

NATIONAL E-COMMERCE STRATEGY



Ministry of Information and Communications Technology

Policies and Strategies Directorate

TABLE OF CONTENTS

1	Introduction	2
2	Rationale for the Strategy	4
2.1	<i>Definition of e-commerce</i>	4
2.2	<i>Strategic Drivers</i>	5
2.3	<i>Present state of readiness</i>	7
2.4	<i>E-commerce hurdles</i>	8
2.5	<i>Strengths and opportunities</i>	13
2.6	<i>Opportunities</i>	15
2.7	<i>Threats</i>	17
2.8	<i>Structure of the strategic plan</i>	18
3	Vision	19
4	Goals.....	20
4.1	<i>Increasing the wealth of the nation</i>	20
4.2	<i>Exploiting the strengths and the opportunities of the ICT sector</i>	23
4.3	<i>Introducing consumer e-commerce to Jordan</i>	24
4.4	<i>Enhancing business performance and international trading links</i>	27
5	Strategic objectives.....	30
5.1	<i>Goal 1: To increase the wealth of the Jordanian people through the development and exploitation of e-commerce</i>	30
5.2	<i>Goal 2: By 2012, to be a regional leader for IT systems development, applications and services associated with e-commerce</i>	31
5.3	<i>Goal 3: To be one of the leading countries in the region that uses e-commerce as a channel for selling goods and services to consumers</i>	32
5.4	<i>Goal 4: To be one of the leading countries in the region that uses e-commerce as a channel for domestic and international business to business collaboration and trade</i>	33
6	Enablers	34
6.1	<i>Introduction</i>	34
6.2	<i>The Law</i>	35
6.3	<i>Security</i>	36
6.4	<i>Electronic payments</i>	37
6.5	<i>Tax</i>	39
6.6	<i>Customs</i>	40
6.7	<i>Awareness</i>	41
6.8	<i>Skills</i>	44
6.9	<i>Employment</i>	46
6.10	<i>The IT sector</i>	47

6.11	<i>Availability and use of ICT infrastructure and services</i>	49
6.12	<i>Logistics and transport infrastructure</i>	54
6.13	<i>Catalogues and content</i>	56
6.14	<i>Finance and investment</i>	57
6.15	<i>Government</i>	58
7	Implementation of the strategy	59
7.1	<i>Governance and implementation</i>	59
7.2	<i>Strategy monitoring and audit</i>	61
8	Risk analysis	62
8.1	<i>External risk factors</i>	62
8.2	<i>Links between enablers and strategic objectives</i>	63
8.3	<i>Risks to enablers</i>	64
8.4	<i>Risk conclusions</i>	74
	Annex 1: Linkage between Enablers and Strategic Objectives	77
	Annex 2: Government E-Commerce Policy	89

NATIONAL E-COMMERCE STRATEGY

1 INTRODUCTION

This e-commerce strategy provides a framework for the development of e-commerce in Jordan over the next five years. The strategy is founded in an assessment of the present state of e-commerce and the factors on which it relies carried out between July and October 2007. This assessment led to the identification of strengths, weaknesses, opportunities and threats to be taken into consideration in developing the strategy. The assessment was presented to a stakeholder workshop on 20th September 2007 in which a vision and candidate goals of a strategy were discussed together with enablers and stakeholder involvement.

The strategy presented here is based on the outcome of the workshop and a subsequent public consultation undertaken in December and January 2007. Figure 1 shows the relationship between elements of the strategy. The vision statement for e-commerce in Jordan was prepared at the stakeholder workshop. This vision statement identified what Jordan should become in e-commerce. This vision statement led to the development of particular strategic goals, also at the workshop, which define the overall purpose of the strategy. The vision and goals lead to a set of strategic objectives that specify what the strategy is intended to achieve in terms of its impact. These objectives are concerned with the benefits for the Jordan as a country, for the ICT sectors which are beneficiaries through the e-commerce products and services that can be provided, for the retail sector selling products and services to consumers and for the sectors selling products and services to businesses and government.

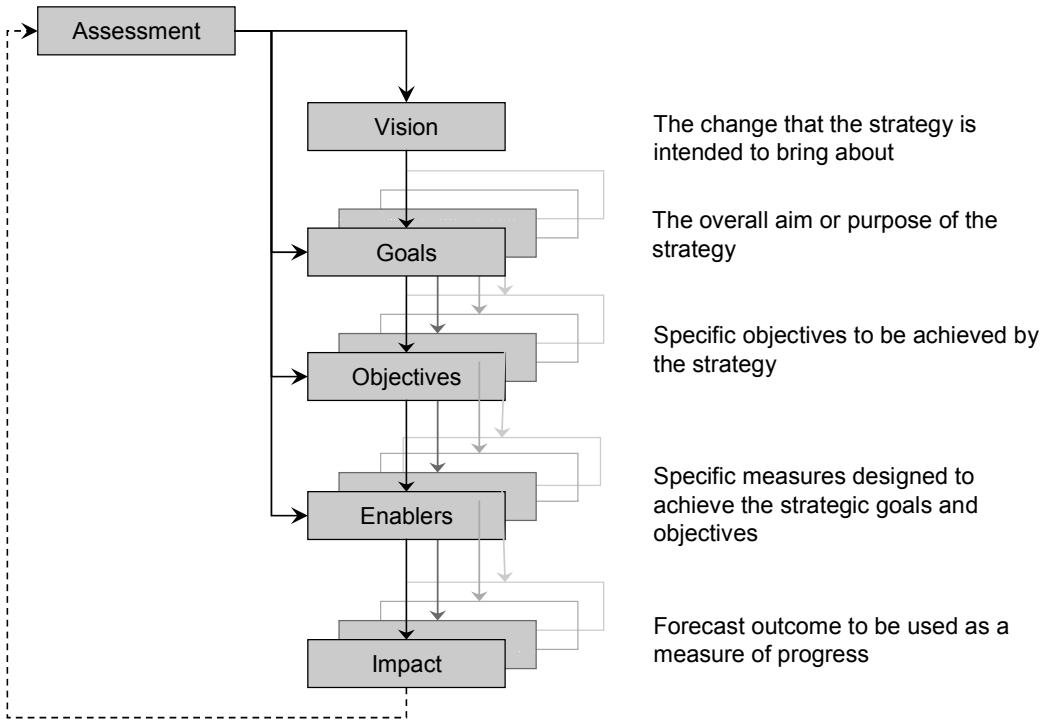


Figure 1: Strategic elements

Parallel to these objectives are a set of enablers. These enablers are specific measures designed to bring about an environment suited to e-commerce. The enablers are targeted at conditions that inhibit the development of e-commerce or are stimuli for e-commerce development. The enablers lead through directly to a set of actions that will be specified in an Action Plan which is to be produced once the overall strategy has been agreed.

There is an impact associated with the strategy, particularly the enabling actions. This impact is the subject of the Impact Assessment paper published with this strategy. The impact assessment gives rise to particular targets that can be monitored during the strategy period. Subsequent feedback will allow refinement of the vision and a restatement of goals, objectives and enablers to meet changing circumstances.

The strategy needs to be owned. This strategy proposes ownership through a Governing Body with Ministerial level representation by a Council chaired by the Ministry of Industry and Trade.

There are requirements for monitoring and auditing the strategy and proposals for such tasks are also presented.

Finally an analysis of the risks to the strategy is presented.

The Strategy gives rise to Government owned actions. Government's intention in E-Commerce is set down in an E-Commerce Policy that is included here in Annex 2.

2 RATIONALE FOR THE STRATEGY

2.1 Definition of e-commerce

E-commerce is a term that applies to ways in which businesses can work together and interact with consumers and government using electronic communications networks and services. Usually, it applies to collaboration between businesses in the supply of products and services, commerce or trading, and customer support, both pre- and post sales. E-commerce is defined in this strategy as:

“transactions between consumers and businesses or between businesses associated with the development or trade of goods and services over a telecommunications or broadcast network.”

This is similar to, but not exactly the same as the definition of e-commerce given by the United Nations Economic and Social Commission for Western Asia (ESCWA):

“E-commerce is defined as conducting purchase, sale, auction and tender transactions online. In addition to selling products by providers and retailers, e-commerce includes the sale of services and information, including computer systems and applications.”¹

The definition used in this strategy is intended to include collaboration in basic research and development, product development, production planning, and other pre-sales activities through for example exchange of designs, bills of materials and other documents that might be produced in a development or planning process. These additional forms of communication are included because substantial benefit may arise from the electronic exchange of such data.

The ECSWA goes onto define business to business e-commerce and business to consumer e-commerce.

“B2B e-commerce refers to all forms of wholesale commercial transactions conducted over an exclusive computer-mediated network or an open computer-mediated network. In B2B, payment and ultimate delivery of goods and services can be conducted on- or off-line. However, B2B does not include such transactions as foreign exchanges, futures, derivatives, bill payments, unsuccessful online bidding, inter-bank transfers and other financial instruments trading.

“B2B e-commerce channels include e-markets, private exchanges and consortium exchanges.

“Furthermore, one-way purchase transactions conducted online or via private exchanges are also considered e-commerce transactions.”²

“B2C e-commerce refers to all retail transactions conducted electronically over an open network, including the direct sale of products and services to customers over the Internet. The online payment of bills or transfer of money is not considered a part of B2C e-commerce given that the actual transactions are conducted offline. Similarly, transactions where products are purchased offline and paid for online are not considered B2C e-commerce transactions, nor are online payments of bills, including credit card, telephone and utility bills.”³

¹ Regional Profile of the Information Society in Western Asia, United Nations Economic and Social Commission for Western Asia, New York, 2005, p50

² Ibid pp50 – 51

³ Ibid p52

In this strategy such definitions of B2B e-commerce and B2C e-commerce are taken to include pre- and post sales collaborative and customer support transactions.

This strategy is intended to promote the diffusion and use of e-commerce throughout Jordanian industry and government in order to increase the efficiency and wealth generation capacity of the Jordanian economy. It will do this by promoting:

- The use of e-commerce as a channel for collaborative and commercial activities between businesses and between businesses and consumers; and
- The development of a national capacity in e-commerce covering ICT, financial services associated with e-commerce, logistics services for e-commerce, catalogue and other content services and contact centre services associated with e-commerce.

The strategy is also intended to overcome the many and varied hurdles in the way of developing and using e-commerce.

The development and use of e-commerce is ultimately a commercial opportunity for the citizen and private sector enterprises. These will be the primary beneficiaries. Government is involved directly in e-commerce as a consumer. Like a citizen, Government has needs for pre-sales and post-sales support, and an ability to transact commercially with business.

As an implementer of e-commerce strategy, however, Government's roles and responsibilities are limited. This strategy lays down objectives for Government to meet in areas such as the law associated with e-commerce, taxation and customs. The strategy also lays down objectives for the private sector to attain, for example, in such areas as the development of electronic payment services, awareness and skills training. The strategy gives Government a programme management role, although it gives ownership of particular actions within the programme to particular private sector organisations and public private partnerships. As programme manager, Government can facilitate, promote, propose, recommend and sometimes fund, but seldom command or require action by the private sector. In this respect it looks to the private sector to join with it in pursuing the strategy to the benefit of all Jordanians.

2.2 Strategic Drivers

Strategic drivers for e-commerce in Jordan arise from the national commitment to development which is desired by HM King Abdullah, the Government, business and most sectors of the wider society and demonstrated by the National Agenda. The use of ICT to transform the economy is a well developed theme, and e-commerce plays to that theme.

2.2.1 The National Agenda

The National Agenda has defined three transformational stages:

- Phase I (2007 to 2012): Employment Opportunities for All, focuses on creating employment opportunities by promoting export-oriented, labour intensive industries, education, measures to eliminate discrimination against women, measures for the liberalisation of state-controlled markets and investments in key infrastructure as an enabler of investment in sectors with high growth potential.
- Phase II (2013-2017): Upgrade and Strengthen the Industrial Base, focuses on promoting more capital intensive industries and inducing the newly educated workforce into value-added jobs. This phase also involves development of the service sectors. The intention of this phase is to migrate the economy towards higher value added occupations and to increase labour productivity.

- Phase III (2018- onward): “World Class Competitor in the Knowledge Economy” focuses on evolving selected economic sectors in the knowledge economy.

E-commerce is essential to supporting all three phases. E-commerce enables businesses to extend their markets by making it easier for them to export. It also encourages competition by increasing market transparency. This increase in transparency arises from the ease that buyers have in finding suppliers of goods and services using web search engines and electronic marketplaces (e-marketplaces) and the ease of obtaining product information from suppliers’ websites. Such increase in competition will force companies to improve their quality, maintain or reduce their prices, and focus on what they do best. Further, e-commerce provides a mechanism for improving competitiveness and growth prospects by improving the ability of firms to collaborate and trade. This improvement arises from lower cost of collaboration and increased quality, greater range of goods and services, and reduced prices. Improvement in collaboration means that companies can devolve peripheral activities where they are sub-scale and may not be quality leaders, allowing them to focus on their core businesses, where they are excellent. Thus, e-commerce should help to upgrade and strengthen the industrial base leading to higher value added occupations in sectors that use e-commerce and those that provide e-commerce products and services within Jordan. The vigour generated by e-commerce businesses should give rise to new employment opportunities including ones in export oriented businesses, while at the same time deliver improved goods and services with lower prices. Of course, companies that do not adopt e-commerce will be disadvantaged in world markets by those that do. As increasing numbers of companies trade in this way, Jordanian companies will need to adopt e-commerce to survive.

2.2.2 *ICT policy*

The ICT policy commits Government to take steps that encourage the adoption of e-commerce within the general industrial and services sectors of the economy, in collaboration with the private sector, by developing services and infrastructure that will support e-commerce, encouraging the preparation of advanced programs of education and training in telecommunications and information technology including e-commerce, and taking action to create a legal framework for electronic transactions in Jordan, associated consumer protection, and, the discouragement of ‘cyber-crime’.

Therefore, Government intends to encourage Jordanian businesses to offer online services and applications (including via mobile phones), especially e-commerce services, in order to grow their businesses. This will include efforts not only to service the Jordanian market but also to increase the export of goods and services by Jordanian businesses.

Further, Government intends to work with the TRC to complete the subordinate regulations and instructions under the e-Transactions Law related to Certification Authorities, and with other concerned government entities such as the Central Bank of Jordan, the Ministry of Justice and the Ministry of Finance in order to implement the e-Transactions Law and promote the use of e-commerce services.

Finally, Government recognizes that postal services can best support the growth of e-Commerce and e-Government through the provision of efficient and dependable basic postal services. At the same time, these services can be combined with electronic communication services to develop new “hybrid” services that combine the best features of both technologies. Government therefore intends to encourage the sector to incorporate further, advanced communications technologies, and other technologies to improve and expand basic postal services.

Thus, ICT policy, and the consequential strategy are concerned with providing ICT foundations that can be used for the development and implementation of e-commerce products and services.

2.3 Present state of readiness

E-commerce in Jordan has not taken off. This is due to a number of factors, the main ones being:

- The lack of a viable electronic payment system.
- The lack of laws which support e-commerce processes and which protect consumers who are using it.
- A lack of awareness amongst stakeholders (both consumers and business) regarding e-commerce.
- Affordability – the cost of broadband access and the cost of PCs.
- Arbitrary changes to licenses and taxes that deter e-commerce entrepreneurs.

Only about 0.8% of Jordanian consumers⁴, it is estimated, buy using e-commerce, and the absence of any functioning e-payment mechanism in Jordan means that virtually no payments are made between Jordanians and Jordanian companies online. Such consumer e-commerce as there is occurs between Jordanian citizens and foreign suppliers that do have adequate payment facilities at their disposal.

Electronic communication associated with business to business trade in Jordan and for importing and exporting is mainly by email. This is used to send orders to and to receive and accept quotations. Such business to business e-commerce uses letters of credit for payment. The letters of credit are often arranged at the physical premises of a bank or sent to a bank via fax. Government, to some extent, advertises tenders online and a few hundred Jordanian companies have registered with one or more electronic marketplaces. A few companies appear to transact through these marketplaces. The marketplaces hold virtually no product information however. This may place Jordanian companies at a disadvantage on world markets in comparison with other developing countries and particularly with China.

