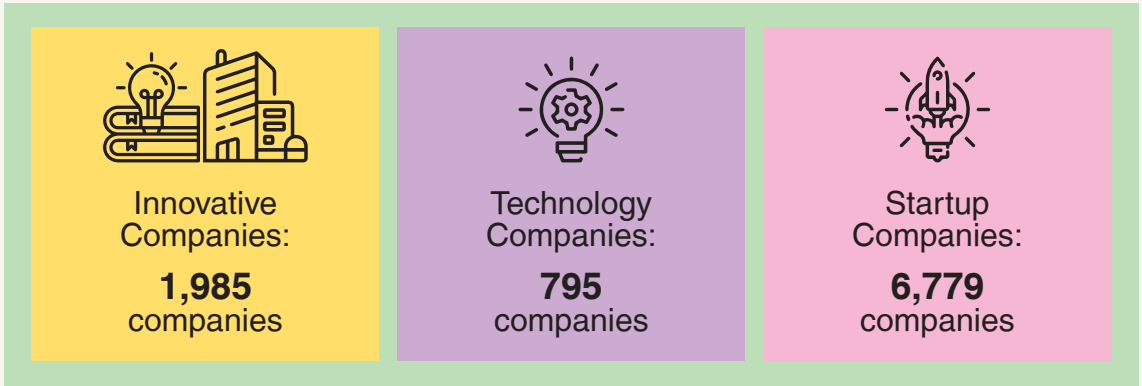
Mapping of incubators in Iran

Source: www.ir.undp.org

• Knowledge-based Companies

After approval of Law on Support for Knowledge-based Institutions/Firms and Commercialization of Innovation and Inventions in 2010 and its implementation in 2013, various supportive mechanisms were developed for KBFs. Iran has witnessed a remarkable growth in the number of knowledge-Based companies. In just eleven years, the number of such companies increased from 55 in 2013 to 9559 as of June, 2024.

Knowledge-based Companies by License Type



Source: https://pub.daneshbonyan.ir/dashboard, updated: Jan, 23, 2024

Confirmed knowledge-based firms by technology category

Biotechnology, Agriculture, and Food Industries: **481 companies**	Pharmaceuticals and Advanced Diagnostic and Therapeutic Products: **481 companies**	Advanced Materials and Products Based on Chemical Technologies: **1,472 companies**
Advanced Machinery and Equipment: **1,975 companies**	Medical Instruments, Equipment, and Supplies: **388 companies**	Electricity and Electronic, Photonics, Telecommunications, and Automated Systems **481 companies**
Information and Communication Technology and Computer Software: **2,008 companies**	Commercialization Services: **456 companies**	Cultural Industries, Creative Industries, and Humanities and Social Sciences: **61 companies**

Source: https://pub.daneshbonyan.ir/dashboard, updated: Jan, 23, 2024

• Innovation Centers and Accelerators

Innovation centers refer to companies, organizations, or groups that foster the growth of individual, group, or corporate ideas. The first innovation center in Iran was established in 2015. As of January 2024, the total number of innovation centers and accelerators cooperating to these centers in Iran is estimated to be 419 and 159, respectively.

Total number of innovation centers **419**	Total number of accelerators cooperating to innovation centers: **159**
	Total number of teams and companies located at the innovation centers: **4565**
	Total employment rate in innovation centers: **23330**

