

E-Government Status in Iran (TAKFA Plan Case Study)

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Abstract: This paper is the result of a research program and aims at examining e-government status in Iran. Therefore, firstly we will discuss about formation history, missions, key strategies, strategic goals, key fields and main parts of Iran TAKFA plan based on laboratorial studies and evaluating documents and proofs related to Iran Development and Use of Information and Communication Technology Plan (TAKFA). Then we will describe the status of e-government in ministries and higher organizations in Iran based on services and the main components of e-government such as G2G, G2C, G2B and G2E. Obtained results indicate that Government-Government, Government-Commerce sector and Government-Employees components are currently absent in the portals of ministries and higher organizations in Iran.

Key words: E- government • TAKFA plan • Iran

INTRODUCTION

Information and communication technologies have gained significant importance in modern world and various countries. These technologies are very powerful tools that can increase the participation of all people of the society in social changes through establishing e-government. Employing e-government make it increasingly possible for all people to access public information and prosper in economical and social fields [1].

Due to various economical, social and political limitations and pressures, most countries of the world has already began the implementation of e-government architecture in sectors where it seems more necessary and they focus their investments in these areas. That is why various countries are in different phases of e-government implementation.

It is obviously true that there is a significant difference between developed countries and developing countries in this regard. In developed countries, the idea of delivering better services to the society and people originates from private sectors and flows into governmental areas. In these countries, governments face considerable demand and pressure from citizens to deliver better and more suitable services. They must meet society needs; otherwise they will change soon [1].

But in developing countries including Iran, it has paid less attention to citizens and satisfying them such that for many authorities of these countries there isn't any need to change governmental structures for delivering more suitable services to people. However, the authorities of many such countries believe that information technology has benefits for them, since reduces costs and administrative corruptions and provide them with better decision making tools. If you look at developing countries websites created by the help of World Bank and has been named as "development gates," you will recognize increasing interest of their authorities for changing the governmental affairs administrative system through implementation of e-government [2].

Numerous definitions have been suggested for e-government, since this concept is approached from different angles. However, the most inclusive definition which covers all these definitions and considers all aspects of this concept is as follows: "Using technology especially web based applications by the government for improving access to information and delivering governmental services to citizens, business partners, employees, other brokers and components of the government." E-government has potential to help establishing better relationships between government and public through creating more smooth, easy and efficient interaction with citizens. In addition,

Table 1: Areas of activity and details of e-government strategies plan of Iran [6]

No.	Main activities	Secondary Activities	Code	Responsible organization	Coworker organization
1	Government Virtual Private Network (VPN)	Network Management Regulations Security Content (Generating real time information and delivering them to decision making system and macro management of the country)	010101 010102 010103 010104	Presidency	All organizations
2	Automation of planning and budgeting system	Budgeting Agreements exchange Credit Assignment Cost report Performance check	010201 010202 010203 010204 010205	Management and Planning Organization (Deputy of Support)	All organizations All organizations
3	Automation of income system (treasury)	Treasury system accounting	010301	Ministry of Economic Affairs and Finance	All organizations Management and Planning Organization/Banks/Ministry of Commerce
4	Traffic and driving and execution affairs	Automating traffic and driving affairs for delivering real time services to people	010401	Police	Municipalities/Provincial governments
5	Creating websites of governmental organizations and delivering databases of governmental services delivered to people	Creating electronic forms (e-forms) Information service systems and databases for people having relationship with the organization (including job market information service system, agricultural information service, etc.) Helping automation of the country activities Electronic tendering system for all governmental auctions	010501 010502 010503 010504	Management and Planning Organization and all executive organizations of the country Ministry of Economic Affairs and Finance	Ministry of Culture & Islamic Guidance/Management and Planning Organization/Secretary of High Council of Informatics/all executive organizations of the country
6	Providing the draft of laws and plans related to management entities of cyberspace at national level	Cyber crime law Intellectual property law in cyberspace National identification validation system (CA&PKI) and e-signature and its macro management entity Privacy policy in cyberspace Legislating required standards related to information network Creating macro management entity, issuing domain names under IT classification Creating justice chamber for cyber conflicts	010601 010602 010603 010604 010605 010606 010607	Secretary of High Council of Informatics Ministry of Post and Telegraph and Telephone/communication companies of Iran and its provinces	Ministry of Justice related organizations/Culture & Islamic Guidance/Science, Research and Technology/commerce/Economic Affairs and Finance/P.T.T/Police
7	Creating suitable information infrastructures and information highways required for the country	Legislating based on Iran national information infrastructure (IR-NII) by ministry of Post and Telegraph and Telephone and communication companies in the country and its provinces with related credits	010701	Ministry of Post and Telegraph and Telephone/communication companies of Iran and its provinces	Banks/executive organizations/computer companies Management and Planning Organization/Ministry of Road & Transportation/Ministry of Interior/Ministry of Information/Free zones
8	(National Government Portal) Creating national governmental portals	Integrating web portals of governmental organizations with the process of delivering services to people through this network	010801	Management and Planning Organization (Deputy of Human Resources)	All government organizations
9	Master plan of ICT	Creating national/sectorial/provincial master ICT plan	010901	Secretary of High Council of Informatics	All executive organizations and sectors of the country/Management and Planning Organization

