In the name of God,
the most Compassionate,
the most Merciful

Iran's 20-Year Country Report on the WSIS

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IRAN 20-Year Country Report

I. Executive Summary

Information and Communication Technology (ICT) is essential in narrowing the digital gap and promoting social justice. Over the last two decades, nations worldwide have implemented infrastructure at various levels and harnessed ICT's potential to enhance their governance efforts. Most of these measures can be mapped to the Action Lines of the World Summit on the Information Society (WSIS). In the past 20 years, international organizations, including ITU, UNESCO, UNCTAD, and UNDP, play a vital role as WSIS Action Line facilitators, and actively engaging in their follow-up during WSIS Forums and affiliated events.

The Islamic Republic of Iran has been an active role in the WSIS process from the beginning. During the past twenty years, Iran has initiated and deployed numerous ICT-driven projects to enhance national capabilities. The Ministry of ICT and the Information Technology Organization of Iran (ITO), the body responsible for developing information technology in Iran, recognizes the important role of the Action Lines of the World Summit on the Information Society (WSIS) in accelerating smart government and sustainable development in the country. In this regard, many efforts have been made in recent years to enhance ICT infrastructure and provide affordable e-services in Iran. In the process of realizing the information society, knowledge transfer and sharing best practices through regional and international cooperation are key points that can boost the socio-economic situation of countries.

This report presents a broad overview of the key activities, accomplishments, challenges, and future priorities associated with the development and application of ICTs in Iran in recent years. All the initiatives described, which are categorized in this report under WSIS Action Lines, have been planned and/or implemented according to I.R.Iran's National Development Plans. The report also provides brief statistics, key data or indicators that demonstrate the country's progress in the field of ICT.

Furthermore, the report describes the WSIS follow-up in Iran, most of which have been planned and carried out by the Iran National Committee for WSIS in the Information Technology Organization of Iran (ITO), as well as Iran's activities in WSIS Forums in past years.

II. Progress on WSIS Action Lines

This section introduces some of the digital strategies, achievements, challenges, and future priorities in the field of information and communication technology that have been developed and implemented by the Ministry of ICT based on the country's five-year national development plans. These items have been categorized under the WSIS Action Lines for this report.

Achievements include advancements in digital infrastructure, increased access to ICT services, and the promotion of digital literacy among citizens. These efforts aim to bridge the digital divide and foster innovation across various sectors. However, challenges such as limited resources, most of which stem from Unilateral Coercive Measures (UCM) imposed by some countries on others, as well as the need for effective regulatory frameworks to keep pace with rapid technological changes, remain critical areas to address.

Future priorities include enhancing digital inclusivity, strengthening cybersecurity measures, fostering public-private partnerships, and leveraging emerging technologies like AI and IoT to drive socio-economic development. These key accomplishments, challenges, and future priorities areas are detailed for each of the action lines below.

1. Action Line C1: The role of governments and all stakeholders in the promotion of ICTs for development

- **Achievements**
  - Deploying a national information network and expanding e-government services, including platforms such as the National Smart Government Services Window, the Land Management Unit Window, the Civil Registration System, and Adl-Iran.
  - Introducing public participation platforms, such as transparency systems, public oversight tools, and various participatory governance applications.
  - Setting up accelerators and science and technology parks to empower startups operating in the ICT domain.
  - Incorporating information technology into sectors like education (Shad), healthcare (SIB, electronic prescriptions), smart farming, and digital tourism.
  - Developing and executing thorough and strategic ICT policies.
  - Providing training and fostering a competent workforce for the information technology industry.
  - Offering financial support to startups and technology-focused enterprises.

- **Challenges**

  - Reluctance from certain traditional institutions to embrace digital transformation and the gradual pace of technology adoption.
  - Insufficient digital skills, which limit the efficient utilization of technological advancements.
  - Limited funding and the impact of fluctuating currency rates.
  - Technological sanctions imposed by advanced nations on others.
  - Restricted government budgets coupled with inadequate investment in ICT infrastructure.
  - Disparities in accessing high-speed, reliable internet, particularly in rural or underprivileged regions.

- **Future priorities**

  - Enhance digital governance by creating robust legal frameworks and institutional structures to facilitate smart services and advance e-government initiatives.
  - Formulate a comprehensive national digital transformation strategy in collaboration with all stakeholders, with an emphasis on sectors such as education, healthcare, agriculture, and public services.
  - Establish clear and transparent frameworks to foster public-private partnerships (PPP) for investing in ICT infrastructure and elevating service quality.
  - Empower marginalized groups—including women, rural populations, indigenous communities, and individuals with disabilities—by designing inclusive services and leveraging multi-stakeholder platforms.
  - Focusing on digital justice and nurturing a digital culture.
  - Developing legal and regulatory structures to drive market expansion.

2. Action Line C2: Information and communication infrastructure

- **Achievements**

  - Expanding internet accessibility and mobile phone penetration (110% mobile phone ownership, 98% network connectivity).
  - Advancing e-government and digital services (70% of services delivered electronically, SAMED platform, online citizen engagement system, national platform for information dissemination and free access, banking services, and more).
  - There has been an expansion of 4G services, alongside the start of preparations to develop fifth-generation (5G) technology in metropolitan areas and industrial hubs.

- Large-scale fiber-optic projects, such as the "Fiber-optic plan for homes and businesses," have been launched to promote digital inclusivity.
- The growth of national data centers and internal traffic exchange points (IXPs) has contributed to improved domestic access quality.
- Supporting the expansion of knowledge-driven firms that specialize in infrastructure hardware and softwareresult in rising the share of locally produced ICT equipment in the local market.
- Public services are increasingly being delivered through digital platforms, catering even to remote locations through initiatives such as smart agriculture systems, virtual education, and digital health services.

• Challenges

- Insufficient foreign investment in ICT infrastructure, largely impacted by Unilateral Coercive Measures (UCM) by some countries against others.
- Limited availability of assistive technologies and inadequate infrastructure to support individuals with disabilities.
- Lack of coordination among agencies and overregulation in the regulatory framework.
- Insufficient availability of qualified professionals in the ICT sector.

• Future priorities

- Development of high-speed, high-quality communication infrastructure, encompassing the design and application of the Ultra-Broadband Program (UBBP), along with FTTX and 5G expansion, as well as the development of the National Information Network.
- Guaranteeing universal access to high-speed internet for all societal segments through strategic investments in terrestrial, wireless, and satellite systems.
- Creating a fair and transparent competitive landscape for ICT service providers to improve service quality and lower costs.
- Encouraging the advancement of technologies and the localization of ICT equipment to ensure inclusivity for individuals with special requirements.
- Establishing domestic Internet Exchange Points (IXPs) to reduce dependence on international networks, thereby bolstering security and enhancing service performance.
- Fortifying the foundation of cloud services, data centers, and pervasive computing technologies to lay the groundwork for a robust smart national infrastructure.

- Advancement of space and emerging technologies.
- Enhancement of national data infrastructure, including rapid processing systems, data center hubs, and artificial intelligence.

3. Action Line C3: Access to information and knowledge

• Achievements

- Implementing initiatives such as the "Open Access and Publication System for Information" to grant the public access to specific official data.
- Building national repositories for scientific and cultural information, including platforms like “Irandoc,” “National Theses Treasury,” “Normegs,” and the “Regional Center for Science and Technology Information.”
- Advancing efforts to establish and enhance digital libraries in academic and organizational contexts, enabling online access to scientific materials.
- Adopting open-source solutions in certain organizations and educational institutions to cut costs while boosting security.
- Setting up digital cultural hubs affiliated with the Ministry of Islamic Guidance in various provinces to make multimedia content more accessible to the public.
- Conducting events, such as festivals and awareness campaigns, to promote open data usage and encourage the creation of indigenous and free software solutions.

• Challenges

- Restricted or limited availability of domestically generated scientific research, including theses and national publications.
- Legal and intellectual property barriers obstructing the advancement of open-source software or the redistribution of publicly available content.

• Future priorities

- Building the infrastructure for national digital libraries and archives, enabling efficient search capabilities and free access to scientific, cultural, and governmental resources.
- Developing centralized repositories of official public information (Open Government Data) to enhance transparency, encourage civic engagement, and foster data-driven innovation.
- Broadening the availability of multipurpose public stations to provide internet connectivity and access to digital information, particularly in underprivileged regions.

- Enhancing public education to equip individuals with information literacy and proficiency in utilizing digital tools, focusing on schools, universities, and technical or vocational institutions.
- Promoting the adoption of open-source and free software to offer cost-effective tools for knowledge creation and dissemination.
- Establishing incentives to support open access to scientific research and academic theses via national open-access platforms.

4. Action Line C4: Capacity building

• Achievements

- Broadening virtual education platforms such as "Shad" and "Faradars", while enhancing public awareness of e-learning options.
- Implementing initiatives like "Coding for Kids" and computer instruction in secondary schools to teach fundamental digital skills.
- Offering specialized ICT training at technical institutes and universities of applied sciences.
- Expanding access to open educational resources (OER) online and promoting self-guided learning platforms.
- Establishing innovation hubs and educational accelerators to develop youth skills in tech-driven fields.
- Advanced efforts in equipping teachers with necessary tech skills for classroom use, especially noted during the pandemic period.
- Involvement of NGOs in setting up camps, workshops, and offering voluntary digital education activities for children, teenagers, and underprivileged groups.

• Challenges

- Limited training opportunities for teachers and trainers to develop skills in technology and modern teaching methodologies.
- Lack of quality virtual education resources and inadequate infrastructure, especially in rural and underserved regions.
- Weak alignment between higher education programs and the real-world requirements of the ICT job market.
- Loss of skilled technology professionals due to brain drain, coupled with challenges in retaining specialized talent.

- **Future priorities**

  - Enhance digital literacy for individuals of all age groups, prioritizing vulnerable populations such as the elderly, rural communities, and individuals with disabilities.
  - Strengthen distance learning systems and educational content across all education levels and skill development areas.
  - Advance and update training programs for teachers and educators to promote efficient utilization of technology in teaching and learning.
  - Establish pathways for lifelong learning and self-education through nationally and locally accessible open education platforms.
  - Promote the education and training of specialists in information and communication technology, with a particular focus on emerging sectors like artificial intelligence, cybersecurity, data analysis, and the Internet of Things.
  - Advocate for active involvement of youth and community volunteers in initiatives to enhance digital skills development locally.

5. Action Line C5: Building confidence and security in the use of ICTs

- **Achievements**

  - Setting up the "MAHER Center" as a system dedicated to managing and coordinating the country's computer security incidents (National CERT).
  - Establishing infrastructure for digital signatures and encryption within financial, banking, and governmental systems.
  - Implementing digital authentication mechanisms and enhancing the security of e-government transactions and public services.
  - Expanding the role of the FATA police in identifying cybercrimes, combating them effectively, and increasing public awareness.
  - Organizing specialized cybersecurity workshops, conferences, and training sessions for managers, developers, and end-users.
  - Reinforcing measures to detect and counter malware, phishing attempts, and DoS/DDoS attacks.
  - Promoting the growth of security-focused knowledge-based companies that develop indigenous digital security products and services.

- **Challenges**

  - Lack of professionals with expertise in information security and privacy, especially within government organizations.

- Limited access to effective digital security education for individual users and small enterprises.
- The escalation of cybercrime and online fraud outpacing the current capabilities for monitoring and control.
- The absence of well-defined standards and technical guidelines for creating secure and trustworthy digital applications and services.
- A lack of proactive frameworks to enable swift, real-time responses to cyber incidents (incident response).

• Future priorities

- Develop and implement comprehensive and integrated policies in the field of national cybersecurity with the involvement of various stakeholders.
- Promote heightened public awareness and education on cyber risks, safeguarding personal data, and adopting preventive measures.
- Strengthen infrastructure and systems for rapid detection and response to cyberattacks (CERT/CSIRT) in key institutions.
- Focus on the development of homegrown technologies for encryption, authentication, and data security, with an emphasis on government and financial systems.
- Strengthen legal structures to protect user privacy and uphold digital consumer rights.
- Foster a secure and trustworthy ecosystem for online transactions, e-commerce operations, and digital financial tools.
- Address spam, Internet fraud, and cyberspace abuse through inter-institutional and international collaboration.