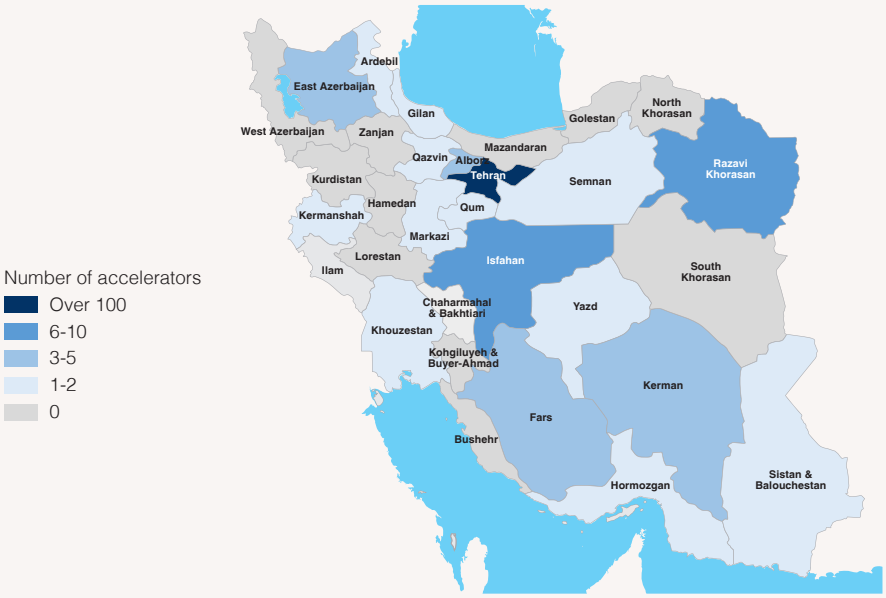
Source: https://isti.ir

Mapping of Innovation Centers in Iran

Source: https://isti.ir

The dispersion of 159 accelerators cooperating to innovation centers in Iran is mapped in the figure below.

Mapping of Accelerators in Iran



Source: https://www.undp.org

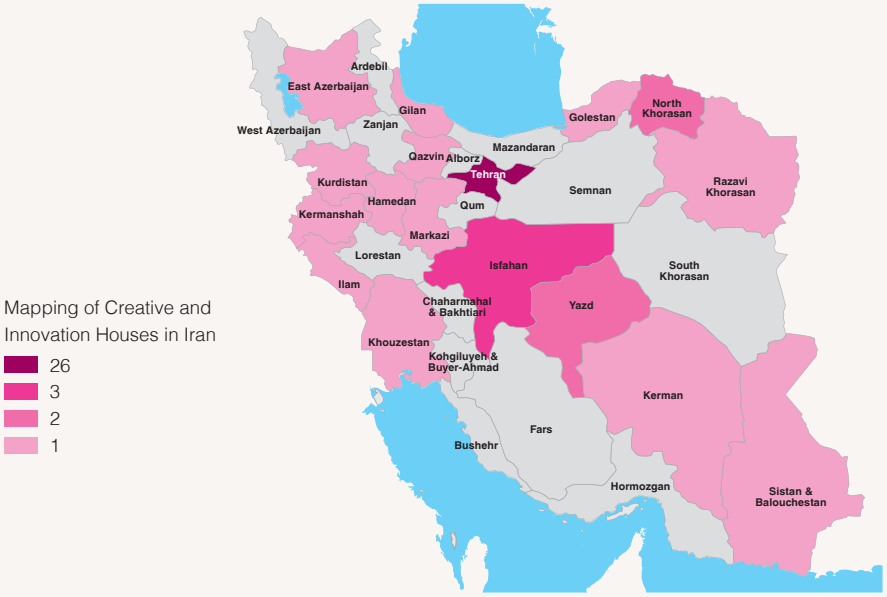
• Creative Companies

In Iran, there is another type of company, namely “Creative Company” which officially came into existence in 2017. The main activity of creative companies is in the field of art, creative industries, culture, and digital services. Creative companies use creativity, innovation, and new business models in offering new products and services. However, the growth and development of their products and services are not based on advanced technology. The total number of creative companies in Iran has reached 1,914 by January 2024.

• Creative and Innovation Houses

Creative and innovation houses, as the main platform of the Vice-Presidency for Science, Technology and Knowledge-based Economy are responsible for realizing the ecosystem of cultural technologies and creative industries in the country. To do so, creative and innovation houses are responsible for policy making, facilitating and supporting the formation of creative companies through helping to create infrastructure, provide financial facilities, counseling, empowerment and spiritual support in the development of the product and market of soft technologies and creative industries. To support the development of the infrastructure of creative companies, about 70 creative and innovation houses have been formed in the country, where they provide acceleration services, consulting, mentoring, market development and product development, and investment from idea to product. It is worth mentioning that 46 of 70 creative and innovation houses include the licensed creative and innovation houses and 24 of which are those set to receive licenses in the country.