governmental organizations use e-government for improving main business operations and delivering information and fast and easier access services to larger groups of clients [1-5].

A Review of the History of E-government Formation in Iran:

The first coordinated and inclusive activities in government sector of the country for extending information technology and implementing e-government was providing and legislating “Iran Development and Use of Information and Communication Technology Plan (TAKFA)” by Management and Planning Organization (Secretary of High Council of Informatics, 2000) in the beginning month of the year 2000 (May) [6]. This plan that was legislated with the aim of coordinating executive activities in Iran and belongs to development and use of information and communication technology field, was approved by Ministers Council in 25 July, 2000 and was referred to related organizations including High Council of Informatics for execution [7].

According to the strategic plan provided by Management and Planning Organization, seven areas of information technology strategic plan were considered as the country future activities: E-government, extending information technology application in education and training and developing digital skills of the country human resource, extending information technology application for improving social services, extending information technology application in the field of culture, art and promoting Farsi script and language in cyberspace, extending information technology application in economy, commerce and business, extending information technology through establishing Small Medium Enterprises (SMFs) in research parks [6]. Table 1 shows areas of activity and details of e-government strategies plan of Iran [6].

Finally High Council of Country Administration with the suggestion of Management and Planning Organization approved the “E-government Establishment Plan” in 2 July, 2000. This plan which consists of automating public and private activities of governmental organizations was aimed at accessing third law of development plan and delivering exact and real time information in various economical, social and cultural sectors. The goals pursued by this plan were automation of activities, expediting jobs, improvement of delivering services to people with maximum discipline and accuracy and increasing decision making quality in various levels, delivering in-person services and reduction of costs,

increasing efficiency and effectiveness in various sectors, rapid and accurate establishment and extension of information among executive organizations, etc [6].

Also implementing e-government article was approved in 2000 by High Council of Informatics and was referred to related governmental organizations for implementation [7]. According to this e-government establishment plan consists of nine field of activity. The details of Iran electronic government strategic plan are presented in Table 1: government virtual private network (VPN), automation of planning and budgeting system, automation of income system (treasury), traffic and driving and execution affairs, creating web portals for governmental organizations and delivering databases of government services delivered to people, providing the draft of laws and plans related to management entities in digital space at national level, creating suitable information infrastructures and information highways required for the country, creating national governmental portals, master plan of information and communication technology [6].

Iran Development and Use of Information and Communication Technology Plan (TAKFA):

This plan aims at creating a structured process and has clear and well stated executive goals, although it focuses on a particular domain [8]. This plan has been created in the main frameworks of legislating fundamentals for human resource development, cultural and social, governmental services, extending economical and commercial services, creating national infrastructure, information network, law, security, industry and employment [9]. Theoretical framework of TAKFA plan is according to international institutions working in the filed of information and communication application and its main concept is using information and communication technology in various sectors of Iranian community. This concept is addressed within the following themes:

Necessity of Legislating TAKFA Plan: From 1980s, developed countries and even some of developing countries started implementing their national policy regarding information and communication technology application for development. Introduction of personal computers as well as increasing demand for new softwares and hardwares rised the pace of this process. On the other hand, digital communication and data transmission became common. The appearance of Internet and its rapid development was considered a turning

point in this area that resulted to significant changes in world economics, policy and culture. Increase in data transmission rate, increase in human resource productivity, promoting distant working methods, distant medicine, e-commerce and electronic banking, increase in distant learning education and appearance of virtual communities and e-government are some examples of these changes [8].