Prevalent opinions about why consumer e-commerce has not happened are expressed in terms of the Jordanian 'culture' and the lack of trust of e-commerce mechanisms. While these opinions may be valid in part, culture and lack of trust are not the whole story, and may not even be an important part of that story. Jordanians have, in recent times, become major holders of credit and debit cards, and there are now about 2.5 million such cards that could be used for electronic payments. In addition, Jordanians are using mobile phones and online mechanisms for banking and for bill paying in rapidly increasing numbers. The young in Jordan are often highly IT aware, just as they are in other countries. The difference between Jordan and some other countries is that the young, those under 25 comprise 50% of the population. These are the biggest potential users of e-commerce, and the present users of mobile phones and e-banking services. They have trust in e-banking and this trust is transferable to e-commerce should the facilities be made available for them.

Despite the lack of e-commerce activity in Jordan, the country is rated relatively highly for e-commerce *readiness* on a regional basis. This is because much of the ICT infrastructure is in place (or almost in place) to enable e-commerce adoption.

Jordan is well placed in terms of institutions and law to be highly placed in the adoption of e-commerce. No country in the Arab region has widespread adoption, although UAE and Bahrain are best placed. In this respect, Jordan, in third place in terms of readiness for e-commerce should

⁴ The Regional Profile of the Information Society in Western Asia, 2005, United Nations' Economic and Social Commission for Western Asia. This report estimates that e-commerce averages 0.84% of GDP over the following ESCWA states: Jordan, Egypt, Iraq, Syria and Yemen.

aim to maintain its position as the region as a whole moves from the development of the conditions necessary for e-commerce to the use of e-commerce.

The main barrier appears to be a psychological block; businesses, academics and public servants are waiting for someone or something to tell them that e-commerce is now feasible if the obstacles are removed. None of these bodies have sought spontaneously to remove these obstacles themselves. This strategy therefore defines a framework in which the initiatives necessary for e-commerce adoption can be achieved.

2.4 E-commerce hurdles

The five biggest hurdles to the use of e-commerce were identified above. There are many others that need to be overcome for e-commerce to be widely used. The hurdles that the strategy must overcome are listed in Table 1 which follows immediately below. This table also indicates why the hurdle is important for e-commerce and its priority, how quickly it needs to be resolved.

Table 1: E-commerce hurdles

Factor	Hurdle	Importance for e-commerce	Priority / related objective
The Law and regulation	Lack of a certification authority for e-signatures under the e-Transactions Law.	This is a pre-condition for trust in electronic contracts. Without it there will be minimal e-commerce in Jordan.	High
	Incomplete nature of the laws applicable to e-commerce	To varying degrees these are important in establishing trust and protection of individuals, intellectual property owners, and intermediaries for e-commerce. Gaps in the law will contribute to a lack of trust in e-commerce and should be remedied.	Medium
	The requirement for a property to operate a business in an area zoned for business	This increases costs for e-commerce start ups.	Medium
Information security	Lack of awareness amongst potential e-commerce traders of a need for information security	Visible and rigorous information security measures are a pre-condition for consumer confidence.	High
Electronic payments	No payment system that can easily be adopted by merchants and consumers for e-commerce	This is a pre-condition for any consumer e-commerce and small business e-commerce. Without it there will be minimal e-commerce in Jordan.	High
Tax	Over-complex tax systems that are difficult to implement electronically	These limit the potential for electronic contracts and transactions, since tax may need to be calculated manually.	High
	Inability of the tax authorities to use electronic records	The production of paper records puts business to an unnecessary cost and leaves open the opportunity of fraud since paper records will not be the primary records of an organisation. A tax audit that does not examine electronic records cannot be sufficient.	High
	Additional taxes and other transfer charges levied on mobile telecommunications bills.	Such taxes and charges limit the potential for electronic commerce on mobile phones because, if applied, they would raise the prices of goods purchased using a mobile phone as a channel.	High

Table 1: E-commerce hurdles

Factor	Hurdle	Importance for e-commerce	Priority / related objective
Culture	Lack of trust in e-commerce	This limits take up. It is likely that trust will increase as society becomes more familiar with e-commerce and proxies such as e-banking and electronic bill payment.	Medium
Awareness	Awareness of laws applicable to e-commerce amongst the legal profession	Lack of awareness leads to conservative legal advice from lawyers and poor decisions from judges.	High
	Awareness amongst tax officials	Lack of awareness leads to taxation systems that are not suited to an e-commerce environment	High
	Awareness amongst public sector administrators	Lack of awareness leads to indecision and delay where e-commerce is a material factor, for example in accepting a new business's objectives.	High
	Awareness amongst consumers, small businesses	This limits take up, and is important particularly for small businesses who will not adopt it unless awareness grows.	High
Skills	Relative lack of business sophistication	Businesses find it difficult to develop alternative channels to their markets.	High
	Skill base in the IT sector including skills of graduate entry	The IT sector cannot respond to a need for e-commerce systems development requirements.	High
	Skill base amongst lawyers and judges associated with e-commerce	Poor advice about e-commerce related subjects.	High
Customs	Current customs processes and the lack of electronic document interchange with customs	These impose long delays and lead to considerable effort on behalf of custom clearance organisations. Until replaced with single window electronic systems, it is unlikely that any logistics organisation will hub in Jordan.	High

Table 1: E-commerce hurdles

Factor	Hurdle	Importance for e-commerce	Priority / related objective
IT Sector	Perceptions of lower quality amongst Jordanian ICT companies, particularly in the area of web based applications including e-commerce	This encourages customers to go elsewhere for IT products and services.	High
	Adoption of technology from abroad, and low levels of government sponsored IT R&D	This may be an issue in the adoption of e-commerce and may be reflected by the lack of training in e-commerce related technologies and standards. As many e-commerce products are now well developed, there is no need for basic R&D. There is some need for re-purposing technology from abroad for the Arab region.	Medium
ICT infrastructure availability in homes and businesses	Take up of fixed telephone services amongst consumers	The market size for e-commerce related consumer sales channels is limited. It is possible that not all individuals in the early adopter segment have a fixed line since they may be reliant on mobile phone technology for telephone services. Consumer e-commerce may need to use channels other than the fixed line to these individuals.	Medium
	Low installed base of IT in households and small businesses	The market size for e-commerce related consumer sales channels is limited. It is likely that the households in the early adopter segment have a personal computer already.	Medium
	Low take up and high cost of the internet and broadband	The market size for e-commerce related consumer sales channels is limited. It is very likely that a substantial proportion of the target consumer market will not have broadband or even internet access in the home.	High

Table 1: E-commerce hurdles

Factor	Hurdle	Importance for e-commerce	Priority / related objective
	Regional variation in take up of internet access particularly in the South and rural areas	The south will be disadvantaged with regard to the benefits of e-commerce.	High
	Low penetration of outsourced IT	Outsourcing is a low risk method of establishing an e-commerce business infrastructure. This will have an impact on businesses that may wish to enter the market slowly without committing substantial resources.	Medium
Telecommunications services	No diversity in international links	Diversity in international telecommunications is essential to the provision of an international hosting sector and an international contact centre sector	High
	Lack of competition in the fixed network, and particularly in access to the FLAG cable which provides international communications	There is no market driven requirement for product innovation and price reductions in a key aspect of telecommunications services associated with e-commerce.	Medium
	Lack of local loop unbundling, limiting opportunities for competition in the provision of broadband	There is no market driven requirement for product innovation and price reductions in a key aspect of telecommunications services associated with e-commerce.	Medium
	Lack of mobile broadband networks	Broadband is a pre-condition of e-commerce. A mobile network will not support e-commerce until broadband is provided. As mobile networks have higher penetration than fixed networks, these may provide the best method of reaching the target market.	High
Logistics	Air transport infrastructure at Queen Alia airport	Logistics companies will not hub at Queen Alia airport until facilities are improved.	Medium

Table 1: E-commerce hurdles

Factor	Hurdle	Importance for e-commerce	Priority / related objective
Electricity supply	Availability of secure sources of electricity supply	This is a risk to any hosting business setting up in Jordan. Hosting businesses may take remedial action, for example, by having an emergency generator.	Low
Finance and investment	High public sector deficit and debt	E-commerce initiatives will need to be financed largely through the private sector.	Medium
	Availability of venture capital	While venture capital from venture capital companies is not readily available in Jordan, business angels, individual investors are. They are able to provide venture funding to a point where international VCs may take an interest.	Medium

Table 1: E-commerce hurdles

Some of these hurdles are already being addressed by the National ICT Strategy 2007 – 2011. This e-commerce strategy addresses these hurdles only in so far as e-commerce generates new issues or opportunities.

2.5 Strengths and opportunities

While there is a long list of hurdles to be overcome, Jordan has significant strengths related to e-commerce, and these are reported in Table 2 below. This strategy exploits the strengths and opportunities as far as it is possible to do so. They provide a focus for particular actions in terms of sectors of supply and demand and in other ways. These strengths and opportunities therefore provide focus for the attainment of particular goals.

Strength	Importance for e-commerce
Overall strength of the Jordanian economy, excepting high unemployment rates	High unemployment rates should be addressed by the strategy.
The intensity of local competition compared with the extended Arab region (including North Africa).	Local competition gives rise to a need for efficiency improvement and innovation to deliver competitive advantage. This need should drive the use of e-commerce provided a suitable infrastructure is available.
The young and talented people in Jordan who are educated either in the universities in Jordan or abroad and who are much sought after by international companies	These individuals are the primary market for e-commerce services, and should drive innovation in the economy.
Extensiveness and competition in the mobile telecommunications sector	Mobile networks can act as a medium for the delivery of e-commerce services.
High mobile phone penetration	This is a potential market for a mobile e-commerce channel.
Availability of broadband services	Broadband is an essential pre-condition for internet based e-commerce.
Rapidly growing and increasingly sophisticated IT sector	The IT sector can adapt to deliver e-commerce products and services.
IT sector's export record	This suggests that the IT sector could export e-commerce products and services that it develops
IT sector cost base	This will support both domestic and export sales.
Reputation and strength of Jordanian banks	Services provided by Jordanian banks for e-commerce should be trusted. Their involvement will be the basis of trust for e-commerce payment channels.
The availability of e-banking services	These demonstrate innovation in the banking sector that can be extended to e-commerce payment channels.
Presence of major and sophisticated global and regional logistics companies	There is a ready delivery market for goods bought through an e-commerce channel.
Trade agreements with most of Jordan's major trading partners	These demonstrate cooperation between trading partners that facilitates exporting and importing.
Sector strengths in food manufacture, chemicals & pharmaceuticals, non-metallic mineral products, construction, wholesale and retail trade, land transportation, telecommunications, financial intermediation	These constitute innovative industries that can be considered as possible users of e-commerce channels.

Table 2: E-commerce strengths

2.6 Opportunities

Specific opportunities that are exploited by the strategy include:

Table 3: E-commerce opportunities

Opportunity	Potential for e-commerce
Factors	
High mobile phone penetration	Channel for consumer e-commerce
The youth market for internet access	Consumer market for e-commerce
Rapidly growing penetration of payment cards in Jordan and the region	Consumer payment mechanism
The regional leadership position established by the banking system	Export banking services associated with e-commerce to the Arab Region
New contact centre companies now starting up in Jordan	Basis for contact services for e-commerce start ups
Jordan's relative 'safety' in the region	Overall opportunity
Shortages of ICT skills in the Arab Region	Export of ICT development and implementation services
Shortages of ICT skills in Europe and USA	Export of ICT development and implementation services
Rapid growth of importance of e-commerce in Europe	Export of ICT development and implementation services
Low sales taxes across the Arab region (opportunity for export sales)	E-commerce sales to export markets
Presence of sophisticated regional logistics companies	E-commerce sales to export markets
Street addresses	Delivery of goods purchased by e-commerce
Financing	
Use of Jordan Enterprise as a means of providing venture capital for e-commerce start ups	Financing of start ups
Attract financing from Kuwait, Bahrain and UAE for e-commerce start ups	Financing of start ups
SABEQ may be a source of e-commerce demonstrator project funding	Financing of start ups
SABEQ content project may provide an infrastructure for the development of e-	Financing of content management start ups

Table 3: E-commerce opportunities

Opportunity	Potential for e-commerce
commerce catalogue content	
Government opportunities	
Use of government purchasing to stimulate e-commerce amongst companies that frequently sell to Government	Stimulation of business to business e-commerce amongst government suppliers
Key sector opportunities	Base for business to business e-commerce
Financial services, particularly the insurance sector	Online sales of financial services
Pharmaceuticals manufacture and distribution	National and international supply chain automation
Component and spare parts supply	Component supply and tendering in utilities
Food manufacture and distribution	National and international supply chain automation
Raw materials from mining, quarrying such as potash and phosphates and fertilizers	National and international supply chain automation
Utility account management and bill payment	Demonstrator for payment mechanisms
Wholesale distribution	National supply chain automation for the retail sector
Key import and export opportunities	
U.S.A, India, Saudi Arabia, UAE, Kuwait, Algeria, and Iran	Exploitation of existing export markets for business to business e-commerce
Saudi Arabia, China, Germany, USA, Egypt, Italy, South Korea, Japan and Turkey	Key supply chain / import opportunities for business to business e-commerce

Table 3: E-commerce opportunities

2.7 Threats

The strategy addresses the following threats:

Threat	Implication
<i>ICT leadership</i>	
Position of UAE as the leader in ICT in the region	The strategy takes account of UAE's leadership position, and the developing strengths in ICT in Bahrain and Saudi Arabia.
Competition from countries with lower cost base such as Egypt and India	Jordan needs to differentiate itself from such countries in ICT products and services.
Loss of the young and the educated to countries with higher wage levels and greater opportunities for personal development	Jordan needs to create an environment where the young and the educated can thrive and develop.
Jordanians using e-commerce services in other countries	The strategy will address this issue by giving consumers greater opportunities for using e-commerce services in Jordan. Nevertheless, the increase in use of e-commerce by consumers may ultimately increase the volume of e-commerce related trade with other countries in absolute terms.
<i>Investment</i>	
ICT investment in other Gulf states including Bahrain	Jordan will need to demonstrate that it is an attractive location for foreign investment. As e-commerce is an attractive opportunity for start up businesses requiring finance, the e-commerce strategy should provide a means of channelling foreign investment into such start ups in Jordan.
<i>Taxation</i>	
The over zealous nature of tax administration which threatens start up businesses and increases the cost base for all businesses	The administration of taxes should be viewed as a means of encouraging strategic development as well as a means of funding government activities. Its role as a modifier of individual behaviour should be acknowledged. Therefore, the tax regime should be redesigned to stimulate wealth generating activities and in so far as those are e-commerce development activities, it should be used to stimulate e-commerce activities. This applies to the structure of the taxes themselves, the way they are applied, and the administrative processes used to determine individual tax obligations.

Table 4: Threats to the development of e-commerce

2.8 Structure of the strategic plan

The strategic plan provides a framework for e-commerce. The hurdles define what the strategy must overcome. The strengths, opportunities and threats assist in determining feasible goals and objectives.

The strategy itself sets a vision for e-commerce in Jordan. It is concerned that:

- ICT companies, contact centres, logistics companies and financial intermediaries supply new e-commerce related products and services.
- Jordanian companies use e-commerce as a channel for buying and selling goods and services and generally improve the functioning of the supply chains in which they work.

The vision is defined in terms of goals for the development of e-commerce, and these goals are further divided into specific performance related objectives that define what will be achieved and by when. They specify the growth of e-commerce over the period of the strategy.

In addition to these objectives, the strategy specifies a relatively large number of e-commerce enablers. These are intended to overcome the hurdles that are constraining the development of e-commerce in Jordan and to stimulate Jordan's strengths and opportunities.

The objectives and enablers give rise to specific initiatives that are defined in the Action Plan, giving ownership, estimated resources required, performance indicators and completion timescales for each.

The plan is intended to be owned by a Jordan E-Commerce Council made up of organisations responsible for actions under the plan. The E-Commerce Council will monitor and control the implementation of the strategy and will in addition ensure that the results are audited.

The remainder of this document describes the vision, the goals, the goal related objectives and the enablers. It specifies the structure of the Jordan E-Commerce Council and responsibilities of individual bodies. An impact analysis describes the benefits that will arise from implementing the strategy and the Action Plan will be prepared subsequently.