6. Action Line C6: Enabling environment

• Achievements

- Enacting key laws and regulations such as the E-Commerce Law, the Cybercrime Law, and the E-Government Regulations.
- Introducing a single window for smart government services and enhancing offline services across various sectors (registration, insurance, tax, health).
- Accelerating the growth of startups and knowledge-based companies in the ICT field with support from the Innovation and Technology Fund and science and technology parks.
- Expanding the country's participation in regional and international forums on Internet governance and digital policymaking.

- Enhancing the registration of domestic Internet domains (.irand .Iran) and advancing national DNS infrastructure.
- Formulating policies and programs to support small and medium-sized enterprises (SMEs) in the digital sector.
- Advancing the development of national technical standards for digital services, secure systems, and electronic archiving.

• Challenges

- Delays and inconsistencies in updating laws governing the digital domain, resulting in a disconnect between technological advancements and legislation.
- Lack of clarity regarding intellectual property rights for digital creations, software, and data, which undermines innovation and erodes market confidence.
- Challenges in efficiently resolving disputes pertaining to digital trade, online consumer rights, and similar issues.
- Legal and technical obstacles that hinder the full deployment of e-government initiatives and the provision of inclusive digital services to the public.
- Insufficient technical infrastructure to effectively manage domains, DNS, and internal root servers in compliance with global standards.

• Future priorities

- Develop modern legal and regulatory frameworks aligned with digital advancements (e.g., e-commerce, privacy, digital intellectual property laws).
- Support the establishment and growth of innovative digital enterprises, including startups and SMEs, by minimizing bureaucratic hurdles, offering financial support, and introducing incentive programs.
- Develop the necessary technical and legal infrastructure to manage Internet governance at both national and regional levels, such as domain registrations, regional root servers, and IP management.
- Promote the adoption of national ICT standards that are aligned with international benchmarks for services and products in the tech sector.
- Strengthen arbitration institutions and dispute resolution mechanisms in cyberspace.
- Advocate for the development and growth of local platforms in e-commerce and e-government initiatives.
- Foster active engagement in international ICT and Internet forums to shape and influence global digital policies.

7 Action Line C7: ICT applications

• Achievements

- Implementation of digital health solutions, including e-prescriptions, electronic medical records, virtual appointments, and telemedicine services.
- Enhancement of e-government platforms alongside offline public service systems, such as tax platforms, insurance services, document processing, and integrated smart service hubs.
- Advancement of digital enterprises in areas like online shopping, virtual services, freelancing platforms, and digital payment solutions.
- Application of space technologies and remote sensing tools for monitoring agricultural activities, managing natural disasters, and overseeing natural resources.
- Promoting increased transparency in certain organizations through systems such as salary and benefits management platforms and municipal transparency tools.
- Extensive adoption of virtual education during the pandemic, along with the expansion of e-learning platforms.
- Launching initiatives to regulate electronic waste recycling, facilitated by technology-driven companies.

• Challenges

- Fragmentation and inconsistency in the progression of electronic systems across various sectors (e.g., government, healthcare, agriculture, education, etc.).
- Insufficient communication infrastructure and limited bandwidth,hindering the effective rollout of e-services programs in remote and rural areas.
- Lack of skills among end-users and some executives to effectively engage with e-applications.
- Lack of nationally established standards and frameworks for open data, information security, and system interoperability.
- Insufficient oversight and absence of a comprehensive strategy to manage electronic waste and mitigate the environmental impacts of technological devices.
- Delayed integration of digital transformation in certain fields (such as conventional education and traditional farming practices).

• Future priorities

- Innovating ICT solutions for public service areas such as e-health, e-government, smart farming, virtual learning, and environmental management.

- Enhancing infrastructure to facilitate teleworking and e-employment, thereby creating broader job opportunities, particularly in underprivileged regions.
- Developing and applying ICT-driven systems for early natural disaster alerts and crisis response to strengthen community resilience.
- Increasing the use of ICT in environmental monitoring (e-environment) while advocating for sustainable production and consumption approaches.
- Building the necessary infrastructure to support digital knowledge-sharing (e-publishing) and scientific advancement (e-science), including within universities and research institutions.
- Enhance public education to promote information literacy and skills in using digital resources, especially in schools, universities, and technical and vocational centers.
- Establishing robust policies and systems for managing e-waste and recycling technological devices.
- Utilizing technology to strengthen transparency, ensure accountability, and minimize corruption within governments and public organizations.

8. Action Line C8: Cultural diversity and identity, linguistic diversity, and local content

• Achievements

- Launching initiatives to digitize cultural heritage and manuscripts through collaborations with the National Library, the Cultural Heritage Organization, and academic institutions.
- Enhancing platforms dedicated to publishing local, traditional, and artistic content in digital spaces, including apps for folktales and traditional music.
- Advancing the creation and improvement of Persian language processing tools, such as smart keyboards, Persian OCR systems, and text-to-speech software.
- Boosting the contribution of digital creative industries like gaming and animation to the country's cultural content sector.
- Designing and implementing various cultural programs in the digital space targeting children, youth, and specific community groups.
- Developing strategies and adopting measures to promote and support the Persian language in the digital realm, including policies from the Supreme Council of Cyberspace on language and script usage.
- Promoting the use of indigenous Persian (.Iran) internet domains to establish a distinct digital identity rooted in local culture.

- **Challenges**
  - Lack of smart tools supporting local languages (natural language processing, speech recognition, OCR, etc.)
  - Inadequate funding and lack of dedicated support for initiatives aimed at digitizing cultural and traditional heritage.
  - Limited representation of local languages and dialects online, particularly in utilizing emerging technologies to create original content.
  - The influence of cultural globalization and the prevalence of non-native content pose challenges to preserving local cultural diversity.
  - Insufficient education on cultural and media literacy for a mindful and critical engagement with digital content.

- **Future priorities**
  - Creating and improving digital content in local languages and ethnic dialects to promote linguistic justice in cyberspace.
  - Developing language-based technologies and tools (such as search engines, translators, and voice assistants) for Persian and indigenous languages.
  - Digitizing and archiving the country's cultural, literary, artistic, and traditional heritage into publicly accessible platforms.
  - Formulating cultural policies to support digital cultural industries (creative industries) such as gaming, animation, electronic publishing, and digital music.
  - Empowering ethnic groups, indigenous peoples, minorities, and vulnerable populations to create and share their cultural content in cyberspace.
  - Expanding international domains with local languages (such as Persian domains) and localizing digital communication tools.
  - Promoting international cultural interaction through the exchange of cultural and artistic digital content.

9. Action Line C9: Media

- **Achievements**
  - The significant growth of digital media platforms, online news networks, and user-generated content channels.
  - Growing implementation of media education initiatives for the public and different groups, including the introduction of media literacy programs in schools.

- Establishing new journalism training centers in various universities and media institutions.
- Creating strategic frameworks to address the spread of misinformation and disinformation as well as fake news and harmful content in the digital media space.
- Increased involvement of women and youth in media-related roles, including content creation and management within modern media industries.
- Organizing media festivals and competitions to elevate the quality of cultural production and disseminated information.
- Progressing toward integrating cutting-edge technologies in media, such as data journalism, podcasts, and interactive programs.

• Challenges

- The unrestrained and rapid growth of harmful media content, including fake news, misinformation, and disinformation as well as unsuitable material for children.
- A lack of current and practical training opportunities for journalists and media creators to keep pace with evolving technologies.

• Future priorities

- Supporting and reinforcing the independence of media while promoting inclusivity through diverse perspectives and upholding media pluralism across traditional and digital platforms.
- Developing effective frameworks to counter unlawful, violent, or hateful media content while ensuring the protection of freedom of expression.
- Promoting media literacy among the public, especially the youth, to encourage critical evaluation of information and the ability to recognize misinformation.
- Tackling global media inequality by supporting independent, decentralized media networks and empowering local communities.
- Integrating emerging technologies like artificial intelligence, data analytics, and augmented reality into media production and distribution workflows.

10. Action Line C10: Ethical dimensions of the Information Society

• Achievements

- Drafting regulations and bylaws that address ethical considerations, including issues related to cyberspace, content filtering, privacy, and computer-related offenses.
- Promoting the creation of content and facilitate the organization of training programs and workshops on media ethics, digital responsibility, and users' rights.

- Motivating and encouraging companies to adopt social responsibility in the development and use of technology.
- Developing public policies for online education and the promotion of digital literacy.

• Challenges

- Limited access to locally produced scientific research, including theses and national publications.
- Insufficient infrastructure and inadequate management of digital libraries and national electronic archive systems.
- Challenges related to legal restrictions and intellectual property rights that hinder the development of open-source software or the distribution of public content.
- Lack of public centers for digital access in some of remote and rural areas.
- The need for proper ethical regulations in technology, particularly in emerging fields like artificial intelligence.

• Future priorities

- Developing the infrastructure for national digital libraries and archive with advanced search capabilities and unrestricted access to scientific, cultural, and governmental resources.
- Developing unified databases for official public information (Open Government Data) to enhance transparency, encourage civic engagement, and promote data-driven innovations.
- Expanding the availability of public multipurpose stations to provide internet connectivity and access to digital resources, particularly in underserved regions.
- Promoting the use of free and open-source software to facilitate affordable tools for knowledge creation and sharing.
- Introducing incentives to encourage open access to scientific research outcomes and academic theses through dedicated national platforms.
- Advancing the development of software and digital tools aimed at safeguarding children and adolescents in the online space.

11. Action Line C11: International and regional cooperation

• Achievements

- Actively engaging in the drafting and development of WSIS documents since 2003, along with their follow-up initiatives since 2005.

- Playing a significant role in all WSIS-related events, particularly the WSIS Forum from the beginning to the present, to the present, by showcasing Iran's accomplishments through national workshops, exhibitions, and side activities within the forum.
- Taking part in regional fiber optic collaborations and data exchange projects with neighboring countries, including Azerbaijan and Iraq.
- Representing Iran in ICT international events and meetings via ICT Ministry, its subsidiary bodies.
- Participation in the cooperation frameworks of the Organization of Islamic Cooperation, Shanghai Cooperation Organization, BRICS, ECO, and the International Telecommunication Union (ITU).
- Holding international regional meetings aimed at introducing Iran's international cooperation capacities and opportunities in the field of ICT.

• Challenges

- Challenges posed by unilateral coercive measures (UCM) by some developed countries on others, which have hindered efforts to deploy ICT infrastructure projects.
- Inadequate representation of achievements and progress in the field of ICT to international evaluation bodies.
- Underutilization of regional collaborative capacities in West Asia, Central Asia, and the Islamic world for advancing digital infrastructure.
- Difficulty in attracting foreign investment due to perceived high risks and uncertainty in return on investment, primarily stemming from UCM.

• Future priorities

- Securing international financial investments and engaging in projects aimed at the development of digital infrastructure.
- Collaborating with neighboring countries for the implementation of shared ICT infrastructure initiatives, such as cross-border fiber optics, regional data centers, and information exchanges.
- Crafting and executing joint regional action plans based on ICT agreements and memorandums of understanding with adjacent and culturally aligned nations.
- Enhancing the effective presence of ICT ecosystem industries and businesses within regional markets, including activities like data transit, content service delivery, participation in international development corridors, and engaging in related investments.

- Encouraging investor participation in the development of data center hubs and digital free zones.
- Supporting digital startups and entrepreneurs in providing services at the regional and global levels.

III. National Strategies and Policy Documents

Over the past 25 years, Iran has undertaken numerous projects in the realm of information technology as part of ICTs, all designed according to the series of Five-Year National Development Plans aimed at fostering the country's economic, social, and cultural progress. The latest of these initiatives, "The 7th Five-Year National Development Plan", commenced in 2024 and is set to continue through 2029.

Spanning 24 chapters divided into seven sections, the 7th National Development Plan dedicates chapter 13 to prioritizing the advancement of the national information network alongside the growth of the digital economy. Among its specific focuses, Chapter 23 highlights the development of e-government. This comprehensive plan sets forth various objectives, such as improving information and communications technology infrastructure and applications while increasing the digital economy's contribution to the nation's gross domestic product. As part of its digital economy goals, the plan encompasses initiatives like the "National Program for the Growth of Digital Skills in the Country," which emphasizes fostering the required expertise through introducing new academic disciplines, updating existing educational programs, and reinforcing data-driven innovation in digital services, products, and businesses. Two significant supporting documents are the "Cyberspace Strategic Plan of the Islamic Republic of Iran" and the "Digital Economy Framework", both of which are emphasized in the 7th Five-Year National Development Plan.