Phases of Legislating TAKFA Plan: Clear and specified phases and an inclusive plan were followed for legislating and implementing TAKFA plan. Firstly, general policies related to computer information networks were created during six steps [8]. After legal validations performed by highest levels of the country, these general policies of computer information network were declared to government in the form of regulations like creating and improving national computer information system, extending national information network quantitatively and qualitatively, active and effective presence in international networks and supporting governmental and private sectors, creating and improving access to international treaties and regulations and creating information unions with other countries specially Islamic countries [7, 10].

TAKFA Plan Perspective: The perspective of Iran Development and Use of Information and Communication Technology Plan (TAKFA) is as follows: "Powerful Iran in 21th century: Knowledge oriented economy through using information and communication technology" [11].

TAKFA Plan Mission: Employing information and communication technology for converting national opportunities and resources to national richness, ability and pride with the goal of stable national development [7].

Key Strategies in Providing TAKFA Plan Programs: The strategies pursued in Iran Development and Use of Information and Communication Technology Plan (TAKFA) are as follows: systematic extending of information and communication technology in stable national development, human resource development as a strategic priority of information and communication technology development, improving sharing environment and space, infrastructural measures (access network, regulations, resources and facilities), private sector is a key and strategic pivot of information and communication technology development movement [7].

Strategic Goals of TAKFA Plan: The main goal of TAKFA plan was specified as more preparation of the country for its fully involvement in information age to meet cultural and economical development as well as developing fields and opportunities to motivate private sector as a key and strategic pivot of information and communication technology. However, it aims to reach the following goals: Improving the efficiency of the services including reduction of costs and time specially those related to governmental sector, encouraging and extending electronically participation of people in society control, promoting information sharing specially government information as the absolute national rights of people help to create value added employment opportunities, rapid and cheaper access of public to communication and information, extending digital literacy and promoting national culture and language in digital environment, creating modern infrastructures for exporting services and products, more rapid extending, creating and growing small medium enterprises, extending and improving Islamic culture and Farsi script in digital environment [11].

Key Areas and Main Parts of TAKFA Plan: The key areas of Iran Development and Use of Information and Communication Technology Plan (TAKFA) are presented in Table 2 and this table shows the framework of Development and Use of Information and Communication Technology Plan (TAKFA) [7].

Also, determining and recognizing secondary pivot of TAKFA plan which are included in aforementioned main frameworks is the authorized right of High Council of Informatics and can be changed or interpreted with the suggestion of the organization or the future corrective articles of High Council of Informatics. The Secretary of High Council of Informatics will be responsible to pursue and study all affairs related to TAKFA plan [7]. Also, the most important parts of Iran Development and Use of Information and Communication Technology Plan (TAKFA) are as follows:

- The plan of providing the master system of the country information and communication technology (national information and communication technology plan, institutionalization of executive management plan, the plan of creating engineering system of information and communication technology companies)

Table 2: The framework of Development and Use of Information and Communication Technology Plan (TAKFA) [7]

No.	Key areas	Main parts
1	National master plan	The country master plan of information and communication technology
2	Creating infrastructure for human, cultural and social resources	Developing human resources and e-learning
3		Culture in cyberspace
4	Governmental services	E-government
5		E-services
6	Developing social and commercial services	E-commerce
7		E-economics
8	Developing national infrastructures of information network and law and security	The network of Iran national information infrastructure (IR-NII) and security
9		Infrastructure of laws
10	Industry and employment	Small Medium Enterprises (SMEs)
11		Industry sector