3 VISION

Placed in the context of its region, Jordan is well endowed with capacities that should enable it to take a leadership position in the supply of e-commerce related products and services from the IT sector, financial intermediaries, logistics companies and others. Jordan is already a success in each of these sectors, even though it has some weaknesses. Further, its strong position in the region in its readiness for e-commerce, particularly in its institutions and the law, will act as a firm foundation for the use of e-commerce by particular sectors to improve supply chain efficiency and provide channels to new markets or to reach existing markets in a new way. Overall, the supply of e-commerce products and services and their use in supply chains involving Jordanian companies will increase wealth creation opportunities in Jordan. Some of these opportunities will be in the form of new relatively highly paid jobs in the IT sector. Other opportunities will arise in developing new channels for buying and selling goods and services. E-commerce start ups will provide a boost to economic activity, while existing businesses will gain from improved process efficiency and lower sourcing costs.

The vision for e-commerce in Jordan is therefore:

Jordan to become a ‘leading’ e-commerce centre in the region through the exploitation of its information technology capacity and the creativity of its people.

This vision statement leads to the definition of strategic goals that develop the themes inherent in this vision:

- Increasing the wealth of the nation through investment in e-commerce and trading using e-commerce channels;
- Exploiting the strengths and the opportunities of the ICT sector;
- Introducing consumer e-commerce into Jordan;
- Enhancing business performance and international trading links.

These themes are developed and strategic goals defined in the next chapter.

4 GOALS

4.1 Increasing the wealth of the nation

The first goal is:

To increase the wealth of the Jordanian people through the development and exploitation of e-commerce.

This is the overarching goal. It will be achieved by:

1. Exploiting the strengths and the opportunities of the ICT sector.
2. Introducing consumer e-commerce to Jordan.
3. Enhancing business performance and international trading links using e-commerce.

4.1.1 *The ICT sector*

The ICT sector has changed over the last five years. Previously, a major element of its business was reselling hardware and software, and serving the needs of the public sector, education and the health sector. In the last five years, it has developed a new focus on in-house developed packaged software, the provision of services, and the development and implementation of business systems. Export sales, always a strength, have continued and grown. The consequence of the developments in the sector is significantly higher gross value added which has given a return to staff and to the businesses themselves. Exploitation of the strengths and opportunities of the ICT sector will increase the wealth of the Jordanian people by:

- Increasing further the sales and profitability of the sector. This will accrue to sector employees and to business owners, and will lead to increasing activity elsewhere in the economy arising from their increasing wealth. It will filter through to the economy as a whole ultimately benefiting all citizens.
- Increasing revenue from abroad arising from export sales. This will strengthen the Jordanian economy through improved macro economic conditions.
- Additional tax revenue from the sector. Increased value added and sector income will lead to a larger tax take on the sector. This will assist with the reduction of the budget deficit.

4.1.2 *Consumer e-commerce*

There is only a very small level of consumer based e-commerce and this is served by foreign e-commerce channels, losing business to Jordanian retailers. Therefore, this strategy, where focused on consumer e-commerce, is intended to introduce e-commerce into Jordan.

The introduction of consumer based e-commerce in Jordan will have only a relatively small effect over the next five years, yet it will provide the basis for future growth serving both Jordan and the Arab region. It is likely that there will be net investment in consumer e-commerce; returns to retail trade are likely to be negative during this period. However, in return, consumers will have the possibility of a greater choice of goods and services, lower prices and greater convenience. The e-commerce marketing mix has been shown to be successful in many countries, including many where, like Jordan, trust and lack of experience with IT were issues, and there is no reason why it should not be successful in Jordan also. The two practical issues that will delay consumer e-commerce are the lack of working payment systems and take up of broadband internet access.

Payment systems will be addressed by this strategy. Take up of broadband internet access is being addressed by the ICT strategy. It is likely that the penetration of mobile telephony will continue to be greater than fixed telephony, and because this penetration is high, it is likely that the mobile device (phone, multimedia device) will be the most prevalent device that could be suitable for consumer e-commerce. This strategy therefore promotes mobile communications as an infrastructure for consumer e-commerce and with actions to develop mobile broadband services and mobile payment services.

4.1.3 Business to business e-commerce

The readiness of business sectors is improving as they embrace IT for business administration and management. Indeed, some businesses, particularly those in knowledge based sectors such as pharmaceuticals, and those that buy or sell from abroad are already ordering and accepting orders by email and through e-marketplaces. The strong trading links between Jordan and other countries, particularly those in Asia, North America and Europe give opportunities for e-commerce based trading. Such trading will enable Jordanian companies to extend their supply chains and markets and to be more responsive to the requirements of distant markets.

The use of e-commerce for business to business trading within Jordan and with other countries will arise from increased efficiency in purchasing operations and lower purchase prices. There will be fewer efficiency benefits from selling online than from buying online, although the potential for market expansion should have some effect. The greater efficiency will ultimately lead to improvements in the allocation of resources across sectors and to increased competitiveness of Jordanian firms. Therefore overall, Jordanian firms will benefit from:

- Lower costs.
- Increased competitiveness (leading to lower prices for consumers).
- Greater market access.

This should feed through to the Jordanian people through improvements to the terms of trade and greater access to export markets, leading to improved macroeconomic performance.

4.1.4 Economic and social gains

Lower prices of intermediate and final goods will deliver an overall welfare gain This gain is shown in Table 5 below.

	2008	2009	2010	2011	2012
Gains from e-commerce selling (consumer)	20	389	2,408	7,438	15,140
Gains from e-commerce buying (consumer and producer)	19	374	2,297	7,048	14,277
Total Welfare Gain	39	763	4,705	14,486	29,417

Table 5: Total Welfare Gain, JD'000⁵

⁵ See Impact Analysis Report. In general there is the possibility of double counting in this analysis. We have estimated the amount by which prices are lowered by both selling online as well as by buying online. We have assumed in this analysis that in any transaction it is either the seller or the buyer that deploys the system for e-trading, not both. This allows us to assume that there is no double counting. This analysis assumes, also, that e-trading prices have no effect on prices used in traditional methods of trading. We think that this is a valid assumption until e-commerce is a relatively mature channel to which many potential buyers have access.

Investment in e-commerce projects will result in growth in the economy. This growth is forecast in Table 6 below which is based on experience of the consequence of IT investment elsewhere.

Scenario	2008	2009	2010	2011	2012	Over five years
Lower	0.00%	0.00%	0.00%	0.01%	0.01%	0.02%
Base	0.00%	0.00%	0.02%	0.05%	0.07%	0.14%
Upper	0.00%	0.01%	0.03%	0.08%	0.13%	0.25%

Table 6: Annual estimated contribution to GDP growth of investment in e-commerce

This growth will have a small impact on the number of jobs in the economy as shown in Table 7.

	2008	2009	2010	2011	2012
Overall	3	40	238	701	1,365
Excluding the ICT sector	0	5	51	240	662
ICT sector - jobs created by domestic demand	2	26	139	344	525
ICT sector - jobs created by export demand	1	9	47	115	175
Total ICT sector	3	35	186	459	700

Table 7: Estimate of the change in employment arising from e-commerce⁶

This table shows the overall growth of employment across the economy, the growth outside the ICT sector and growth in the ICT sector. Growth in the ICT sector arises from two sources, the growth in jobs created in satisfying domestic demand, and the growth in jobs created in satisfying export demand. These export related jobs are jobs that would not be created unless an e-commerce capability is built within the ICT sector.

The jobs created are a mix of knowledge based and other jobs, and therefore satisfy the requirement of the National Agenda for job creation overall and in knowledge based sectors.

The e-commerce strategy should therefore lead to economic gains: growth in the overall economy and increased employment particularly in higher value activities. In Section 4.2 the impact on the ICT sector is shown in more detail.

However, the e-commerce strategy will also have an impact on social conditions through increases in employment, decreases in the cost of goods over what they would have been otherwise, greater access to goods and services, particularly in rural areas, and more variety in goods and services. People will have more choice and will be able to obtain goods and services with less travel and expense.

⁶ In making these estimates, we have assumed that the revenue per employee levels remain constant.

4.2 Exploiting the strengths and the opportunities of the ICT sector

The strategy will build on the particular strengths and opportunities of the ICT sector, notably:

- Its potential to develop and make more competitive most sectors of the Jordanian economy
- The fact that, even now, the IT sector is developing its own software to meet the needs of Jordanian business
- Its use by the financial services, pharmaceuticals, logistics and insurance industries – which are all likely to want to move onto more e-commerce based systems.

The goal for building on these strengths and opportunities is:

By 2012, to be a regional leader for IT systems development, applications and services associated with e-commerce.⁷

This will be achieved through a new e-commerce focus for sales to the domestic IT market and to export markets in the Arab region and the rest of the world. It will build on:

- The growth in sales of business systems development services experienced by the IT sector over the last five years, which provides the basis for business automation that can be extended to e-commerce;
- The exporting success of the IT sector particularly in applications software developed in Jordan.

This new focus will rely on new expertise and capacity in the sector. This will be addressed through the development of commercial relationships with e-commerce software vendors and through the development of the skill and expertise of technical and marketing staff within the sector.

As has happened in the past in the IT sector, as companies have gained capacity they have been asked to work in export markets in partnership with technology companies from abroad. That will continue to happen as the sector's capacity in e-commerce applications and services grows. Relationships will need to be developed with new e-commerce companies in order to fulfill e-commerce opportunities. These IT companies might be sellers of e-commerce software that can readily be adapted to the Arab region in terms of language, taxes, and in inter-working with local payment gateways, customs systems, and tax authorities.

Skills and expertise will need to address the new technology architectures that are being deployed in web based applications, and in business models associated with social networking, search based advertising and other innovative approaches to marketing. This change in skill and expertise will require a major retraining exercise in the sector, one that will require significant investment by individual companies.

The effect of the strategy is shown in Table 8. This effect is based on the likely diffusion of e-commerce in Jordan and in the rest of the region.

⁷ E-commerce services can include e-commerce hosting, marketplaces, auction services, content development, contact centres, e-payment, logistics, security.

	2008	2009	2010	2011	2012
Sales					
Domestic	70	1,311	7,120	17,642	26,898
Export	23	437	2,373	5,881	8,966
Total	94	1,748	9,494	23,523	35,864
Sales by function					
Resale of hardware and software	26	488	2,654	6,575	10,024
Application sales	7	131	713	1,766	2,692
Systems development, integration and project management	24	451	2,453	6,077	9,266
Hosting and other IT services	36	676	3,675	9,105	13,881
Employment					
From domestic demand	2	26	139	344	525
From exports	1	9	47	115	175
Total	3	35	186	459	700

Table 8: Impact of e-commerce strategy on ICT sector⁸

This will feed through to new opportunities for the young and educated in the IT sector. Expansion of the sector into e-commerce related products and services will give rise to new employment opportunities particularly in higher earning categories. This will encourage the young to remain in Jordan, as long as the young get a stake in the growth of these businesses. Expansion of the sector could also generate opportunities for those who have gained experience elsewhere to return to Jordan in management or senior technical positions.

4.3 Introducing consumer e-commerce to Jordan

The strategy will build on Jordan's entrepreneurial spirit and the desire of its young and educated citizens to buy and sell goods online. A significant pressure will come from the 61% of the adult population⁹ who are currently between 15 and 34 and who will want to access a broader range of goods and services than their parent's generation. These pressures will be used to realise the following goal:

To be one of the leading countries in the region that uses e-commerce as a channel for selling goods and services to consumers.

By achieving this level of usage, Jordan will have the scale of operation and the sophistication to compete in export markets with UAE and Bahrain elsewhere in the Arab region using an e-

⁸ Assumptions: sales tax: 16% on domestic revenue; Income tax: 25% on profits assumed to be 7% of revenue; Sales by function based on 2006 shares; Employment based on a revenue per employee of JD51,290; Domestic and Export revenues from Impact Analysis

⁹ 15 years of age or older

commerce channel. It will have implemented all the necessary infrastructure – payment systems and banking arrangements, logistics facilities and IT to build international e-commerce businesses.

In the consumer market, this strategy is concerned to kick start e-commerce. It has therefore to be primarily focused on the early adopters of new technologies and services and possibly the early majority – the first users of a new product or service (see Figure 2). By definition, it cannot be concerned with the late adopters. They will follow in time. The business opportunities for e-commerce to be considered in this strategy have to be those that these early adopters will support.

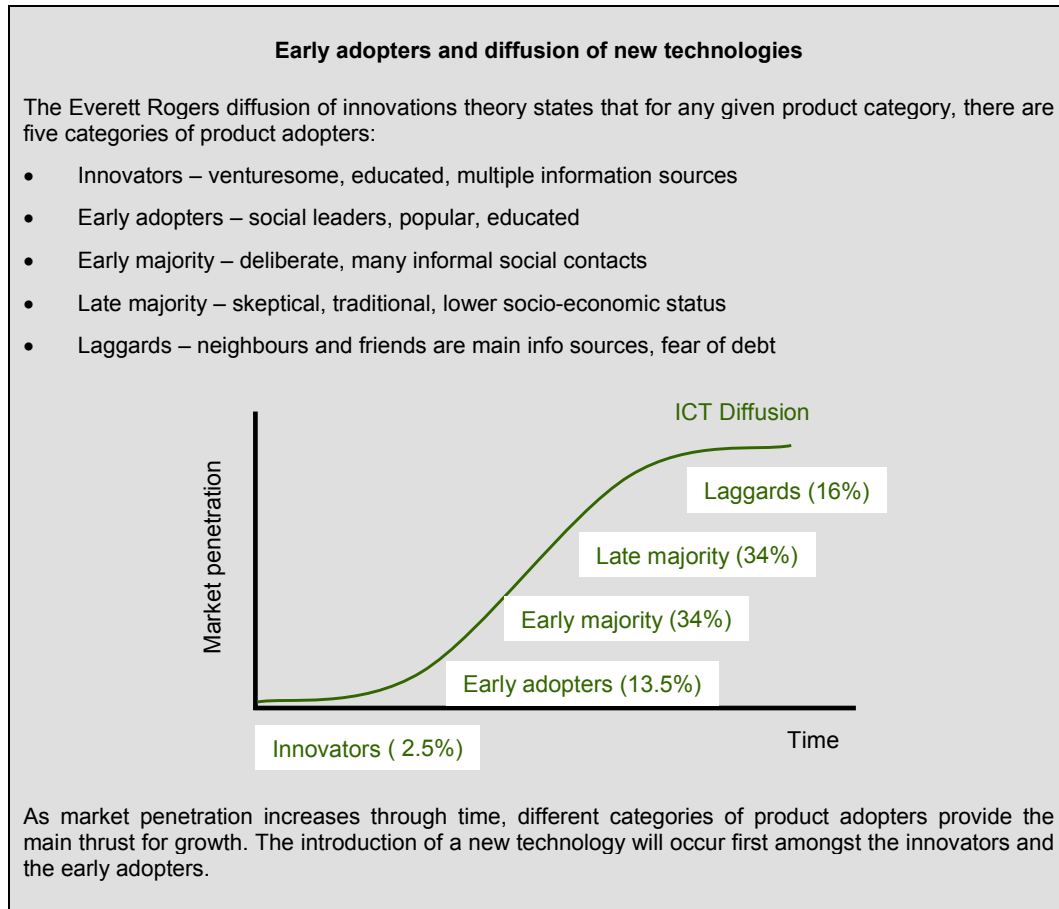


Figure 2: The Everett Rogers diffusion of innovations theory¹⁰

This strategy is intended to put in place the conditions that will allow innovators, early adopters and, later on, the early majority to use e-commerce. It should be recognised that even in those countries that are leading in the adoption of e-commerce, it is only now, ten years after the first efforts at consumer e-commerce, that the early majority is adopting e-commerce, and the late majority and laggards have yet to adopt e-commerce. The five year outcome of this strategy will be adoption by innovators and some early adopters. The ten year outcome will be the adoption by the early majority as well. This means that factors such as scepticism and lack of trust may be discounted. Diffusion theory takes such factors into account.