The other key component of realizing Iran's ambition for intelligent governance lies in the provision of smart electronic services. Efforts in this direction are guided by the "Smart Government Roadmap," designed to align with Chapter 23 of the 7th Five-Year National Development Plan to drive the country's development. Officially introduced in 2025, this roadmap centers on advancing smart systems and e-government.

On the other hand, Iran is actively advancing its efforts in the field of emerging technologies, with a strong focus on the development and application of artificial intelligence along with its interconnected disciplines. The "National Artificial Intelligence Document of the Islamic Republic of Iran" was approved in June 2024, targeting a ten-year period. With bold ambitions and a clear vision for the future, Iran is striving to cement its status as one of the top ten countries in the field of artificial intelligence, underscoring its commitment to technological progress and cutting-edge innovation.

The rest of this section describes the key activities that have been carried out regarding the WSIS in Iran. As previously mentioned, all efforts related to ICT development, including national strategies, policies, and frameworks, have been devised and executed by the Ministry of ICT according to successive Five-Year National Development Plans. Some of these efforts and measures are categorized under the WSIS Action Lines to report in the WSIS-related events over the past two decades by the Information Technology Organization (ITO), which is the body in charge of policymaking, managing, and monitoring information technology in Iran. These showcases, carried out by ITO directly and/or the Iran National Committee for WSIS that formed by and operating under ITO and Iran Supreme Council of ICT in two different periods, as detailed below.

3.1. Iran National Committee for WSIS

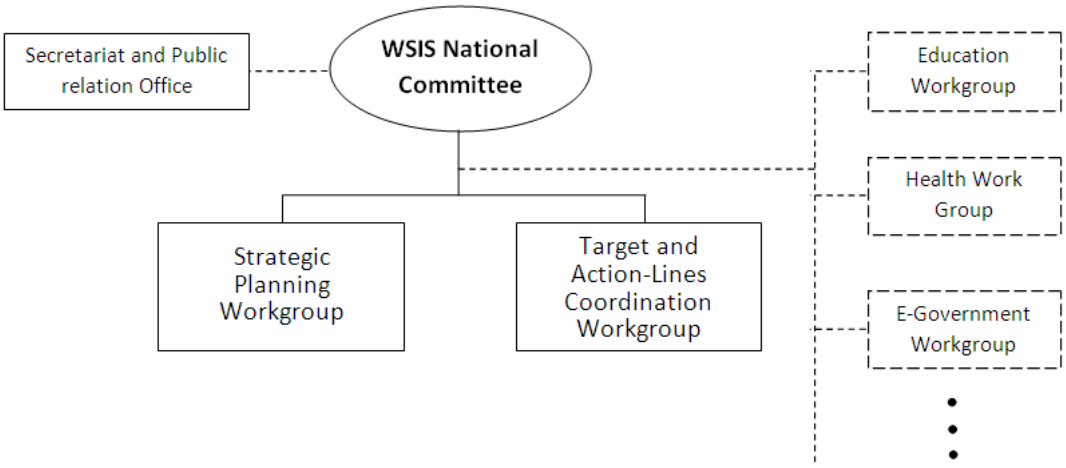
This section outlines the role of the Iran National Committee for WSIS, which was responsible for aligning activities related to WSIS. The committee oversaw coordination efforts and compiled relevant reports, with its various terms shaped by involvement in consultations and negotiations within the WSIS processes.

The National Committee for WSIS (The First Term)

From the beginning of the negotiation phase of WSIS and following WSIS 2003, the Iran Supreme Council of ICT established the Iran National Committee for WSIS to strengthen its role in the WSIS 2005 negotiations and associated initiatives. The committee successfully coordinated activities to prepare contributions submitted through Iranian negotiators for WSIS 2005. Throughout this time, the Committee convened numerous preparatory sessions to guarantee extensive engagement in the Tunis Summit. A comprehensive roadmap outlining all activities was developed, with the Iranian delegation taking a pivotal role in discussions and significantly influencing the drafting of essential final documents. Additionally, Iran operated one of the most prominent and well-received stalls at the WSIS exhibition during the Tunis Summit.

Reorganizing the National Committee for WSIS (Second Term)

After announcing a research project by the Information Technology Organization of Iran (ITO), which had been carried out by the Iran University of Science and Technology (IUST), the National Committee for WSIS was reorganized by ITO in 2011. The new committee members were assigned from governmental organizations, as well as the private sector, academia, and WSIS experts. Two main workgroups were created in the Iran National Committee for WSIS: the Strategic Planning workgroup and the Targets and Action Lines Coordination workgroup. Some subsidiary workgroups also existed in the organizations that were active in pursuing related WSIS Action Lines.



Iran National Committee for WSIS (Second Term) from 2011 to 2108

The Strategic Planning workgroup:

- Analyzes previous decisions
- Updates the calendar of meetings for decision-making
- Organizes national or regional meetings in Iran
- Proposes strategic policies at the national level
- Prepares proposals for decision-making sessions and presents them to the committee, enhancing the preparation of inputs for the next ten-year WSIS process
- Plans for participation in the corresponding meetings

The Target and Action Line workgroup:

- Assigns responsibilities and national obligations on WSIS domains
- Prepares and/or updates the list of the most important meetings and sessions
- Prepares the periodic reports and receives the approval of the committee
- Participates in international meetings and reports them

Subsidiary workgroups were established to address organizational matters, actively engaging with the WSIS Action Lines to prepare reports and submit proposals to the Strategic Planning workgroup. Representatives from various governmental and private sector organizations were invited to participate in these workgroups to coordinate related activities.

Some of the outcomes of Iran National Committee for WSIS

3.2. Iran Engagement in the WSIS Process

Since the initiation of WSIS negotiations, Iranian representatives have played a significant role throughout the process. The outcomes of these efforts have been captured in the WSIS documents from Geneva 2003, Tunis 2005, and New York 2015. The United Nations Commission on Science and Technology for Development (CSTD) in UNCTAD as a subsidiary body of the Economic and Social Council (ECOSOC), holds an annual intergovernmental forum for discussions on timely and pertinent issues affecting science, technology, and development. Since 2006, the Commission has been mandated by ECOSOC to serve as the focal point in the system-wide follow-up to the outcomes of the World Summit on the Information Society (WSIS). CSTD holds annual meetings that review the progress made in the implementation of the outcomes of WSIS. Iranian representatives have attended these meetings, and Iran was a member of the commission from the Asia-Pacific region during some four-year terms over the past 20 years.

There are other WSIS-related activities, such as the Working Group on Enhanced Cooperation followed up by CSTD, or WSIS+10 where Iran was involved. As we now approach the concluding years of the second phase of WSIS, discussions for the WSIS+20 review process are underway. This section provides an overview of Iran's participation in these processes.

2000-2003 and Geneva Summit 2003

During this time, Iran actively engaged in the preparatory meetings leading to the 2003 Geneva Summit on the Information Society. Heading Iran's delegation at this significant event was the President of the Islamic Republic of Iran. Two major outcomes emerged from these efforts: the Declaration of Principles of the Information Society and its Plan of Action.

Development Projects in Rural Area with the Cooperation of International Bodies

In 2004, in collaboration with UNDP, Iran selected four villages as pilot locations for ICT development projects. The initiative aimed to evaluate the advantages and challenges brought about by ICT in rural communities. The findings of this project were disseminated at that time.

Asian-Pacific Regional Meeting in Tehran

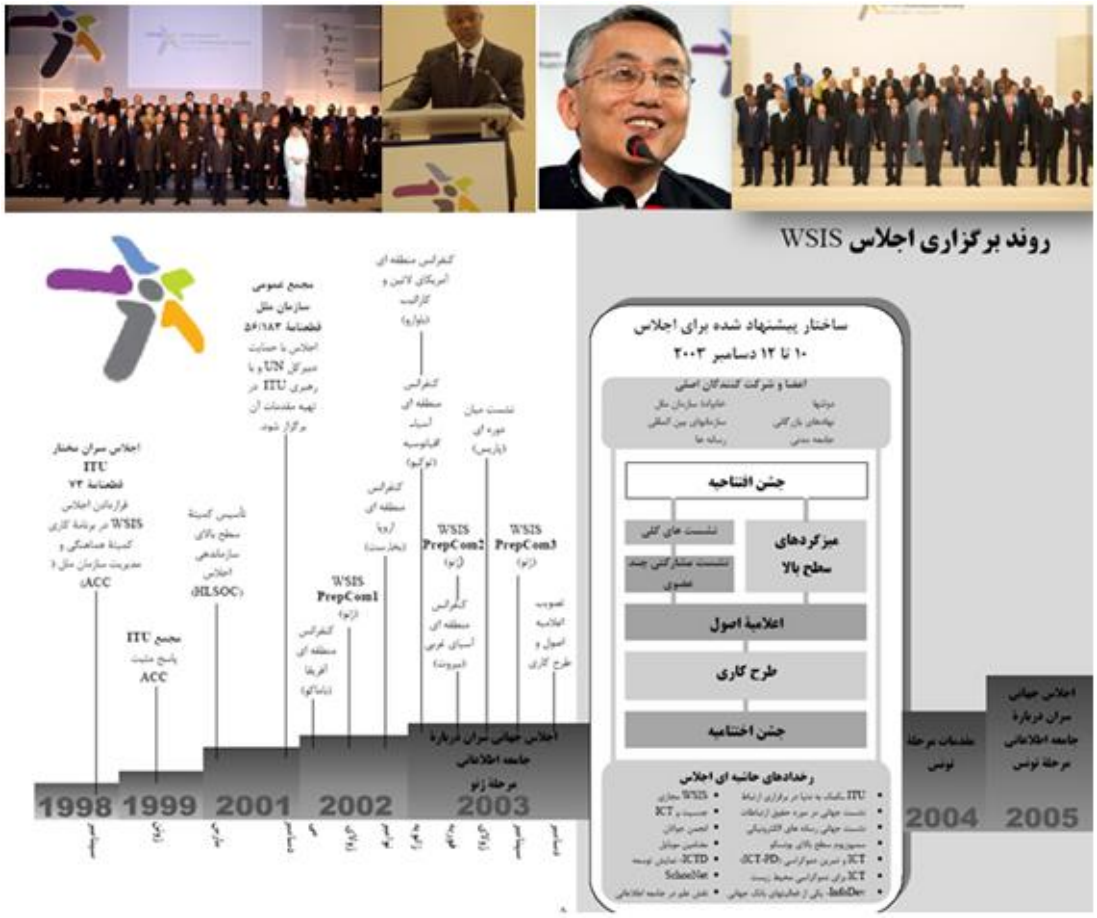
In 2005, Iran hosted a regional WSIS conference for Asia in Tehran. The event welcomed over 130 prominent participants, representing 54 Asian nations alongside various international organizations. The key outcomes of this gathering were presented during the final session of the WSIS at the Tunis Summit in 2005.

Tunis Summit 2005

Iran's delegation at the Tunis Summit included 74 representatives from government bodies, academia, and the private sector. The head of the delegation was the ICT Minister. For this event, Iran had already established its National Committee for WSIS, which held several preparatory meetings to ensure robust participation in the summit. A strategic roadmap for all activities was created, with the Iranian delegation playing a key role in key negotiations and contributing to the drafting of critical final documents. Furthermore, Iran managed one of the most popular stalls at the WSIS exhibition during the Tunis Summit.

The first WSIS+10 Review Event in UNESCO Headquarters: Towards Knowledge Socie1es for Peace and Sustainable Development

The WSIS+10 Review process was launched with the first WSIS+10 Review Event that was hosted by UNESCO in February 2013. The event, entitled Towards Knowledge Societies for Peace and Sustainable Development, was held at UNESCO Headquarters in Paris. The Iranian delegation participated, headed by the ICT vice minister. The head of the Iran delegation in this event presented a speech under the title of “National Learning Network of Iran” in the ministerial meeting (Using E-Science to Strengthen the Interface between Science and Policy), discussing the impact of ICT on the fields of education and knowledge as well as the establishment of a comprehensive network called the National Learning Network (NLN) of Iran. Moreover, the Iranian delegation participated in the open discussion for the first review document of WSIS+10 that was held during this meeting.