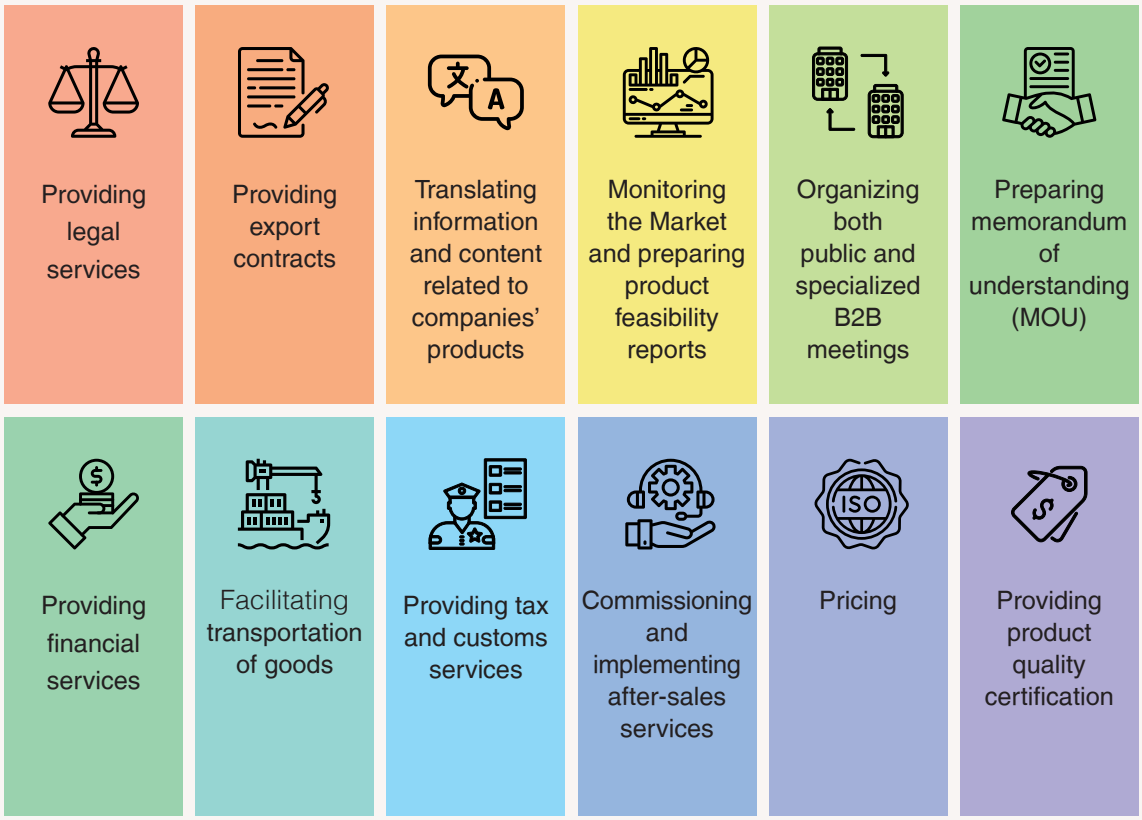
Mapping of Creative and Innovation Houses in Iran



Source: https://isti.ir

• Iran House of Innovation and Technology

Iran house of innovation and technology (IHIT) have been established with the goal of enhancing hardware infrastructure, commercializing, and exporting knowledge-based technologies. These centers function as a showcase for knowledge-based products and achievements, offering dedicated and shared workspaces, B2B meeting rooms, and software services such as performing market research, obtaining sales standards and licences, and marketing. Additionally, it supports for the foreign market development of knowledge-based companies through active collaboration with export brokers and export management companies (EMCs). Total number of IHITs in Iran mounts to 8 by Jan. 2024.



