

KINGDOM OF MOROCCO  
UNDER THE EFFECTIVE PRESIDENCY OF  
HIS MAJESTY THE KING MOHAMMED VI



**Digital  
Morocco  
2013**

**The National Strategy  
for Information Society  
and Digital Economy**



Kingdom of Morocco  
Ministry of Industry, Trade  
and New Technologies





«[...] وبموازاة ذلك، ندعو الحكومة إلى اعتماد استراتيجية جديدة في المجال الصناعي والخدماتي وتنمية تكنولوجيات العصر، تقوم على الاستغلال الأمثل لما تتيحه العولمة من فرص تدفق الاستثمار، وتهدف إلى تقوية المقاولات المغربية وتشجيع الاستثمار الصناعي الحامل للقيمة المضافة، وفتح المجال أمام الاقتصاد الوطني، لاقتحام أنشطة صناعية جديدة ذات تقنيات مبتكرة، وأسواق واعدة، لتصدير منتوجاتها وخدماتها.

فعزما يوازي طموحنا، لإدماج المغرب بمقاولاته وجامعاته، في الاقتصاد العالمي للمعرفة [...]»

نص الخطاب السامي الذي وجهه جلالة الملك  
إلى الأمة بمناسبة عيد العرش فاس 08 / 7 / 30

« [...] In parallel, we invite the government to adopt a new strategy for the industry and service sector and for the development of new technologies. This strategy should be focused on the optimal use of opportunities created by the globalisation in terms of investment flows. In addition to the reinforcement of Moroccan companies and the promotion of added-value industrial investment, this strategy should also chart new ways for the Moroccan economy to invest in new industrial sectors that require innovative technologies and open up promising markets to export its products and services.

We have both the ambition and the determination to ensure the insertion of Morocco, through its companies and universities, in the international economy of knowledge. [...] »

Extract from the full speech addressed to the Nation  
by His Majesty the King on the occasion of the Throne Day - 30/ 07/ 08

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# INTRODUCTION

### **Information is crucial to the development of nations**

- The use of Information Technology (IT) is an essential factor for the emergence of the knowledge of a society, and can actively contribute to human development, improved social cohesion, and national economy growth.
- Indeed, all around the world, the access to information and its appropriate and effective use have an impact on progress and development. Modern and prosperous nations enjoy a high index for their capacity to produce and use information.
- The IT sector accounts for 7% of the world GDP and attracts 25% of the world growth as well as 60% of jobs in the industrialised world.
- However, there is a great imbalance between industrial and emerging nations. Industrial nations control around 85% of the sector activities with political, economic, social, and cultural consequences, the impact of which has only started to be analysed.

### **Information is crucial to the development of nations**

- In accordance with the High Orientations of His Majesty the King Mohammed VI, the IT sector is now one of the priority sectors of Moroccan economy, given the contribution it can have on human and economic development.
- In the IT sector, the challenge for Morocco in the coming years is not only to build on the progress that has already been made, but to achieve the integration of Morocco in the global economy of knowledge, by integrating and extending IT to all entities within the society: state, administrations, companies, and individual citizens.
- Facing this challenge, the national strategy for the information society and digital economy:
  - focuses on defining priorities and actions with strong impact, that will be gradually improved;
  - sets ambitious but realistic objectives that can be achieved by putting in place a sustainable system of governance and by allocating adequate resources.

# CHALLENGES AND OPPORTUNITIES

- For Morocco, the major challenge regarding its transformation into an information society is to produce added-value and improve the standard of living and the well-being of its citizens.
- IT is a key factor in human and economic development, based on:
  - effective and efficient use of information, the main factor in the production of added-value, after capital and labour;
  - the achievement of significant productivity gains, by creating new opportunities to produce, process, record, store and share information, as well as by providing easier access to information.
- Thus, developing an efficient use of IT in all areas of economic and social life in Morocco is a priority to ensure sustainable national growth and competitiveness.

- In the 21<sup>st</sup> century, companies' ability to collect, produce, and manage information, has become an essential factor for the economic growth, productivity and competitiveness.
- Thus, the IT penetration rate within companies, particularly within small and medium enterprises (SMEs) and very small enterprises (VSEs), and its widespread and effective use play a significant role in the emergence of an economy of knowledge, and in the capacity of companies to produce higher added-value and create further job opportunities.
- In Morocco, the economic arena mainly comprises SMEs and VSEs which have low level of computerisation. As a result, work productivity remains limited.
- The modernisation of the Moroccan entrepreneurial arena is one of the main challenges of the spread of IT. In opting to put in place an information system, the company embraces a dynamic step of technological and organisational modernisation, notably to:
  - meet the requirements of the industry in terms of quality, costs, and deadlines;
  - develop new job processes;
  - achieve better productivity.

- IT and access to the internet facilitate communication and provide access to knowledge. Besides providing easy and quick access to information, they enable individual citizens to considerably save time, especially with the availability of online services.
- It is essential to introduce the benefits of IT to individual citizens, to provide them with opportunities to access these technologies and purchase equipment, and enable them to acquire the necessary skills for the appropriate use of these technologies.
- In this context, after the progress made regarding individual citizens' access to mobile phone technology, the next stage should be to accelerate the process of democratisation of home internet, and to encourage individual citizens to take up and use new technology on a daily basis.
- This is particularly relevant in difficult access areas, where a computer connected to the internet remains the sole mean of link to the world of knowledge.

