

IRANDOC

**Ministry of Science, Research & Technology
Iranian Information & Documentation Center
(Research Center)**

**Proceedings of the Meeting & workshop on
Development of a National IT Strategy
Focusing on Indigenous Content Development**

**Iran-Tehran
October, 2nd & 3rd**

October, 2004

TAKFA Iran's Road to Knowledge-based Development

Nasrollah Jahangard¹

1. Introduction

Analysis of the approach to ICT policy taken by developing countries shows that, many nations have taken advantage of the opportunities afforded by ICT within a policy framework, laid down guidelines and proceeded with the formulation of a national ICT strategy as a very significant part of their overall national development plan.

It needs not to elaborate on the fact that, numerous factors influence the extent and speed of social and economic development—not least political stability, physical infrastructure, basic literacy and basic health care. Although there is no suggestion that ICT can eliminate the need for these or offer a panacea for all development problems, but detailed analysis of experience around the world reveals ample evidence that, used in the right way and for the right purposes, ICT can have a dramatic impact on achieving specific social and economic development goals as well as play a key role in broader national development strategies.

This paper explains the foundations of National ICT Agenda “TAKFA” as Iran’s road to knowledge-based development. It also briefly goes through the management structure and the process in which TAKFA was developed.

2. Iran’s Supreme Council of ICT

Supreme Council of Information & Communication Technology (SCICT), the highest decision making body in the area of ICT policy making in Iran, under a direct order from the President undertook the development of a national ICT plan beginning late 1999 which ended April 2002.

The development process was a collaborative effort of some of the best planners of the country and was based on a comprehensive study of other countries that have successfully excelled in assimilation of IT at a national level. The national

ICT agenda was called "TAKFA" (an acronym of Farsi words representing the Iranian National ICT Agenda). This document is prepared to present an overview of some of the different aspects of Iran's national ICT development plan

