



E-Government Unit  
Ministry of Communication and Information Technology

# **E-Government Interoperability Framework (e-GIF)**

## **Government of the Islamic Republic of Afghanistan**

### **DRAFT VERSION**

# **e-GIF Scope and Policies**

by

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## Foreword

The Government of the Islamic Republic of Afghanistan is committed to the adoption and application of information and communication technology within the government and promotion of its use in the Afghan society in general. Towards this end, several projects and programs have been initiated by the government and many others are being planned. A comprehensive program for development and deployment of e-Government in the country is now being pursued under which ICT application within the government would be expanded and optimized. The Government recognizes the importance of ICTs in social and economic development of the country, poverty reduction and public service delivery and therefore, it is pursuing its e-Government program with vigor and determination

For the effective development and roll out of e-Government it is essential that the individual technical systems at various departments and agencies of the government should interoperate with each other, exchange data with each other and virtually operate as a single system. For this to happen uniform and compatible policies and standards have to be used all across the government. The e-government interoperability framework (e-GIF) presented here is meant to achieve this aim of the government by providing the uniform and optimal e-government policies, guidelines and technical standards that must be followed all across the government.



## 1.0 What is e-Government?

A government that makes strategic and optimal use of information and communication technologies to better serve its constituents would meet the basic and necessary condition for being termed an e-Government. This condition though necessary, is not sufficient. A Government to be a true e-Government, in addition to optimally adopting ICTs, must suitably adjust its organizational structure and re-engineer its processes and most importantly transform its operating culture to be totally citizen centric in its approach to governance.

Governments, especially in the developing parts of the world, have for decades and indeed centuries, operated as bureaucracies in tight silos and departments following rigid rules and regulations. Traditionally government officials have seen themselves more as agents of the rulers to enforce the law and rarely as officials engaged in public service. In the e-Government mode of functioning of the governments this authoritarian culture should give place to a more service oriented attitude. Guided by the experience of many successful e-governments worldwide notably United Kingdom, Canada, Australia, South Korea, Ireland and New Zealand the Islamic Government of Afghanistan has formulated its e-Government policy which is based on the following basic principles:

- *Government would be Citizen Centric and Service Oriented*
- *Government would be functionally integrated and unified as a Single enterprise.*
- *Government would strategically and optimally adopt and apply technology to bring in transparency, effectiveness and efficiency to its operations.*

By the formulation and implementation of these broad national policies the government is seeking to place emphasis not only on simply automating their business processes but to facilitating and optimizing the use of technology through adjustment of its



organizational and institutional structure and processes and transformation of the government to become more integrated, citizen centric and service oriented.

## **2.0 Need for Interoperability**

The Government of Afghanistan, in line with its policy of optimizing use of technology, wishes to adopt technology that is flexible, scalable, interoperable and easily adoptable and maintainable, and most importantly the total cost of its ownership should be minimal. Afghanistan is fortunate in that it does not have any IT legacy problems to deal with; since it is a green field in as far as ICT is concerned. It is the government's policy to reject any such ICT technology that ties it up to any vendor or any system and fails to interoperate with other systems and platforms. We will emphasize adoption of neutral technology that is open source and most importantly interoperable with other platforms and technologies.

## **3.0 e-GIF and its Architecture**

To achieve interoperability between the systems operating in the various departments and agencies of the government it is essential that the local level systems are able to communicate with each other, exchange data with each other in real time and to virtually integrate as a single system. It is also necessary that the individual systems at the agency and departmental levels should be able to communicate and exchange data with the interagency common systems at the national data centre. This can be achieved only if same ICT policies and technical standards are followed by all departments and institutions of the government.