- Morocco has made significant progress in promoting R&D in recent years:
  - The number of partnerships with foreign universities and research centers has increased, highlighting the credibility enjoyed by Moroccan academics and researchers;
  - Moroccan researchers are leading R&D teams in innovative areas, such as microelectronics, biotechnology and nanotechnology;
  - A support fund for technology innovation has been set up.
- The challenge for the future is to ensure the continuation and to reinforce the cooperation between the research institutes and the private sector to turn this existing national research potential into marketable technology and products.
- A great interaction between academic researchers and private companies will lead to a greater focus on concrete projects, while enjoying the support of industrialists, and balancing fundamental and applied research that are oriented toward marketable openings.
- Furthermore, openness to the world is necessary, given the limited size of the local market to justify a significant investment in R&D.

### Added-value increase of IT offshoring services

- Morocco has become a leading destination for investment from francophone countries in the field of call centres, IT offshoring, as well as in the outsourcing of business processes. The main offshoring actors have started operating in Morocco, and have further ambition for their development plans.
- Morocco has significantly contributed to this success by making the offshoring business as one of the pillars of its industrial strategy, and has put in place a dynamic policy to enhance the attractiveness of Morocco for foreign clients. Overall, some 50 multinational companies have already launched operations in the country.
- For the future, the challenge resides in the consolidation of our francophone market leadership and our current mature experience in offshoring in order to expand to new markets and to increase the added-value of the services offered in Morocco.

### IT Industry Export Growth

- International companies are also interested in the skills and know-how available in Morocco in several professional areas related to information systems: monetics, engineering consultancy and information systems integration, geographical information systems, development of digital content in Arabic and decision systems...
- Morocco should identify and profit from the existing opportunities to rapidly position itself as a reference country in the sector, and to achieve higher added-value.

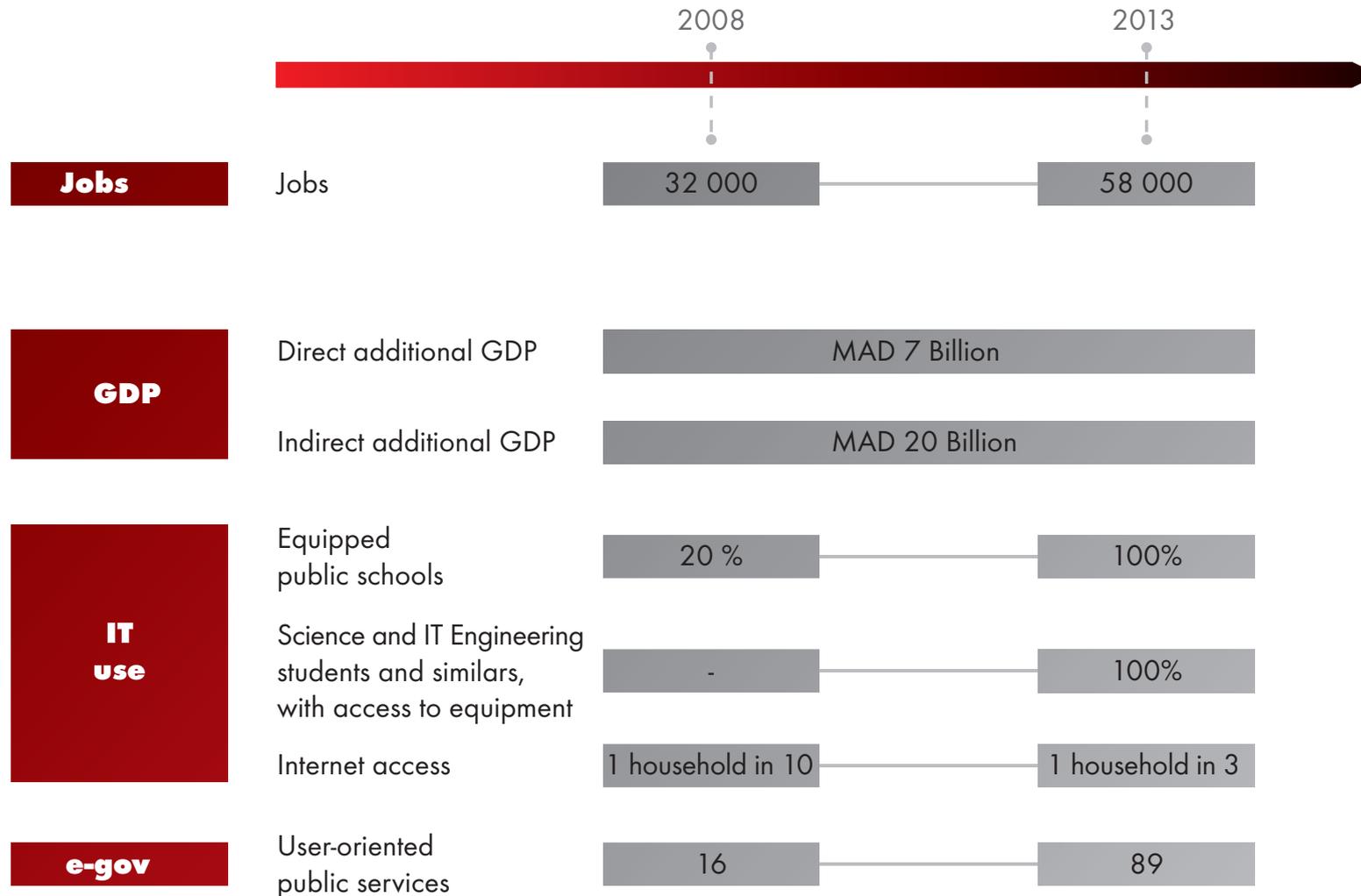
- Public services and their efficiency have an important impact on the country economic and social aspects of living. Thus, it is very important to provide these services in an integrated, transparent and secure manner so that the Moroccan society can be gradually transformed into an information society, thanks to IT and in respect to the needs and expectations of the citizens and companies.
- In Morocco, the public sector expenditures represent a significant portion of the budget of the State. The public sector will certainly achieve important profits in terms of effectiveness and efficiency as a result of the implementation of E-government services via simplified and automated information processing.
- Therefore, for instance, the online Tax declaration for companies will allow the Moroccan State to achieve productivity gains by using simplified collection and automated information processing. In counterpart, it will allow companies and their partners to considerably save time by accessing information that have been already filed while being assisted with the online declaration process.

