

# Lunching E-Government in Jordan

## Jordanian Experience

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**Abstract**— Most of governments in developed countries implement E-government model to ease the interaction between citizens and their governments to conduct the standard citizen services such as renewing a passport or a driver license. Despite the maturity of the E-government in some developed countries, it is considered fairly new in Jordan. This paper addresses the method for building and launching the E-government in Jordan in four sections. The first section addresses an overview of the current information technology structure in Jordan. The second section addresses the problems facing information technology utilities to build the Jordan's E-government model. The third section addresses, the current status of e-government based on Jordan's experience, and finally the last section progress in launching E- Government in Jordan, and some suggestions are addressed to speed up the implementation of E-government in Jordan.

**Keywords**- E-Government; Jordan; Information Technology; Challenges; E-Services.

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### I. INTRODUCTION

E-Government has many definitions. One of these definitions is digital interaction between a government and citizens (G2C). Furthermore, the E-Government can be defined as a process of conducting business between the public and the government through the use of automated systems and the Internet network. The E-Government main objectives can be classified based on the promising benefits which are provided to citizens, businesses and other governmental agencies. Therefore E-Government is not just a technology project, from its Vision , And Mission which concentrate to transform governmental and contribute to the Kingdom economic and social development ( transform it into objectives )but rather it is an attempt to accomplish the following tasks:

- Improve the performance, credibility and transparency of the government.
- Provide government products and services electronically.
- Provide services to citizens electronically.
- Improve collaboration between government agencies.
- Improve Jordan's competitive advantage.
- Reduce costs incurred by the government and the private sector.

E-Government presents a new and innovative approach to addressing traditional problems of government services utilizing the Internet and the World-Wide-Web. E-Government should deliver public services in ways that citizens and businesses need them, using the internet and other technologies as enablers. E-Government is much more than building a web site. E-Government is the

infrastructure that governments today are building to transform the way they complete their missions (Manage changes in the government and focus on the satisfaction of recipients of government services to deliver the service using modern ) and their vision ((Active Participant in the economic and social development process through Information & communication technology and transform governmental and contribute to the Kingdom economic and social development to transform it into objectives ). Direct effects of E-Government include cost effectiveness in government and public operations, significant savings in areas such as public procurement, tax collection and customs operations, with better and continuous contacts with citizens, especially those living in remote or less densely populated areas.

We are moving on from Information Technology (IT) to Information and Communication Technology (ICT) and IT to Information System (IS) so Jordanian E- government steering committee has chosen in their programs to launch E- government four main pillars. E-government in Jordan relies on successful deliveries of E-government services which rests on a number of foundations in the areas of institutionalization, Laws, regulations, technology and business factors, identified four Pillars of E-government: shown below.

1- Institutional Framework : this pillar contains the following ( E- government National Steering Committee , E-government Units , Inter agency working group , reporting mechanism ,e-Gov. unites, program, NITC ).

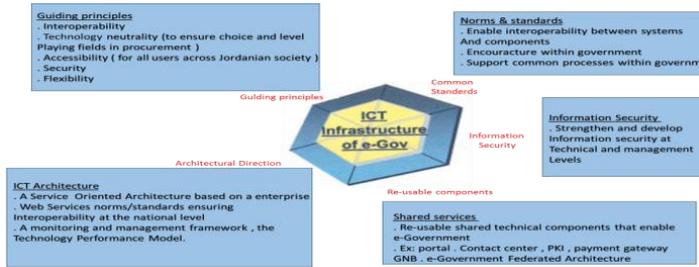


Figure 1. ICT Infrastructure of E-Gov.

2- Legal Framework: this pillar contains the following (Governance, Online transactions, Information security & public –Private – Partnership)

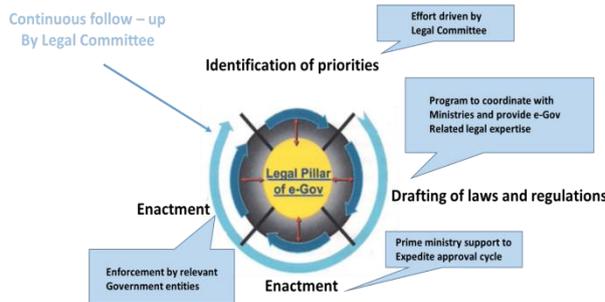


Figure 2. Legal Framework- Legal Pillar of E-Gov.