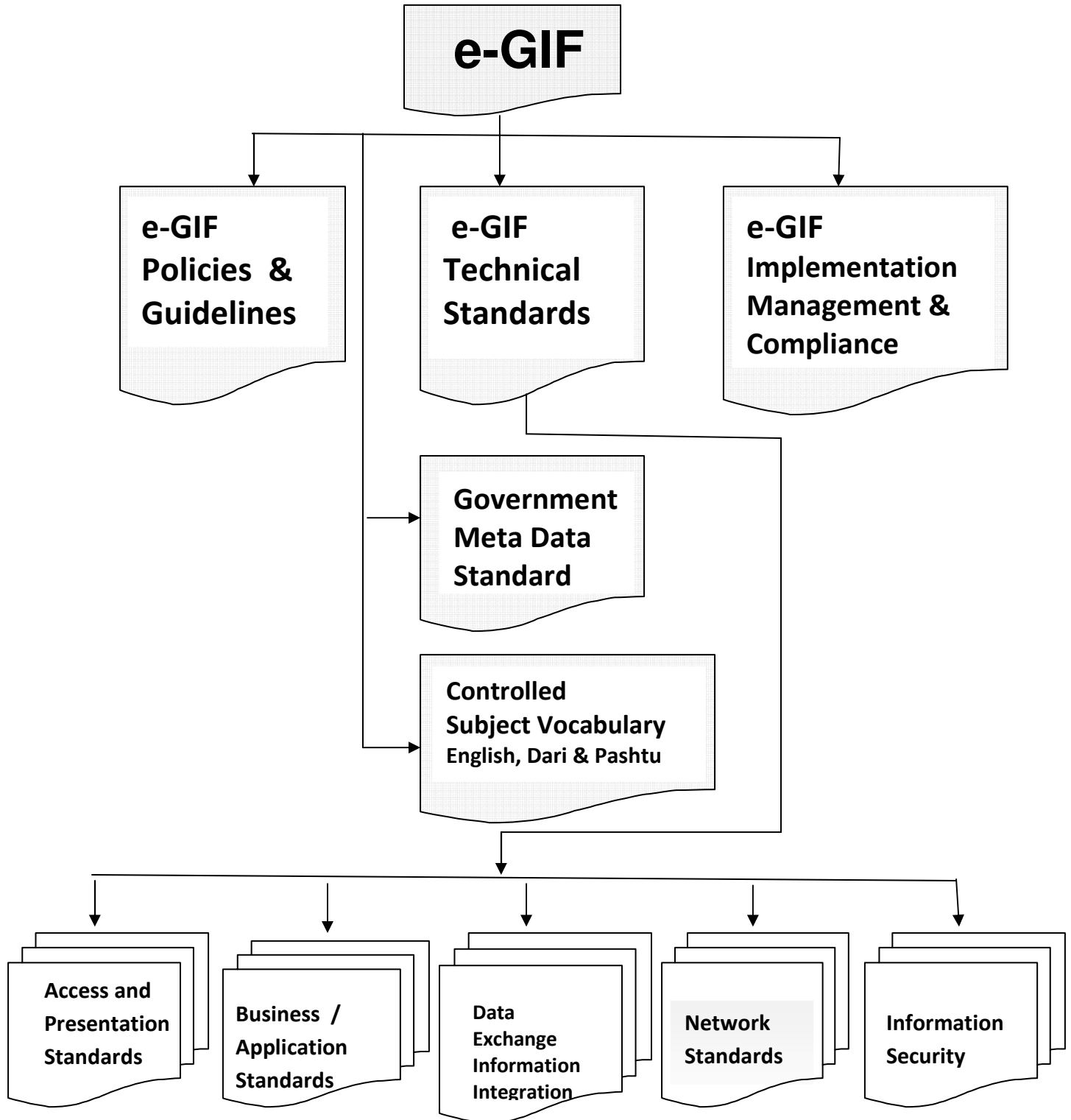
E-Government Interoperability Frame work (e-GIF) being presented here contains the IT POLICIES and GUIDELINES, TECHNICAL STANDARDS, GOVERNMENT METADATA STANDARDS, CONTROLLED SUBJECT VOCABULARY that every department, agency and organ of the government is required to follow. The e-GIF presented here also gives implementation guidelines to dynamically manage the e-GIF and keep it updated at all times. Therefore implementation, management compliance issues are handled in a separate section of the e-GIF. For the convenience of all stake holders all the documents that are component parts of the e-GIF are also uploaded on the e-GIF web site: [www.egov.gov.af](http://www.egov.gov.af) that has been designed and launched to facilitate the operation and management of and compliance to e-GIF.

The e-GIF has been architected to cover the broad policies on one hand and on the other give detailed descriptions of the technical IT standards covering the management of information in a layered fashion. Starting with the access and presentation layer the e-GIF technical standards would cover the standards at the application and business layer, database layer as well as at the network and communication layer; and the standards for metadata and content management, standard controlled vocabulary in English, Pashtu and Dari to be used across the whole government, as well as standards for information security and data protection.

The Fig 1 shown below gives a schematic presentation of the proposed e-GIF architecture.