# **VISION, OBJECTIVES, AND STRATEGIC ORIENTATIONS**

**The “Digital Morocco” plan has been designed according to a clear vision and ambitions for Morocco, aiming to position it among emerging and dynamic countries in the field of Information Technologies**

- Make IT a tool for human development.
- Make IT a source of productivity and added value for other economic sectors and for the public Administration.
- Make the IT sector one of the economy’s pillars.
- Position Morocco as a regional technology hub.

**Clear and targeted objectives for 2013**



**Digital Morocco 2013 is based on 4 principles**

**Creating momentum**

- Show strong ambition
- Mobilise public and private actors
- Assess regularly the progress

**Gouvernance structuring and  
adequate resources allocation**

- Manage the entire plan, by setting a course of actions allocating resources and assessing the results
- Allocate adequate human and financial resources

**Setting the right priorities and  
taking strong actions**

- Set a limited number of priorities
- Initiate clear and comprehensive actions
- Identify measures to support change

**Taking action for the long term period**

- Implement sustainable governance structure
- Create a 5 year plan
- Enhance progressively the action plan

**Digital Morocco 2013: A strategy designed around four strategic priorities...**

- 
- |          |  |   |  |
|----------|--|---|--|
| <b>1</b> | Provide individual citizens with access to broadband internet and promote interaction and access to knowledge.   | ▶ | <b>Social change</b>   |
| <b>2</b> | Sensitise the public administration about users' needs with regard to efficiency, quality, and transparency, through an ambitious e-government program.  | ▶ | <b>Implementation of user-oriented public services</b>       |
| <b>3</b> | Promote computerisation in small and medium enterprises to improve productivity.   | ▶ | <b>Computerisation of small and medium-sized enterprises</b> |
| <b>4</b> | Develop local IT business potentials by providing support to the creation and growth of local actors, as well as by promoting the emergence of areas of excellence with strong potential for the export. | ▶ | <b>Promotion of IT industry</b>                              |
-