Iran roadmap for the WSIS 2005

WSIS+10 Multi-stakeholder Preparatory Platform (MPP)

The WSIS+10 High-Level Event addressed the progress made in implementing the WSIS outcomes related to the WSIS Action Lines. This event and its pre-event meetings provided a platform for multi-stakeholder coordination in implementing the WSIS outcomes, involving all WSIS action line facilitators, certain UN agencies, and numerous WSIS stakeholders. The WSIS+10 High-Level Event reviewed the WSIS Outcomes (2003 and 2005), particularly outcomes related to the Action Lines, to develop proposals for a new vision beyond 2015.

Iran delegation has participated in all six phases of open consultation for the WSIS+10 which were called Multi-Stakeholder Preparatory Platform (MPP). This process has resulted in two outcome documents that were approved in the WSIS+10 High-Level Event:

- Draft WSIS+10 Statement on the Implementation of WSIS Outcomes.
- Draft WSIS+10 Vision for WSIS Beyond 2015

WSIS+10-MPP Phase 1: July 2013 - Initiation of the Open Consultation Process

In this phase, a workgroup was formed by Iran National Committee for WSIS. This workgroup gathered proposals from all governmental and other multi-stockholders.

WSIS+10-MPP Phase 2 (October 2013) - First Physical Meeting & Phase 3 (December 2013) - Second Physical Meeting

Since the preparatory process was an open and inclusive consultation among WSIS Stakeholders (governments, private sector, civil society, international organizations, and relevant regional organizations), the Iran workgroup for WSIS+10 MPP in the Iran National Committee for WSIS formed 9 reference groups of information society stakeholders in Iran and received their comments and proposals about two drafts of documents that were under negotiation, as well as their new ideas for the vision and future of the information society. These groups are summarized in Table 3.1.

Table 3.1: Nine reference groups of information society stakeholders in Iran

	Information Society Stakeholders Reference Group
Group 1	Policymakers, like the Islamic council parliament and Supreme Council of ICT.
Group 2	International institutions (that relevant to the information society) like Iran UNESCO and CSTD Representative of Iran
Group 3	Governmental organization
Group 4	Ministry of ICT and its subsidiary organization, such as ITO.
Group 5	Private sector associations (relevant to ICT)
Group 6	Telecommunication Operators
Group 7	Academia (active University and Research Centers such as Iran Telecommunication Research Center (ITRC), Research Center Strategic and International Studies (ICT-SIS), University of Tehran, Iran University of Science and Technology (IUST), and TarbiatModares University.)
Group 8	NGOs and associations (such as the Iranian Association for Studies on Information Society (IRASIS)).
Group 9	Media

Comments received from the nine reference groups of the Information Society stakeholders

WSIS+10-MPP Phase Four (February 2014), Phase Five (April 2014), and Phase Six(May 2014)

These three physical meetings (called the 3rd, 4th, and 5th Physical Meetings) were held in Geneva, where a complete delegation from Iran participated and prepared proposals for all items in the documents, many of which are considered in the final documents.

CSTD 19th Session

The 19th Session of the Commission on Science and Technology for Development (CSTD) was held in Geneva, 9-13 May 2016. At each of its annual sessions, the Commission drafts two resolutions for the Economic and Social Council (ECOSOC); one of them is the draft resolution on the progress made in the implementation of the outcomes of the World Summit on the Information Society, and the second one is the draft Resolution on Science, Technology, and Innovation. Iran took part in finalizing both of them. In December 2015, the 70th session of UNGA requested the chair of CSTD to establish a working group regarding the Enhanced Cooperation, and he had planned to do this during the 19th CSTD annual session. So Iran, as a member of CSTD, participated in the process of forming the second Working Group for Enhanced Cooperation (WGEC 2.0).

Working Group on Enhanced Cooperation (2016-2018)

The first and second meetings of the WGEC 2.0 were held on 30 September 2016, and 26-27 January 2017 in Geneva, respectively. The first meeting considered the following issues on the agenda: goals and target dates to meet the request of the General Assembly (A/RES/70/125 para 65); methods of work, review of work and documents related to enhanced cooperation, proposals on topics and format of next meetings, and proposed dates for next meetings. Iran representatives attended both meetings as a member state and contributed to the direction of the working group discussions. During the first session, the Iran representative actively participated in discussions, and finally, some of the proposed comments contributed to the agreed guiding questions as inputs for the next meeting. In the second meeting, the contributions received from WGEC members were exchanged, and based on the additional and revised recommendations received, the secretariat prepared a revised version of the compilation of recommendations documents to be submitted to the third meeting of the Working Group as input for discussion. The third meeting was held on 3-5 May 2017, just before the CSTD annual session at the Palais des Nations in Geneva, Switzerland. Iran took part in this meeting as a member of CSTD, in addition to the participation of the Iran University of Science and Technology (IUST) from academia.

CSTD 20th Session

The 20th Session of the Commission on Science and Technology for Development (CSTD) took place in Geneva from 8 to 12 May 2017. During this session, participants assessed the progress in implementing the outcomes of the World Summit on the Information Society (WSIS) and listened to presentations on reviews of national policies related to science, technology, and innovation. The session also examined the recently published UNCTAD report titled "Science, Technology, and Innovation Policy Review: The Islamic Republic of Iran". Additionally, the chair of WGEC 2.0 presented an update on the working group's activities to the commission.

CSTD 27th Session

The 27th Session of the Commission for Science and Technology (CSTD) was held in Geneva on 15-19 April 2024. This session began the review process of the progress made in implementing the outcomes of the second ten-year period of the World Summit on the Information Society (WSIS+20). Iran actively participated in this meeting, during which the roadmap of WSIS+20 was announced by the CSTD Chair. After this meeting, a questionnaire for the 20-year review of WSIS implementation was distributed to gather information on the achievements of countries in the fields of infrastructure, content and

application, capacity-building, governance, and wider public policy aspects of the Information Society, measurement and monitoring of the Information Society, as well as the changes that have occurred over the past twenty years and their implications for the WSIS vision. ITU collected questionnaires through a web-based system before the WSIS+20 Forum High-Level Event 2024, and Iran completed and submitted the questionnaire to the system.

Call for Inputs on the WSIS+20 Review

In accordance with ITU Council Resolution 1332, members and other stakeholders were invited by the Chair of the ITU Council Working Group on WSIS & SDGs (CWG WSIS&SDG) to contribute their views on the work of the ITU in the WSIS+20 review, including ideas related to the review of the WSIS Action Lines. The inputs have been used in preparing a comprehensive and inclusive assessment of the WSIS process. An online form was launched in August and closed in March 2025. The process is designed to gather detailed insights into various aspects of the WSIS+20 review process, including achievements and challenges in implementing the Geneva Plan of Action, the alignment of the WSIS Process with the 2030 Agenda for Sustainable Development, the constant evolution of the WSIS process to adapt to emerging trends, and the future of WSIS beyond 2025.

The matter was followed up in two physical meetings of CWG WSIS&SDG in October 2024 and February 2025. The results will be reviewed in a side event during the WSIS+20 High-Level Event 2025 in July 2025. Iran took part by filling and submitting the questionnaire in March 2025 and participating in the above-mentioned meetings.

CSTD 28th Session

The 28th Session of the Commission for Science and Technology (CSTD) was held in Geneva on 7–11 April 2025. This session focused on WSIS+20, as well as hearing presentations on national science, technology, and innovation policy reviews. Iran participated in this event with a full delegation from the government and academia. The items related to WSIS were led by the ICT Vice Minister and Head of the Information Technology Organization (ITO). He took on the role of a high-level speaker in the following two meetings:

- ***Agenda item 2:*** *Review of progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international level, in particular WSIS+20 review*
- ***Agenda item 3:*** *Panel on diversifying economies in a world of accelerated digitalization*

Iran ICT Vice Minister and Head of the Information Technology Organization (ITO), who was a high-level speaker in the twenty-eighth annual session of CSTD-28, April 2025.

3.3. Iran in WSIS Forums

WSIS Forums have served as a yearly platform to monitor progress in achieving WSIS Action Lines, organized by the International Telecommunication Union (ITU) in collaboration with associated UN Agencies. These forums offer insights and assessments on the implementation of WSIS Action Lines and initiatives. The first physical forum was held in 2009. In its second decade, the outcome document of the UNGA High-level Meeting on the overall review of WSIS outcomes in 2015 highlighted the significance of reporting and sharing best practices for implementing WSIS vision by all stakeholders for next ten years. It also recognized the WSIS Forum as a key platform for discussions, following up on the implementation of outcomes, and sharing best practices, which should continue to be held annually until WSIS 2025.

The WSIS Forum has proven to be an efficient mechanism for coordinating Action Lines implementation activities, exchanging information, creating knowledge, and sharing best practices. This Forum provides structured opportunities to connect all stakeholders for discussions and consultations on WSIS implementation. The Forum's Agenda and Program will emerge from inputs received during the Open Consultation Process.

In these forums, four main facilitators of Action Lines (ITU, UNESCO, UNCTAD, and UNDP) reported their activities. Moreover, countries presented their activities in the National Workshop, and several subjects were also discussed in Thematic Workshops by

companies, organizations, and universities. In addition, eighteen winners of the WSIS-Project Prize in various WSIS Action Lines were introduced, and five runner-up projects in each Action Line were recognized as WSIS Prize Champions.

To sum up, the annual WSIS Forum represents the world's largest annual gathering of the 'ICT for development' community, providing well-organized opportunities for participants through open discussions and consultations on WSIS implementation.

Iran has contributed to WSIS Forums since 2009. The rest of this section summarizes these contributions.

WSIS Forum 2009

At this forum, a delegation of four representatives from Iran, led by the country's Deputy Minister of ICT, took part in the discussions. The delegation actively contributed to the Action Line 2 panel. During the event, the Iranian team engaged in several official meetings with other participants as well as ITU officials.

WSIS Forum 2010 and 2011

Iran participated with two delegates in these forums and presented a short report regarding the WSIS activities at the WSIS exhibition stall.

WSIS Forum 2012

Iran's delegation gained notable recognition at the WSIS Forum 2012. Key events included a keynote speech by the head of the delegation from the Islamic Republic of Iran during the policy statement track, being awarded the WSIS-Project Prize in Action Line 11 at the opening ceremony, participation in the closed high-level meeting, the presentation of a success story in the WSIS Stocktaking session, and organizing the Iran Country Workshop. Furthermore, Iran contributed to the WSIS Forum exhibition. The delegation also engaged in numerous side meetings with other high-level participants at the forum. Among these, a significant meeting occurred between Iran's head of delegation, the country's Vice Minister of ICT, and the ITU Secretary-General.

WSIS Forum 2013

The WSIS Forum 2013 took place from May 13 to 17, 2013, in Geneva, hosted at the ITU headquarters. During the forum's high-level track, the ICT Minister, serving as the head of the delegation, delivered a speech. Iran conducted two thematic workshops and one country-specific workshop as part of its contribution. The first thematic workshop, organized by the Iran University of Science and Technology (IUST), was titled "GDP in the World Economic Crisis: Drivers and Future Landscape," while the second focused on "Protection of Children in Cyberspace: The MENA Region." Additionally, the country workshop, called "Iran Progress in Information Society," was prepared by the Iran National

Committee for WSIS. The Information Technology Organization of Iran (ITO) also actively participated in the event's exhibition.

WSIS High-Level Event (HLE) 2014 (WSIS Forum 2014)

This event was the extended version of the WSIS Forum that was held in June 2014 in Geneva at ITU headquarters. Iran participated in this event, as in previous years, with a complete delegation from the government, private sector, and academia. The head of the delegation was the Iran ICT Minister, who presented his speech in the policy statement track of the event. Moreover, the chief of the Permanent Mission of the Islamic Republic of Iran to the United Nations Office in Geneva was another high-level speaker in the policy statement track of this event as the chairman of the Non-Aligned Movement (NAM) countries.Iran organized three Thematic Workshops and a Country Workshop in this high-level event, entitled:

- The Challenges of Making Broadband Ecosystem in Developing Countries
- The Future of the Information Society Beyond 2015 Opportunities and Challenges
- Hubco: An Initiative for the Development of ICT Access, Use, and Skills in the Businesses of Iran
- Iran Country Workshop

The Country Workshop featured panelists representing the government, private sector, and academia, with the participation of Iran's ICT minister and the ITU Secretary General. Additionally, as in past years, the Information Technology Organization of Iran (ITO) set up a booth in the forum's side exhibition.