Science and Technology Key Players

Iran's S&T system is marked by a variety of key players operating at different levels. Here, a brief overview of some key bodies is explained as follows:

• Supreme Council of Cultural Revolution

The Supreme Council of Cultural Revolution (SCCR) was established in 1984 upon official closure of universities. SCCR is the highest policymaking and legislative body for all stages of pre-university and academic education. Its resolutions do not require parliament's approval and become law automatically. Members of the SCCR include heads of the three powers of state, Minister of Education; Minister of Science, Research and Technology; and Minister of Health and Medical Education, as well as several cultural experts. Ministry of Education is responsible for all stages of pre-university education. Within the MSRT, technology development falls under a separate Vice-Ministry.

The vast scope of mission of the council includes all fields related to culture and science throughout the country. The council, then, is responsible for providing and approving principles, objectives, policies and programs related to the scientific and cultural issues, providing the cultural engineering map of the country and updating this map, formulating map of science, providing a plan to develop the educational system of the country, directing and reorganizing macro-management in cultural, educational, research and media organizations, and presenting efficient strategies for each field.

• Vice-Presidency for Science, Technology and Knowledge-based Economy

Iran's Vice-Presidency for Science, Technology and Knowledge-based Economy (VPSTKE) was established with the aim of promoting national sovereignty, generating wealth and improving the Iranian people's life quality through expanding technology and innovation capabilities in the country as well as promoting the "National Innovation System" along with completing its components and circles. Other goals were also taken into consideration when founding the institution, including: Developing "knowledge-based economy" through inter-sectoral and inter-departmental coordination and synergy, strengthening knowledge, industry and society linkages, facilitating exchanges between supply and demand sectors of technology and innovation, commercializing technological innovations, and developing knowledge-based firms. The VPSTKE also seeks such objectives as developing those national strategic technologies specified in the country's comprehensive scientific roadmap, fostering international collaborations in science, technology and innovation (STI) arena, and promoting science and technology diplomacy. In this line, the VPSTKE has been charged with a number of assignments including planning, encouraging inter-sectoral coordination and synergy in the "National Innovation System", and promoting integration among development plans and macro-policies on STI.

In addition to the major responsibilities mentioned, the VPSTKE is also tasked with supporting knowledge-based firms, and in general, strengthening the foundations of the knowledge-based economy. The necessary measures in this field include: developing S&T capacities, strengthening commercialization processes, supporting knowledge-based institutions/firms and engineering design companies, supporting the expansion of R&D activities in the country, improving technology management capabilities among knowledge-based firms, boosting technological entrepreneurship, improving knowledge-based business environment, effectively allocating capital to enable the production of knowledge-based goods and services, developing venture capital mechanisms and providing sources of finance for knowledge-based firms, supporting the creation

and empowerment of private organizations involved with production and export of knowledge-based goods and services, stimulating demand and marketing for domestic knowledge-based goods and services and facilitating their exports as well.

• The Center for International Science and Technology Cooperation

The Center for International Science and Technology Cooperation (CISTC) was established in 2017 through merger of the Deputy for International Affairs and Technology Transfer affiliated to the Vice-Presidency for Science and Technology and Knowledge-based Economy and the International Affairs Office of the National Elite Foundation.

As it has been already mentioned, CISTC is assigned to implement the Comprehensive Document of the International Scientific Relations of IRI introduced by the Supreme Council of Cultural Revolution to the Vice-Presidency for Science and Technology and Knowledge-based Economy in 2018. Developing cooperation and constructive interactions with other countries, international scientific and technological entities and foreign experts in line with achieving a leading position in the knowledge economy is considered to be the main mission of this center.

Promoting scientific partnerships and developing human resources by taking advantage of the capacity of foreign experts especially Iranian diaspora and brain circulation, expanding technological cooperation and exchange by using capacities of the international/foreign companies and entities in the field of technology development and exchange, and developing knowledge-based businesses through using the capacity of the international markets and facilitating entry of domestic KBFs as well as technology companies to such markets are among the main strategies of CISTC.

• Ministry of Science, Research and Technology

The Ministry of Science, Research and Technology (MSRT) is the main state ministry involved in higher education, science, research and technology. MSRT mandates to:

- Provide support and encourage universities and research institutes (public/private);
- Develop basic and applied research;
- Provide support for S&T parks and incubators;
- Focus on fields such as Engineering, Basic Sciences, Art, Humanities and Agriculture;
- Promote and support research through funding, human resource development and providing the necessary research facilities;
- Facilitate knowledge and innovation development in all scopes of science and technology including indigenous knowledge;
- Contribute to life quality improvement;
- Provide services to research community especially at higher education and research institutions.