The sectors that will comprise the innovators and the early adopters comprise:

¹⁰ Diffusion of Innovations, Fifth Edition, Rogers, Everett M, 2003, New York

- The youth and young market, particularly young professionals such as lawyers, accountants and engineers; those aged between fifteen years of age and thirty four comprise some 61% of the population aged fifteen and older (see Figure 3 below);
- International travellers and their families;
- Employees in high technology sectors such as telecommunications, IT and pharmaceuticals, and managers and management trainees in the financial services sector.

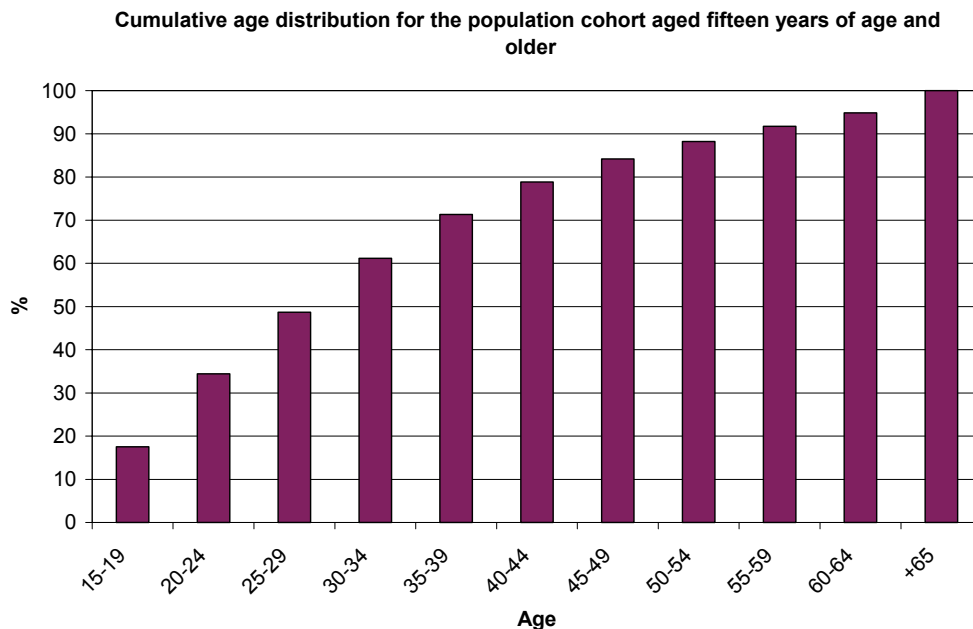


Figure 3: Cumulative age distribution of the population fifteen years of age and older¹¹

These sectors are characterised as users of IT already, owners of mobile phones and with access to PCs at work and in many cases at home, users of the internet already, and holders of bank accounts, debit and credit cards. Some of these, particularly the international travellers, will also have used e-commerce to purchase goods and services from websites in other countries. This market will provide the bulk of transactions and any retailer or service provider using e-commerce such businesses will need to recognise their needs.

The strategy will need to stimulate the use of e-commerce as a channel to market by Jordanian retailers and service providers. There will be a need to overcome scepticism that has arisen from the lack of progress in selling through an e-commerce channel by the few retailers that have tried it. For this reason, it will be important for retailers to target innovators and early adopters. This means that first retailers who consider e-commerce will be those that sell to early adopters. Such retailers may include financial services companies, sellers of high technology goods, travel services, hotels and information, web search and social networking companies.

Introduction of consumer e-commerce into Jordan will therefore build on:

1. The IT literacy and sophistication of the youth, the young adult market and the IT sector

¹¹ Department of Statistics, Statistical Yearbook, 2005

2. High mobile phone penetration
3. The very high penetration of payment cards
4. The implementation of street addresses which will enable goods to be delivered to households.

The strategy also needs to consider how to extend the opportunities for e-commerce in other sectors, particularly those sectors that have little access to IT in order to meet Jordan's wider policy objectives associated with increasing readiness of IT. Individuals outside Amman and other cities may gain most advantage from e-commerce because of a more general lack of access to a wide range of shops and services. Individuals and families in these areas would see a significant change in access to goods and services through e-commerce, yet they are unlikely to be in the innovator or early adopter categories. Therefore special measures will need to be taken to enable these groups to partake in the benefits of e-commerce.

Major developments will be needed to achieve this goal:

- A working payment gateway that accepts all major credit, debit and ATM cards used in Jordan and elsewhere in the region, bank transfer facilities, and that works with merchant accounts provided by Jordanian banks and banks in other countries in the region.
- Increased levels of internet access using fixed networks
- Strengthening of e-commerce related law, and particularly consumer protection

Benefits

Attaining this goal will mean:

- Lower prices for consumers – as e-commerce tends to spread information about where to obtain cheaper goods and services;
- Opportunities for entrepreneurs provided satisfactory financing is available;
- A broader range of goods and services available to Jordanians both from inside and outside the country.

4.4 Enhancing business performance and international trading links

Jordan can use e-commerce to improve its business performance. While it is already one of the strongest countries in the region in terms of e-commerce readiness, little actual use is made of e-commerce in Jordan. Trade has now moved on from telex to fax to email for ordering, quotations and acceptance of quotations, but more sophisticated methods could be used. In European and North American market there is significant use of EDI and web based purchasing and selling.

However Jordan already has many of the elements of a successful business to business e-commerce sector. For example:

- The presence of sophisticated regional and international logistics companies that will enable goods to be easily distributed in Jordan and elsewhere;
- Government e-procurement that can be used as a demonstrator to build expertise in Jordanian companies and to stimulate e-commerce amongst companies that frequently sell to government;

- Many industries that would benefit from the use of business to business e-commerce such as commodities, manufacturing and machine / vehicle maintenance and pharmaceuticals.

The fourth goal is for Jordan is designed to push Jordanian companies to exploit these strengths:

To be one of the leading countries in the region that uses e-commerce as a channel for domestic and international business to business collaboration and trade.

There will be a need to build on the existing level of electronic exchange of trade data and increase sophistication consistent with the levels reached in each sector on a world basis. There are many examples of sector oriented specialised trading environments.

E-commerce awareness will need to be raised in order for Jordanian companies to take their place in electronic supply chains. This will happen as a matter of course in some sectors, with suppliers or buyers informing Jordanian companies of specific requirements for trading electronically. However, in other sectors Jordanian companies may well need to be informed.

Small and medium sized companies in any sector are likely to lag behind the larger companies, since they will not have the resources available to monitor developments in electronic trading and they will, in general, be less sophisticated in their use of IT. Therefore, there will be a particular need to raise the awareness of smaller companies, in addition to raising the awareness of individual sectors. Once adopted, e-commerce will help smaller companies catch up with larger companies in the adoption of ICT since the adoption of e-commerce will encourage the adoption of ICT for other functions in the organisation.

Jordan has strong established trade links and international supply chains. Particular opportunities that Jordan can address are:

- Key import and export opportunities particularly in markets that already exploit e-commerce
 - U.S.A, India, Saudi Arabia, UAE, Kuwait, Algeria, and Iran
 - Key supply chain / import opportunities are: Saudi Arabia, China, Germany, USA, Egypt, Italy, South Korea, Japan and Turkey
- Sectors that are well positioned to exploit e-commerce including:
 - Financial services, particularly the insurance sector
 - Pharmaceuticals manufacture and distribution
 - Spare parts (for example, the car repair business)
 - Manufacturing component supply
 - Food manufacture and distribution
 - Raw materials from mining, quarrying such as potash and phosphates and fertilizers
 - Component supply and tendering in utilities
 - Utility account management and bill payment
 - Wholesale distribution
- Rapid growth in e-commerce in Europe, North America and Asia

Awareness of these opportunities needs to be raised. This need can fall to one or other of a number of organisations:

- The Ministry of Industry and Trade
- The Chamber of Commerce and the Chamber of Industry
- Individual sector societies and associations.

This strategy proposes that awareness is raised by the Chambers in conjunction with individual sector societies and associations, but that the Ministry of Industry and Trade have over arching responsibility. The ICT sector will also bear some responsibility for raising awareness.

The strategy proposes to follow a traditional market risk minimisation strategy which is to either change product or market but not both at the same time. The use of e-commerce instead of a traditional channel for distribution changes the product marketing mix. Experience with this new marketing mix should be gained in existing markets before attempting to exploit new markets. Expansion into new markets will involve the development of a complete marketing strategy for the new markets.

Benefits

The benefits from developing business to business e-commerce include:

- Extending the market reach of companies,
- Reducing the costs of procurement processes
- Reducing the costs of goods purchased.

Such improvements to the supply chain of Jordanian companies and to their efficiency will help to increase exports and to reduce the costs of production.

5 STRATEGIC OBJECTIVES

The goals define the overall outcome of the e-commerce strategy consistent with the vision for e-commerce. The strategic objectives further specify what is intended by the goals. The strategic objectives provide focus for the strategy in terms of the particular benefits that it is intended to deliver.

The objectives are related to the goals but they are also related to drivers from the National Agenda and from Government Policy.

This section specifies the strategic objectives arising from each of the strategic goals.

5.1 Goal 1: To increase the wealth of the Jordanian people through the development and exploitation of e-commerce

Ref	Objective
-----	-----------

- | | |
|-----|--|
| 1.1 | To create an environment that generates business opportunities particularly for young people |
| 1.2 | To create additional high value employment for Jordanians in knowledge based industries |
| 1.3 | To improve the efficiency of Jordanian business |
| 1.4 | To reduce factor prices |

Employment objectives are linked to Phases 1 and 2 of the National Agenda. E-commerce is firmly linked to information technology and knowledge based work. Therefore it should provide high value employment particularly for young people who have ICT skills or skills in marketing and management. In addition, it should provide additional employment in sectors such as logistics and transport because it will generate new opportunities in warehousing, packing and delivery. Because of the developmental nature of e-commerce, high value knowledge based employment opportunities will precede opportunities in other sectors.

Improving the efficiency of Jordanian business is a requirement of the Phase II of the National Agenda. Improving efficiency and reducing factor prices will give rise to greater profitability, lower retail prices and improved competitiveness benefiting all citizens. As well as improving efficiency, e-commerce also leads to lower factor prices, and both will enable Jordanian business to compete more effectively.

5.2 Goal 2: By 2012, to be a regional leader for IT systems development, applications and services associated with e-commerce.

Ref	Objective
2.1	To expand the domestic and export markets for ICT products and services
2.2	To increase the gross revenue and gross value added by the sector
2.3	To increase tax revenues raised from the ICT sector.
2.4	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country
2.5	To increase the range of e-commerce products and services

Expansion of the domestic and export markets for ICT products and services through e-commerce will clearly help to drive forward the development of the ICT sectors and will lead to increases in gross revenue and the gross value added by the sector. UAE through Dubai will continue to be the leading ICT sector in the Arab Region, and other countries will be competing with Jordan, particularly Bahrain, Saudi Arabia, Qatar, Oman and Egypt.

Increased gross revenue and gross value added will accrue to sector employees and to business owners, and will lead to increasing activity elsewhere in the economy arising from their increasing wealth. It will therefore filter through to the economy as a whole ultimately benefiting all citizens.

The increased revenue and profit will lead to increased tax revenues that will enable Government to continue to develop the national infrastructure and the provision of services for the Jordanian people. Tax revenues will increase naturally as the ICT sector grows. The development of e-commerce related services will give new opportunities for growing the sector and this will lead to incremental growth in tax.

Focus on exciting new sectors such as e-commerce will improve Jordan's ability to attract skilled ICT professionals and will generate new opportunities for additional products and services. This will lead to the upgrade and strengthening of the ICT sector consistent with Phase II of the National Agenda.

5.3 Goal 3: To be one of the leading countries in the region that uses e-commerce as a channel for selling goods and services to consumers

Ref	Objective
3.1	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.
3.2	To stimulate retail e-commerce business start ups
3.3	To improve consumers' access to goods and services sold by Jordanian retailers
3.4	To reduce the cost of goods and services for Jordanians
3.5	To extend the range of goods and services available to Jordanians
3.6	To increase the volume of Jordanian domestic retail business
3.7	To extend the reach of Jordanian retail businesses across the Arab region
3.8	To increase the profitability of Jordanian retail businesses

Increasing the number of retailers selling online using e-commerce is fundamental to an e-commerce strategy. However, it is not only the number of e-commerce retailers, but their exploitation of e-commerce that matters. Therefore, retailers adopting e-commerce should be encouraged to sell into export markets as well as the domestic market.

In other countries, start ups have led the way in e-commerce. In Jordan, start ups will encourage existing retailers to defend their position by adopting e-commerce, therefore, the strategy should encourage e-commerce start ups.

E-commerce, by its nature will improve access to consumer goods, but this will happen only if the e-commerce channel is accessible to consumers. Therefore the strategy needs to promote access to broadband and use of mobile services for e-commerce.

E-commerce will reduce the prices of goods and services to Jordanians because of greater transparency and easier access to product and price information. E-commerce should increase the volume of domestic retail business by virtue of reduced prices that drive consumer demand. E-commerce will also enable retailers that have successfully adopted e-commerce to sell across the Arab region, and logistics, payment and other services will need to ensure that these sales are possible.

Profitability of retail businesses may or may not be improved by e-commerce. E-commerce can be demonstrated to reduce margins and return on sales, but it also increases sales volumes. Therefore it is anticipated that profitability of Jordanian retail businesses will grow at a lower rate than revenue.

5.4 Goal 4: To be one of the leading countries in the region that uses e-commerce as a channel for domestic and international business to business collaboration and trade

Ref	Objective
4.1	To increase the number of businesses that use e-commerce for business to business trading within Jordan, in the Arab region and worldwide.
4.2	To stimulate wholesale e-commerce business start ups
4.3	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.
4.4	To increase the efficiency of supply chains operating in Jordan
4.5	To extend the range of goods and services available to Jordanian companies
4.5	To extend the reach of Jordanian companies in existing international markets and reach new international markets.
4.6	To increase the efficiency of individual companies in the procurement of goods and services

The first objective is to get businesses to start to use e-commerce for business to business trading. While this will involve investment, it should also deliver rewards particularly in terms of improvements in efficiency in procurement. Most of the businesses that trade using e-commerce will be existing businesses. However, e-commerce provides opportunities for start ups in particular sectors, particularly selling online. Sectors might include business goods and services as well as consumer goods and services.

Participation in global supply chains that use e-commerce tools and techniques would position Jordanian companies in a leading position in the world.

Use of e-commerce in business to business trading will lead to greater efficiency in supply chains consistent with the Phase II of the National Agenda.

One of the consequences of business to business e-commerce will be to extend the range of goods and services available to Jordanian companies. This extra choice should lead to further efficiencies through better match to requirements.

Business to business e-commerce will allow Jordanian suppliers to extend their reach into new international markets. This will give opportunities for increased sales without, necessarily, a large increase in sales costs.

Finally, Jordanian companies that adopt e-procurement should have opportunities for efficiency savings in their procurement functions.

6 ENABLERS

6.1 Introduction

The previous sections identified the strategic goals and the outward looking strategic objectives. In order to attain these objectives a secure environment attractive to e-commerce needs to be created. Businesses can use e-commerce as a new channel to the consumer market or as a new means of buying and selling to other businesses. A large number and variety of enabling actions need to be undertaken to create this environment. These enablers specify what actions need to be taken to create an environment which is benign to e-commerce. Each enabler is linked to one or more actions that will be provided in the Action Plan. At a top level, each enabler specifies:

- What has to be done - the enabler;
- Why it needs to be done – a justification
- Who should do it – the owner and possible stakeholders
- When it should be done – a target date for completion or reaching a particular milestone

The Action Plan then specifies how the enabler will be undertaken.

This section identifies enablers by factor. The annex provides a table that indicates the relationship between enablers and strategic objectives.