**...2 supporting measures...**

**1** Ensure the availability of human resources, in terms of both quality and quantity, to meet the sector's needs.



**Development of human capital**

**2** Put in place the right conditions for cyber-confidence.



**Promotion of cyber-confidence**

**... and 2 implementation modalities**

**1** Put in place an overall governance.



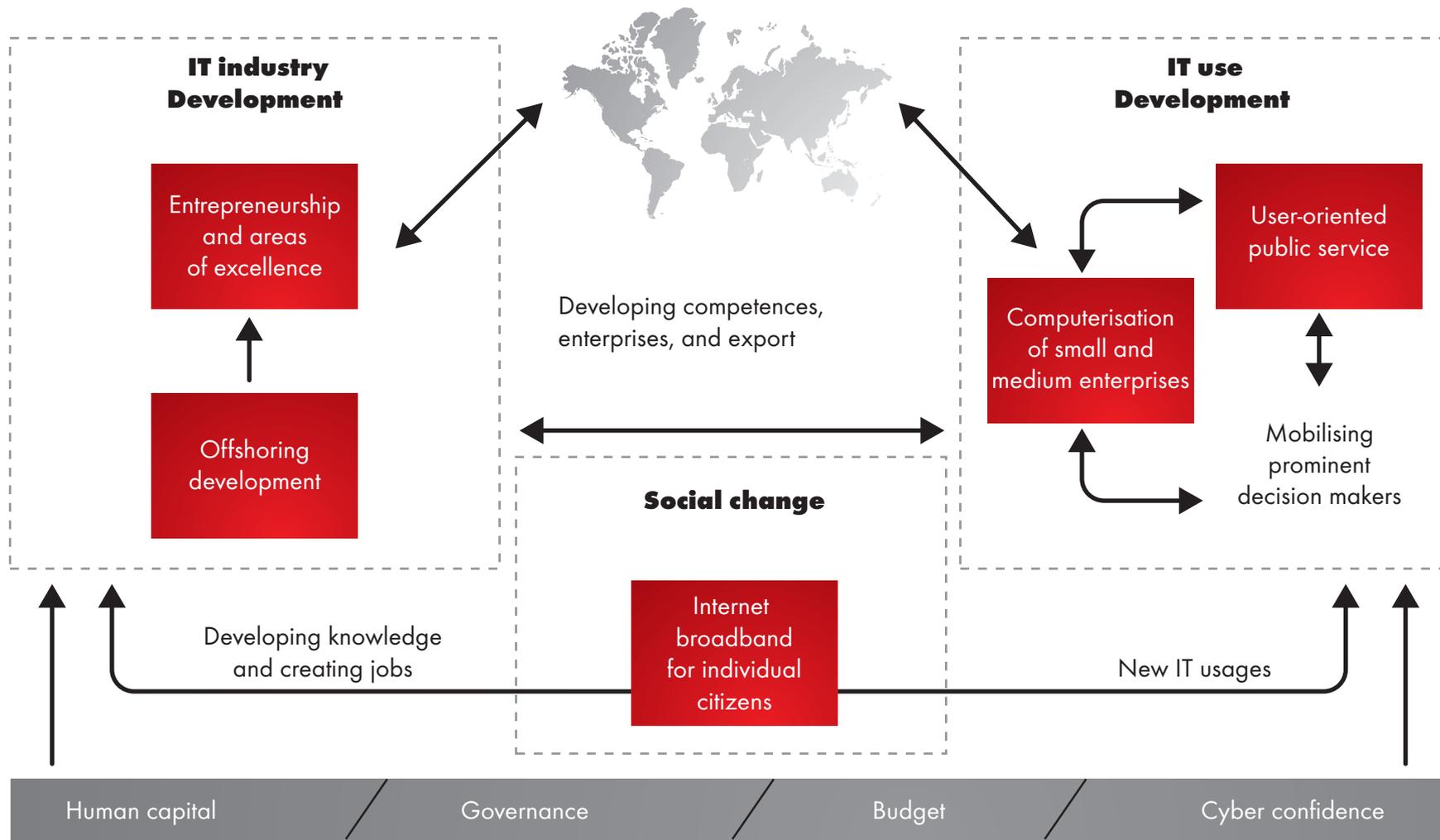
**Management of strategy**

**2** Ensure the allocation of adequate financial resources.



**Allocation of financial resources**

**The orientations of the Digital Morocco strategy combine economic gains with benefits for individual citizens**



# STRATEGIC PRIORITIES

**1- Social change**

**2- User-oriented public services**

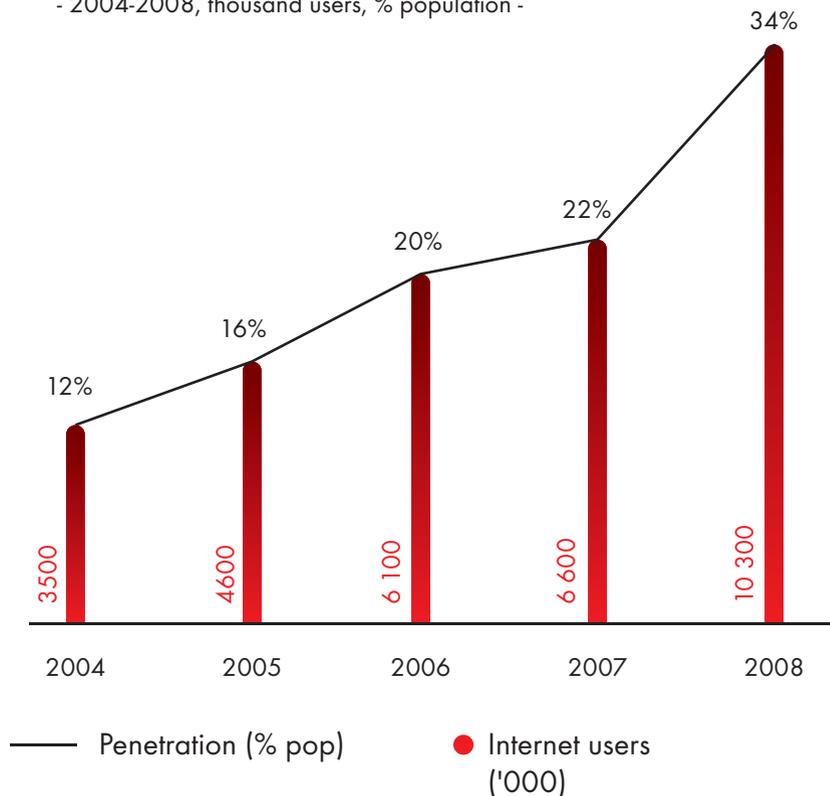
**3- Productivity for small and medium enterprises**