In addition, MSRT is paying particular attention to implementing diplomacy of science and technology, traffic of academic collaborations, strengthening and improving national and international science and technology cooperation with its foreign partners including overseas universities and science and technology institutions.

In addition, there are other public or private institutions with related functions including the Ministry of Education which is responsible for primary and secondary education, the Ministry of Health and Medical Education, and other scientific and technological institutions affiliated with other public or private institutions in the country.

• Ministry of Information and Communications Technology

In 2004, the Ministry of Posts, Telegraphs and Telephones was renamed the Ministry of Information and Communications Technology (MICT), following ratification by the Islamic Consultative Assembly, to better represent the new duties of the ministry. The main duties of the ministry include:

- Compiling overarching policies and regulations for the advancement of communication and information technology;
- Policymaking and overseeing macro-level planning, while directing and monitoring the nation's postal, post bank, telecommunication, and information technology networks;
- Representing the government in international communication and information technology associations and assemblies, working towards fulfilling international and bilateral commitments and agreements related to postal services, post banks, telecommunication, and information technology;
- Drafting and proposing national standards concerning communications and information technology to the relevant authorities in the country;
- Implementing standards, regulations, and quality control systems, as well as approving equipment samples (Type Approval), for the provision of services and the establishment and operation of telecommunication, postal, and information technology networks within the country; and
- Facilitating research and development (R&D) to enhance the widespread adoption of new technologies in the field of information technology and promoting the culture of their practical application.

Through the Information and Communication Technology Center, the aforementioned ministry endeavors to attain the foremost position in the realm of e-government, encompassing cyber security and services, as well as establishing a single window in conventional assessments at the ministry level. Overall, this center serves multiple objectives in the field of e-government, including:

- Enhancing a secure infrastructure to deliver electronic government network and software services;
- Formulating and executing a comprehensive and indigenous cyber security system across infrastructure, service, and data layers;
- Developing system integration and intelligence for service software at the Ministry's headquarters through the incorporation of cutting-edge technologies, including artificial intelligence;
- Modernizing the headquarters' service-oriented architecture across goals and strategies, business, and processes layers; and
- Effectively executing plans related to single window services.

• Center for Progress and Development of Iran

Since its establishment in 1984, the Center for Progress and Development of Iran (CPDI) has always tried to identify bottlenecks and neglected affairs in the progress of Iran, especially in the field of high technology, and to contribute to the advancement of these affairs in the country. This role is being played by informing and creating a discourse on the country's key opportunities and threats for progress, and participating in operational actions in order to actively engage with them (such as prototyping and modeling, institution-building, policy-making, and mechanism design). CPDI believes that the progress of the country will not be achieved, unless a consensus takes place between various stakeholders in the country, and the opportunities for international cooperation are properly exploited. For this reason, CPDI- as a consultant and

facilitator- has a close relationship with all stakeholders, including executive agencies, universities and research institutes, private companies, specialists and scientists. This center also tries to identify international cooperation opportunities and establish constructive and continuous interactions with different countries and institutions.
Achieving these goals requires an agile and flexible organizational structure. Accordingly, CPDI, with the help of young elites in an ad-hoc structure, organizes emerging groups focused on various fields of progress to take special missions on the path to progress of the country. At present, the main focus of these groups is on the following axes:

- Identifying and monitoring emerging issues with great potential to create transformation, and trying to involve the country in such areas in a timely manner;
- Identifying opportunities and threats facing the country in resilient economy and knowledge-based economy, and trying to find effective ways of dealing with them;
- Monitoring and identifying management mechanisms and soft technologies, and trying to benchmark the successful ones and localize them.