WSIS Forum 2015

WSIS Forum 2015 was held on 25-29 May 2015 in Geneva at ITU headquarters. Iran participated in this event with a complete delegation from the government, private sector, and academia. Iran's head of delegation (ICT Minister) and deputy head of delegation (Vice Minister and Chairman of ITO) presented two speeches in the high-level track of the forum. The ICT-SIS Director from Iran University of Science and Technology (IUST) received the WSIS-Project Prize 2015 in Action Line C7 E-Science.

Iranian delegation held two Thematic Workshops and one Country Workshop in this forum. The first Thematic Workshop, “Measuring the Information Society: Challenges and Trends,” was organized by ITO. The second Thematic Workshop, organized by the Iran University of Science and Technology (IUST), was titled “E-Science and Research in the Information Society: Key Factors for Sustainable Development.”

ITO arranged a stall in the exhibition of the forum, and IUST ICT-SIS arranged a stall in the WSIS Prize Winners’ exhibition at ICT Discovery in ITU to introduce the E-Science-Net project.

Iran Country Workshop in WSIS Forum 2012

Iran booth at the exhibition in theWSIS Forums 2015 and 2024

Iran delegations' sponsors for WSIS+10High-Level Event

WSIS Forum 2016

The WSIS Forum 2016 took place from May 2 to May 6, 2016, at the ITU headquarters in Geneva. Similar to previous years, representatives from governments, the private sector, and academia actively participated in the event. Leading the Iranian delegation was the ICT Minister, who delivered a speech during the forum's high-level policy statement track. Another key speaker representing Iran during this segment was the Vice Minister and Chairman of ITO, who served as the deputy head of the delegation.

The Iranian delegation hosted two Thematic Workshops and one Country Workshop as part of the forum. The first Thematic Workshop, organized by Iran University of Science and Technology (IUST), was titled "E-Science Ecosystem and Collaborative Knowledge Societies." The second, titled "Role of ICT in the Sustainable Development Goals: Lessons Learned and Approaches," was arranged by ITO in collaboration with the Data Processing Company. Additionally, the Country Workshop, titled "Iran Progress in Information Society," was conducted by the Iran National Committee for WSIS. As in previous years, ITO arranged a stall in the side exhibition of the forum.

WSIS Forum 2017

The WSIS Forum 2017 took place from June 12 to 17, 2017, at the ITU headquarters in Geneva. Iran attended this event with a delegation comprising representatives from the government, private sector, and academia. Leading the Iranian delegation was the ICT Minister, who delivered a speech during a high-level policy session focused on Bridging Digital Divides. Moreover, the delegation's deputy head, also the Vice Minister and Chairman of ITO, spoke in another high-policy session dedicated to ICT Applications and Services. Iran hosted a country workshop in the ITU headquarters' main room on June 16. Additionally, IUST ICT-SIS organized a thematic workshop titled "E-Science and Sustainable Development in the Information and Knowledge Societies," with participation from Iranian university professors and the Chief of the Innovation and Partnership Department (IP) BDT/International Telecommunication Union.

WSIS Forum 2018

The WSIS Forum 2018 took place from March 19 to 23, 2018, in Geneva at the ITU headquarters and the CICG, centered around the theme of "Leveraging ICTs to Build Information and Knowledge Societies." A full delegation from Iran, comprising representatives from the government, private sector, and academia, actively participated in the event. The delegation was led by Iran's ICT Vice Minister for Technology and Innovation, who shared insights in the high-level policy statement session on ICT Applications and Services. In addition to hosting the Iran Country Workshop, which highlighted the nation's achievements in ICT infrastructure and applications, Iran organized two thematic sessions. These were titled "Child Online Protection Ecosystem: Platforms, Services, and Tools," hosted by the Iran National Committee for WSIS, and "Cross-Border e-Science and Research Partnerships for Shaping Better Information and Knowledge Societies," presented by Iran University of Science and Technology (IUST). Furthermore, the ITO set up a booth at the forum's exhibition. Iran also gained recognition as a champion project recipient in action line 5 of the WSIS Prize 2018.

WSIS Forum 2019

WSIS Forum 2019 was held from 8 to 12 April 2019 in Geneva at ITU headquarters and CICG. Iran participated in this event with a delegation from the government, private sector, and academia. Iran's head of delegation (ICT Minister) delivered his speech in the high-level policy statement session 1, i.e., the Forum opening ceremony. Another high-level speaker was the IUST Vice Chancellor for International Affairs and Director of the Research Center for ICT Strategic and International Studies (ICT-SIS) in the high-level policy statement track session for Knowledge Societies, Capacity Building, and E-learning/Media. A thematic workshop entitled "The Future of Jobs: Opportunities and Challenges in ICT-

centric Economies" was held by the Iran Ministry of ICT. Iran University of Science and Technology (IUST) organized a thematic workshop entitled "E-Science, Innovation and Future Universities," whose panelists included professors from IUST, the University of Geneva, Iran ICT Research Institute (ITRC), a representative from the German Rectors' Conference (HRK), and the Chief of Innovation and Partnership Department (IP) BDT/International Telecommunication Union. Iran succeeded in winning the WSIS prize 2019 in action line 7 in the category of E-Science. The winning project was Iran National Research and Education Network (SHOA).

WSIS Forum 2020

Due to the Covid-19 Pandemic, the WSIS Forum 2020 was postponed and finally held entirely online starting on 22 June with a weekly program. The final week of the Virtual WSIS Forum 2020 took place on 7-10 September 2020. Iran contributed to this event with two high-level speakers and two thematic workshops. The high-levels spoke in the session of Knowledge Societies, Capacity Building, and e-Learning. The first was the IUST Vice Chancellor for International Affairs and Director of the Research Center for ICT Strategic and International Studies (ICT-SIS); and the second was the Chairman of ITU-D Study Group2 and Professor at TarbiatModares University (TMU). One thematic workshop organized by Iran ICT Research Institute (ITRC) was entitled "Smart City Governance: Transforming Mashhad to the Smart City." The other one, organized by IUST ICT-SIS, was entitled "Universities and Digital Transformation: Reactions to the Covid-19 Pandemic and the Future of E-Science Ecosystem." The panelists were professors from Iran, Australia, Germany, and Brazil.

WSIS Forum 2021

Same as 2020, WSIS Forum 2021 was held entirely online, starting on 15 March 2022 with the final week held from 30 May to 3 June 2022. Iran had three high-level speakers in the high-level track of the Forum. The first speaker was the ICT Vice-Minister for Technology and Innovation, who contributed to the opening of the High-Level Track Session 1, focusing on "Bridging Digital Divides." The second speaker was the senior advisor to the ICT Ministry and professor at Tarbiat-Modares University (TMU), addressing topics during High-Level Policy Session 4: "ICT Applications and Services/e-Environment/Climate Change." The third speaker was the Vice-Chancellor for International Affairs at Iran University of Science and Technology (IUST) and Director of the Research Center for ICT Strategic and International Studies (ICT-SIS), who spoke during High-Level Policy Session 8 on "Knowledge Societies, Capacity Building, and e-Learning."

Additionally, Iran showcased two nationally recognized champion projects as part of the WSIS Prize 2021 Contest. The first project, under Action Line 7 in the E-Business category,

was executed by Rahbaran Internet Ashya Company. The second project, in Action Line 7 in E-Learning, was presented by the Iran University of Science and Technology.

WSIS Forum 2022

The WSIS Forum 2022 started on 15 March in a virtual format, and the final week was held physically with enhanced remote participation from 30 May to 3 June 2022 at the ITU Headquarters in Geneva. Iran participated physically in this event with 5 delegates headed by the ICT Minister. The head of the delegation delivered a speech in the High-Level Policy Session for ICT Applications and Services. A thematic workshop was arranged by the Iran ICT Research Institute (ITRC) entitled “The Impact of ICT Development in Urban or Rural Areas: Smart Villages and Smart Cities.” The mayor of Mashhad participated in an Interactive High-Level Dialogue with Mayors on Smart Cities, Drivers of Innovative Sustainable Development. Iran also moderated a High-Level Dialogue meeting: ICTs for Developing Countries (and LDCs) and a High-Level Policy Session: Building Confidence and Security in the Use of ICTs, led by the Chairman of ITU-D Study Group 2 and a professor from Tarbiat Modares University (TMU). Iran had two champion projects in the WSIS Prize 2021 Contest. The first one is Action Line 4, Capacity Building, by the Astronomy Society of Iran, and the second one is Action Line 7 in the E-learning category by the Iran University of Science and Technology.

WSIS Forum 2023

The WSIS Forum 2023 started on 13 March 2023 at the ITU Headquarters in Geneva. Iran participated physically in this event with 4 delegates headed by the ICT Vice-Minister. The Head of the delegation delivered a speech in the High-Level Policy Session for ICT Applications and Services. There were three thematic workshops:

- The role freelancing, SMEs in bridging digital divide (by Iran University of Science and Technology) April 25,2023
- Digital Governance and Open Data (by ICT Research Institute - ITRC) May 2, 2023
- Local ICTs platforms: challenges and opportunities (by Iran University of Science and Technology) May 3, 2023”.

Iran had one champion project in the WSIS Prize 2023 Contest in Action Line 7 in the E-government category by the ITO.

WSIS+20 Forum High-Level Event 2024

The WSIS+20 Forum High-Level Event 2024 was held from 27 to 31 May 2024 at the ITU Headquarters in Geneva. Iran participated physically in this event with 9 delegates, headed by the ICT Vice-Minister. The head of the delegation delivered a speech during the High-Level Policy Session on ICT Applications and Services. Additionally, a thematic workshop titled "Artificial Intelligence and E-Government: Opportunities, Challenges, and Future

Landscape" was organized by ITO and IUST. Iran was also recognized in the WSIS Prize 2023 Contest, earning a champion project award in Action Line 7 under the E-Science category, a project collaboratively executed by the ITO and MSRT.

Table 3.2 summarizes the participation of I.R. Iran in the WSIS Forum and engagement in the WSIS Process during the past 25 years.

Table 3.2: Participation of Iranian delegations in annual forums and various meetings associated with the Information Society over the last two decades

Year and Venue	The Number of Members of the Delegation	Head of Delegation
2000-2005	8 negotiators in all phases of the process	Special Representative of the President and Secretary of the Supreme Council ICT
Geneva Summit 2003	54 delegates and participants from governmental organizations and the private sector	The President of the Islamic Republic of Iran
Asian-Pacific Regional Meeting in Tehran	130 delegates and participants from 54 Asian countries and relevant international organizations	Special Representative of the President and Secretary of the Supreme Council ICT
Tunis Summit 2005	74 delegates and participants from governmental organizations and the private sector	The Minister of Information and Communications Technology (ICT)
WSIS Form 2009	4 delegates from the Ministry of ICT and its subsidiaries	Vice Minister of Information and Communications Technology
WSIS Form 2010	One delegate from the Ministry of ICT One delegate from the Digital Media Development Centre of the Ministry of Culture One delegate from Iranian National Commission for UNESCO	-
WSIS Form 2011	One delegate from the Ministry of ICT One delegate from the Digital Media Development Centre of the Ministry of Culture	-
WSIS Form 2012	5 delegates from the Ministry of ICT Secretary General of the National Commission UNESCO of Iran One delegate from IRIB One participant from academia One delegate from the Ministry of Education Two delegates from the Digital Media Development Centre of the Ministry of Culture 3 participants from the private sector	Deputy Minister of Information and Communications Technology and Chairman of the Information Technology Organization of Iran (ITO)

Year and Venue	The Number of Members of the Delegation	Head of Delegation
First review meeting for WSIS+10 (Paris 2013 Hosted by UNESCO)	2 delegates from Information Technology Organization 1 delegate from the Ministry of ICT 1 participant from academia	Deputy Minister of Information and Communications Technology and Chairman of the Information Technology Organization of Iran (ITO)
WSIS Form 2013	2 vice ministers from the Iran Ministry of ICT 2 delegates from the Islamic parliament council 7 delegates from the Ministry of ICT and its Subsidiaries 4 participants from the private sector 4 participants from academia and universities 1 participant from the Tebyan institution	The Minister of Information and Communications Technology (ICT)
WSIS+10-MPP Phase 1	(Organizing 9 reference groups of WSIS Stakeholders in Iran)	Secretariat of Iran National Committee for WSIS
WSIS+10-MPP Phase 2	Remote participating	-
WSIS+10-MPP Phase 3	Remote participating	-
WSIS+10-MPP Phase 4	5 negotiators from the Information Technology Organization (ITO), Iran Ministry of Foreign Affairs, and Iran University of Science and Technology (IUST)	Secretariat of Iran National Committee for WSIS
WSIS+10-MPP Phase 5	4 negotiators from the Ministry of Foreign Affairs, the Iran University of Science and Technology (IUST), and the University of Tehran	Secretariat of Iran National Committee for WSIS
WSIS+10-MPP Phase 6	4 negotiators from the Information Technology Organization, Iran Ministry of Foreign Affairs, Iran University of Science and Technology, and Tehran University	Secretariat of Iran National Committee for WSIS
WSIS High-Level Event 2014	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 4 delegates from the Ministry of ICT 1 delegate from IRIB 4 participants from communication operators and the private sector 3 participants from academia 22 delegates and participants from other governmental organizations	The Minister of Information and Communications Technology (ICT)