Supreme Council of ICT

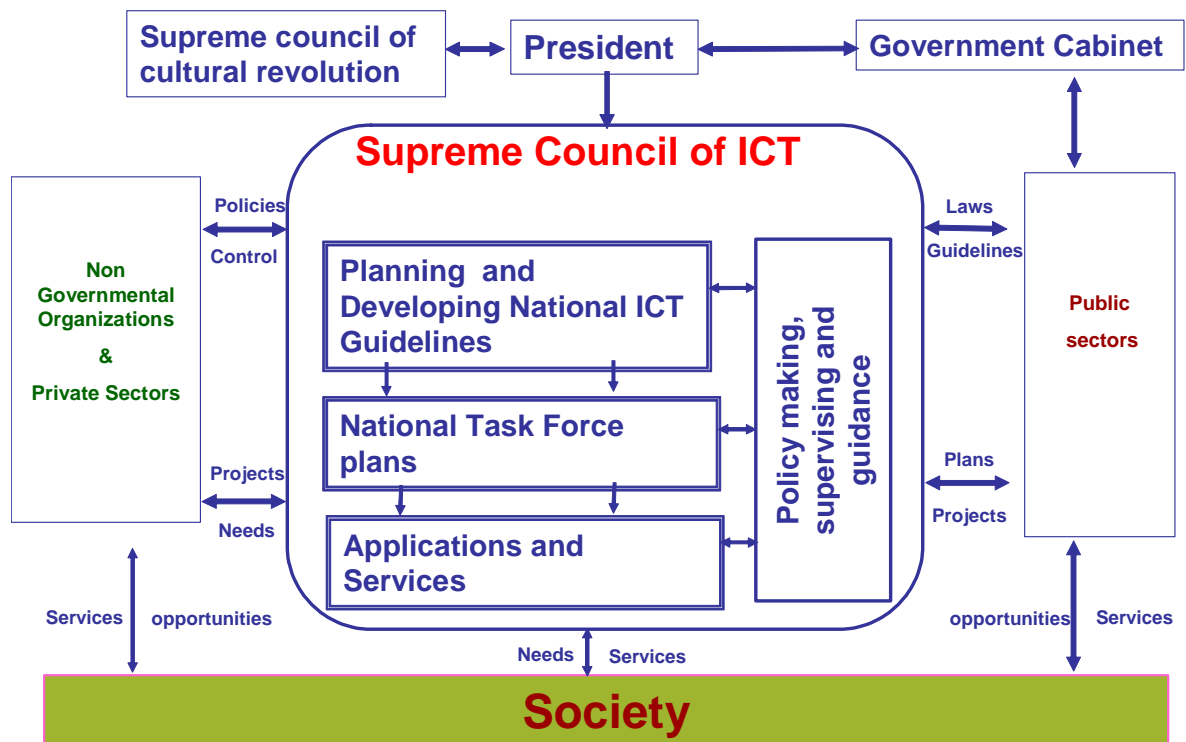


Fig 1: Iran's supreme council of ICT

The development process was a collaborative effort of some of the best planners of the country and was based on a comprehensive study of other countries that have successfully excelled in assimilation of IT at a national level. The national ICT agenda was called "TAKFA" (an acronym of Farsi words representing the Iranian National ICT Agenda). This document is prepared to present an overview of some of the different aspects of Iran's national ICT development plan.

A. Major activities in TAKFA's development phase

- Studying in great detail the achievements of many countries.
- Scrutinizing the national strengths and weaknesses to make sure that the national agenda is realistic
- Environmental scanning at the international level in order to choose the right model for Iran's ICT development process
- Design and establishment of an executive organization to handle the complex task of steering and managing the projects
- Developing a very clear and modern budget allocation engine to ensure that TAKFA is not hampered by traditional and bureaucratic budgetary procedures.

Schematic of TAKFA's development

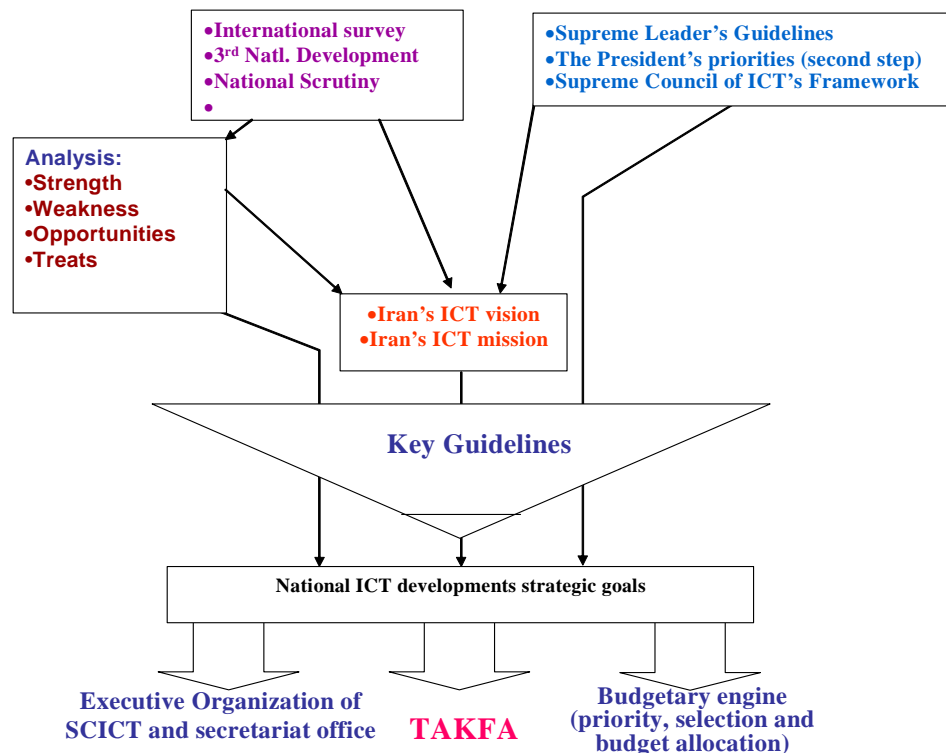


Fig 2: Schematic of TAKFA'S development

B. Major events of TAKFA since the initiation

A special envoy has been appointed by the President to follow the progress of Iran's ICT action plan. Some facts and figures regarding TAKFA are as follows:

- 100 million US dollars initiating budget was allocated for the advancement of ICT in Iran by the parliament at the beginning of 2002.
- On June 14th 2002, TAKFA was presented to the Iranian cabinet.
- On June 27th 2002, TAKFA was approved and additional 1% of the fiscal national budget was permitted to be used by different sectors of government for achieving the objectives of TAKFA.
- 20 million US dollars initiating budget was allocated for the start of eCommerce
- 20 million US dollars initiating budget was allocated for the eEducation at the secondary school level
- Internet bandwidth of all colleges and universities was doubled
- ICDL (International Computer Driving License) was adapted by the government as a mandatory skill of all governmental employees
- TAKFA's budget was increased in 2003 fiscal year to 400 million US dollars.
- Creation of a significant awareness amongst all government officials regarding the importance of TAKFA