**Fig 1: e GIF- Structure**





#### **4.0 Dynamic Nature of e-GIF**

The e-GIF that has been presented here is the first version of the e-GIF. We do not expect the e-GIF to remain static and in the *as it is* condition. As technology develops and new applications are developed there would be need to revise the e-GIF: there would be need for addition of some standards, modification of some policies and deletion of some standards and guideline etc. Given that ICT is almost constantly developing there would be a necessity for periodically revising the e-GIF. For this reason the management and compliance system mentioned as a part of the e-GIF calls for establishment of an organizational structure for e-GIF maintenance and management, which is enduring and ongoing.

#### **5.0 E Government Goals drive e-GIF**

In the development of this e GIF the government has been driven by its broader E-Government goals and policies. In other words e-GIF could be seen more as a tool to achieve the broader e-Government goals. The 'e-government' vision of the government is:

- A Government which is citizen centric
- A Government which is holistic and integrative
- A Government which is efficient
- A Government which is responsive and open
- A Government which is collaborative and transparent



## 6.0 Scope of e-GIF

The policies, guidelines and technical standards that form a part this e-GIF is meant to be followed by all the departments, agencies, ministries and government institutions at all levels in the government of the Islamic Republic of Afghanistan as a mandatory requirement. The policies and standards contained in this e-GIF are recommended to be followed by all such businesses that wish to conduct business with the government. However, for such businesses that are undertaking any citizen delivery tasks as a sub-contractor of the government have to follow the e-GIF policies and standards as a mandatory requirement in their dealings with the government.

**6.1** The following organizations within the government must follow the policies, guidelines and standards of e-GIF, as a mandatory requirement.

1. All Federal Government Ministries
2. All Federal Government Departments at all levels.
3. The office of the President and all the government agencies and departments reporting to the office of the President.
4. All provincial Government Ministries and all their subordinate offices and departments.
5. All offices of the provincial Governors.
6. All offices subordinate to the offices of provincial Governors.
7. All government operated autonomous institutions.
8. All local government entities and organs
9. All privately owned businesses and private entities that act as subcontractors for the government in the delivery of citizen services must follow e-GIF in their upside links with the government owned systems.





**6.2** In exceptional circumstances an agency, department or any organ of the government may seek permission to deviate from the policies, guidelines and standards for reasons of any specialized work of the agency or department where the common policies and standards may not be applicable. The procedure for seeking and obtaining permission is laid down in the section on e-GIF Management and Implementation, which forms a part of the e-GIF

**6.3** The data and information exchange between the Government of Afghanistan and the following entities will also be facilitated by the policies and standards of this e-GIF. Therefore these entities are also covered by the e-GIF, but the adoption of e-GIF policies, guidelines and standards by them is only recommended but is not mandatory. It is recognized that compliance to e-GIF by the citizens and private businesses and other entities mentioned below, with whom the government deals, cannot be enforced, but the government of Afghanistan will make it clear that e-GIF policies and standards detail the preferred and recommended mode of interface with the government.

- The citizens of Afghanistan
- Business corporations and other privately owned entities in Afghanistan
- Civic Society Organizations that have significant dealing with the government
- Other national governments
- International and development Organizations
- Non Afghan global business organizations

**6.4** It is mandatory that the projects and departments that obtain equipment and IT software products as a part of the donor assistance to various government departments should adhere to the policies, guidelines and standards of this e-GIF. Likewise donors and development organizations supplying ICT



hardware and software systems as a part of any project assistance should comply with the requirements of this e-GIF.

### **6.5 Relationship with other e-GIF initiative**

This e-GIF has borrowed heavily from the contents, procedures and practices of the e-GIF followed by other national governments including UK, Australia and Canada. International standards issued by such international bodies like the w3C, ISO, IEEC, ITU and other professional standardization associations form the core of the technical standards contained in this e-GIF. Though in the preparation of this e-GIF the practice of other countries had an influence, the suitability or otherwise of a standard for the situation in our country has been carefully gauged before inclusion of the standard as a part of the e-GIF. As in other parts of the world some of the practices have found inclusion in e-GIF as standards by default on account of their wide spread use and ubiquity.

## **7.0 e-GIF Policies and Guidelines**

The government of the Islamic Republic of Afghanistan recognizes that information is a vital resource in the emerging information societies and knowledge economies. Therefore, the GIF policies of the government, presented here are based on this conceptual understanding. The underlying aim is to maximize and optimize the usage of this resource. All management and technical policies that form a part of this e- GIF are implicitly based on this principle.