Year and Venue	The Number of Members of the Delegation	Head of Delegation
WSIS Form 2015	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 6 delegates from the Ministry of ICT 4 participants from communication operators and the private sector 6 participants from academia 5 delegates and participants from other governmental organizations	The Minister of Information and Communications Technology (ICT)
WSIS Form 2016	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 2 delegates from the Ministry of ICT 2 participants from communication operators and the private sector 7 participants from academia 5 delegates and participants from other governmental organizations	The Minister of Information and Communications Technology (ICT)
WSIS Form 2017	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 5 delegates from the Ministry of ICT 1 participant from communication operators and the private sector 6 participants from academia 5 delegates and participants from other governmental organizations	The Minister of Information and Communications Technology (ICT)
WSIS Form 2018	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 4 delegates from the Ministry of ICT 5 participants from communication operators and the private sector 3 participants from academia 7 delegates and participants from other governmental organizations	ICT Vice Minister for Technology and Innovation
WSIS Form 2019	Senior advisor of Iran ICT Minister in international affairs 4 delegates from the Ministry of ICT 1 participant from communication operators and the private sector 2 participants from academia 3 delegates and participants from other governmental organizations	The Minister of Information and Communications Technology (ICT)

Year and Venue	The Number of Members of the Delegation	Head of Delegation
WSIS Form 2020	1 delegate from the Ministry of ICT 4 participants from the private sector 2 participants from academia 1 delegate and participants from other governmental organizations	Due to Covid-19 Pandemic, the WSIS Forum 2020 was held entirely online
WSIS Form 2021	3 participants from academia	ICT Vice Minister for Technology and Innovation
WSIS Form 2022	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 2 participants from communication operators and the private sector 1 participant from academia	The Minister of Information and Communications Technology (ICT)
WSIS Form 2023	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 2participant from academia	Deputy Minister of Information and Communications Technology and Chairman of the Information Technology Organization of Iran (ITO)
WSIS+20 Forum High-Level Event 2024	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 5participants from Ministry of ICT 2participants from academia	Deputy Minister of Information and Communications Technology and Chairman of the Information Technology Organization of Iran (ITO)
28th Annual Session of Commission on Science and Technology for Development (CSTD-28)	Deputy Minister of ICT Senior advisor of Iran ICT Minister in international affairs 1participant from ITO 1 participant from academia	Deputy Minister of Information and Communications Technology and Chairman of the Information Technology Organization of Iran (ITO)

3.4. Iran WSIS National Events and Conferences

In this section, the conferences and workshops that have been held by Iran regarding the World Summit on the Information Society (WSIS) are described.

Asian-Pacific Regional Meeting in Tehran

A regional meeting for WSIS in the Asia region was held by Iran in 2005. More than 130 high-level participants from 54 Asian countries and relevant international organizations attended in this conference. The outcomes were reported in the final meeting at the Tunis summit.

Iran Conferences on Preparation for WSIS+10

From 2011 to 2015, an annual national conference called "The National Conference on Preparation for WSIS Summit 2015 (WSIS+10)" was scheduled each year by the Iran National Committee for WSIS. According to the annual calendar of the conference, it was held before International WSIS events such as WSIS Forums or WSIS High-Level Events, except in years when another regional or international related event was going to be held in Iran, resulting in the merging of both events.

- Investigating the challenges in the decision-making procedure for 2015.
- Describing national actions and achievements in the field of the Information Society.
- Investigating the records and reports of completed activities concerning the indexes of the Information Society.
- Monitoring and following up on receiving information from workgroups.
- Updating action programs across governmental organizations and the private sector aimed at achieving the WSIS Targets.
- Creating a national synergy in the field of the Information Society.
- Creating the opportunity to enhance the capabilities of companies and non-governmental organizations in the field of the Information Society.

Iran University of Science and Technology (IUST) and the Information Technology Organization of the Islamic Republic of Iran (ITO) were co-organizers of the conference. The Steering Committee and Program Committee were composed of policymakers and academics, while the Executive Committee consisted of members from both the Iran University of Science and Technology and the Information Technology Organization.

The First National Conference on Preparation for WSIS+10

The first national conference was held at the Shahid-Ghandi Conference Center of the ICT Ministry in Tehran on 4 March 2012. Organizations that presented their reports regarding the implementation of WSIS Action Lines included: the ICT Ministry, the Ministry of Health and Medical Education, the Ministry of Science & Technology Research, the Ministry of Education, the Ministry of Culture and Islamic Guidance, the Communications Regulatory Authority (CRA) of the Islamic Republic of Iran, the Telecommunication Company of Iran, and the Iranian National Commission for UNESCO. There were also two keynote addresses during the conference and a roundtable about the challenges anticipated for 2015.

The 1st national conference on preparation for WSIS+10,
Shahid-Gahndi Conference Center of ICT Ministry, Tehran

Regional Activities for WSIS (The second Conference for Preparation on WSIS+10)

The second national conference on WSIS+10 preparations occurred alongside the first ministerial ICT meeting and the 14th ECO Telecommunication Summit in November 2012 at Saad-Abad Complex, Tehran, Iran. The workshop featured two sessions: the first, led by the Deputy Minister of ICT and Chairman of Iran's Information Technology Organization (ITO), presented Iran's WSIS experiences to ECO member state delegations, while the second, hosted by the Vice-Chairman of the Iran National Committee for WSIS, addressed 2013 challenges in national WSIS activities with participation from public and private IT managers.

The Third Iran National Conference on Preparation for WSIS+10

The third national conference took place on 8 December 2013 at the Shahid Ghandi Conference Center within the ICT Ministry in Tehran. It aimed to foster national collaboration for impactful engagement in the WSIS+10 Review Process and Multi-stakeholder Preparatory Platform (MPP) meetings. Additionally, it focused on evaluating national actions and outcomes within the Information Society framework to prepare decade-long WSIS reports.

The 2nd national conference on preparation for WSIS+10 held in conjunction with the first ministerial meeting on ICT of ECO member states

The Fourth Iran National Conference on Preparation for WSIS+10

The Fourth National Conference on Preparations for WSIS+10 took place at Shahid Ghandi Hall, within the ICT Ministry of Iran, on May 26, 2014. This event was organized by the Information Technology Organization of Iran (ITO) and the Iran University of Science and Technology (IUST). The conference focused on topics such as media, ethics, and digital content in the information society, the applications of information technology, and the infrastructure that facilitates connectivity in an evolving information society.

During the opening session, the chair of the conference presented a report outlining the steps taken to prepare for Iran's contribution to WSIS+10. He also detailed the declaration, which included a ten-year review of activities and established a vision for action beyond 2015. Following this, the conference audience was presented with a message from H.E. Dr. Touré, the Secretary-General of the International Telecommunication Union (ITU), praising and congratulating the ITO and IUST for taking the initiative to organize this major national event, which he described as a significant contribution to WSIS.

The Vice Minister of ICT and Chairman of ITO delivered the keynote speech, emphasizing the significance of WSIS, Iran's contribution to the 2003 and 2005 summits, and the nation's outlook for WSIS+10. Additionally, prominent experts and scholars from various institutions—including the Ministry of ICT, the Information Technology Organization (ITO), the Ministry of Science, Research and Technology, the Ministry of Education, the Ministry of Health and Medical Education, the Telecommunication Company of Iran, Tarbiat Modares University, and Iran University of Science and Technology—offered their insights in the four conference sessions.

The 4th national conference on preparation for WSIS+10 held in Shahid-Gahndi Conference Center of ICT Ministry, Tehran.

Iran Country Workshops in WSIS Forums

Over the last two decades, Iran has hosted seven Country-Workshops in collaboration with WSIS Forums between 2012 and 2018, prior to the COVID-19 pandemic. These workshops were conducted either at the ITU Headquarters in Geneva or in designated venues such as the ILO in 2012. Participants from both Iran's governmental and private sectors showcased key initiatives that aligned with WSIS Targets and Action Lines. Moreover, the sessions provided a comprehensive overview of Iran's achievements and advancements within the Information Society.

Iran Thematic Workshops in WSIS Forums

During WSIS Forums, Iran organized 20 Thematic Workshops at ITU Headquarters in Geneva from 2012 to 2024. In these workshops, panelists from the private and public sectors, academia, and industry presented their papers or presentations regarding the topics of each workshop. The titles of the workshops are as below:

- Information Technology Industry and GDP in World Economic Crisis; Drivers and Future Landscape (2013)
- The Challenges of Making Broadband Ecosystem in Developing Countries (2014)
- The Future of the Information Society Beyond 2015: Opportunities and Challenges (2014)
- Hubco: An Initiative for the Development of ICT Access, Use and Skills in the Businesses of Iran (2014)
- Measuring the Information Society: Challenges and Trends (2015)

- E-science and Research in the Information Society: Key Factors for Sustainable Development(2015)
- Role of ICT in the Sustainable Development Goals: Lessons Learned and Approaches (2016)
- E-Science Ecosystem and Collaborative Knowledge Societies (2016)
- E-Science and Sustainable Development in the Information and Knowledge Societies (2017)
- Cross-Border e-Science and Research Partnerships for Shaping Better Information and Knowledge Societies (2018)
- Child Online Protection Ecosystem: Platforms, Services, and Tools (2018)
- E-Science, Innovation and Future Universities (2019)
- The Future of Jobs: Opportunities and Challenges in ICT-centric Economies (2019)
- Universities and Digital Transformation: Reactions to Covid19 Pandemic and the Future of E-Science Ecosystem (2020)
- Smart City Governance: Transforming Mashhad to the Smart City (2020)
- The impact of ICT development in urban or rural areas: smart villages and smart cities (2022).
- The role freelancing, SMEs in bridging digital divide (2023)
- Digital Governance and Open Data (2023)
- Local ICTs platforms: challenges and opportunities (2023).
- Artificial Intelligence and E-Government: Opportunities, Challenges, and Future Landscape (2024)

3.5. Iran Publication in the Field of WSIS

Over the past two decades, numerous books have been authored and/or disseminated by Iranian researchers focusing on the Information Society. This section provides a list of some of these notable works.

- Knowledge Society: Information Technology for Sustainable Development (in Persian)
- Cultural and Lingual Diversity in the Information Society (in Persian)
- Studying and Measuring Knowledge-based Information Societies: A Statistical Challenge (in Persian)
- Report on Holding the World Summit on the Information Society (WSIS) and Iran Participation (in Persian)
- Education in the Information Society (in Persian)
- Information Society in the Research (in Persian)

- Evaluating the Information Society: The World situation in mid-range of WSIS (in Persian)
- Descriptive calendar of events and meetings for WSIS (in Persian)
- A framework for the preparation of the National Reports on Information Society (in Persian)
- Information technology and basic concepts of the Information Society (in Persian)
- E-science and Research in the Information Society: Key Factors for Sustainable Development (in English)
- E-Science Ecosystem and Collaborative Knowledge Societies (in English)
- E-Science and Sustainable Development in the Information and Knowledge Societies (in English)
- Cross-Border e-Science and Research Partnerships for Shaping Better Information and Knowledge Societies (in English)
- E-Science, Innovation, and Future Universities (in English)

Some of the books published in the field of Information Society in Persian and English

3.6. Iran in WSIS Project Prize Contests

WSIS Prize was formed in WSIS Forum 2011 to create a mechanism to evaluate and reward stakeholders for their efforts in the implementation of WSIS outcomes. The WSIS Prizes are an integral part of the WSIS Stocktaking Process that was set up in 2004 (Para 120, Tunis Agenda). The WSIS Prize contests provides the platform to identify and showcase the success stories and models that could be replicated. The contest of WSIS Prizes is open to all stakeholders: governments, the private sector, civil society, international organizations, academia, and others. The contest comprises 18 categories that are directly linked to the WSIS Action Lines outlined in the Geneva Plan of Action. In the opening ceremony of the forum, within the five candidate projects per each of the 18 categories, one will be announced as the winner.