**4- Information technology industry**

**Internet use has increased since 2004, but home access remains limited to a minority of Moroccan households.**

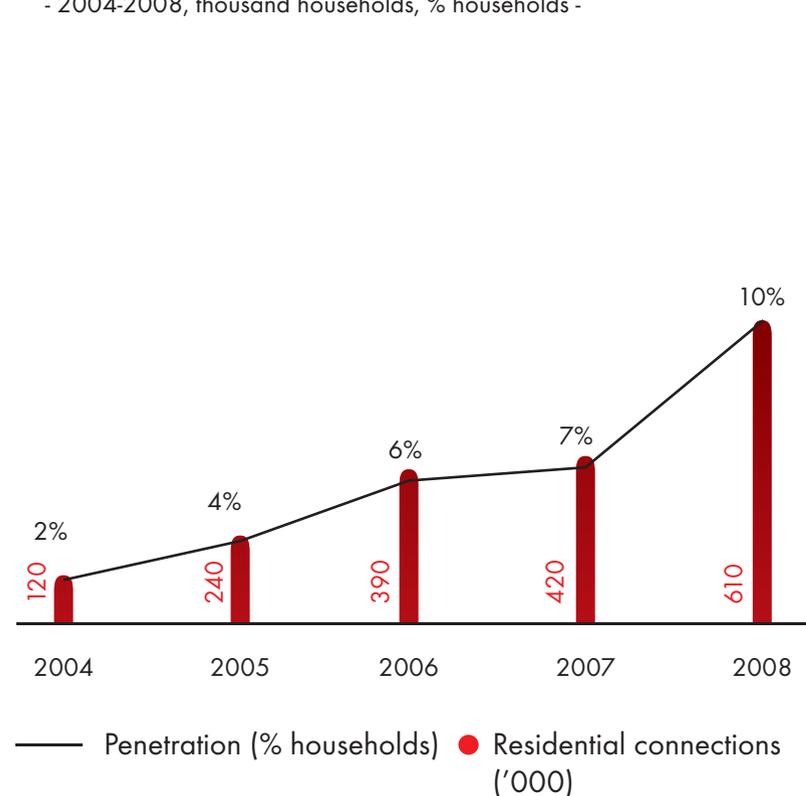
**Internet users and penetration**

- 2004-2008, thousand users, % population -



**Household internet access penetration**

- 2004-2008, thousand households, % households -



**The penetration rate varies significantly according to geographical zones and household income levels.**

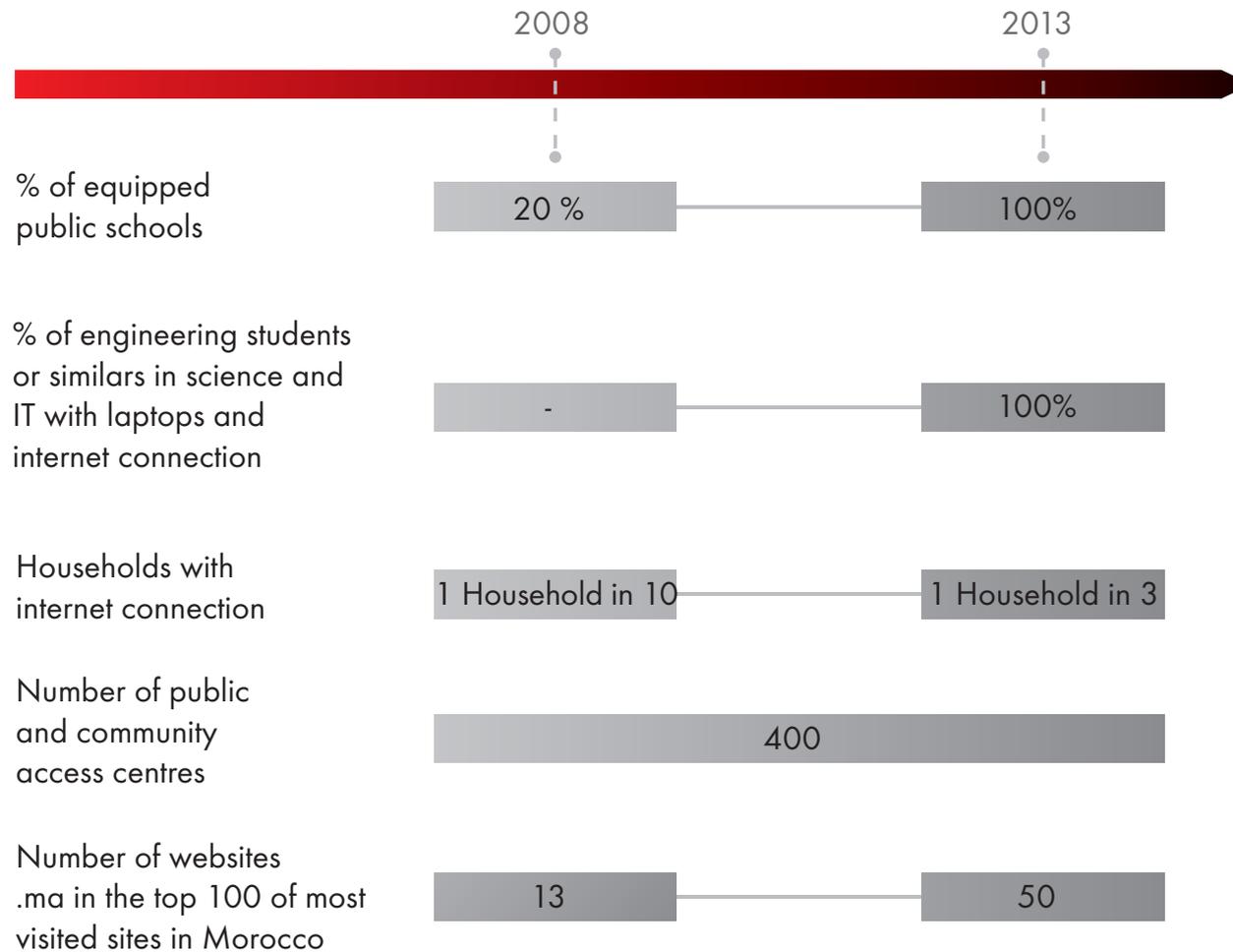
**Estimation of household internet access penetration per geographical zone and income**