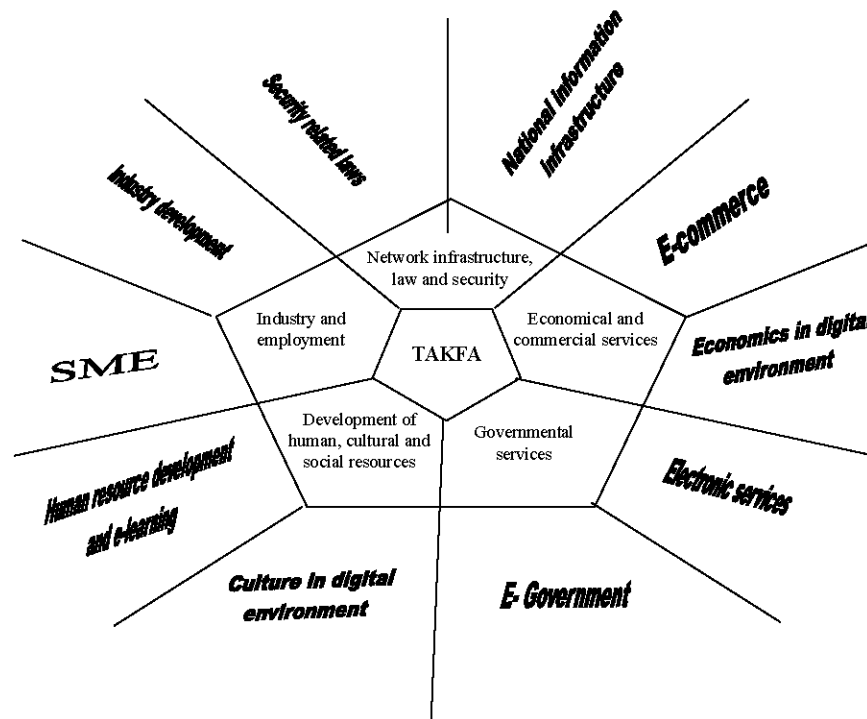


Fig. 1: How key fields and main parts of TAKFA plan interact and communicate with each other [7]

- The plan of recreating promotion of national and Islamic culture in cyberspace.
 - The plan of recreating the governmental services within information and communication technology context.
 - The plan of recreating promotion of social services in cyberspace.
 - The plan of recreating commerce within the information and communication technology context.
 - The plan of recreating economics within the information and communication technology context.
 - The plan of national information infrastructure and security.
 - The plan of recreating a nd providing the draft of laws in digital/ computer/internet environment.
 - The plan of recreating and increasing employment in the field of information and communication technology with emphasis on the growth of small medium enterprises.
 - The master plan of development of information and communication industry [7].
- Figure 1 shows the way key fields and main parts of TAKFA plan interact and communicate with each other [7].