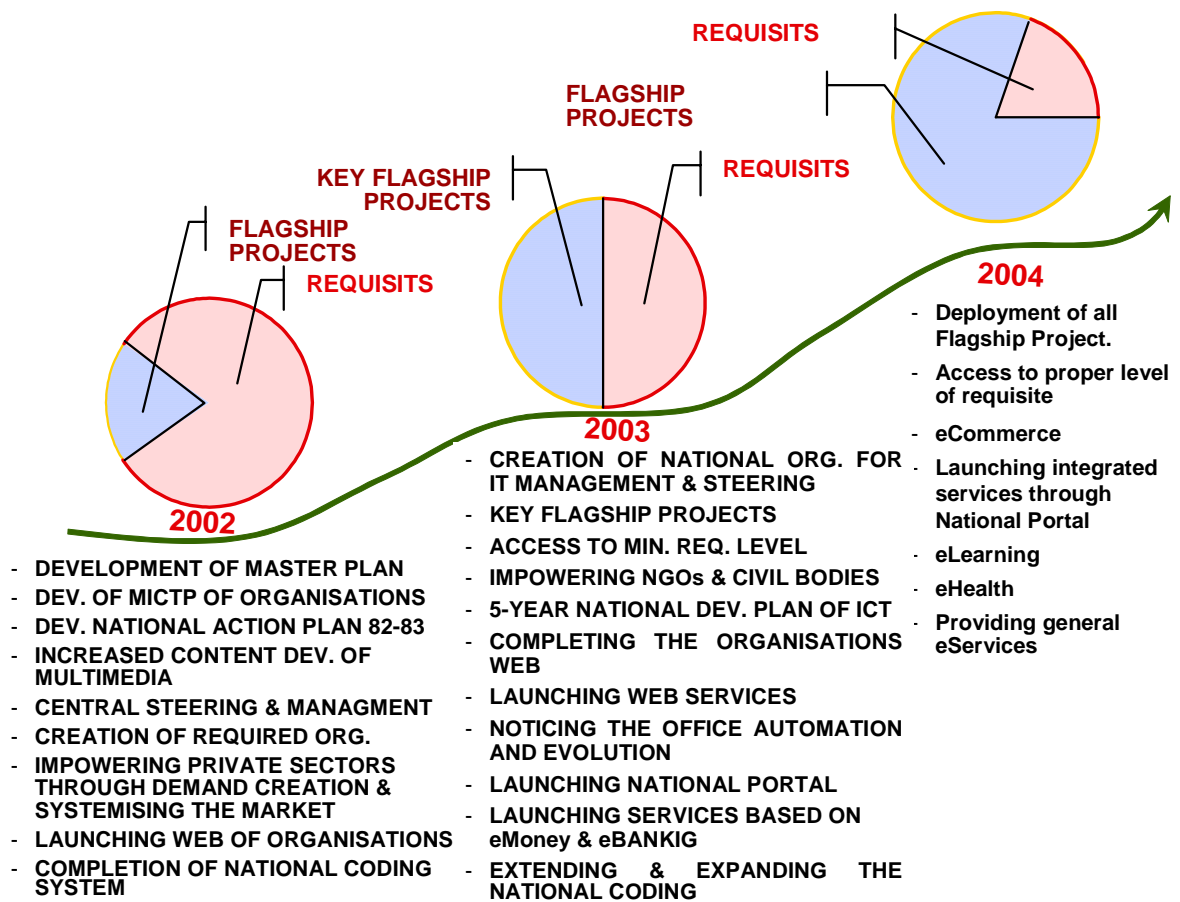


Fig 3: Major events of TAKFA

C. Framework of TAKFA

The general framework of National Information & Communication Technology Agenda "TAKFA" consists of five major parts, namely:

1. **Infrastructure:** Access, Security, Data Centers, Regulations, and Law
2. **Commerce and Economical Services:** eCommerce, eBanking, eMoney
3. **Government Services:** eServices, eGovernance, and eGovernment
4. **Human Resource Development, Cultural and Social Programs:** HRD & eEducation, Culture in digital environment
5. **Employment and Industry:** Industrial development, high tech jobs, Industrial parks, and SME development

As can be seen each major parts is in turn divided into subdivisions, in all there are some 40 national projects and in the action plan some 110 subprojects are defined.