- March 2008, home, households (thousand and %), connections (thousand), Morocco -

Zone (x 1000 households)	SPC* (x 1000 households)						Average penetration rate in Morocco	Literacy rate (%)	Penetration rate in case of literacy
		A (200)	B (400)	C (1000)	D (2000)	E (2400)			
High density populated zones (2500)		80%	35%	15%	2%	0%	<b>14%</b>	70%	<b>20%</b>
Moderately populated zones (1400)			35%	15%	2%	0%	<b>7%</b>	60%	<b>12%</b>
Grey-white zones (2100)				0%	0%	0%	<b>0%</b>	40%	<b>0%</b>
<b>Average penetration rate in Morocco</b>		<b>80%</b>	<b>35%</b>	<b>15%</b>	<b>2%</b>	<b>0%</b>	<b>8%</b>		
Literacy rate (%)		100%	95%	90%	55%	35%	57%		
<b>Penetration rate in case of literacy</b>		<b>80%</b>	<b>37%</b>	<b>17%</b>	<b>4%</b>	<b>0%</b>	<b>14%</b>		

\* Socio-professional categories are defined according to monthly household income in MAD: A > 18 000; 8 000 < B < 18 000; 3 000 < C < 8 000; D & E < 3 000

**Providing individual citizens access to internet broadband and promoting interaction and access to knowledge**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives.**

**Initiative 1 :** Extending and generalising IT use and equipment to education and teaching entities.

**Initiative 2 :** Mobilising public and private actors around attractive IT access opportunities for each socio-professional category.

**Initiative 3 :** Developing national digital content.

**Initiative 1 : Extending and generalising IT use and equipment to education and teaching entities.**

- The information and knowledge society will be only developed if the younger generation acquires the know-how of technology at an early stage. Computers and internet are the powerful educational tools which can speed up human, economic, and social development.
- Actions designed to provide pupils and students with computer equipment are multiplying worldwide, and their efficiency has been clearly proven.
- To further promote computer equipment and internet use by actors in the education sector, the Moroccan government will implement a leader action to provide engineering students and their similars with subsidised laptops and internet access.
- This initiative will supplement the 'Génie' program for the equipment of primary and high public schools, and the Nafid@ program to subsidise mobile computers and internet access for teaching staff, launched respectively in September 2005 and May 2008.

**Initiative 1 : Extending and generalising IT use and equipment to education and teaching entities.**

**Measures/Actions**

**Description**

**1. Provide hardware, internet access and multimedia resources to public educational institutions**

- Proceed with the 'Génie' program by providing public educational institutions (9 260 institutions) with multimedia resources connected to internet, over the 2009-2013 period;
- Alongside equipment and infrastructure, 200 000 IT teachers must be trained and pedagogical digital content suitable for learning must be developed.

**2. Provide multimedia resources and internet access to public higher education institutions**

- Press ahead with the IT generalisation program in education, and introduce digital work environments (DWE) in higher education institutions.

**3. Subsidise computer equipment and internet connection for teaching staff**

- Proceed with the Nafid@ program designed to subsidise computer equipment and internet connection for teaching staff, helping them use and integrate multimedia resources in teaching and learning.

**4. Subsidise mobile computers and internet connection for engineering students or similars**

- Provide offers to enable engineering students and similars in science and IT to purchase subsidised laptops and internet connection;
- Over the 2009-2013 period, around 80 000 engineering students and similars will benefit from this action.

**Initiative 2 : Mobilising public and private actors around attractive IT access opportunities for each socio-professional category**

- The rapid introduction of internet broadband infrastructure should be considered in relation to an optimal digital development of the territory, and to reduced cost for internet broadband access, especially in moderately populated zones.
- Given that cost, for a large section of the population, is one of the major barriers to computer purchasing and internet access, within the framework of the public-private partnership, the government will ensure that attractive and suitable offers, such as computer plus internet, are available to different sections of the population.
- Similarly, the introduction of public community access centres, drawing on existing telecom infrastructure, will extend access to new technologies to a wider range of citizens.
- These facilities will focus notably on zones where offers of household internet access are not available or financially inaccessible.