3- ICT Infrastructure Pillar: this pillar contains the following (Guiding principles which establish enterprise architecture for development Standards, Architectural Direction, Re – usable components & Information security)



Figure 3. Infrastructure Pillar of E-Gov.

4- Business Pillar: this pillar contains the following (development of standards, training, & raise efficiency, Project life- cycle management, Communication, marketing, & promotion)

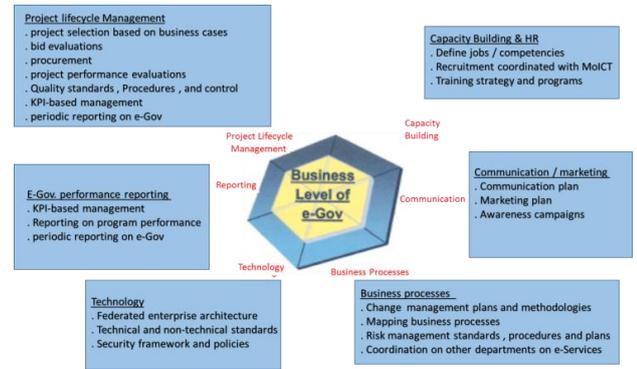


Figure 4. Business level of E.Gov.

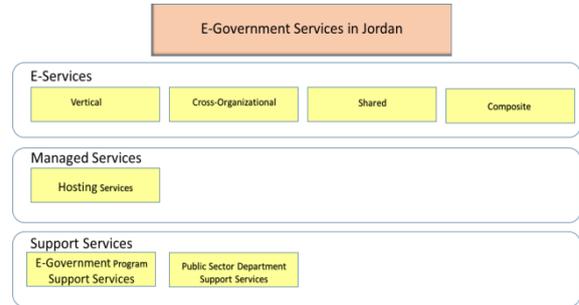


Figure 5. E-Government Services in Jordan.

The penetration of ICT in all facets of human existence is leading to changes in the way humans interact within the society and the way societies involve individuals in the evolution process. The ICT can influence the process of governance in various ways and in varying degrees, from improving the current mechanisms of delivery of services to transforming the entire mechanism and the nature of services themselves. The role played could be purely technical in terms of automation of tedious tasks earlier done by humans, facilitating or supportive role leading to more participatory and all-encompassing decision-making and implementation processes, or completely innovative role which involves new services and new mechanisms to deliver these services. The ICT initiatives in Jordan started with the REACH initiative launched in 1999 (REACH as a concept is the sum of abbreviations Regulatory Framework, Enabling Environment (Infrastructure), Advancement Programs, Capital and Finance, Human Resource Development.) Which was the core ICT programmers intended to transform the country to e-Jordan? It promised to play a central role in economic and social improvement of the country. REACH laid out a goal to bolster Jordan's nascent IT sector and maximize its ability to compete in local, regional, and global markets. REACH Initiative set the following targets to be accomplished in Jordan by the year 2004: The E-Government in Jordan has been introduced as a modern evolution of ICT and how to convert the life of societies to the communication and networked age.

The Hashemite Kingdom of Jordan took aggressive steps to transform Jordan to an e-Country by launching a number of e-Initiatives from the start of the year 1999, so that e-Government lay at the heart of the government's efforts. Jordan believed that one solution that could be used to develop the country and overcome its limited recourses was to join the global economy and promote

sustainable human development by transforming Jordan into an e-Country. Jordan is a developing country where computers were used recently. Information data processing and Information systems are still in the infancy phase in Jordan. These systems are being used increasingly in government and slowly finding their way into other sectors. To comply with REACH targets, Jordan undertook major ICT programs; one of them has been e-Government. E-Government is a national program initiated by King Abdullah II in September 2000. The Ministry of Information and Communications Technologies (MOICT), previously known as the Ministry of Post and Communication started the e-Government program towards achieving the e-Government vision in the year 2005. The vision was that e-Government would be a contributor to Jordan's economic and social development by providing access to e-Government services and information to everyone in the Kingdom irrespective of location, economic status, and the services has been classified as below

IT ability and education . E-Government represents a major shift in the role of government towards the 'client-focused' delivery of services, rather than government as a collector of information solely for its own purposes.