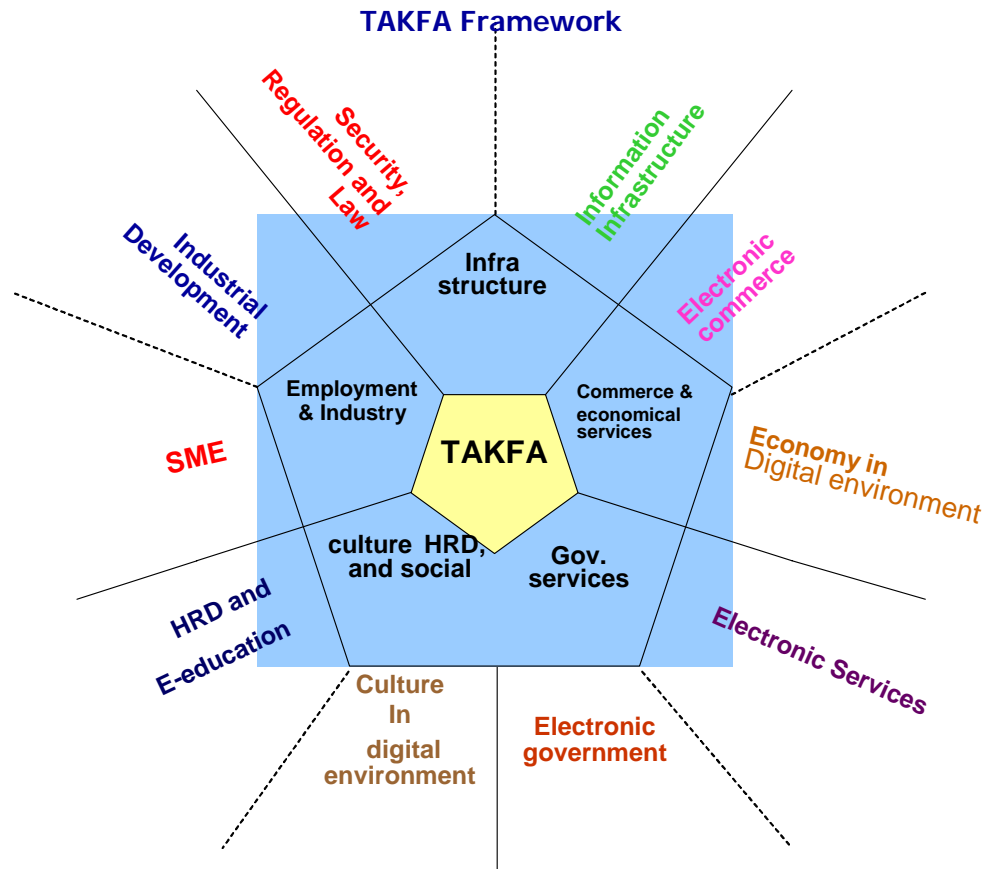


Fig 4: TAKFA frame work

D. The key guidelines used to develop TAKFA

- Systematic approach towards a national sustainable development
- Human resource development
- Improvement of national synergy
- Development of national information infrastructure: networks, laws, standards and resources
- Private sector involvement through international joint ventures

E. Iran's information and communication infrastructure

- Average fixed telephone penetration in the country is nearly %20; but in major cities this number exceeds %30
- Access to internet is very popular and the access cost in Iran is one of the lowest in the region.
- There exists a three layer data communication coverage of the country
 - the first layer is digital radio that is almost %98 complete
 - the second layer is full redundant fiber optics, and is about %60 complete
 - and the third is satellite coverage with already 3 major countrywide connections in place, and major connections to all main cities and ports in the near future