So far, three Iranian projects have won the award in 2012, 2015, and 2019; and since 2016, when five runner-up projects in each action line were recognized as WSIS Champions, numerous Iranian projects have received the WSIS Champion Certificate. Iran's success stories in this contest are summarized in the rest of this section.

Preparing Strategic Documents in the Field of Information Society Project,
WSIS-Prize 2012 winner in the Category C11

Iranian Winner Project of WSIS Prize 2012 in Action Line C11: Preparing Strategic Documents in the Field of the Information Society

In the summer of 2011, the Information Technology Organization of Iran (ITO) launched a research initiative under the title "Research Study and Preparation of International Strategic Documents in the Field of the Information Society." This project was carried out by Iran University of Science and Technology (IUST) and was designed to explore the history of the topic, evaluate existing Iranian and international documents, and prepare the following key documents as support materials:

- Assessment of the Information Society; Status of the Countries at the End of the 1st Half of the WSIS,
- Descriptive Calendar of International Events and Meetings in the Field of Information Society,
- Preparing the National Report for WSIS,
- Information Technology and WSIS Basic Concepts and Principles.

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The initial three volumes were designed to establish the status, generate national reports, and engage in relevant events. The fourth volume focused on introducing the concepts of WSIS to newcomer experts and specialists. This research initiative, which led to the reorganizing and formation of the second term for the National Committee for WSIS in Iran, won the WSIS-Prize 2012 in Action Line C11.

Iranian Winner Project of WSIS Prize 2015 in Action Line C7 e-Science: E-Science-Net: Universities and Research Network for Science and Technology Development in the Information Society

Launched by the Research Center for ICT Strategic and International Studies (ICT-SIS) within Iran University of Science and Technology (IUST), this project aims to develop a collaborative network consisting of researchers, university scholars, and students. Its objective is to foster the exchange of innovative ideas and scientific data between academic and research-related institutions throughout Iran. This project, which began in 2015, aims to be an active national reference research point in the field of e-science, as well as a network of researchers and scientists who are familiar with the Information Society concepts in Iran. Furthermore, it aspires to establish future pathways for global scientific collaboration in targeted areas The main focus is on determining how scientific development and its requirements affect the information society and vice versa.

One of the primary goals of this project is the execution of a specialized parallel expert survey focusing on e-science and examining the roles of science, research, and technology in achieving sustainable advancements in information and knowledge-based societies. Findings from this survey will contribute to national e-science strategic planning and will be disseminated through publications and organized thematic workshops. As part of these efforts, the IUST research center for ICT-SIS held a series of workshops during the WSIS Forum from 2015 to 2020.

Iranian Winner Project of WSIS Prize 2019 in Action Line C7 e-Science: Iran National Research and Education Network (SHOA)

SHOA, the Iran National Research and Education Network, plays a pivotal role within the ecosystem of the science economy. This network has substantially contributed to advancing e-Science and fostering capabilities for scientific development in Iran. By delivering high-speed connectivity to universities, research institutions, and students, SHOA has supported academic progress and fueled economic growth. Established as a Public-Private Partnership (PPP) between the private sector, government, and academic institutions, SHOA functions as Iran's National Research and Education Network (NREN). An NREN serves as a dedicated internet service provider tailored specifically to the requirements of a nation's research and education sectors.

WSIS FORUM 25-29 MAY 2015 Geneva Switzerland

150 ITU 1865 2015

THE INTERNATIONAL TELECOMMUNICATION UNION

AWARDS

Research Center for ICT Strategic and International Studies,
Iran University of Science and Technology, Iran (Islamic Republic of)

WSIS Forum: Winner of WSIS Prize 2015 in
ICT applications: e-science

A certificate of recognition for outstanding contribution towards strengthening the implementation of the World Summit on the Information Society (WSIS) Outcomes

Houlin Zhao
ITU Secretary-General

Geneva, May 2015

E-Science-Net: Universities and Research Network for Science and Technology Development in the Information Society Project, WSIS-Prize 2012 winner in the Category C7 e-Science

SHOA operates as an independent, advanced infrastructure that interlinks educational, health, research, and scientific entities via dark fiber optics. This robust network is equipped to integrate with other accredited NRENs internationally. As a fully technology-driven platform, SHOA caters to subscribers across a spectrum of public and private scientific organizations, including universities, educational institutes, health facilities, hospitals, libraries, research centers, NGOs, and religious seminaries. Adopting a distinct method for service development, SHOA addresses the evolving dynamics of NRENs globally. Departing from the conventional provider-consumer framework, SHOA redefines connection points within the network. Subscribers are no longer solely service recipients; instead, each network point has the potential to both receive and provide services. Within SHOA's operational structure, network nodes can simultaneously act as consumers and contributors of services for other subscribers. Essentially, this innovative model offers two key service categories:

– Services provided by the operator as infrastructure services
– Vast services provided by others

In the first approach, the operator is tasked with designing and categorizing tariffs for infrastructure services and essential facilities for customers. These services primarily focus on establishing a connection and concurrently serving customers via the network. At this stage, there are no value-added services available, and options like Internet access are absent in this model.
In the second approach, both the operator and all SHOA customers have the capability to design and offer services within the network, allowing them to attract their own clients. This service-centric model clearly establishes three key aspects that contribute to the network's sustainability and growth.

Iranian Projects Recognized as the WSIS Prize 2016 Champions
In 2016 two Iranian projects were certified as WSIS Champions 2016, both in Action Line 7 in the category of E-Science.

- **Citation Organization Software Pajoohyar, Computer Research Center of Islamic Sciences.**
  "Pajoohyar" stands as the first Iranian reference management software designed specifically to support the Persian language. It offers features such as accessing diverse information sources, creating collections of various scientific data and metadata, and organizing them according to researchers' preferences. Moreover, it allows users to share their collections via Pajoohyar's cloud platform, enabling seamless access from multiple devices. The software has been tailored to accommodate Persian and Arabic users by incorporating language-specific referencing tools and elements compatible with both Persian and Arabic linguistic systems.

- **Kowsar-Net: Scientific Intelligent network for Women Information Technology Management Center of Women's Seminaries, Hawzah.**
  As a scientific social network, Kowsar-net empowers researchers to share their scientific outputs and connect without being bound by geographical or social barriers. This platform integrates diverse science-oriented services, which significantly enhance the ecosystem of academic communication and research discovery.
  Built using an Enterprise Service Bus (ESB) infrastructure, Kowsar-net establishes links to academic databases such as educational management systems, electronic libraries, and more. Additionally, it features an intelligent recommendation system, connecting members through shared attributes like common coursework, classmates, teachers, or researchers' titles, fostering deeper collaboration among users.

Iranian Projects Recognized as the WSIS Prize 2018 Champions

In the WSIS prize 2018 contest one Iranian project was recognized as 2018 WSIS Champions in Action Line 5, Building Confidence and Use of ICTs:

- **Kids and Internet (Information Technology Organization of Iran):**
  Over the past five years leading up to the project's nomination for the WSIS prize by ITO, significant steps were taken in Iran to advance information technology and boost Internet penetration rates. During that period, the number of high-speed Internet users grew approximately 35-fold, with nearly all citizens now having access to high-speed and mobile Internet services. When the project was implemented, over 40 million people in Iran actively used social media and messaging platforms, with children and adolescents comprising 15 percent of the user base. This vast improvement in Internet speed and accessibility triggered concerns about heightened user vulnerability and security, particularly regarding children and teenagers. In light of the country's demographic makeup, cultural characteristics, and the need to elevate knowledge and skills for utilizing the Internet and social media securely, the Government of the Islamic Republic of Iran developed and implemented a comprehensive national program aimed at safeguarding kids and youths online.

Iranian Projects Recognized as the WSIS Prize 2021 Champions

In the WSIS Prize 2023 competition, two projects from Iran were acknowledged as 2021 WSIS Champions in Action Line 7 under the E-Learning and E-Business categories.

- **AR Apps during the COVID-19 pandemic for Countrywide Elementary School Students (Iran University of Science and Technology)**
  The initiative focuses on delivering augmented reality (AR)-based mobile apps to enhance the quality of education for K-6 students during the COVID-19 pandemic. By using AR technology in education, the project seeks to benefit over 8 million elementary students nationwide, providing a valuable distance learning solution. Through a simple interaction with their phone or tablet, students can engage with 3D visualizations that replicate real-world scenarios, making it easier to grasp academic content. They can also access live or prerecorded lessons presented by virtual teachers, interact with them, and solve problems without needing to attend physical classrooms. This learning approach accelerates engagement, facilitates deeper comprehension of educational objectives, and naturally raises students' interest in learning.

The project stands out for several reasons, including its affordability as a tech-based learning tool, with a minimal production cost of just one dollar per textbook. It aims to make educational resources accessible for all, particularly targeting the most vulnerable communities. Furthermore, the initiative integrates the country's education system with cutting-edge ICT advancements. By utilizing these apps, students gain access to practical demonstrations of theoretical and experimental concepts that are otherwise difficult or too expensive to observe in real-world scenarios. This project not only heightens the effective use of ICTs to modernize the national educational system but also helps reduce learning gaps across the country.

- **Linkap Integrated IoT Solution (Linkap, Rahbaran Internet Ashya Co)**
  Linkap is a unified IoT solutions platform designed to simplify and enhance connected living. The "Linkap Integrated IoT Solutions" project delivers three key benefits: enhancing quality of life, boosting security, and lowering energy consumption. By leveraging this innovative platform, both individuals and businesses can seamlessly connect IoT devices from various brands, even if they use different protocols like ZigBee, LoRaWAN, and others, onto a single system. Thanks to the advanced "LinkapIoT Core" technology, users can easily manage all their devices through one centralized platform. This solution ensures effortless compatibility, allowing new devices of any protocol or brand to be quickly integrated into homes. Additionally, it creates an excellent growth opportunity for IoT device manufacturers targeting smart homes and intelligent building systems, enabling them to expand their market presence with fewer protocol restrictions. Moreover, the initiative facilitates smoother entry into global and developing markets, making international business expansion more accessible for technology companies.

Iranian Projects Recognized as the WSIS Prize 2022 Champions

In the 2023 WSIS Prize contest, two Iranian initiatives were distinguished as 2021 WSIS Champions under Action Line 4 and Action Line 7 in the E-business category:

- **Iranian Women Astronomers (Astronomy Society of Iran)**
  The female branch of the Astronomy Society of Iran was launched in 2021 to mark the centenary of Dr. Alenush Terian's birth, widely regarded as the mother of modern Iranian astronomy. This branch, known as Iranian Women Astronomers (IWA), focuses on supporting and empowering women in the field of astronomy. While the Astronomy Society of Iran (ASI) has existed for over 25 years, no dedicated programs for promoting gender equality had been introduced prior to the creation of the IWA. Its purpose is to

build a strong network of Iranian female astronomers, both professional and amateur, within the country and across the globe. Dr. Terian's birthday, celebrated on November 9, has been officially designated as Iranian Women Astronomers' Day to emphasize the contributions of women in astronomy. IWA has hosted numerous scientific workshops and events; in a bid to motivate greater participation from women and girls, half of the available seats are reserved for female attendees at reduced rates. Additionally, IWA prioritizes inviting female astronomers to deliver talks and lectures during these sessions.