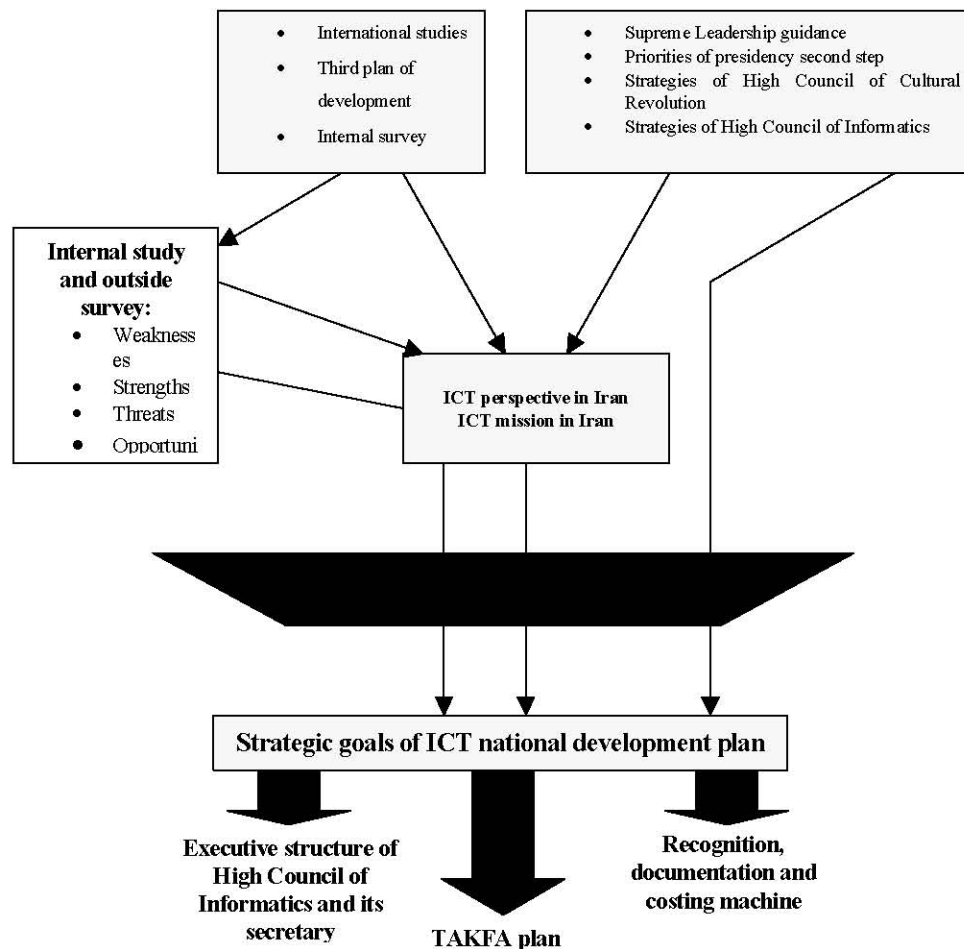


Fig. 2: Schematic view of TAKFA plan legislating process [7]

Executive Results of TAKFA Plan The Main Results Are as Follows:

- Organizing the strategic specialist committee of information technology in ministries and independent organizations with responsibility of ministers.
- Supporting the execution of more than 258 main researches; planned and applied projects by various economic, social and cultural entities to create additional space and promote the using of cyberspace.
- Evaluating, approving and assigning credit for executive plans in technical and scientific committees.
- Promoting private sector as the pivot of national TAKFA plan execution.
- Attracting the involvement of civil institutions for developing information technology [12].

Figure 2 shows Schematic view of TAKFA plan legislating process [7].

Evaluating E-Government Status in Iran: Based on studies conducted about e-government status in various countries and their rank, united nations and American Society for Public Administration standards (including the condition of websites or web presence measure (WPM), information and communication technology infrastructure Measures (ICTIM), human resource abilities), Iran had the index of 1.31 and rank of 77 that indicates low ability of implementing e-government in Iran [13].

The results obtained from a two phase research were used for determining e-government status in ministries and higher organizations of Iran. A sample of 20 ministries and 5 higher organizations that are under the direct control of Islamic republic of Iran president were studied.

Table 3: Five levels for evaluation of e-government services [14]

Level	Meaning
0	Not delivering information and services
1	Delivering poor information and not delivering services
2	Delivering acceptable information, but not delivering services
3	Delivering acceptable information and poor services
4	Delivering acceptable information and suitable services

- The first phase of this research includes identifying the website addresses of ministries and higher councils.
- The second phase of this research was devoted to evaluation of current governmental websites based on e-government services and main components like G2G, G2C, G2B and G2E. Therefore, five levels were defined for each of e-government services and main components like G2G, G2C, G2B and G2E. These levels begin from Level 0 meaning “not delivering information and services” and end to level 4 meaning “delivering acceptable information and suitable services” (Table 3).
- Expect for services delivered by G2G component that belongs to level 1 in presidency website and portal, no other component such as G2G, G2C and G2E is present in the websites of ministries and higher organizations of Iran.
- Regarding delivering governmental services to citizens, 40 percent of studied ministries and governmental organizations had no website address, 32 percent of them had websites containing limited information and only 28 percent of them enjoyed acceptable content and information in their websites.
- According to the results of this research, electronic services and e-forms aren't provided in the websites of ministries and higher organizations of Iran.

RESULTS

- Interview with governmental authorities and professionals indicated that the services delivered by G2C and G2E components were not accesable to public due to their nature. So, both components don't exist in ministries and higher organizations of Iran and these organizations belong to level 0 in delivering G2B and G2E services.
- Levels 3 and 4 of delivering information and services were not found in any of the existed websites. This indicates that currently no governmental services are delivered through the websites of ministries and higher organizations of Iran. The status of each of 4 main components of e-government in ministries and higher organizations of Iran is presented in Table 4.