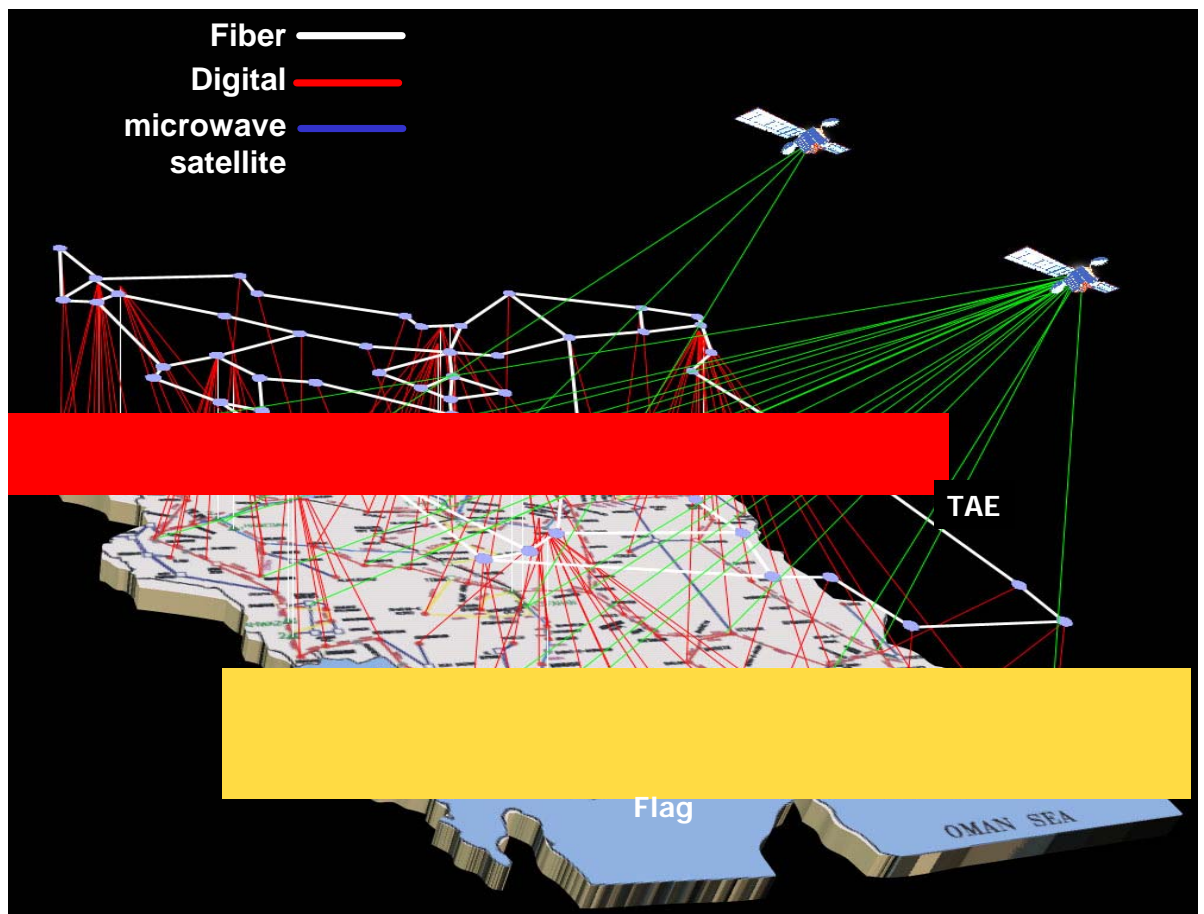


Fig 5: Iran's position as the natural hub of the region

What is evident from Iran's national information infrastructure is the plan to fully explore Iran's position as the natural hub of the region. Iran borders 15 countries in the sensitive and strategic regions of the Middle East and the Persian Gulf. Iran is not just the only road connecting Europe to the Indian subcontinent, but it is also the most economical and the shortest route to Central Asia and the Caucasus.

3. Government and eCommerce in TAKFA

From the vantage point of business and efficiency of doing business both in public and private sector eCommerce for G2G, G2B, and B2B has been viewed as the most essential part of TAKFA. The use of eCommerce by government is identified as a priority both by government agencies and by the private sector. As a result a \$20,000,000.00 government budget was dedicated to jump start the implementation of eCommerce in Iran. The business community recognizes that government application of eCommerce practices will provide a major stimulus to the adoption of eCommerce throughout the economy, and to its acceptance by the public at large. In turn, this will lead to business efficiencies and increased competitiveness. eCommerce has the potential to benefit all Iranian citizens, both directly and indirectly.

The results of past two years of "TAKFA" show that reasonable progress is being made in implementing eGovernment. There is an ever increasing confidence amongst governments that if they continue this path then the benefits of eCommerce

and eGovernment will become ever so more apparent. However both governments and the private sector realize that if governments are to be perceived as an exemplar of eCommerce then much work still lies ahead.