The main domains of the E Government initiative in Jordan according to the following clusters:

- Communication
- Economics
- Education and Training
- Health
- Industry
- Labor
- Natural Resources and Environment
- Population and Human Settlements
- Tourism and Antiquities
- Transportation
- Geography
- Agriculture
- Law and Legislation
- Research, Science and Technology
- Society and Social Conditions
- Political Affairs Culture

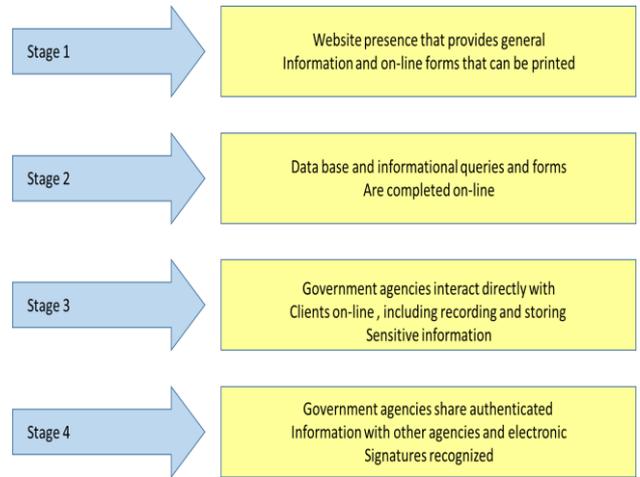


Figure 6. Infrastructure Fast Tracks.

After activating these clusters enabling transformation to e-Government which requires a broad vision of realizing and incorporating the perspectives of various parties involved in the process and expected to benefit from such transformation. There are mainly three major areas (citizens, businesses and government) involved in enabling the transformation to e-government and their perspectives should be taken into account. E-Government initiatives are complex change efforts intended to use new and emerging technologies to support a transformation in the operation and effectiveness of government. Success stories have been limited in infrastructure building, telecommunication market reform, and conducted training programs for thousands of public sector employees. Stage analysis indicates that Jordan's e-Government is still in the informative level of service delivery, and website usability analysis applied using the Backer instrument revealed that websites have not been designed to meet with people's expectations and needs; instead websites had a very poor usability design reflecting a lack of understanding of people needs to apply online services .at 2000 the 1st high level Jordanian committee for launching E-Government in Jordan has been established and supported by king Abdullah the 2nd , this committee selected ( 9 ) fast tracks to start with , where these tracks are the most ready to implement E- Government in Jordan , also they have high percentage of the required infrastructure as shown in the following diagram.

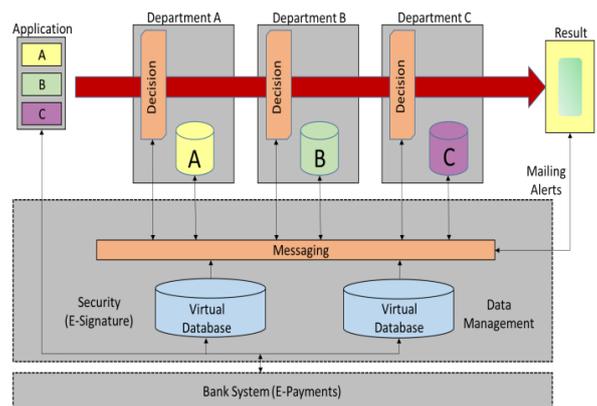


Figure 7. The Australian E- government Implementation Model.

From department A to department I (ABCDEFGHI =9)

The concerned committee at that time has been recommended to use the Australian E- government Implementation Model as shown

By launching E-Government in Jordan the target of national information center (NIC) at the beginning used the policy of building the national information system (NIS) which will support the policy of (NIC) to have (17) sub information systems according to the number of information clusters which are accepted by (NIC) each cluster having focal point placed in the most suitable location to enable all concerned parties to be connected to it.

The process of launching E- Government has to be started by a piloted project where the economic information system ( EIS ) has been chosen for this plan and its focal point has been established and placed in the central bank of Jordan, and then the other sub information systems will follow till they cover the whole clusters and it will be connected to each other through national network .

This approach has been used as NIC strategic policy to launch E- government in Jordan.