6.2 The Law

Factor: The Law				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
1.	To ensure the validity of digital signatures under the e-transaction law	Owner: TRC	Publication of the bylaw by end Q1 2009	This is a pre-condition for trust in electronic contracts. Without validity there will be minimal e-commerce in Jordan.
2.	To provide an effective legal framework for the development of e-commerce	Owner: MoJ	<p>1-Amend the E-Transactions Law by Q3 2009 to:</p> <ul style="list-style-type: none"> • guarantee secrecy & privacy to e-transactions, e-records & e-communications; prohibit spamming and ensure effective enforcement action; • include effective dispute resolution method with regard to e-transactions. <p>2- Prepare instructions associated with the E-Transactions Law to give the consumers the right to identify and correct input errors prior to placing online orders.</p> <p>3- Promulgate a Cyber Crime Law to promote cyber-security and criminalize & prosecute cyber-crime by Q3 2009</p>	An effective legal framework is important in establishing trust and protection of individuals, intellectual property owners, and intermediaries for e-commerce.

Factor: The Law				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
			4- Put in place a Consumer Protection Law by end Q2 2010 5- Promulgate a permanent law to establish Credit Bureau facilities in Jordan by end 2009	
3.	To revise the regulation of businesses to take account of new forms of business made possible by e-commerce and other forms of communication	Owner: MIT Stakeholders: Municipalities; Chamber of Commerce, Chamber of Industry; MoICT	Examine the consequences of the removal of the requirement for a business to have premises suitable for the operation of its business when it is established, and replacement with a requirement for a business to have a registered address for correspondence. If the consequences are acceptable, change the requirement by the end Q2 2010, taking into consideration the issue of consumer protection in such law amendment.	The requirement for a business to have premises suitable for the operation of its business unnecessarily increases costs for e-commerce start ups.

6.3 Security

Factor: Security				
Ref	Enabler	Owner / Stakeholders	Targets	Justification

Factor: Security				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
4.	To ensure that there is a general awareness of the need for information and personal security amongst companies that trade electronically	Owner: MoICT Stakeholders: ,Int@j	90% of all e-commerce websites conform to security guidelines two years after the guidelines are issued	This is a pre-condition for any consumer e-commerce and small business e-commerce.

6.4 Electronic payments

Factor: Electronic Payments				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
5.	To enable the overwhelming majority of citizens and businesses to make online payments over the internet.	Owner: MoICT , Payment Service Providers Stakeholders: Banking Association, retail banks, Int@j	Availability of at least one payment gateway that supports common card types and other common forms of payment All banks to offer credit cards and debit cards which can be used to make online payments using the e-payment gateway Credit cards with the Visa or MasterCard logo by end 2008 Debit cards issued by all Jordanian Banks and using the following networks for clearance: JoNET, Cirrus,	This is a pre-condition for any consumer e-commerce and small business e-commerce. Without it there will be minimal e-commerce in Jordan.

Factor: Electronic Payments				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
			Maestro, PLUS by end 2008 Online electronic funds transfer between bank accounts by end 2008 Prepaid cards by end Q4 2009 80% of retail banks to provide merchant accounts by end 2008	
6.	To enable payments for purchases made on line via a mobile phone without incurring taxes and other charges applicable only to telecommunications services	Owners: MoICT and Payment Service Providers Stakeholders: Banking Association, retail banks, Int@j, mobile phone service providers, TRC, MoF	Payments for purchases made on line without incurring special taxes and charges via a mobile phone by end 2009	Such taxes and charges limit the potential for electronic commerce on mobile phones because, if applied, they would raise the prices of goods purchased using a mobile phone as a channel.

Notes

E5 is intended to enable the overwhelming majority of citizens and businesses to make online payments over the internet in association with purchases made online using the rapidly growing installed base of credit and debit cards and electronic funds transfer facilities in Jordan.

E6 is a complex issue that has to take account of the special telecommunications tax, the revenue share on mobile operators and the levy for the operation of the TRC. Unless m-payments exclude these taxes and other costs from the purchase of non-telecommunications goods and services, m-commerce will be disadvantaged relative to other channels. It may be possible to use post pay telecommunications service accounts for such payments, although banking

regulations may preclude their use. However, it is unlikely that pre-paid cards used for telecommunications can be used for m-payments, other than for telecommunications service related purchases because of the tax implications. As these cards are used to purchase telecommunications services, telecommunications operators have to pay telecommunications related taxes and transfer charges based on the revenue that they receive from such cards. Therefore, any purchases made using these cards would be surcharged.

Other approaches to payments from mobile phones may prove more feasible. For example, payment could be made through a separate account (an electronic purse) managed independently of the phone account. Alternatively, payment could be made by electronic funds transfer or via a payment card triggered by a message of some kind from the phone. Payment could be achieved through a web based service, an SMS based service, or an interactive voice response (IVR) service (which recognises voice commands or touch tones). The latter is used in some countries, for example, to pay for parking or for cinema tickets. Typically, on first use, a card holder enters their payment card information and subsequently the service asks whether this card is to be used for the payment. Such a system could be in place quite quickly, particularly as banks already have phone based payment services. An e-commerce service could be developed based on printed catalogues with ordering and payment via an IVR service or using SMS.

6.5 Tax

Factor: Tax				
Ref	Objective	Owner / Stakeholders	Targets	Justification
7.	To ensure that taxation on e-commerce meets requirements for neutrality, efficiency, certainty and simplicity, effectiveness and fairness and flexibility.	Owner: Ministry of Finance Stakeholders: Chamber of Commerce, Chamber of Industry	End Q3 2011	Failure to satisfy these criteria may make electronic contracts and transactions impractical, since tax may need to be calculated manually.
8.	To ensure that processes for taxation associated with e-commerce services and companies:	Owner: Ministry of Finance Stakeholders:	Complete consultation on use of electronic records by end Q3 2009 Agreed processes for use of electronic	These limit the potential for electronic contracts and transactions, since tax may need to be calculated manually.

Factor: Tax				
Ref	Objective	Owner / Stakeholders	Targets	Justification
	<ul style="list-style-type: none"> continuously improve taxpayer services through the use of available technology and commercial developments in tax administration, maintain their ability to secure access to reliable and verifiable information in order to identify taxpayers and obtain the information necessary to administer their tax system, and develop rules for cross-border consumption taxes that take account of international practice in taxation of digitised products and intangible products and services, and take account of the American Free Trade Agreement. 	Chambers of Commerce and Industry, Ministry of Trade	<p>records end Q3 2009 for introduction in 2011 tax year</p> <p>Number of companies where electronic records have been used in the audit</p> <p>2011: 200 companies 2012: 2000 companies</p>	The production of paper records puts business to an unnecessary cost and leaves open the opportunity of fraud since paper records will not be the primary records of an organisation. A tax audit that does not examine electronic records cannot be sufficient.

6.6 Customs

Factor: Customs				
Reference	Enabler	Owner / Stakeholders	Targets	Justification
9.	To ensure customs clearance for	Owner: MoF -	Customs clearance within two hours for	Excellent customs clearance meet one

Factor: Customs				
Reference	Enabler	Owner / Stakeholders	Targets	Justification
	imports and exports is undertaken with the minimum effort by clearers and with the minimum delay	Customs Department Stakeholders: Registered customs clearance companies	any legal goods by end Q1 2009 No more than one form per department by end Q1 2009 No more than a single electronic window to all departments by beginning of 2010	of the conditions for the development of logistics hubs and export based e-commerce in Jordan

6.7 Awareness

Factor: Awareness				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
Awareness of e-commerce				
10.	To create a general awareness of the concepts, processes, benefits and opportunities of e-commerce amongst the citizens of Jordan	Owner: MIT; MoICT Stakeholders: Chambers of Commerce and Industry; Int@j, e-commerce software and services vendors	When surveyed 50% of a representative sample of Jordanian citizens over 16 years of age are aware of e-commerce concepts and three of its main benefits within three years.	Awareness of benefits is likely to increase trust and likelihood of using e-commerce.

Factor: Awareness				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
Awareness amongst small and medium sized enterprises and business advisors				
11.	To create awareness and understanding of the application and benefits of e-commerce to businesses.	Owners: MIT; Int@j; Jordan Enterprise Stakeholders: MoICT, Chambers of Commerce and Industry, e-commerce software and services vendors; Jordan Computer Society	When surveyed 70% of a representative sample managers in small and medium sized businesses are aware of the role of e-commerce in a business and three of its main benefits within three years.	Awareness of role and benefits is likely to increase trust and likelihood of adoption of e-commerce.
Awareness of ecommerce amongst lawyers and judges				
12.	To ensure that all lawyers and judges are aware of and have a broad understanding the concepts, processes, technology and the law associated with e-commerce and, with respect to the law, its intention, applicability and implications	Owner – Judges: Ministry of Justice, Judiciary Institution Owner – Lawyers: Bar Association	Proportion of lawyers and judges who have undertaken a designated course <ul style="list-style-type: none"> • End 2008: 10% of lawyers and judges • End 2009: 30% of lawyers and judges Number of lawyers and judges that have provided advice / given a judgement in an e-commerce related case <ul style="list-style-type: none"> • End of 2009: five lawyers • End of 2009: five judges 	Awareness will lead to improved legal recommendations and judgements associated with e-commerce.
Awareness amongst tax officers				

Factor: Awareness				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
13.	To create awareness and understanding amongst tax officers of the application and benefits of e-commerce to businesses and the impact of e-commerce on taxation principles and practice.	Owner: Ministry of Finance	When surveyed 90% of tax officials in a representative sample are aware of the application of e-commerce to business and its impact on tax principles and practice within five years.	Awareness will lead to improved taxation associated with e-commerce.
Awareness amongst government officials				
14.	To create awareness and understanding amongst government officials of the application and benefits of e-commerce to businesses and to the country as a whole, and the impact of government action on the development of e-commerce	Owner: MIT; MoICT e-government Stakeholders: All Government Departments and local government offices	When surveyed 90% of officials in a representative sample are aware of the application of e-commerce to business and to the country, and the impact of government action within five years.	Awareness will lead to government policy and implementation that is sensitive to e-commerce.
Awareness in the banking sector				
15.	To create awareness and understanding of the application and benefits of e-commerce to businesses and the opportunities that e-commerce gives to the banking sector.	Owner: Banking Association Stakeholders: All banks	When surveyed 90% of bank staff are aware of the application and benefits of e-commerce to businesses, the opportunities that e-commerce gives to the banking sector and the banking products associated with e-commerce within 5 years.	Awareness will lead to improved advice by banks to businesses and to the selling of e-commerce products by banks.

6.8 Skills

Factor: Skills				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
16.	To increase the capacity of SMEs to adopt e-commerce systems, services and related processes in order to improve their interaction with customers and suppliers.	Owner: MIT; JE Stakeholders: Chamber of Commerce; Chamber of Industry; Int@j, Jordan Computer Society	Number of SMEs which access skills development opportunities Number of SMEs which use online marketplaces Number of SMEs which have access to the internet	An increased capacity of SMEs in e-commerce will lead to additional adoption.
17.	To ensure that the ICT sector and other sectors of the economy have the commercial and technical e-commerce skills amongst their IT professionals to provide e-commerce advice and systems	Owner: MOHE; Int@j; Jordan Computer Society Stakeholders: Higher Council for Science and Technology; MoICT; Universities, Chambers of Commerce and Industry	1) E-commerce skills as widely available as IT skills are at present by 2009. 2) By the beginning of the 2008 academic year, at least one university including an e-commerce module in its degree level course 3) By the beginning of the 2009 academic year, degree level IT courses at two universities to include an e-commerce module 4) By the 2009 academic year, at least one post graduate e-commerce course available at one university	An increased capacity in the ICT sector will enable the sector to respond to e-commerce systems development requirements in Jordan and in export markets. Overall, therefore, increased capacity should lead to further domestic and export business for the ICT sector and will reduce the propensity of businesses in Jordan to source IT systems from other countries. It will also enable the ICT sector to provide advice to business about the use of e-commerce. This should support the objective of increasing awareness and skill in the business

Factor: Skills				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
			<p>5) Programme for an e-commerce practitioner qualification for IT professional staff by 2009</p> <p>6) By 2012, 10% of IT practitioners will have undertaken the practitioner qualification or taken the post graduate.</p> <p>7) By 2012, applicants from other countries attracted to Jordan for e-commerce training</p>	sector.
18.	To ensure that judges and lawyers have expertise in e-commerce to provide advice, to represent and to render judgements in cases associated with e-commerce	<p>Owner: Ministry of Higher Education</p> <p>Stakeholders: Ministry of Justice, Judiciary Institution, Bar Association, University Law Faculties</p>	<p>1) Availability of an internationally recognised e-commerce law course by the 2010 academic year</p> <p>2) Number of course graduates each year</p> <p>At least one post graduate course available at one university by the 2010 academic year</p> <p>E-commerce law modules in 50% of degree level courses in the 2010 academic year</p> <p>50% of student lawyers taking the e-commerce law module in the 2010 and</p>	<p>Such training is needed for excellent advice about e-commerce related legal issues.</p> <p>The development of such a skill base in Jordan would enable the establishment of an international law practice in Jordan focused on ICT law.</p>

Factor: Skills				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
			thereafter 5% of practicing lawyers and judges undertaking post graduate training each year in e-commerce by 2012	
19.	To ensure that there is capacity in the Ministry of Finance to audit e-commerce and other online businesses	Owner: Ministry of Finance	Any business that maintains its accounting records electronically to be audited electronically by Q4 2012	Such capacity will enable tax to be administered in relation to e-commerce businesses and any other business that maintains its accounting records electronically.

Notes

E16 may be implemented in a variety of ways. For example: ICT sector sponsored events, ICT sector sponsored courses, consultants, e-commerce incubators, e-business clubs.

6.9 Employment

Factor: Employment				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
20.	To provide employment opportunities, particularly in knowledge based work and other work leading to high levels of added value, that meet the aspirations of the	Owner: Ministry of Labour Stakeholders:	Number of graduates working in Jordan in the ICT sector, the financial services sector and the logistics sector.	General requirement to create jobs.

Factor: Employment				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
	educated young	MIT, MoICT	Number of jobs overall in the ICT sector, financial services sector, contact centre sector, and logistics sector	

6.10 The IT sector

Factor: IT sector				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
21.	To showcase the capabilities of Jordanian information technology companies, payment services, logistics services, legal advice and accounting firms in e-commerce and web based systems and services	Owner: Int@j Stakeholders: MoICT; Jordan Computer Society; Jordan Enterprise; Jordan Chambers of Commerce and Industry	At least one conference / exhibition each year in Jordan where the Jordanian ICT sector can show its capacity in e-commerce. Representation by the ICT sector in at least three regional exhibitions per year (one per quarter, excluding the quarter in which the Jordanian exhibition takes place) showing the sector's capacity in e-commerce.	Advertising the new capability in the ICT sector and other sectors in e-commerce will lead to export and domestic sales of e-commerce systems, services and advice.
22.	To increase capacity in ICT firms in e-commerce systems development and services provision	Owner: Int@j Stakeholders: IT sector firms and	The proportion of IT sector firms offering e-commerce systems and services Not all firms will offer such systems and	This will improve international competitiveness of the IT sector

Factor: IT sector				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
		e-commerce software and services vendors	services. A suitable target will be set by Int@j in consultation with its members.	
23.	To develop Arabic e-commerce related software and services and to adapt non-Arabic e-commerce software and services for the Arabic market.	Owner: Int@j	At least one IT firm offering localisation services for e-commerce applications for use in Jordan by end 2008. At least one IT firm offering localisation services for e-commerce applications for use across the Arab region by end 2009. Localisation services will include: language, interfaces for local payment gateway(s), and inclusion of Jordanian sales tax rules	This will enable IT sector firms to develop local and regional capacity in conjunction with e-commerce systems and services vendors, and will potentially provide a further export service.
24.	To leverage high mobile phone penetration rates in Jordan and the region to develop new mobile-based e-commerce and m-commerce software and services (see Objective 2.1 of the ICT Strategy)	Owner: Int@j Stakeholders: Mobile Operators	The proportion of mobile users who can do some e-commerce transactions online End Q1 2010: 1% End Q1 2011: 3% End Q1: 2012: 5%	The high penetration of mobile phones is an opportunity for the introduction and adoption of e-commerce.
25.	Promote Jordan as an outsourcing destination for e-commerce services (see Objective 2.2 of the ICT Strategy)	Owner: Int@j	No of business people from a sample in the airport who are aware that e-commerce services can be purchased in Jordan.	