The under mentioned policies are the broad guidelines that must be followed all across the government enterprise. These policies have also shaped the choice of technical standards that have been included as a part of this e-GIF



## **7.1 Adoption of Open and Free standards**

As a policy the government would adopt open and free standards rather than proprietary standards. Open standards are defined as the standards which are free and open, without cost or without any restrictions on their use. These standards are vendor neutral. That is to say no commercial entity has any interest in the use or non use of these standards. Moreover, open standards are often detailed and transparent. However, in exceptional circumstances if a proprietary standard is included in the e-GIF there must be a strong justification for its inclusion.

The major advantages of the open standards policy are:

### **7.1.1 Reduction of Risk**

With the open standards the government would not be dependent on one single vendor or a single group of vendors; so the risk of any one vendor not supporting the government in the long run is reduced. It would also be much easier to achieve interoperability with open standards than with proprietary standards.

### **7.1.2 Durability:**

Open Standards are shown to be more durable than proprietary standards. Individual vendors promoting proprietary standards based products and solutions, have a natural incentive to phase out one standard and replace it with another to maximize their profits. Since no commercial interest is involved in open standard based products and solutions they tend to endure much longer. Moreover, as the open standards are free and available to all without restrictions these benefit from peer reviews and improvements that are indeed important from the users and customers point of view since no one's vested interest is involved. The sense of durability also gives the users confidence in the open standards and in turn leads to their increased use and popularity.



### **7.1.3 Flexibility and interoperability**

Adoption of open standards will give us flexibility in terms of having multiple vendors supplying products and services based on the same open standard. This will increase our choice of the applications, solutions and products from multiple vendors based on the same standard. We will also achieve greater ability to integrate disparate systems both internally within the government and externally with other government systems, businesses and other entities with whom we deal

### **7.1.4 Better Vendor Support:**

We expect better vendor support with the adoption of open standards. Adoption of Open Standards. With multiple vendors competing in an open standards environment competing with each other for our business we expect better service from the government suppliers at reduced prices. The risk of loss of support is also mitigated. If one supplier was to go out of business there would be others to support us.

### **7.1.5 Lower Costs and Better ROI:**

Open standards would lead to higher competition in the market place, which would in turn translates into lower prices for us, as our vendors cut their own costs and innovate in order to stay competitive in the market place.

## **7.2 International Standards**

In an increasingly globalised world it is important that we follow the standards that are tested and tried globally and have wide acceptability internationally. In the choice of technical standards that have been included in this e-GIF we have adopted this policy guideline. Standards that have the largest remit would take precedence over standards that have limited area of influence. Accordingly



internationally accepted standards should take precedence over national standards and national standards over locally used standards.

### **7.3 Internet and world wide web**

Government recognizes the importance of internet and the World Wide Web as the basic platforms on which the emerging knowledge and information society of the worlds rests. Therefore alignment of all government of Afghanistan ICT systems with the internet and the World Wide Web and adoption of all common specifications used on the internet and World Wide Web would be a central policy of the government.

### **7.4 Extensible Markup Language (XML)**

With the emergence of XML as the preferred means of data exchange between data systems the world over, XML would be used as the primary standard for data exchange between ICT systems of the government.

### **7.5 Content and Document Management**

The Information content and documents of the government of Afghanistan in English and official languages of the country: Pashtu and Dari, would be managed using the Government of Afghanistan metadata standards ( GMS), which will be developed based on the internationally accepted Dublin Core Model ( ISO 15836)

### **7.6 Delivery Channels**

It would be the policy of all government information systems to support multiple channels for service delivery. Although desktops and laptop computers using browser technology would be main means of accessibility, the systems adopted by all government departments and institutions should permit access and service delivery thorough other means like the public kiosks, web TVs and mobile phones; and should also interface well with the traditional means of personalized service delivery.



### **7.7 Users with disabilities**

In line with the policy of the government to provide service universally to cover all citizens of Afghanistan irrespective of their location, gender, age, status and education, special attention would be given to the needs of citizens with visual or other disabilities in the design and deployment of ICT systems, especially in the formulation of standards related to access, presentation and customer interface.

### **7.8 Information Security**

Information is an important resource in the knowledge society that we envision for our country. At the same time we recognize that threats to its integrity and safety are manifold. Therefore the protection of data and information resources within the government of Afghanistan; whether in its databases, documents, applications or in transit over its networks; will be accorded the highest priority by all agencies, organs and institutions of the government.

### **7.9 Maximize Participation**

E-GIF is a multi stakeholder entity whose full potential can be realized only if the participation of all the stake holders in its formulation and management can be maximized. The management and implementation of the e-GIF is expected to require participation of all the agencies of the government; and information technology, management, language and other experts from outside the government.