This policy hasn't been worked so far due to unstable managerial designs in this respect, so this approach to launch E-government in Jordan has failed.

main problems hindering jordan's government transformation

There are many significant problems delaying Jordan's transformation such as the lack of infrastructure, the scarcity of funding, and the absence of a well-established e-Society. On an institutional level within government agencies data analysis showed a number of problems which can be categorized in different domains starting from the expected cultural problems such as resistance to change, as well as the lack of coordination, and accountability problems, technical problems related to knowledge management issues, behavioral problems such as the employees' adaptability to the introduction of new working methods. Here the following problems are discussed that are delaying Jordan's e-Transformation.

1. Lack of an Adaptable Strategy: The Jordanian government did not have a well-defined strategy for implementing e-Government; one that responds to the countries and the people's needs and matches their profiles. Even when the government set up 'Fast Track Projects' they were imported from countries who are leading the field in e-Government and then applied to similar Jordanian institutions without understanding what the characteristics are of a Fast Track Project.
2. Lack of Focus: Jordan has launched several e-Initiatives at the same time; these include REACH, e-Government, e-Learning, and e-Health. This has led to a loss of concentration and focus by the government on any specific initiative in spite of the fact that all the initiatives that have been introduced are completely new both to the Jordanian government and to Jordanian society. Another factor that increases the confusion is the involvement of a number of

international donors with little co-ordination, if any, between them.

3. Sector Existing Structure and Culture of the Public Sector: The security procedures and the involvement of military based departments makes the re-engineering process by integrating civic and military departments harder due to legal, security and cultural considerations. In addition, the country's hostile geographical location as well as the fact that more than one third of its population is of Palestinian refugees makes integrating civic and military departments difficult to achieve. Within civic public sector agencies especially key ones, there is a sense of resistance to information and databases sharing that would lead to any reduction of institutions power or authority.
4. Lack of Consistency: One of the major obstacles found was the lack of consistency in ICT plans and policies within Jordanian public sector institutions, which has been caused by the rapid change in the positions of IT managers and employees. It was noted that a number of IT experts did not know where e-Government is heading because there were no short term goals to achieve and rapid change in their objectives.
5. Ineffectiveness in Promoting e-Society: Statistics show that during the past six years, the government has failed to connect the vast majority of the Jordanian population online, with official figures indicating that Internet users accounted for only 8% of the total population in the year 2005. The numbers of PC's in Jordan are 4.5 per 100 users. These numbers reflect the reality of the limited existence of a true e-Society within Jordan. Figures for e-Government spending between the years 2004 and 2006 reflect a huge gap between the spending of tens of millions of dollars allocated to e-Services projects in contrast to only tens of thousands of dollars being allocated to projects aimed to promote Internet access and computer ownership between citizens.
6. Technical Problems and the Lack of IT Expertise: Due to the scarcity of financial and technical resources, in addition to government agencies resisting change to their systems and working methods, many government agencies are building on existing systems to integrate them. These situations where different existing systems need to be integrated with newly implemented ones make the automation of services a complex process. There is a lack of expertise especially in areas related to IT project management and risk management. Also there are shortages in many technical areas such as system developers, website developers, and network experts.
7. This has led to the Jordanian government in most cases consulting private sector firms for the implementation of e-Government projects. This process makes implementation more expensive.
8. Central Government Facing Problems in Achieving Requirements: Although MOICT has

identified building blocks to successfully implement e-Government; the government is not fully executing most of the recommended enablers. For example, the legal and regulatory framework is identified in Jordan's e-Government strategy, as an important enabler for e-Government transactions and integration. However, the framework has not achieved any significant progress and is not expected to develop over the coming few years because of the lack of funding.

9. Lack of Monitoring and Testing: Poor government websites in Jordan reflect a lack of monitoring procedure. Many government websites are found in a dire condition, for example a few ministries websites were only in English language, although the main language of Jordan is Arabic. Also the websites have a very poor design and interface, most of their internal links were broken, and information was out of date.
10. The last limitation is the outdated legislation that stood in the way of the establishment of the project. However, current legislations are being reviewed and changed by the parliament.

II. CURRENT STATUS OF E GOVERNMENT IN JORDAN

The most important step to overcoming all the obstacles that stand in the way of E-Government is the continued seriousness and dedication to the project. His Majesty King Abdullah II certainly expresses his dedication for the establishment of a serious IT sector in Jordan. One of the ways to achieve that is with the E-Government project. On his personal website, his majesty outlines the necessary steps to achieving this goal and that they include “new or amended legislation, necessary government policies, procedures and incentives that would lead to the growth of this sector, and perhaps more importantly a will to make them overcome any obstacle in this regard, at 2012 Jordan has been scoring the rank of 98\190 from the united nation evaluation to global ranks , while scouring 71\193 in 2015 , and score the 8th out of the Arab countries , where the countries which came in front of Jordan the gulf countries , which means the reach countries , Jordanian government has spent ( 25 ) million Jordanian dinar through ( 12 ) years in developing their E-government programs , especially the requirement for infrastructure , which is very little according to Jordanian ambitions , while the reach countries spent 100s of millions of us\$ on developing their E- government programs .