Tasks Separation of TAKFA

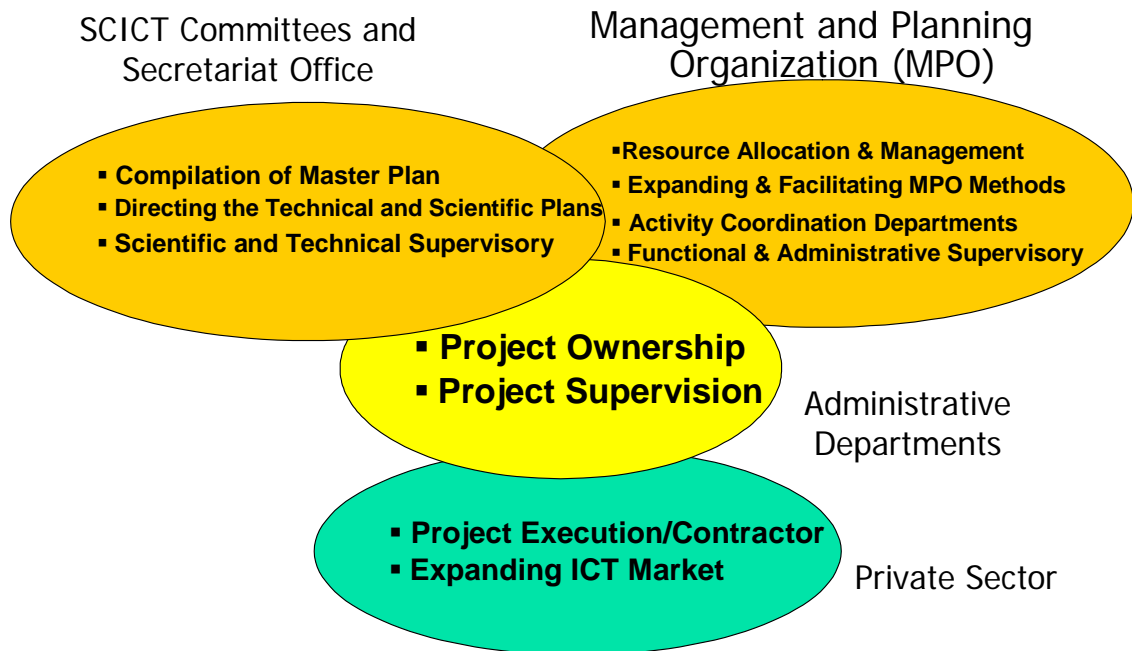


Fig 6: tasks separation of TAKFA

4. Budgeting and Planning at TAKFA

Budgeting is widely acknowledged to be one of the most important processes any public-sector entity undertakes. This is particularly of greater significance in Iran because of its outdated budgeting practices. There is increasing dissatisfaction among the public and elected officials because they can't actually understand budgets and their connections to goals, plan and accomplishments. Most budget documents and processes do a wonderful job of itemizing the 'things' on which government money is spent. But those same budgets tell very little about what will actually be accomplished with those expenditures. Citizens are finding they don't really understand what they are getting for their tax money. This belief leads to strong dissatisfaction and a lack of trust in our governmental entities.

Planners of TAKFA believe the technology must be combined with a new approach to planning. Governments must move from a process of annual budgets to one of continuous planning, monitoring and adjusting. This approach, with the supporting technology, mirrors how we are seeing the private economy changing. Government needs to change in a similar fashion to fulfill its role of enabling the private sector as a whole to flourish. After all, how well government works and how well it optimizes its resources and service delivery has a direct impact on how well the private sector can function.

A. Iran as an ICT market for foreign investment

- Iran is a real attractive ICT market
- Iranian companies have great technical potential and proven know-how
- The national information infrastructure is almost complete
- Iran's eCommerce law as a fundamental infrastructure of ICT activity is in its final stages of legislation
- There is a well defined national agenda and dedicated budget
- Proper tax incentives are being developed to encourage foreign investment in the ICT sector
- The Iranian president himself is going to lead the leap into the information society
- Joint venture of national companies with internationally proven companies is the core strategy of TAKFA as the surest way to success
- Joint cooperation of International and Iranian Companies are encouraged, welcome and will be supported.

B. TAKFA and the next Iranian five-years national development plan

- ICT is at the core of Iran's next national development plan
- The theme of knowledge based economy dominates Iran's next 5-years national plan
- It is expected that by the first year of the next national development plan (2005), prerequisites of knowledge based economy will be in place. These include:
 - easy and inexpensive access to internet for the masses,
 - adequate and preliminary digital literacy by the public
 - delivery of minimal government eServices (informative web sites, download of forms, filling of electronic forms, electronic appointments etc.) of all government sectors,
 - national government secure Intranet
 - digital signature, intellectual property, data protection etc. laws
 - Completion of national information infrastructure
- Iran's eCommerce should include majority of government and private sector's transactional activities by 2008
- eGovernment should be in full utilization by 2008 in all government activities