• Iran High-Tech Laboratory Network

The Iran High-Tech Laboratory Network (called LabsNet) was established in 2014 by the Vice-Presidency for Science and Technology and Knowledge-based Economy with the aim of developing science and technology and creating the effective communication between laboratories and researchers by sharing infrastructures and providing the universities and industrial researchers with laboratory services. LabsNet missions include improving quality of the high-tech laboratory services by standardization of laboratory activities, improving laboratory technicians' knowledge base through organizing training courses and experience-sharing sessions, and facilitating industrial and academic researchers' access to laboratory services.
Currently, LabsNet serves more than 1500 public and private laboratories in Iran. These laboratories include universities (45%), institutes and research centers (19%), companies (35%), and technology parks and incubators (1%). Figure 19 displays laboratories affiliated to High-Tech Laboratory Network.

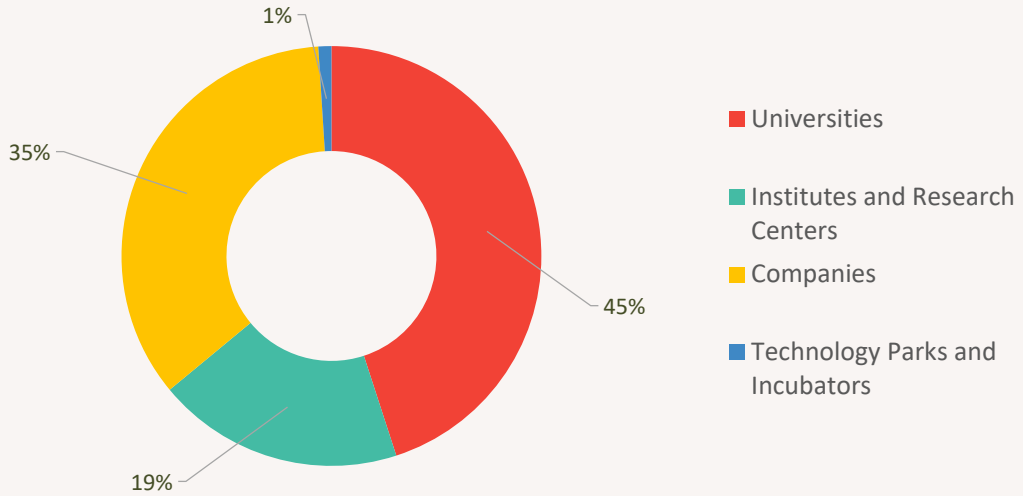


Figure 13: Laboratories affiliated to High-Tech Laboratory Network

LabsNet also covers a wide range of fields in high technology laboratory services such as Nano, Bio, Energy, Cognitive, Stem Cells, ICT, Herbal, etc. Also, it boasts:

- 1500 laboratory complexes (national) in 152 cities throughout the country;
- More than 10000 laboratory staffs;
- More than 28000 laboratory equipment (national); and
- More than 3 million lab services per year.

LabsNet provides its members with a unique opportunity to share their capabilities, experiences, and knowledge through the network and also creates funding opportunities for the renovation and/or standardization of facilities at member laboratories through the funds offered by the Vice- Presidency for Science and Technology.

LabsNet maintains a variety of international collaborations in different fields such as laboratory services, interlaboratory comparisons, training, standardization, renovation, and other projects of mutual interest. For this purpose, the International Unit of LabsNet was established in 2020. It is worth mentioning that 21 laboratories from 7 countries have joined this network so far.

• Iran National Innovation Fund

The Iran National Innovation Fund (INIF) was established directly under the President in 2011 for the purpose of supporting KBFs both financially and non-financially. Since March 2017, it has funded 2117 projects with total turnover of $395 million. Moreover, high and medium-high-tech exports have dramatically increased from $1.5 billion in 2004 to $12.1 billion in 2014, which followed by turning the total trade balance positive in 2016.

• Iran National Science Foundation

The Iran National Science Foundation (INSF) was founded in 2003 by approval of Iran's Supreme Council of Cultural Revolution. For more than a decade, INSF has taken meaningful actions to provide a variety of support programs to Iranian researchers and scientists so that the gap between science and industry is bridged and the Iranian people can directly touch the impact of scientific development on their life quality. Currently, more than 70 percent of the faculty members and researchers from different universities and research institutes across the country are involved in various activities and projects defined by INSF.