Also ( 90 ) of E- government services has been delivered on-line , and the number of working mobiles in Jordan reached to ( 2.5 ) million for population of ( 6 ) million breeze population , which means very high penetration , where the most of these mobiles use the E-government services , one thing more that E-government steering committee sent more than ( 5.5 ) million of SMS to users to inform them about the available services on-line offered in Jordan steering committee. Also from the table below we can notice the progress in E- government services in Jordan. This table shows the classification of (42) public sectors dealing with E-government activities and services

TABLE 1: THE DIFFERENT CLASSIFICATION OF E-GOVERNMENT IN JORDAN

Other portal	National portal	Classification			Number of services	Entity
		G2G	G2B	G2C		
1	16	0	0	17	17	1
2	0	0	0	2	2	2
2	11	0	11	1	13	3
3	0	0	0	3	3	4
2	0	0	2	0	2	5
3	0	0	0	3	3	6
2	0	0	1	1	2	7
10	0	0	2	8	10	8
5	0	0	0	5	5	9
7	0	0	6	1	7	10
1	0	0	0	1	1	11
2	0	0	4	6	2	12
8	0	1	1	3	8	13
5	0	0	2	3	5	14
2	1	0	0	3	3	15
1	1	0	0	2	2	16
6	4	0	7	3	10	17
6	0	0	1	5	6	18
0	4	0	4	0	4	19
0	6	0	5	4	6	20
1	0	0	1	1	1	21

Other portal	National portal	Classification			Number of services	Entity
		G2G	G2B	G2C		
0	4	0	0	4	4	22
0	2	0	0	2	2	23
0	1	0	0	1	1	24
0	1	0	0	1	1	25
0	1	0	0	1	1	26
0	4	0	0	4	4	27
1	1	0	0	1	2	28
0	1	0	0	1	1	29
0	2	0	0	2	2	30
0	2	0	0	2	2	31
0	1	0	0	1	1	32
0	3	0	1	2	3	33
0	1	0	1	0	1	34
0	1	0	0	1	1	35
3	2	0	0	5	5	36
2	12	0	14	14	14	37
1	0	0	0	1	1	38
1	0	0	0	1	1	39
0	1	0	0	1	1	40
2	0	0	0	2	2	41
5	0	0	0	5	5	42

One thing more about what the E-government Services (important websites in Jordan) which Entity; means (ministry. department ---- -), Number of services; the number of services the Entity provides. Classification: different E- government services. Portal: the portal which the entity using whether The government portal or other portals, some Entities have double support to G2C&G2B.

Classification as shown in the following table (2), S.N: Series Number

TABLE 2: JORDANIAN E-GOVERNMENT SERVICES CLASSIFICATION

Jordanian E-Government services ( Websites )				
Privet	public	Number	Website	S.N
0	3	3	KA	1
0	5	5	Media ORG	2
7	0	7	Daily News	3
13	0	13	Weekly News	4
18	0	18	Arab News Agencies	5
0	25	25	Ministries	6
0	40	40	Gov. Corporations	7
0	51	51	Embassies	8
8	9	17	Trade & Economy	9
14	6	20	Societies & Culture	10
201	5	206	Media sites	11
12	11	23	Universities	12
273	155	428	Total	
Arab Global Media Sites				
10	0	10	Algeria	13
3	0	3	Libya	14
2	0	2	Mauritania	15
1	0	1	Morocco	16
13	0	13	Syria	17
9	0	9	Bahrain	18

Jordanian E-Government services ( Websites )				
Privet	Public	Number	website	S.N
0	3	3	Egypt	19
0	5	5	Iraq	20
7	0	7	Jordan	21
13	0	13	Oman	22
18	0	18	Palestine	23
0	25	25	Qatar	24
0	40	40	Saudi Arabia	25
0	51	51	Tunis	26
8	9	17	UAE	27
14	6	20	Yemen	28
201	5	206	Kuwait	29
12	11	23	Lebanon	30
273	155	428	Sudan	31
10	0	10	Electronic Site News	32
309	0	309	Total	
Foreign Global Media Sites				
0	0	23	UK & Europe	33
0	0	1	USA	34
0	0	1	Australia	35
25	0	25	Total	

III. RESULT

1- Evaluation Result of table (1) we find the number of governmental services supporting G2C =124, while G2B=63, and G2G=1. This means 66% G2C services &33 % G2B while 1% only G2G, this result means that E-government supporting citizen requirements.