6.11 Availability and use of ICT infrastructure and services

Factor: ICT infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
26.	<p>Reiteration of ICT Strategy objectives 1.1, 1.2 and 1.3:-</p> <p>(1.1) Enhance competition for fixed-line broadband internet service, resulting in lower prices</p>	<p>Owners: TRC, MoICT</p> <p>Stakeholders: Jordan Telecom, ISPs</p>	<ul style="list-style-type: none"> • Jordan Telecom providing a wholesale bit stream offer by Q3 2008 • Jordan Telecom's local loop unbundled with retail minus pricing and clear, simple usage terms and conditions by Q3 2008 • Monthly cost of household broadband internet access, as a percentage of average household income • At least two telecommunications companies in the market using their own access infrastructure by Q4 2008 • Service-level agreement for connectivity up-time provided by ISPs at average market prices 	<p>The market size for e-commerce related consumer sales channels is limited. It is possible that not all individuals in the early adopter segment have a fixed line since they may be reliant on mobile phone technology for telephone services. Consumer e-commerce may need to use channels other than the fixed line to these individuals.</p> <p>The market size for e-commerce related consumer sales channels is limited. It is very likely that a substantial proportion of the target consumer market will not have broadband or even internet access in the home.</p> <p>There is no market driven</p>

Factor: ICT infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
	(1.2) Enhance competition for wireless broadband internet service, increasing supply and resulting in lower prices	Owners: TRC, MoICT	<ul style="list-style-type: none"> • Three providers of wireless broadband access by Q4 2008 • Amount of wireless spectrum available for civilian/commercial use • Average monthly retail price of wireless internet access, as a percentage of per capita GDP 	requirement for product innovation and price reductions in a key aspect of telecommunications services associated with e-commerce.
	(1.3) Improve affordability of internet access and personal computers		<ul style="list-style-type: none"> • Sales tax rate on internet access (5% by Q1 2008, 0% by Q4 2008) • Tax rate on PCs (0% by Q2 2008) • Average price of a PC, as a percentage of per capita GDP • Percentage of entering university students who have a laptop computer (20% by Q3 2007, 75% by Q1 2008, 100% by Q4 2008) 	
27.	Ensure that IT infrastructure for e-commerce in small business and for the consumer is available and affordable	Owner: MoICT, Jordan Enterprise Stakeholders: Jordan Chamber of Commerce; Jordan Chamber of Industry; Int@j ; Jordan Computer	Development of innovative low cost internet access and hosting services for households and small businesses by July 2008	<p>The market size for e-commerce related consumer sales channels is limited. It is likely that all the households in the early adopter segment have a personal computer already.</p> <p>The south will be less advantaged with regard to the benefits of e-</p>

Factor: ICT infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
		Society, TRC, Operators and ISPs		commerce.
28.	Put in place the infrastructure necessary for provision of international hosting services and international contact centres	Owner: MoICT Stakeholders: TRC, Network operators, ISPs and hosting service providers	<p>Diversity in international links to adjacent countries and to Internet Exchanges in Europe:</p> <p>At least one physically diverse link from different operators in addition to Jordan Telecom connecting to major population centres in Saudi Arabia, Syria and Israel by December 2010</p> <p>At least one physically diverse link from different operators to major population centres in Iraq by December 2010</p> <p>International capacity to adjacent countries and to Internet Exchanges in Europe:</p> <p>At least one link from different operators in addition to Jordan Telecom contracted to internet exchanges in Dubai, two other states in the Arab region, and two internet exchanges in Europe by December 2010</p> <p>Nominal capacity available on each link to be twice the maximum instantaneous</p>	<p>Diversity in international telecommunications is essential to the provision of an international hosting sector and an international contact centre sector</p> <p>Outsourcing is a low risk method of establishing an e-commerce business infrastructure. The availability of hosting services from outsourcing companies will have an impact on businesses that may wish to enter the market slowly without committing substantial resources.</p>

Factor: ICT infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
			<p>capacity used over the previous three months at any time</p> <p>Separate monitoring of hosting services revenue by Int@j with a growth target equivalent to the prevailing growth rate in ISP revenue (44%pa)</p>	
29.	To enable competitive supply of mobile broadband services for m-commerce by enabling mobile licensees to procure suitable spectrum.	<p>Owner: TRC</p> <p>Stakeholders:</p> <p>The Army, Mobile operators</p>	<p>Spectrum for 3G and HSDPA or mobile WiMax services assigned to three or more operators by end Q1 2009</p> <p>Services to be publicly available in Amman, Zarqa, Irbid, Ma'an, Karak and Aqaba by mid 2009</p>	Broadband is a pre-condition of e-commerce. A mobile network will not support e-commerce until broadband is provided. As mobile networks have higher penetration than fixed networks, these may provide the best method of reaching the target market.

Notes:

E26 The ICT Strategy has already defined objectives and actions associated with the development and use of ICT infrastructure and services, notably in the following objectives:

- (1.1) Enhance competition for fixed-line broadband internet service, resulting in lower prices
- (1.2) Enhance competition for wireless broadband internet service, increasing supply and resulting in lower prices
- (1.3) Improve affordability of internet access and personal computers
- (1.4) Increase interest and capability to use the internet among the Jordanian population

The successful outcomes from these objectives will provide the underlying infrastructure for e-commerce in Jordan. Already, one wireless broadband licence has been let. It is planned that another will be let in 2008. Competitive broadband access will be available across Amman and other major cities by the end of 2008 through ADSL and wireless. Nevertheless, the e-commerce strategy assumes that the TRC will require Jordan Telecom to provide local loop unbundling and bitstream unbundling in accordance with the Interconnect Instructions (TRC, 2005) and priced in a cost oriented manner under these Instructions. The provision of such services in France, Italy and the UK have resulted in lower priced and innovative broadband service offers by independent ISPs. It can be demonstrated that competition in retail broadband stimulated by such wholesale services has a large impact on broadband penetration. Wireless broadband is unlikely to have the same effect because it will not extend into rural areas and may not extend beyond major cities. Experience elsewhere suggests that it will not. Therefore, the lack of local loop unbundling and bitstream unbundling will continue to disadvantage rural areas and smaller towns until such wholesale services are required and implemented.

- E28 Because supply chains in Jordan often start or end outside the country, business to business e-commerce will require excellent international telecommunications and diversity of supply of international networks. The absence of any real alternative to the FLAG cable means that there is a single point of failure in the provision of international services. No other existing international link could replace the capacity provided by FLAG. This single point of failure needs to be addressed if companies are to rely on e-commerce in their international supply chains. Such links could be provided by competing carriers who might offer telecommunications links overland via Saudi Arabia, Syria or Israel if they were allowed to do so. Such links would provide access to alternative undersea cables via Jeddah, Israel, or the Lebanon, and would potentially provide alternative overland routes to the Gulf states and to Turkey and Europe. Such competition, as well as providing a backup to FLAG would also offer competition to Jordan Telecom and would therefore have a downward effect on prices.
- E29 Mobile broadband is necessary for mobile e-commerce.

6.12 Logistics and transport infrastructure

Factor: Logistics and transport infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
30.	Remove impediments to the development of air and land freight hubs by logistics companies	Owner: Ministry of Transport Stakeholders: Civil Aviation Authority / Programme Management Unit (PMU); Queen Alia Airport; Ministry of Municipalities Affairs and Greater Amman Municipality, Jordan Investment Board	At least one logistics company hubbing in Jordan by 2012	The development of a logistics hub in Jordan will lower the cost and improve logistics services for all Jordanian business
31.	Promote the development of fulfilment facilities - warehousing, packing, transportation and delivery - as outsourced services	Jordan Investment Board in conjunction with logistics companies	Possible to place an order from Jordan for delivery within Jordan the next day. 90% of these type of deliveries happen on time within 5 years	Outsourced fulfilment services are often used by businesses that are starting to sell using e-commerce since it removes the requirement for a major investment in facilities. This reduces the capital cost of the new channel, and thereby reduces risk.
32.	Prepare the Maritime Transport Sector to benefit from the strategy by provided maritime information and facilitate electronic accessibility to the services provided by the maritime authority.	Jordan Maritime Authority	By end 2009: Make data/information available to the maritime community in and outside Jordan. Facilitate communication and exchange of data.	Improved communication with the maritime community.

Factor: Logistics and transport infrastructure				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
33.	Promote national street addresses to facilitate delivery to individual buildings	MoICT and Municipalities	<p>Complete addressing in Amman by end 2009</p> <p>Complete addressing in Aqaba by end 2013</p> <p>Start addressing in other Governorates by end 2009</p>	This will provide a means of addressing individual properties that will be a benefit to any delivery organisation.

6.13 Catalogues and content

Factor: Catalogues and content				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
34.	Develop capacity and resources in Jordan for creating catalogues at an affordable cost	Owner: Int@j Stakeholder: SABEQ, Jordan Chambers of Commerce and Industry; Jordan Computer Society	Create an online catalogue using content already available in electronic form for JD1 per line item by end Q4 2010	<p>Low cost catalogue development services are required for successful e-commerce.</p> <p>One of the major inhibitors of e-commerce is the cost of developing a comprehensive catalogue. It has been demonstrated in other markets time and again that all goods and services within the categories to be sold online have to be described. One of the reasons that e-commerce is used is that it gives access to any and every product in a given category irrespective of location. If a company's catalogue gives only a sample, it will fail.</p>

6.14 Finance and investment

Factor: Finance and investment				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
35.	Improve the availability of funds for investment in e-commerce start ups by further developing links between entrepreneurs and potential investors	Owner: JE Stakeholders: MoICT, Int@j, Chamber of Commerce, Chamber of Industry	Number of e-commerce start ups that receive funding from independent investors (not known to the entrepreneurs) <ul style="list-style-type: none"> • 2008 – 5 start ups • 2009 – 10 start ups • 2011 – 15 start ups • 2012 – 20 start ups 	While venture capital from venture capital companies is not readily available in Jordan, business angels, individual investors are. They are able to provide venture funding to a point where international VCs may take an interest. Improved access and availability will facilitate new e-commerce focused businesses
36.	Provide entrepreneurs with access to relevant expertise for e-commerce business financing and development	Owner: JE Stakeholders: MIT, MoICT, Int@j, Chamber of Commerce, Chamber of Industry	Number of entrepreneurs who have access to relevant expertise	

6.15 Government

Factor: Government				
Ref	Enabler	Owner / Stakeholders	Targets	Justification
37.	To stimulate the take up of e-commerce in the private sector amongst suppliers to Government through Government e-procurement	Ministry of Finance	10 contracts let electronically in 2009 20 contracts let electronically in 2010 30 contracts let electronically in 2011	Government is a large purchaser of goods and services. Government e-procurement will lead to greater awareness and adoption of e-commerce amongst companies that frequently sell to Government. This will aid the diffusion of e-commerce amongst businesses in Jordan.

7 IMPLEMENTATION OF THE STRATEGY

Much of the resource and expertise necessary for e-commerce is present already in Jordan. While there are some gaps particularly in payments, in the law and in technical expertise that need to be addressed, much of the economic liberalisation and infrastructure necessary for e-commerce is already in place.

The main barrier is a psychological block; businesses, academics and public servants are waiting for someone or something to take e-commerce initiatives. The main aim associated with implementation is therefore to give Jordan's e-commerce stakeholders a framework that enables them to develop e-commerce. This framework comprises:

- The Action Plan, which sets out a programme of enabling work founded in the enablers listed in Section 6; the action plan is set out in a separate document that will form an Annex to this strategy;
- A governance and implementation organisation structure to manage and monitor the implementation of the Action Plan, and to coordinate and support stakeholders.

7.1 Governance and implementation

The authority for the strategy is vested in Government. Government will delegate authority for governance to a National E-Commerce Governing Body. This Body will report to Government on delivery of the strategic goals and objectives, and monitor the performance of a National E-Commerce Council in enabling e-commerce through the initiatives described in the Action Plan. The relationship and composition of these two bodies is shown below in Figure 4.

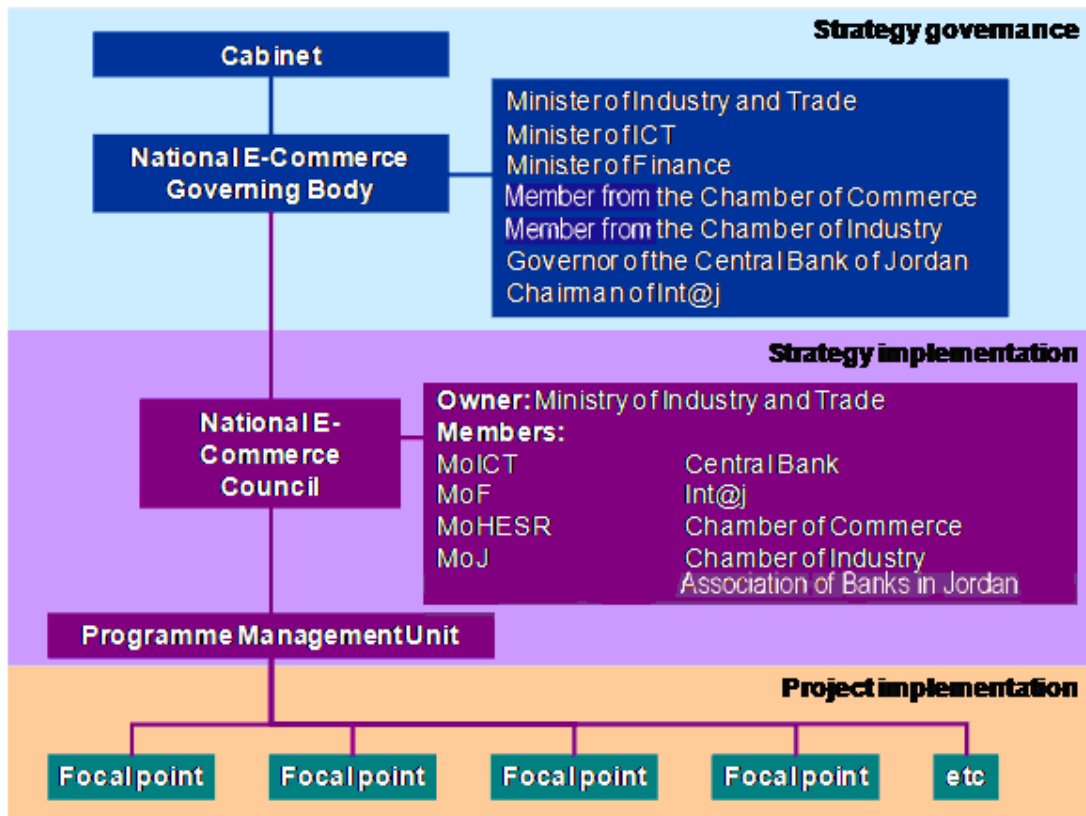


Figure 4: Governance and implementation organisation

The Governing Body will comprise the Ministers of Departments whose interests are directly affected by the strategy. This is important for Departmental commitment to required changes and delivery of initiatives for which they have responsibility. It is anticipated that the Governing Body will meet initially to agree the Action Plan and to agree Governance processes. It will also meet to agree programme management processes and the detailed Action Plan proposed by the E-Commerce Council. Subsequently, the Governing Body will meet quarterly to review progress. The Governing Body will present a quarterly report to Government on progress in delivering e-commerce following the progress meeting, identifying key successes overall, key challenges encountered, any action required by Government, and changes to the Action plan, strategic objectives and targets.

The E-Commerce Council will comprise Ministry representatives and representatives from other organisations that have ownership of initiatives / projects. Suggestions are given in the above figure. The E-Commerce Council will manage the delivery of the Action Plan through a programme manager. The E-Commerce Council will be responsible for proposing any changes to the Action Plan, and these will be ratified by the Governing Body with any changes that body agrees are necessary. The E-Commerce Council will present a quarterly report to the Governing Body on progress in delivering e-commerce prior to the Governing Body’s progress meeting. The report will include an updated version of the Action Plan showing progress in each initiative, challenges encountered, recommended updates to the strategic objectives and targets, if any, measurements of (and updates to) the performance indicators, and a narrative account of progress in implementing the strategy. MIT will chair the Council and will provide secretariat facilities. Members of the Council will comprise all those organisations that have responsibility for individual initiatives. MIT is chosen for this role in recognition of the widespread impact of e-commerce across all sectors of the Jordanian economy.