Table 4: The status of each of the main components of e-government in governmental organizations [14]

No.	Organization (ministry and organization)	G2C	G2B	G2G	G2E
1	Presidency	1	0	1	0
2	Ministry of Education	1	0	0	0
3	Ministry of Information	0	0	0	0
4	Ministry of Economic Affairs and Finance	1	0	0	0
5	Ministry of Foreign Affairs	1	0	0	0
6	Ministry of Commerce	2	0	0	0
7	Ministry of Health, Education and Medical Treatment	0	0	0	0
8	Ministry of Post and Telegraph and Telephone	0	0	0	0
9	Ministry of Cooperatives	2	0	0	0
10	Ministry of Jihad-e-Agriculture	2	0	0	0
11	Ministry of Justice	0	0	0	0
12	Ministry of Defense & Armed Force	0	0	0	0
13	Ministry of Road & Transportation	2	0	0	0
14	Ministry of Industries and Mines	2	0	0	0
15	Ministry of Science, Research and Technology	2	0	0	0
16	Ministry of Labor and Social Affairs	0	0	0	0
17	Ministry of Interior	0	0	0	0
18	Ministry of Culture & Islamic Guidance	1	0	0	0
19	Ministry of Housing and Urban Development Building	1	0	0	0
20	Ministry of Petroleum	1	0	0	0
21	Ministry of Energy	2	0	0	0
22	Atomic Energy Organization	0	0	0	0
23	Physical Training Organization	0	0	0	0
24	Environmental Protection Organization	1	0	0	0
25	Management and Planning Organization	0	0	0	0

CONCLUSION

As it was stated, interview with governmental authorities and specialists indicated that G2C and G2E components are not usually accessible for public due to their nature. So, both of these components of e-government don't exist in ministries and higher organizations of Iran and these organizations enjoy level 0 in delivering G2B and G2E services. Expect for services delivered by G2G component that enjoys level 1 in presidency website and portal, no other component such as G2G, G2C and G2E is present in the websites of ministries and higher organizations of Iran. Regarding delivering governmental services to citizens, 40 percent of studied ministries and higher organizations of Iran had no website address, 32 percent of them had websites containing limited information and only 28 percent of them enjoyed acceptable information in their websites. According to the results obtained from this research, electronic services and e-forms aren't provided in the websites of ministries and higher organizations of Iran. Levels 3 and 4 of delivering information and services were not found in any of the existed websites. This indicates that currently no governmental service is delivered through the governmental websites.

The following factors affect significantly the successful implementation of e-government in Iran:

Technology: Considerable technological level has been used in this area. These technologies must be of high reliability and their related operational issues such as development capability must be taken into account.

Cultural: Successful utilization of e-government requires paying attention to cultural background of the community and its social context.

Training and Human Resource: In order to implement a complex and extensive system with high quality, existed human resources must be taken into consideration. If the education and research practitioners of the country are not capable to improve the existed systems and train required productive and skillful people, employees, leaders and managers of executive organizations will not well prepared for efficient execution of e-government. This problem makes it less likely to implement e-government.

Organizational: Implementing and maintaining such system requires significant and continuous coordinations of various sectors and organizations of the society.

Sub-Contraction: Numerous projects must be executed in order to accomplish e-government plan. These projects often require having somewhat different experiences. Managing these projects is itself a part of e-government technology.

Programming: Designing and implementing electronically committee of government depends on performing many different activities. In many cases, these activities are related to other activities and a coordinated collaboration of many companies and consultants is needed for performing them.

Financial Resources: Supplying and assigning financial resources for performing this plan adds to the complexities of e-government implementation. Financial resources must be taken into consideration for implementing such plan; otherwise it is bounded to failure.

Time Factor: E-government has been formed for meeting a number of needs. If these needs are not satisfied in a reasonable time, it may be omitted from the country priorities as the time passes. In such case, the country affairs may proceed slowly and placed in an uneven path.

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