Strategic Programs

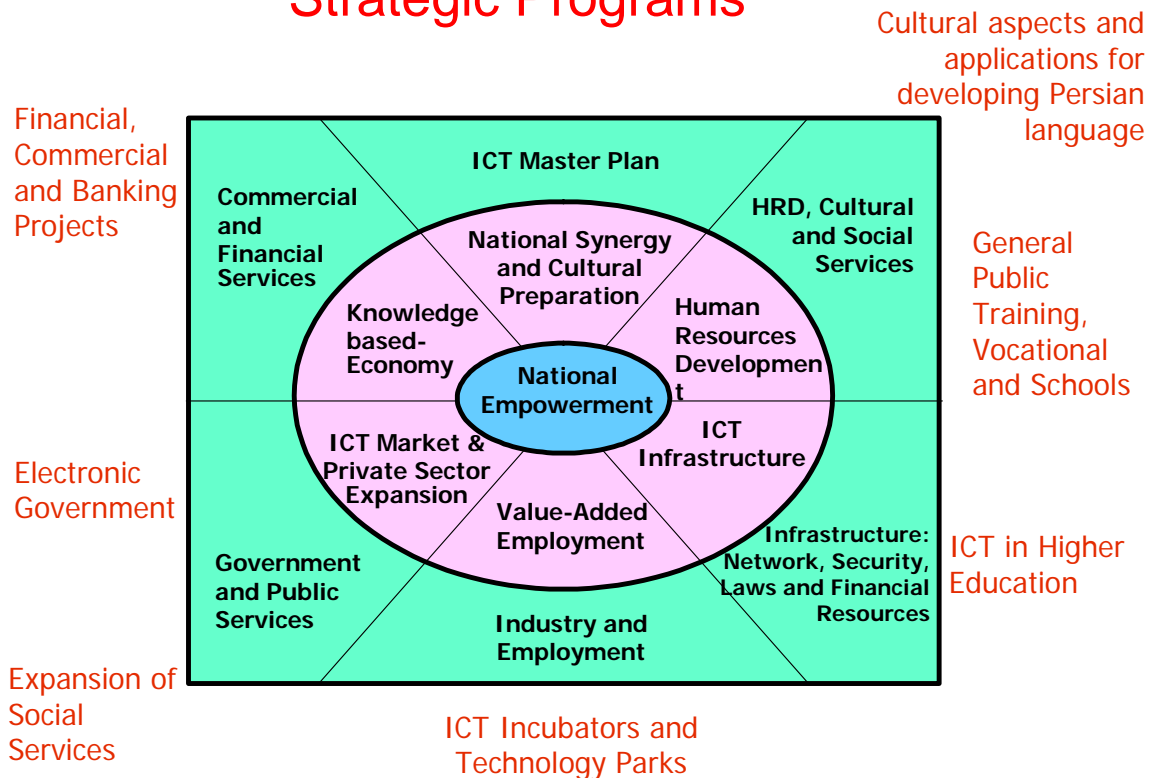


Fig 7: Strategic Programs

C. Main challenges of TAKFA

- **change management:** Reshaping the mindset of the general public as well as government officials, that ICT initiatives are more to do with transforming and reinventing the government than the application of technology. Adoption of workable plans, policies, procedures and mechanisms that facilitate and support the fact that eGovernment is more about *Good Government* than “e”.
- **capital investment:** Lack of understanding of the budgetary officials of the intangible goods measurement, high initial cost of ICT projects, long ROI periods, special requirements of planning and budgeting of ICT projects, the need to steer activities centrally while implement them in different sectors
- **human resource development:** Lack of inexpensive and easy access to internet, lack of encompassing information infrastructure, inadequate national bandwidth, digitally less educated teachers, lack of public trust in digital services, lack of adequate training institutions, lack of experiences with ERP packages in organizations
- **private sector participation:** Mutual recrimination between public and private sectors. Also lack of a properly engineered ICT market with adequate measures for intangible goods to support the proper definition, development and deployment of large scale national ICT projects by Iranian private companies.

- **private investment:** proper presentation of the investment opportunities in all areas of ICT enabled activity and services to the potential investors inside the country, proper strategy of attracting the large number of very influential Iranian investors who live abroad and are major players of IT sector, creation of proper and attractive tax incentives for foreign and national private investment in ICT sector.