The programme manager will have day to day responsibility for the Plan, and will report the E-Commerce Council on a monthly and on an exceptional basis. The programme manager will therefore be responsible for monitoring achievement of the Action Plan, and particularly of progress against targets associated with objectives and enablers. It is anticipated that the programme manager will reside within MIT.

Individual initiatives undertaken in accordance with this strategy will each have an owner who will be responsible for the success of the initiative. Each initiative will also have a project board comprising stakeholders invited by the owner of the initiative. The project board will appoint a project manager who will be responsible for delivering the initiative and who will act as the focal point in the management of the strategy. The project manager and the programme manager will have day to day responsibility for the project within the programme, with the project board having overall responsibility and reporting formally to the E-Commerce Council via the programme manager.

Resource requirements for governance will be relatively minor. The programme management unit will comprise the programme manager and an assistant. They, the Governing Body and the Council, will require occasional secretariat resources.

7.2 Strategy monitoring and audit

Monitoring and audit of the strategy will take place at two levels – at a strategic level and at an action plan level.

At a strategic level, performance will be monitored against the targets for the strategic objectives associated with the four goals, and against targets for the enabling objectives.

Progress towards the targets for the strategic objectives will be monitored using results of standard surveys and surveys specific to the targets being measured. Both the standard surveys and the target specific surveys will be undertaken under the auspices of the Department of Statistics.

Particular measurement of e-commerce will rely on new surveys. For consistency with surveys in other countries it is proposed to use e-commerce related parameters identical to the ones used in the European Union and managed in the Eurostat database. The use of a common set of parameters will enable comparisons against benchmarks to be carried out, and hence it will be possible to characterise progress against strategic targets and also in comparison with progress in other countries.

Progress towards targets for enablers will be monitored using reports from project managers of initiatives. The targets for enablers represent major milestones in a project.

At an action plan level, progress will be monitored against the project plan for each initiative. This will provide a task breakdown for the project with criteria for the completion of each task. Progress will be monitored by the programme manager from project reports provided by each of the project managers. Project plans for initiatives will indicate how the information for evaluating completion of tasks is to be collected and will provide budgeted resources for such evaluation.

Results of the projects will be audited as necessary. Auditing of projects will be carried out independently and will be reported to the E-commerce Council. The chairman of the E-commerce Council will commission such an audit yearly. The audit will review progress against strategic objectives and against enabling objectives, and will in addition consider the performance of individual projects against plans. The audit will be managed by (internal audit in which government department). The audit will provide written report that will be submitted to the Governing Body.

8 RISK ANALYSIS

Strategic risks are those associated with the failure to achieve the strategic goals. The goals may not be achieved because of external factors or because of a failure associated with the enabling actions. This risk analysis considers the external factors that may influence the achievement of the goals and risks to the achievement of the enabling actions.

This section reviews each of the strategic objectives and the enablers to identify the risks and potential actions to manage the risk. The process is shown in Figure 5 below. Goal related strategic objectives are mapped onto the enablers. Risks associated with the enablers are identified and risk management actions proposed. These risks and the risk management actions are then related back to the goals to determine what goal related risk management actions need to be undertaken.

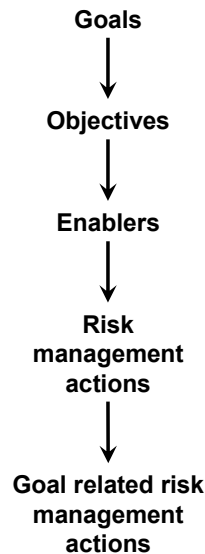


Figure 5: Derivation of actions to manage internal risks

Section 8.1 discusses external risk factors. These are essentially beyond the control of the strategy but may impact on the achievement of the goals.

Section 8.2 examines the links between enablers and strategic objectives, while Section 8.3 identifies the risks associated with enablers and proposed management actions. Section 8.4 draws conclusions about the risks to individual goals.

8.1 External risk factors

External risks to the strategic objectives will arise from factors outside the control of the strategy. These will include:

- The development of the Jordanian economy
- International economic developments, particularly in the Arab region, but also in the development of regional ties with Europe, Asia and the Americas.
- Developments in trade policy by other nations
- Developments in ICT within the Arab region

- Competition in ICT and in trade more generally, particularly from China, India and other countries in South and East Asia who are also attempting to deliver ICT services globally

The Government will need to take account of these risks in pursuing e-commerce, particularly in developing trade policy, negotiating agreements with other nations, and in promoting Jordan as a centre for ICT and as a trading nation.

8.2 Links between enablers and strategic objectives

The links between enablers and strategic objectives are shown in the Annex. Each link is shown by a '✓' symbol. This indicates that the attainment of the enabler will have a positive impact on the strategic objective, and conversely, the failure to attain the enabler will have a negative impact. Enablers that have an effect on many of the objectives, include those concerned with:

- The development of e-commerce law – E1 and E2
- The development of payment systems – E5 and E6
- The creation of awareness – E10

Failure in any of these enablers would have an adverse effect on all the e-commerce goals.

Other enablers have an impact on strategic objectives associated with particular goals. Those associated with the first goal, to increase the wealth of the Jordanian people through the development and exploitation of e-commerce, and promote the use of e-commerce in wholesale or retail trade (objectives 3.1, 3.2 and 4.1 and 4.2) are concerned with:

- Regulation of businesses – E3
- Taxation – E7 and E8
- Awareness of e-commerce – E11, E12, E13, E14 and E15
- Skills – E16, E18, and E19
- Employment – E20
- ICT infrastructure – E28
- Finance and Investment – E35, E36

These areas are key to increasing the wealth of the Jordanian nation through e-commerce.

The enablers concerned with the second goal, to be a regional leader by 2012 for IT systems development, applications and services associated with e-commerce, are:

- The capacity of the ICT sector to provide technical and commercial advice in e-commerce - E17
- Information technology sector enablers – E21, E22, E23, E24 and E25
- Infrastructure associated with hosting services and contact centres – E28

These are all concerned to establish the best conditions for developments in skills and service provision associated with e-commerce.

The enablers concerned with the third goal, to be one of the leading countries in the Arab region that uses e-commerce as a channel for selling goods and services to consumers, and the fourth goal, to be one of the leading countries in the Arab region that uses e-commerce as a channel for domestic and international business to business collaboration and trade, are:

- Security – E4
- Customs – E9

- Infrastructure – E26, E27, E29
- Logistics and transport – E30, E31, E32 and E33
- Content – E34
- Government – E37 (business to business only)

These are concerned to establish a suitable environment for e-commerce as a channel to market or for the purchase of goods and services online.

8.3 Risks to enablers

Risks to enablers with options for managing the risk are shown in **Error! Reference source not found. Error! Reference source not found.** This lists the identified risks and proposes action to manage these risks.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
E1	To ensure the validity of digital signatures under the e-transaction law	Low likelihood that the related bylaw will not be passed by Cabinet	High	None
E2	To provide an effective legal framework for the development of e-commerce	Medium likelihood that the legal framework will not be put in place in a timely manner	High	Develop clear project plan agreed by all Ministers who have ownership of relevant laws.
E3	To revise the regulation of businesses to take account of new forms of business made possible by e-commerce and other forms of communication	High likelihood of no change in business regulations	High	<p>Develop a full justification for removing regulations that work against setting up new businesses</p> <ul style="list-style-type: none"> ○ Market research amongst newly formed businesses to determine impact ○ Publish market research findings ○ Paper to Cabinet from MIT recommending changes to business regulations to remove requirement for a property to meet the operational needs of the building and to remove or reduce capital requirements.
E4	To ensure that there is a general awareness of the need for information and personal security amongst companies that trade electronically	Low likelihood that general awareness will not be created	Medium	Monitor the development of secure websites and promote awareness amongst businesses to achieve target
E5	To enable the overwhelming majority of citizens and businesses to make online payments over the internet.	Medium risk that banks do not allow their credit, debit and ATM cards to be used for online transactions by target date	High	Prioritise the development of a fully operational payment gateway acceptable to all banks, with public reporting of adoption by the banks.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
		Medium risk that banks do not provide merchant accounts	High	Prioritise the development of a fully operational payment gateway acceptable to all banks, with public reporting of adoption by the banks.
E6	To enable payments for purchases made on line via a mobile phone without incurring taxes and other charges applicable only to telecommunications services See also T4 below.	High risk that no action will be taken by electronic payment service providers, mobile operators, or banks to develop an electronic purse for use with mobile phones	High	The Association of Banks, Central Bank, MIT, MoICT, INT@J, and TRC to work with banks, mobile operators, electronic payment service providers, and the ministry of finance to encourage the development of a means of making payments from phones that do not incur telecommunications sector taxes or contravene banking or other regulations.
E7	To ensure that taxation on e-commerce meets requirements for neutrality, efficiency, certainty and simplicity, effectiveness and fairness and flexibility.	High risk that no action is taken on taxation to meet requirements	Medium	Chambers of Commerce and Industry and other sector bodies to develop the case for changes in taxes to meet e-commerce requirements.
E8	To ensure that processes for taxation associated with e-commerce services and companies: <ul style="list-style-type: none"> continuously improve taxpayer services through the use of available technology and commercial developments in tax administration, maintain their ability to secure access to reliable and verifiable information in order to identify taxpayers and obtain the information necessary to 	High risk that no action is taken by target date on processes associated with tax assessment	High	Chambers of Commerce and Industry and other sector bodies to lobby MoF for change in tax processes.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
	<p>administer their tax system, and</p> <ul style="list-style-type: none"> develop rules for cross-border consumption taxes that take account of international practice in taxation of digitised products and intangible products and services, and take account of the American Free Trade Agreement. 			
E9	To ensure customs clearance for imports and exports is undertaken with the minimum effort by clearers and with the minimum delay	Low risk. Developments in Customs IT systems that will facilitate customs clearance are underway.	High	Monitoring developments in customs systems by MIT.
E10	To create a general awareness of the concepts, processes, benefits and opportunities of e-commerce amongst the citizens of Jordan	<p>Low risk that general awareness raising measures do not happen.</p> <p>Medium risk that the awareness measures do not change level of awareness</p>	Medium	<p>The awareness of e-commerce needs only to reach innovator and early adopter categories of consumers.</p> <p>Focus on these two categories of consumer with continuous action to maintain levels of awareness.</p>
E11	To create awareness and understanding of the application and benefits of e-commerce to businesses.	Medium risk that the awareness measures do not change level of awareness amongst businesses	Medium	Further action to demonstrate opportunities from e-commerce to small and medium sized enterprises and continuous action to maintain level of awareness.
E12	To ensure that all lawyers and judges are aware of and have a broad understanding the concepts, processes, technology and the law associated with e-commerce and,	Medium risk that the awareness measures do not have a long term impact on the level of awareness amongst judges and lawyers	Medium	Target awareness campaigns at specific groups; continuous action to maintain level of awareness.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
	with respect to the law, its intention, applicability and implications			
E13	To create awareness and understanding amongst tax officers of the application and benefits of e-commerce to businesses and the impact of e-commerce on taxation principles and practice.	Medium risk that awareness measures do not have a long term impact on the level of awareness amongst tax officers	Medium	Target awareness campaigns at specific groups; continuous action to maintain level of awareness.
E14	To create awareness and understanding amongst government officials of the application and benefits of e-commerce to businesses and to the country as a whole, and the impact of government action on the development of e-commerce	Medium risk that awareness measures do not have a long term impact on the level of awareness amongst government officials	Medium	Target awareness campaigns at specific groups; continuous action to maintain level of awareness.
E15	To create awareness and understanding amongst bank staff of the application and benefits of e-commerce to businesses and the opportunities that e-commerce gives to the banking sector.	Medium risk that awareness measures do not have a long term impact on the level of awareness amongst bank staff	Medium	Target awareness campaigns at specific groups; continuous action to maintain level of awareness.
E16	To increase capacity of SMEs to adopt e-commerce systems, services and related processes in order to improve their interaction with customers and suppliers.	High risk that capacity does not improve.	High	MIT to provide funding for pilot e-commerce systems and other demonstrator projects.
E17	To ensure that the ICT sector and other sectors of the economy have the commercial and technical e-commerce skills amongst their IT professionals to	Low risk that the ICT sector does not develop capacity in e-commerce within specified timescales	High	MoICT work with Int@j on additional measures to raise capacity.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
	provide e-commerce advice and systems			
E18	To ensure that there judges and lawyers have expertise in e-commerce to provide advice, to represent and to render judgements in cases associated with e-commerce	Medium risk that courses and modules for courses are not developed or that lawyers and judges do not attend such courses.	Medium	Bar Association and Judges Association work to develop capacity building measures with universities. Provision of bursaries to attend in-service training courses provided through the Bar Association and Judges Association.
E19	To ensure that there is capacity in the Ministry of Finance to audit e-commerce and other online businesses	Medium risk to the MoF that this capacity is not developed	High	Chambers of Industry and Commerce to lobby for improved capacity in MoF.
E20	To provide employment opportunities that meet the aspirations of the educated young	Employment opportunities do not develop for the young.	Medium	A further investigation regarding why such employment opportunities are not developing.
E21	To showcase the capabilities of Jordanian information technology companies, payment services, logistics services, legal advice and accounting firms in e-commerce and web based systems and services	Low risk of not being undertaken.	High	Early commitment of funds for measures to showcase capabilities.
E22	To increase capacity in ICT firms in e-commerce systems development and services provision	Low risk of objective not being met.	High	Close monitoring of ICT firm capacity by Int@j and MoICT
E23	To develop Arabic e-commerce related software and services and to adapt non-Arabic e-commerce software and services	Medium risk that Arab e-commerce related software will not be developed or adapted in other ways	High	Close monitoring of partnering arrangements between e-commerce software developers and Jordanian ICT companies by Int@j and MoICT.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
	for the Arabic market.	to the Arab region		Initiatives to bring together e-commerce software developers and Jordanian ICT companies organised by Int@j and MoICT
E24	To leverage high mobile phone penetration rates in Jordan and the region to develop new mobile-based e-commerce and m-commerce software and services (see Objective 2.1 of the ICT Strategy)	Medium risk that services will not be developed for mobile phones	High	Little software is available elsewhere in the world for mobile phone based e-commerce. Int@j and MoICT to monitor developments in Jordan closely.
E25	Promote Jordan as an outsourcing destination for e-commerce services (see Objective 2.2 of the ICT Strategy)	Medium risk that hosting services and other outsourcing services will not be developed in a timely manner	High	Monitoring of developments by Int@j and MoICT. Stimulation of the market through government use of outsourced hosting services.
E26	Reiteration of ICT Strategy objectives 1.1, 1.2 and 1.3:- (1.1) Enhance competition for fixed-line broadband internet service, resulting in lower prices (1.2) Enhance competition for wireless broadband internet service, increasing supply and resulting in lower prices (1.3) Improve affordability of internet access and personal computers	High risk that objectives (1.1) and (1.2) will not be met High risk that objective (1.3) will not be met in the area of personal computers	High High	MoICT to work towards the elimination of impediments in the information technology and telecommunications sectors under Article (3/m) of the Telecommunications Law through cooperating with the TRC and other parties. MoICT to work with ISPs to develop internet access services that include a low cost rented PC or mobile internet terminal potentially using online application services.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
E27	Ensure that IT infrastructure for e-commerce in small business and for the consumer is available and affordable.	Medium risk that ICT infrastructure will not be affordable	High	MoICT to work with ISPs to develop internet access services that include a low cost rented PC or mobile internet terminal potentially using online application services.
E28	Put in place the infrastructure necessary for provision of international hosting services and international contact centres	High risk that diversity in international telecommunications will not develop in a timely manner	High	MoICT bring together TRC, network operators, operators of networks in neighbouring countries, security services and other interested parties and negotiate a method of providing competing services over diverse infrastructures.
E29	To enable competitive supply of mobile broadband services for m-commerce by enabling mobile licensees to procure suitable spectrum.	High risk that spectrum will not become available or that it is not assigned to operators within the required timescales	High	MoICT to sponsor Government decision on policy for sales of spectrum for mobile broadband services and communicate decision to TRC.
E30	Remove impediments to the development of air and land freight hubs by logistics companies	Low risk that developments at Queen Alia Airport will not take place	High	MIT to monitor developments closely.
E31	Promote the development of fulfilment facilities - warehousing, packing, transportation and delivery - as outsourced services	Low risk that such fulfilment services will not develop	Low	No action.
E32	Prepare the Maritime Transport Sector to benefit from the strategy by provided maritime information and facilitate electronic accessibility to the services provided by the maritime authority.	Lack of trained personnel to maintain and develop the Maritime Transport system	Medium	Jordan Maritime Authority to provide a training budget and to train staff

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
E33	Promote national street addresses to facilitate delivery to individual buildings	Lack of awareness	High	Raise awareness through media campaign
		Lack of infrastructure and resources for implementation	High	Cooperate with local authorities and encourage donor agencies to fund this initiative
E34	Develop capacity and resources in Jordan for creating catalogues at an affordable cost	Medium risk that this project will not go ahead	High	Ministry of Finance (General Supply Department) to stimulate the development of catalogue services through Government e-procurement initiative.
E35	Improve the availability of funds for investment in e-commerce start ups by further developing links between entrepreneurs and potential investors	Medium risk that links with investors will not be made.	Medium	MIT to sponsor networking events and clubs.
E36	Provide entrepreneurs with access to relevant expertise for e-commerce business financing and development	Low risk that entrepreneurs will not have access to relevant financial expertise.	Medium	MIT to take over the role to provide relevant expertise to entrepreneurs
E37	To stimulate the take up of e-commerce in the private sector amongst suppliers to Government through Government e-procurement	Medium risk of project not going ahead	High	Development of case study material and awareness material by Int@j and Chambers of Commerce and Industry in conjunction with the Ministry of Finance General Supplies Department
				Awareness events conducted by the Ministry of Finance General Supplies Department
				Incentive scheme to encourage use of Government e-procurement scheme by suppliers developed by the Ministry of Finance.