2-Evaluation Result of table ( 2 ) shows that ( 762 ) total websites that has added as E- government services and this number quite sufficient for small country with limited financial support to the E- government projects, and from the figures we find the activates of privet sector more than public sector, with percentage of 80% to 20 % , this shows that E-government give more support to privet sector which relay on citizen services ( G2C ), so this result support the previous result shown in this research .

IV. CONCLUSION

The long-term vision for an E-government is to create a society where electronic government is a coordinator to the economic and social development of the kingdom.

Jordan initiated its e-government project many years ago hoping to achieve social and economic development in what seemed a straight-forward implementable project.

The e-government in Jordan faces challenges that do not arise from hardware and software issues, but from the nature of existing social and administrative regimes which cannot be easily re-engineered to accommodate the evolving networked digital environment of the state model wished for by e-government optimists. The e-government is required to integrate the development of the systems, networks and infrastructure, with the social and cultural frameworks of the country. but the effectiveness, efficiency, usefulness, and success still need additional evaluation and analysis.

Even though there are many difficulties some of which were discussed in this paper, the E-Government project is still very important in facilitating the interaction between the government and the citizens.

These are some suggestions to be considered in order to speed up the development process of E-Government in Jordan:

- Ensuring the public internet access through expanding the existing programs that provide the public access to PCs and Internet through schools, libraries and community. The digital divide can be bridged by supporting competition, facilitating infrastructure, investing E-Government and testing successful pilot projects.
- Jordan Government should adopt a realistic transformation strategy reflecting acceptable levels of change attuned to the country's resources.
- Protecting information privacy. The legislature needs to ensure confidential information, sharing information and changing information.
- The use of digital signature and PIN code for authenticating services must be explored. Recently Top management concerned took a strategic decision in this respect that is to spread the E- Signature over all of governmental departments except for the land and survey department, which will be delayed to the near future, and that is due to sensitivity of deals and transactions in this area, till 100 % of security and certain fraud prevention is achieved.
- Modification of the existing systems to work efficiently with the E-Government model.
- Setting specific deadlines for the projects and not to keep open-ended projects, so goals are reached in shorter time.
- Successful experiences of other countries that are similar to Jordan in size and resources must be used as a model to follow, Also the experience of advanced countries should be taken into consideration like USA (United State Of America), INDIA, ENGLAND & UAE (United Arab Emeries), probably my next paper will be a comparative study between Jordan E-government, and the mentioned countries. Also the following Critical success Factors should be taken into consideration:
  - Sponsorship
  - Activation of national E- government
  - Availability of resources
  - Availability of ICT ( Information communication technology ) and business skills

- Productive cooperation of design makers
- Sustainability of the government strategy implementation, despite political changes.

One thing more is the relation and cooperation between NTIC (National Technology of Information Center) and the steering committee of E-government should be enhanced.

They should take into consideration, the importance of business in the whole process where it acts as a backbone of the whole E- Government activities, in this case, we should look at it from three major angles ( Marketing, Trade & Administration ), which form the business process cycle as shown below :

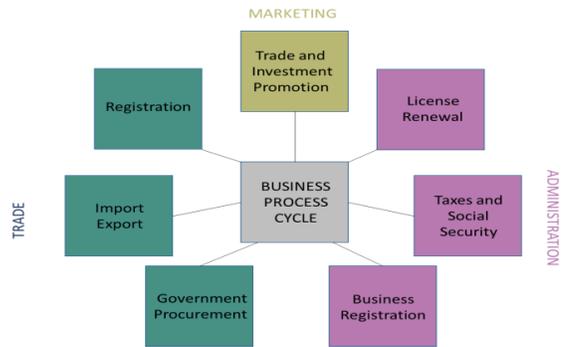


Figure (8): Business Process Cycle

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