Human resources development: pivotal strategy of ICT development

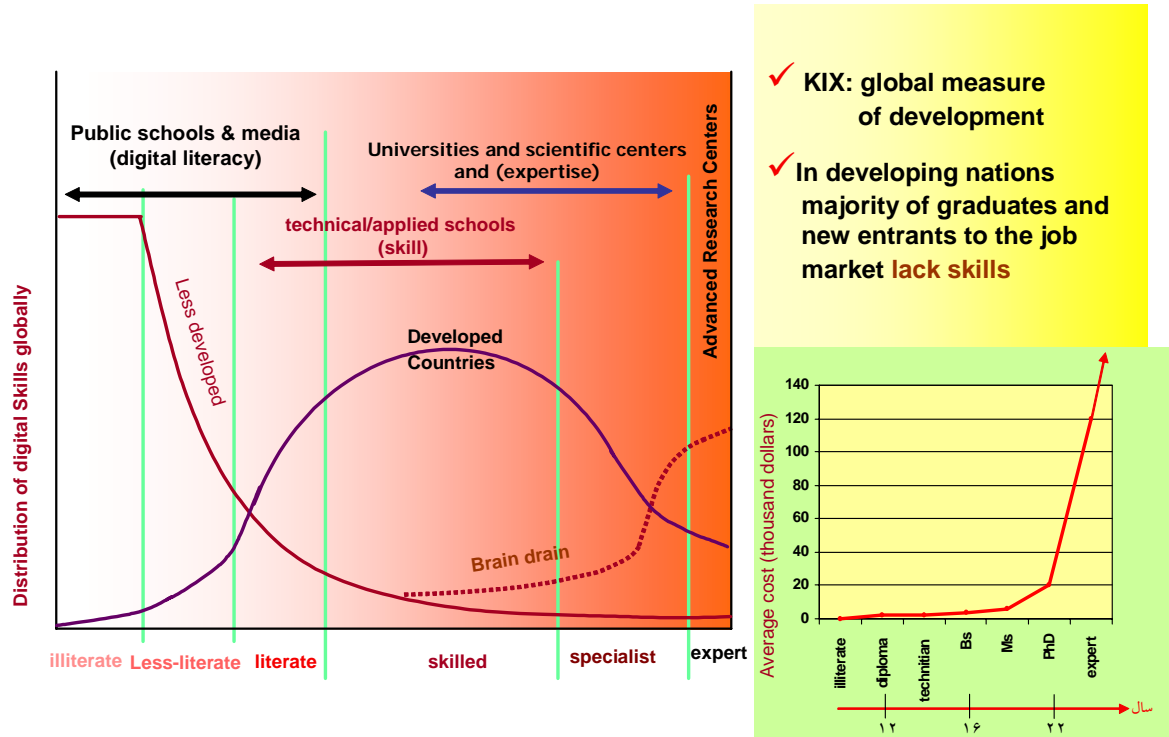


Fig 8: Human resources development: pivotal strategy of ICT development

D. Role of knowledge and culture in TAKFA

- Iranian culture is very much in tune with the idea of knowledge base society and hence if properly programmed and presented, the public would be more than eager to participate in any eGovernment initiatives
- Iran's younger generation makes up more than 70% of the population. This fact presents the greatest opportunity of bringing digital culture to the Iranian society, due to the inherent attraction of the young to this new technology.
- There are more than six million university graduates and more than 100 universities and higher education institutes nationwide
- Iran's glorious past is a reason big enough for any Iranian to try their outmost to assimilate ICT towards TAKFA's vision and mission statement.

5. TAKFA's Vision statement

“Powerful Iran in the 21st century through knowledge centric ICT”

TAKFA's mission statement

“Employing ICT to transform national opportunities and resources into national wealth, power and pride towards sustainable national development so that Iranian citizens are empowered to achieve their full potential in life”

6. Concluding remarks

TAKFA has been framed after an extensive consultation process, including with the public sector and social partners (employers, private sector and NGO's etc). It reflects the broad consensus in the consultation process as to the future development needs of the country. The plan will lay the foundation for the assimilation of technology for Iran's economic and social development. It sets out a coherent development strategy supported by a multi-annual investment commitment in the key areas of infrastructural development (management structure, rules and regulations, information security, Persian language etc.), human resources development and setting up national scale application initiatives, with the ultimate goal of reinventing the public sector for better delivery of services and to provide a national basis for the promotion of collaboration and social inclusion.

Of course over the period of implementing TAKFA, priorities may change in line with economic and social circumstances. Implementation of the plan will therefore be monitored, and there will be flexibility and necessary mechanisms to adjust TAKFA to meet these changes.

Notes

1. The President's ICT Special Envoy