The major activities of the foundation include providing support for innovation center development, research projects, and international patent application; holding scientific events, post-doctoral and short-term visit programs; and granting various research awards.

• National Elites Foundation

The National Elites Foundation was set up in 2004 with the aim of providing the innovators and leaders in science with financial and intellectual support. The organization offers different kinds of support to its members including scientific, monetary/non-monetary incentives such as granting low-interest or gratuitous loans, supplying any sources or laboratory facilities scarce in the country, involving the members with in-demand/priority national projects, assisting the members to commercialize their innovations or move them to the policy level, as well as providing them with other similar support services and networking opportunities.

In December 2013, a new department was created within the foundation, called the Deputy of International Affairs. It aims to harness talent of non-resident Iranians to improve domestic capacity in S&T and take advantage of experience of the diaspora. The foundation tailors its

services to four different groups: Iranian PhD graduates from the world's top universities, Iranian professors teaching in the world's top universities, Iranian experts and managers heading the world's top scientific centers and companies in technological fields, and -last but not least- non-resident Iranian investors and entrepreneurs with successful experiences. The eligibility criteria were revised in 2014 to include groups and individuals based on their research expertise, experience, and academic performance.

• Pardis Technology Park

The Pardis Technology Park (PTP), as the most pioneering S&T park in the country, was established in 2005 under supervision of the Vice-Presidency for Science and Technology and Knowledge-based Economy. PTP has been designed to commercialize technology achievements and create appropriate conditions for technology growth and hi-tech companies development through provision of high-end services; strengthening competitive advantage; and providing access to technology incubators, spin-off processes, and expert labor. It also meets the requirements of getting linked to the actual and potential global markets.
In January 2020 around 470 hi-tech companies were operating in PTP. The below figure represents technology combination of member companies.

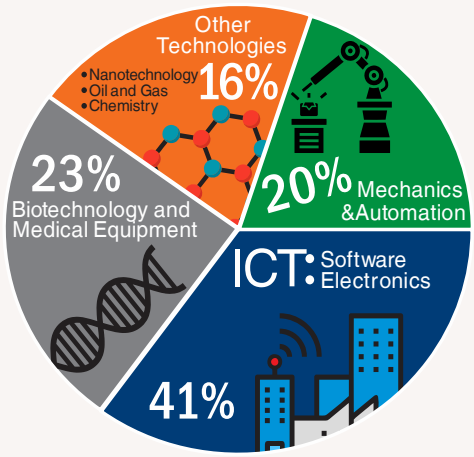


Figure 14: Combination of PTP Companies

• Innovation Acceleration Center

The Innovation Acceleration Center began its work in 2014 under supervision of the Pardis Technology Park (PTP) with the primary mission of entrepreneurship ecosystem reinforcement and start-ups growth acceleration in the country. Both the government and the private sector have collaborated and shared their equipment and experiences in order to empower entrepreneurship ecosystem.

Besides holding different entrepreneurship events, the center is responsible for establishing different accelerators as an effective measure to empower the startups and educate young entrepreneurs. Innovation Acceleration Center is looking forward to establishing co-working spaces for young entrepreneurs in order to build new teams and found new startups through collaborating with the startup community and the private sector.