- **Smart Intersections; Efficient and Safe Controlling of Cross Road Lights by ICT-based and Artificial Intelligent Solutions (Iran University of Science and Technology)**
  Traffic congestion is a widespread issue faced by most urban areas globally, posing a significant inconvenience. This transportation challenge impacts the economy, hampers development, reduces productivity, raises costs, and disrupts overall social life. Contributing factors include the increasing volume of vehicles, insufficient road and highway infrastructure, and inefficient traffic light management strategies. These elements amplify traffic congestion at intersections; however, conventional traffic light systems play a particularly prominent role in this problem.
  This project aims to develop a smart traffic signal control system capable of dynamically scheduling green lights at four-directional intersections by employing fuzzy rule-based and expert-driven methods. These systems effectively address diverse traffic scenarios, including heavy traffic flow and frequent congestion occurrences. A fuzzy traffic light controller concept builds upon incorporating the expertise of human judgment into a dynamic control strategy. Traditional traffic lights operate with fixed cycle timing, which is far from optimal when traffic density fluctuates over time. Adjusting green intervals to allow a greater flow of vehicles when fewer cars are waiting at other lanes could lead to more efficient traffic management.
  To achieve this, the fuzzy logic approach is introduced into traffic light systems, enabling real-time adjustments to green light durations based on changing traffic loads rather than rigid, preprogrammed schedules. The project presents an advanced fuzzy traffic control system designed to handle complex traffic scenarios, including interference and long vehicle queues at red lights. The system actively manages green phase durations through adaptive tuning based on real-time traffic frequency and queue lengths. When compared to traditional systems with fixed timings, the findings underscore how a thoughtfully calibrated adaptive system significantly enhances traffic flow and overall efficiency.

Iranian Projects Recognized as the WSIS Prize 2023 Champions

In the WSIS Prize 2023 contest, one Iranian project has been recognized as a 2023 WSIS Champion in Action Line 7 in the category of E-Government:

- **National window of smart government services (Information Technology Organization):**

  The National Window of Smart Government Services is launched by the Information Technology Organization of Iran (ITO) to provide integrated electronic government services to all citizens (G2C services) on the platform of the National Information Network. This system acts as an SSO system; therefore, its most important advantage and added value for citizens is to receive governmental services in an "integrated," "quick," and "easy" way. The most outstanding feature of this system is its ability to verify the identity of people by using global standard mechanisms.

  The most important features of this system are:

  - Facilitating the receipt of governmental services and increasing the speed of access to services by citizens.
  - Providing integrated electronic governmental services on the secure platform of the National Information Network (NIN).
  - The possibility of entering the system in two ways: receiving a one-time password (OTP) or scanning a QR Code using the Mobile Government application.
  - The possibility of receiving all governmental services in a single system directly (entering via SSO to other governmental systems).
  - Authentication of users safely and reliably using global standard mechanisms.
  - Fast access to the user's selected and frequently used services.

  In this portal, while complying with the upstream laws and regulations in the field of information technology and maintaining the confidentiality and privacy of users, all smart governmental services are provided to citizens with three levels of authentication, including "Inquiry of identity items," "Photo matching authentication," and "Digital signature."

Iranian Projects Recognized as the WSIS Prize 2024 Champions

In the WSIS Prize 2023 contest, one Iranian project was recognized as a 2024 WSIS Champion in Action line 7 in the category of E-Science:

- **Universities Smart Services Single Window (Information Technology Organization (ITO) & Ministry od Science research and Technology (MSRT))**

  The Universities Smart Services Single Window is a project developed to be Universities' Single Window Focusing on Providing Academia Smart E-Service for All. The project aims

to create a suitable platform for providing smart higher education services to its main audience, including students, faculty members, graduates, knowledge-based companies, etc.

The first service offered in this project is the "Single Sign-On" service. In the second stage, a list of service providers in the higher education sector of the country has been designed. In this list, service providers are categorized into central and university-based institutions. Central service providers include the Ministry of Science, Research, and Technology, along with its affiliated organizations. University-based service providers include government universities affiliated with the Ministry of Science, Research, and Technology, universities affiliated with other government executive bodies, private universities, science and technology parks, and more.

In the third phase, centralized and university-based software systems that provide electronic services to their audience have been connected to the Unified Intelligent University Services Window system. More than 450 systems belonging to over 250 service providers have been connected, enabling unified access for users.

In the fourth and final stage, the list of services that can be provided is prepared and revised. During the review, the three sub-processes of requesting, performing, and delivering the service are analyzed and redesigned. Service intelligence is implemented to ensure the predictability of service delivery based on the history of the contacts' requests or the available information from their educational and research records and analysis. This enables them to benefit from the services in the future.

IV. Key Indicators of Progress

This section provides key data and indicators showcasing progress toward achieving the objectives set forth in Iran's 5-year national development plans. The current state of information and communications technology (ICT) in Iran is presented through statistical summaries derived from technical indexes. These insights have been compiled from primary sources, including the Iran Communication Regulatory Authority (CRA), Iranian telecommunication operators, and the Information Technology Organization of Iran (ITO), based on the last released statistics and reports in 2024.

Table 4.1. General information about I. R. of Iran

Index	Unit	Amount
The Population (According to the Last Official Population Census)	Person	85,329,270
Urban Population	Person	65,427,000
Rural Population	Person	19,902,000
Number of Provinces	Province	31
Number of Cities	City	1638

Table4.2. ICT local service, access and use indicators

Index	Unit	Amount
Number of connected villages to the Internet	Village	65,176
Percentage of governmental institutions connected to the Smart Government Single Window	Percent	99
Services coverage of executive bodies in the Smart Government Single Window	Percent	78
Number of people use domestic messengers	Million	54.9
Number of people use domestic social networks	Million	42.5

Table 4.3. ICT access and use indicators

Index	Unit	Amount
Percentage of fixed-telephone subscriptions	Percent	32.67
Percentage of public payphones	Percent	55497
Percentage of the population covered by a mobile-cellular network	Percent	98.97
Percentage of active mobile-cellular telephone subscriptions	Percent	189.6
International roaming agreement with countries - telecommunication service providers	Agreement	187
Fixed (wired) broadband subscriptions (ADSL)	Subscription	11,043,424
Fixed-telephone subscriptions (fixed‹WLL public payphones)	Subscription	28,085,560
Active mobile -cellular telephone subscriptions	Subscription	162,985,521
International Internet bandwidth per Internet user	Kb/s	60,736
Internet mobile subscriptions (GPRS)	Subscription	120,095,531

Table 4.4. Household ICT indicators

Index	Amount
Proportion of households with telephone	99%
Proportion of individuals using a mobile cellular telephone	92%
Proportion of households with Internet access	79.5%
Proportion of individuals using the Internet (last 3 months)	82.7%
Proportion of households with a radio	98.6%
Proportion of households with a television	99.6%
Individuals with ICT skill of Copying and moving a file or folder	75,4%
Individuals with ICT skill of Sending e-mails with attached files (e.g. document, picture video)	47,4%
Individuals with ICT skill of Using basic arithmetic formula	15.9%
Individuals with ICT skill of finding, downloading and installing software	34%
Proportion of individuals using the Internet by Getting of information about goods and services	21.8%
Proportion of individuals using the Internet by Sending and receiving email	18.6%
Proportion of individuals using the Internet by VoIP	76.5%
Proportion of individuals using the Internet by Participating in social networks	86,3%
Proportion of individuals using the Internet by Internet banking	31,6%
Proportion of individuals using the Internet by Gaming or downloading games, photos, videos, film and music	55%
Proportion of individuals using the Internet by Download software	24,9%
Proportion of individuals using the Internet by Looking for a job or sending/submitting a job application	1,4%
Proportion of individuals using the Internet from Home	97.7%
Proportion of individuals using the Internet from Work	21.7%
Proportion of individuals using the Internet from Place of education	1.8%
Proportion of individuals using the Internet in mobility	28.6%

V. Challenges and Gaps

Although national plans in many countries have advanced in the same areas targeted by the WSIS, numerous challenges at the international level in achieving the WSIS vision remain. Key among these challenges are the absence of a universally accepted definition of Internet governance, the lack of a framework to provide technical and financial support to the Information Society, the deepening digital gap, insufficient acknowledgment of cultural and linguistic diversity, ignoring the sovereign rights of governments in Internet governance, and inadequate compensation for damage caused by cyber-attacks. One of the key goals of WSIS, namely bridging the North-South digital divide, has not been achieved, and in some respects, this gap has even widened due to greater economic exploitation by developed countries compared to others. In many cases, this has been further aggravated by Unilateral Coercive Measures (UCM) imposed by some technologically advanced countries. We should find a solution for the following remaining items:

- Since 2005, the global landscape of data has changed in both its significance and scale. While the Tunis Agenda frequently used Information and Knowledge, it did not adequately address the issue of data with the depth demanded today. AI-based services leverage data from books, videos, and other forms of content to generate new content, often through processes that lack transparency and responsibility. Therefore, WSIS mechanisms must reestablish the importance of the concepts of data, as well as information and knowledge, to promote transparent, fair, and inclusive AI advancements. Moreover, there is now an urgent need to enhance the availability of local content to elevate the importance of multilingualism and cultural diversity globally.
- International financial institutions have not fulfilled their role in fostering the Information Society by providing financial resources as outlined in the Geneva Plan of Action, including paragraph 3d. International mechanisms and approaches for financial and technological support, as well as bridging the digital divide, as mentioned in various paragraphs of the Declaration of Principles, including paragraphs 61 and 66, have not been implemented. Furthermore, WSIS has failed to deliver on the Tunis Agenda, which emphasizes financing mechanisms for the use of ICT in Internet development and governance. Paragraph 68 of the Tunis Agenda asserts that all governments should have equal roles and responsibilities in Internet Governance, while paragraphs 69 and 71 specifically call for increased cooperation

and the establishment of mechanisms for Internet governance. This has not been achieved so far due to obstruction by some countries.

- In terms of adapting to emerging global trends, the WSIS should play a more prominent role at the international level. We have begun the review of WSIS+20 at a time when we are not only far from achieving some of the main visions set out in the WSIS documents, such as bridging the digital divide and establishing a universally accepted structure for Internet Governance, but also when the rapid growth of emerging technologies such as artificial intelligence has created new issues, challenges, and opportunities. Considering the pivotal role that WSIS holds in advancing the Global Digital Compact (GDC), it is essential for WSIS+20 to address emerging technologies. It should also adopt effective strategies to maximize their advantages for all while fostering economic growth, prosperity, and development worldwide, particularly in developing nations. We should try to maximize the use of existing international processes such as WSIS and its mechanisms and avoid duplication of processes, to ensure the equal participation of all countries, balance the opportunities and risks of AI, and prioritize capacity-building.

- The dominant sphere in cyberspace in recent years has been largely against local culture and religion. Therefore, at the policy level, the lack of attention to local culture and language, especially in global digital platforms, insufficient recognition of the sovereignty of countries in the governance of the Internet, and limited access to information and knowledge for all countries are major concerns that should be seriously considered in the WSIS+20 process.

VI. Future Directions and Areas for Collaboration and Vision Beyond 2025

The Vision of the WSIS has addressed significant issues, some of which have been realized in today’s increasingly digital world. Best practice sharing has been one of the most successful achievements over the past years. Iran has made remarkable advancements in the ICT sector as part of its five-year national development plans. Key milestones include establishing one of the region's largest fiber optic network, enhancing mobile broadband infrastructure, extending electronic services to the majority of rural and remote regions, and the rapid development of smart electronic services across key sectors such as government, business, healthcare, education, and agriculture.

Currently, the WSIS Forum and IGF mainly serve as venues for knowledge exchange and the sharing of experiences and best practices, yet they possess no binding authority. Since their establishment, there has been ongoing debate among experts regarding their precise objectives. Although knowledge sharing and open discussions on Internet Governance are necessary, they are not sufficient. In order to implement policies, it is necessary to involve an intergovernmental body such as the ITU to follow up on policy-making issues for Internet Governance through the Enhanced Cooperation mechanism.

To address the challenges of emerging technologies and their applications, robust accountability mechanisms must be established. For example, digital platforms should comply with established international principles and obligations, such as those outlined in the World Summit on the Information Society (WSIS) declarations and other key Internet Governance documents. Digital platforms must ensure transparency in their management policies, publish regular reports on efforts to combat harmful content (such as hate speech, disinformation, and misinformation), and cooperate with domestic and international legal institutions to enforce laws and regulations.

Furthermore, it is vital that digital platforms be accountable regarding the social impact of algorithms, user data security, content management, and payment of penalties for failure to comply with agreed terms. In this context, fostering international cooperation, including the development of universal standards, is indispensable for guaranteeing transparent and responsible digital governance.

Over the past two decades, Iran has remained committed to active cooperation with other nations, advancing toward a digital society harnessing the potential of ICTs and new emerging technologies, such as artificial intelligence. The framework for this collaboration is international bodies such as the International Telecommunication Union (ITU), which address the issue while preserving the sovereignty of governments with equal footing rights in the digital world, as stated in the WSIS documents.

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