**Initiative 2 : Mobilising public and private actors around attractive IT access opportunities for each socio-professional category**

Actions	Description
<p><b>5. Adopt policies focused on the development of broadband by category of the zone and income levels</b></p>	<ul style="list-style-type: none"> <li>• Define the broad lines of the development of broadband by category of the zone (low-cost, residential, tourism, offshoring, etc.);</li> <li>• Rationalise investment to provide access in scarcely or moderately populated zones, through the public-private partnership and/or infrastructure sharing.</li> </ul>
<p><b>6. Promote low-cost equipment offers</b></p>	<ul style="list-style-type: none"> <li>• Make available attractive offers, within the framework of public-private partnership, such as computer plus internet, suitable to different sections of the population (civil servants, pensioners, retired...).</li> </ul>
<p><b>7. Promote internet access and IT use outside the home by setting up community access centers</b></p>	<ul style="list-style-type: none"> <li>• Set up 400 public community access centres (CAC) over the 2009-2013 period;</li> <li>• Each CAC will be equipped with computers, internet access and telephone sets;</li> <li>• The launch of these CAC will rely on public infrastructure, enabling private operators to provide affordable multimedia services to citizens (youth centres, girls' residences, post offices...)</li> </ul>

**Initiative 3 : Developing national digital content**

- Internet penetration and development of national content are very closely linked.
- Primarily destined to Moroccan citizens, such digital content must meet specific needs and expectations, so as to naturally draw interest and arouse curiosity.
- This would entail the development of attractive online content, as well as the digitalisation of historical and cultural heritage, a major challenge in terms of visibility and attractiveness of different geographical areas, and more generally, in terms of access to knowledge.
- The development of national digital content must combine governmental action, private initiative, and international partnerships.

**Initiative 3 : Developing national digital content**

**Actions**

**Description**

**8. Support the development of digital informational content**



- Develop regional/ local content;
- Adopt a policy to systematically translate public websites into Arabic;
- Support the Moroccan media, within the framework of public-private partnership, to provide and disseminate updated information in real and interactive time.

**9. Support the development of digital entertainment content**



- Mobilise private operators (TV and Radio) to offer attractive content on the net: implementation of video on demand (VOD), give the right of access to podcast...

**10. Support the development of educational content**



- Make the Moroccan cultural heritage (museums, public libraries, ...) on line with the contribution of national and international partners;
- Create educational content platforms.

**1- Social change**

**2- User-Oriented Public Services**

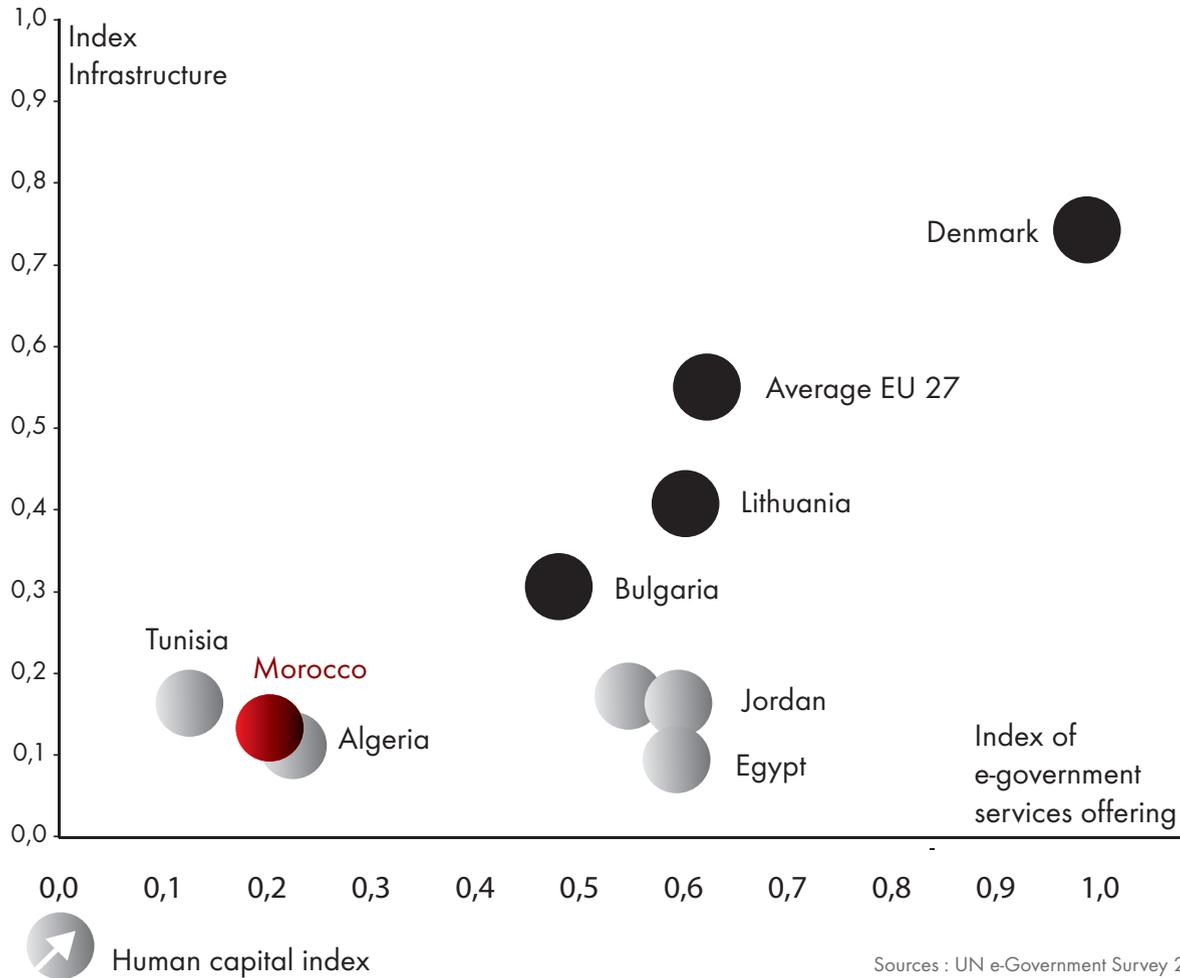
**3- Performance of Small and Medium-Sized Enterprises**