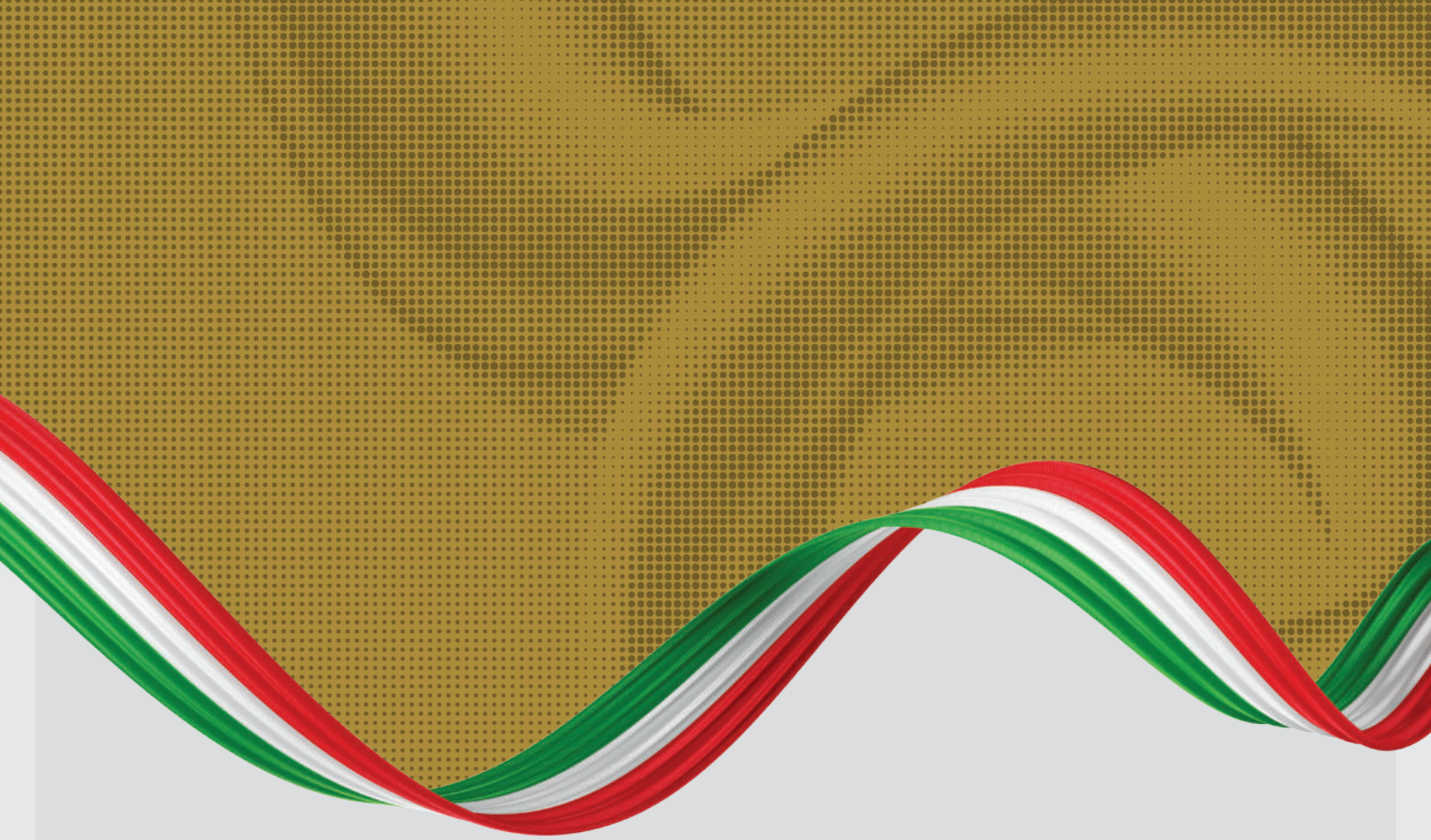
• Iranian Venture Capital Association

The Iranian Venture Capital Association (IRVC) founded in 2012, is a non-governmental organization representing Iran's venture capital and angel investor sectors as well as accelerators and S&T funding organizations. More than 80% of Iranian VCs and accelerators are IRVC members.

Thanks to large network of investors and inventors, IRVC provides the accurate data and transparency on Iranian market to help investors make fact-based decisions on bringing in their own capital, innovation or expertise to the market.

By building a solid structure of active financing institutions, VCs and entrepreneurs in Iran, IRVC promotes professional investment in startups and new technology-based firms.

Some Key Players in Iran's Science, Technology and Innovation Ecosystem



Following the national development policy with an emphasis on realization of knowledge-based economy, compared with other oil-rich countries in the region, Iran has successfully accomplished to create the most diversified economy with the lowest dependence on oil and gas incomes. In line with the national innovation system, Iran is moving steadily towards a knowledge-based and innovation-based economy and seeks to reinforce its productive capacity, encourage international collaboration to exchange technology and engage more actively in innovative activities to foster economic growth and sustainable development.