Error! Reference source not found.

Ref	Enabler	Risk	Importance	Management options
		Medium risk of suppliers not using e-procurement	High	Develop incentive scheme to encourage use of Government e-procurement scheme by suppliers

8.4 Risk conclusions

The key overall risks to the strategic goals arising from the enablers are therefore:

1. The law will not be modified to meet requirements for e-commerce.

Action: A clear project plan agreed with relevant Ministers should be prepared.

2. Banks will not allow credit, debit and ATM cards to be used for online transactions and that banks will not provide merchant accounts

Action: Prioritise the development of a fully operational payment gateway acceptable to all banks, with public reporting of adoption by the banks.

3. The development of mechanisms for making payments by mobile phones will not develop.

Action: The Association of Banks, Central Bank, MIT and MoICT to work with banks to encourage the development of a means of making payments from phones that do not incur telecommunications sector taxes or contravene banking or other regulations.

4. Any awareness measures do not change levels of awareness amongst the citizens of Jordan.

Action: Ensure that awareness campaigns are clearly targeted at consumers and developers that represent innovators and early adopters since these are the two categories most likely to adopt or deliver e-commerce. These categories will be the young, the IT literate and professionals.

The risks to Goal 1: to increase the wealth of the Jordanian people through the development and exploitation of e-commerce, and promote the use of e-commerce in wholesale or retail trade (objectives 3.1, 3.2 and 4.1 and 4.2) are as follows:

1. There will be no change in business regulations to take account of the high cost of business start ups and the need for premises that meet the requirements for operating a business.

Action: Develop a full justification for removing regulations in a paper for Cabinet.

2. Awareness campaigns do not alter the level of awareness amongst key groups – business, lawyers and judges, tax officers, government officials, and bank staff.

Action: Target awareness campaigns at specific groups; continuous action to maintain level of awareness.

3. Skills related to e-commerce in SMEs do not improve.

Action: MIT to provide funding for pilot e-commerce systems and other demonstrator projects.

4. Courses for judges and lawyers do not develop or judges and lawyers do not attend.

Action: provide incentives for lawyers and judges to obtain qualifications in e-commerce from a Jordanian university or elsewhere.

5. Capacity in the MoF to audit e-commerce and other online businesses does not develop.

Action: Chambers of Industry and Commerce to lobby for improved capacity in MoF.

6. Employment opportunities do not develop for the young.

Action: A further investigation regarding why such employment opportunities are not developing.

7. Diversity in international telecommunications will not develop in a timely manner.

Action: MoICT to bring together interested parties and negotiate a method of providing competing services over diverse infrastructures.

8. Links between entrepreneurs and investors are not made.

Action: MIT to sponsor networking events and clubs.

The risks associated with the second goal, to be a regional leader by 2012 for IT systems development, applications and services associated with e-commerce, are as follows:

1. A low risk that the capacity of the ICT sector in e-commerce does not improve.

Action: MoICT to work with Int@j on additional measures to raise capacity.

2. Developments in the IT sector to provide Arab market e-commerce software and services and to exploit high mobile phone penetration rates do not occur.

Action: MoICT to work with Int@j to monitor progress and develop additional measures such as use of government contracts to promote outsourcing.

3. Diversity in international telecommunications will not occur in a timely manner.

Action: MoICT to facilitate the development of such services by commercial operators by sponsoring negotiations between interested parties.

The risks to the third goal, to be one of the leading countries in the Arab region that uses e-commerce as a channel for selling goods and services to consumers, and the fourth goal, to be one of the leading countries in the Arab region that uses e-commerce as a channel for domestic and international business to business collaboration and trade, are as follows:

1. There is a low risk that secure websites will not evolve.

Action: Monitor evolution of secure websites and promote awareness as necessary to achieve targets.

2. There is a low risk that developments in customs clearance will not happen.

Action: Monitoring developments in customs systems by MIT.

3. There is a high risk that competition for fixed line broadband services, and wireless broadband internet access will not mature, and that as a consequence, internet access will continue to be unaffordable by certain sectors of society.

Action: MoICT to work towards the elimination of this impediment in the information technology and telecommunications sector under Article (3/m) of the Telecommunications Law through cooperating with the TRC and other parties.

4. Spectrum will not become available or that it is not assigned to operators within the required timescales.

Action: MoICT to sponsor Government decision on policy for sales of spectrum for mobile broadband services and communicate decision to TRC

5. There is a low risk that developments at Queen Alia Airport will not take place.

Action Civil Aviation Authority / PMU to monitor developments closely.

6. There is a low risk that fulfilment services will not develop.

Action: No action.

7. There is a medium risk of a lack of trained personnel to maintain and develop the Maritime Transport system

Action: Ensure that a budget for training is established and training is carried out

8. There is a medium risk that the addressing initiative will not be completed and will not be adopted.

Action: Take action to ensure citizens are aware of the addressing initiative and that it is fully resourced.

9. Development of capacity in catalogue creation will not develop.

Action: Ministry of Finance (General Supply Department) to stimulate the development of catalogue services through Government e-procurement initiative;

10. Suppliers to government do not use e-government procurement service.

Actions:

- **Development of case study material and awareness material by Int@j and Chambers of Commerce and Industry in conjunction with the Ministry of Finance General Supplies Department;**
- **Undertake awareness events conducted by the Ministry of Finance General Supplies Department ;**
- **Develop incentive scheme to encourage use of Government e-procurement scheme by suppliers by the Ministry of Finance..**

Annex 1: Linkage between Enablers and Strategic Objectives

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
E 1	To ensure the validity of digital signatures under the e-transaction law	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
E2	To provide an effective legal framework for the development of e-commerce	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
E3	To revise the regulation of businesses to take account of new forms of business made possible by e-commerce and other forms of communication	✓	✓	✓	✓		✓					✓									✓			
E4	To ensure that there is a general awareness of the need for information and personal security											✓									✓			

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services	
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6	
	amongst companies that trade electronically																								
E5	To enable the overwhelming majority of citizens and businesses to make online payments over the internet.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
E6	To enable payments for purchases made on line via a mobile phone without incurring taxes and other charges applicable only to telecommunications services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
E7	To ensure that taxation on e-commerce meets requirements for neutrality, efficiency, certainty and simplicity, effectiveness and fairness and	✓	✓								✓	✓		✓					✓	✓				✓	

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6	
	flexibility.																								
E8	To ensure that processes for taxation associated with e-commerce services and companies:	✓	✓								✓	✓		✓					✓	✓					✓
E9	To ensure customs clearance for imports and exports is undertaken with the minimum effort by clearers and with the minimum delay													✓			✓	✓				✓	✓	✓	✓
E10	To create a general awareness of the concepts, processes, benefits and opportunities of e-commerce amongst the citizens of Jordan	✓	✓			✓					✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E11	To create awareness and understanding of	✓	✓								✓	✓							✓	✓					

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
	the application and benefits of e-commerce to businesses.																							
E12	To ensure that all lawyers and judges are aware of and have a broad understanding the concepts, processes, technology and the law associated with e-commerce and, with respect to the law, its intention, applicability and implications	✓	✓								✓	✓							✓	✓				
E13	To create awareness and understanding of the application and benefits of e-commerce to businesses and the impact of e-commerce on taxation principles and practice.	✓	✓								✓	✓							✓	✓				

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
E14	To create awareness and understanding of the application and benefits of e-commerce to businesses and the impact of e-commerce on taxation principles and practice.	✓	✓								✓	✓							✓	✓				
E15	To create awareness and understanding of the application and benefits of e-commerce to businesses and the opportunities that e-commerce gives to the banking sector.	✓	✓								✓	✓							✓	✓				
E16	To increase capacity of SMEs to adopt e-commerce systems, services and related processes in order to improve their interaction with	✓	✓						✓		✓	✓							✓	✓				

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6	
		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services	
E17	To ensure that the ICT sector and other sectors of the economy have the commercial and technical e-commerce skills amongst their IT professionals to provide e-commerce advice and systems	✓	✓			✓	✓	✓	✓	✓	✓	✓							✓	✓					
E18	To ensure that judges and lawyers have expertise in e-commerce to provide advice, to represent and to render judgements in cases associated with e-commerce										✓	✓							✓	✓					

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
E19	To ensure that there is capacity in the Ministry of Finance to audit e-commerce and other online businesses										✓	✓							✓	✓		✓		
E20	To provide employment opportunities that meet the aspirations of the educated young	✓	✓								✓	✓							✓	✓				
E21	To showcase the capabilities of Jordanian information technology companies, payment services, logistics services, legal advice and accounting firms in e-commerce and web based systems and services					✓	✓	✓	✓	✓														

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
E22	To increase capacity in ICT firms in e-commerce systems development and services provision	✓	✓			✓	✓	✓	✓	✓														
E23	To develop Arabic e-commerce related software and services and to adapt non-Arabic e-commerce software and services for the Arabic market.					✓	✓	✓	✓	✓														
E24	To leverage high mobile phone penetration rates in Jordan and the region to develop new mobile-based e-commerce and m-commerce software and services					✓	✓	✓	✓	✓														
E25	Promote Jordan as an outsourcing destination for e-commerce services					✓	✓		✓	✓														

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
E26	Reiteration of ICT Strategy objectives 1.1, 1.2 and 1.3:-										✓	✓	✓		✓			✓	✓	✓	✓	✓		✓
E27	Ensure that IT infrastructure for e-commerce in small business and for the consumer is available and affordable										✓	✓	✓		✓			✓	✓	✓	✓	✓		✓
E28	Put in place the infrastructure necessary for provision of international hosting services and international contact centres	✓	✓	✓		✓	✓	✓	✓	✓														
E29	To enable competitive supply of mobile broadband services for m-commerce by enabling mobile licensees to procure suitable spectrum.									✓	✓	✓	✓		✓	✓		✓	✓	✓		✓		✓

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6
E30	Remove impediments to the development of air and land freight hubs by logistics companies										✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
E31	Promote the development of fulfilment facilities - warehousing, packing, transportation and delivery - as outsourced services									✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓
E32	Prepare the Maritime Transport Sector to benefit from the strategy by provided maritime information and facilitate electronic accessibility to the services provided by the maritime authority.										✓						✓		✓		✓	✓	✓	✓

		To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services	
Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6	
E33	Promote national street addresses to facilitate delivery to individual buildings									✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
E34	Develop capacity and resources in Jordan for creating catalogues at an affordable cost		✓			✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E35	Improve the availability of funds for investment in e-commerce start ups by further developing links between entrepreneurs and potential investors	✓	✓									✓								✓					
E36	Provide entrepreneurs with access to relevant expertise for e-commerce business financing and development	✓	✓									✓								✓					

Ref	Enabler \Objective	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4	4.5	4.6	
E37	To stimulate the take up of e-commerce in the private sector amongst suppliers to Government through Government e-procurement	To create an environment that generates business opportunities particularly for young people	To create additional high value employment for Jordanians in knowledge based industries	To improve the efficiency of Jordanian business	To reduce factor prices	To expand the domestic and export markets for ICT products and services	To increase the gross revenue and gross value added by the sector	To increase tax revenues raised from the ICT sector	To improve Jordan's ability to attract skilled ICT professionals to come to or remain in the country	To increase the range of e-commerce products and services	To increase the number of Jordanian retailers that sell online using e-commerce within Jordan, in the Arab region and worldwide.	To stimulate retail e-commerce business start ups	To improve consumers' access to goods and services sold by Jordanian retailers	To reduce the cost of goods and services for Jordanians	To extend the range of goods and services available to Jordanians	To increase the volume of Jordanian domestic retail business	To extend the reach of Jordanian retail business across the Arab region	To increase the profitability of Jordanian retail businesses	To increase the number of businesses that use e-commerce for business to business trading	To stimulate wholesale e-commerce business start ups	To maximise Jordanian company participation in global supply chains that use business to business e-commerce as their channel.	To increase the efficiency of supply chains operating in Jordan	To extend the reach of Jordanian companies in existing international markets and reach new international markets.	To increase the efficiency of individual companies in the procurement of goods and services	
																			✓	✓		✓			

Annex 2: Government E-Commerce Policy

Government seeks to create a clear and stable policy environment within which, initiatives, investment, and, necessary ICT sector regulation can proceed with confidence. Accordingly, and in conformance with the Telecommunication Law, the MoICT issued the general ICT policy document. The policy was approved by Cabinet, decision no. 4395 dated 29/5/2007.

Government recognises that ICT comprises not only the supply of computer hardware and software, but increasingly the provision of services over communications networks, such as the provision of information, remotely provided applications, and transaction services such as e-commerce.

Government expects that the adoption of e-commerce services, and the development of e-commerce related services in the ICT sector and other sectors of the economy will lead to economic growth and new employment opportunities in high value IT based sectors of the economy. This adoption will not only lead to growth in the domestic economy but will also increase the export of goods and services by Jordanian businesses and increase the attractiveness of Jordanian businesses as partners for international companies.

In furtherance of the ICT policy, and to achieve these economic benefits, Government is committed to take steps that encourage and facilitate the adoption of e-commerce within the general industrial and services sectors of the economy, in collaboration with the private sector. Therefore, Government intends to work through and in partnership with stakeholders in the private sector and with concerned government entities. Government and stakeholders will undertake a coordinated programme of actions to enable the development and adoption of e-commerce.

Government intends to work with the TRC to complete the subordinate regulations and instructions under the e-Transactions Law related to Certification Authorities and introduce a by-law that will otherwise create this legal framework.

Government intends to develop further the legal framework for e-commerce including measures for consumer protection and the discouragement of 'cyber-crime'.

Government intends to develop the tax collecting system to accommodate businesses whose financial records are held in electronic format and to streamline customs clearance processes and other processes necessary for importing and exporting of goods.

Government requires the banking sector to develop electronic payment services necessary for e-commerce.

Government intends to work with the private sector to stimulate awareness of e-commerce and its benefits. This will include general stimulation of awareness amongst citizens. It will also include stimulation of awareness particularly in the public sector, amongst the judiciary and the legal profession, and in the general commercial and industrial sectors of the economy.

Government intends to work with the private sector to promote e-commerce as an ICT sub-sector and to support businesses seeking to implement e-commerce by ensuring necessary expertise and finance is available.

Government therefore requires the higher education institutions to prepare and deliver advanced programs of education and training in e-commerce, particularly in technical, legal and commercial areas.

Government intends to continue to develop the postal service and to work with courier services to ensure that goods purchased via e-commerce may be delivered efficiently.