**4- IT Industry**

**Among the 192 UN member states, Morocco is ranked 140<sup>th</sup> in terms of e-government**

**E-government maturity: international benchmarking**

- Score out of 1, 2008 -

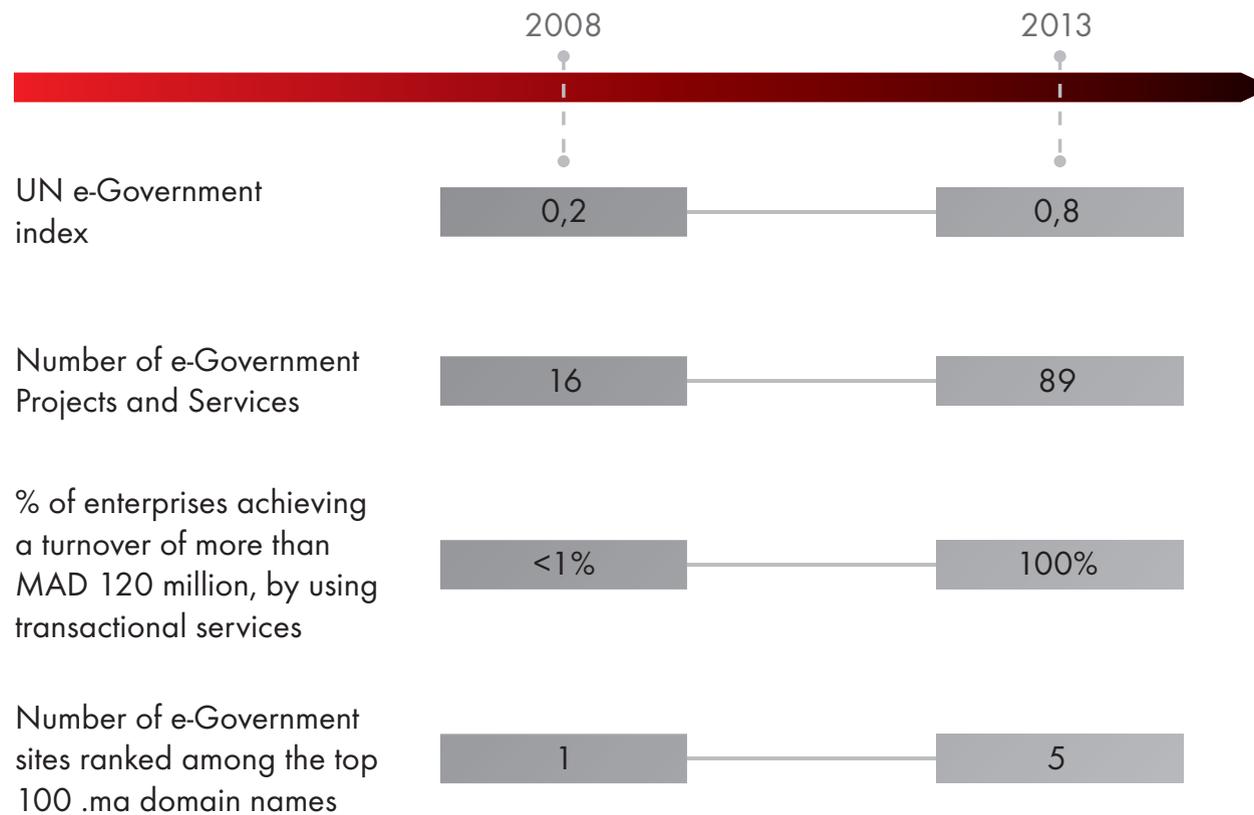


Sources : UN e-Government Survey 2008

This ranking illustrates the difficulties faced by the Moroccan administration in terms of:

- Improving its efficiency;
- Developing online services for both individual citizens and enterprises.

**Reconcile the Moroccan administration with users' needs in terms of efficiency, quality, and transparency through an ambitious e-government program**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives**

**Initiative 1 :** Setting up a steering committee in charge of the e-government program.

**Initiative 2 :** Implement 15 key flagship services and projects by 2011.

**Initiative 3 :** Implement all the e-government services and projects by 2013.

**Initiative 1 : Setting up a steering committee in charge of the e-government program**

- Beyond computerising existing processes and procedures, e-government requires their indepth reconfiguration, on the basis of a real understanding of the public administration functioning.
- This also requires transversal collaboration between the administrations and relevant bodies, as well as a vision shared between the different entities.
- Governance dedicated to e-government projects is thus imperative to ensure the design of a global strategy and the allocation of necessary funds, and to manage the effective implementation of decision making process.
- The principles of such governance are as follows :
  - Define the government's common vision and a coherent action plan taking into account government priorities;
  - Optimise operation and investment costs of e-government services and projects;
  - Adopt a personalised approach with the different ministries, administrations and local collectivities, to assist them in implementing their projects and operating their e-government services;
  - Be accountable for the results obtained with respect to the defined objectives and to the means of implementation;
  - Manage transversal missions with different ministries and administrations

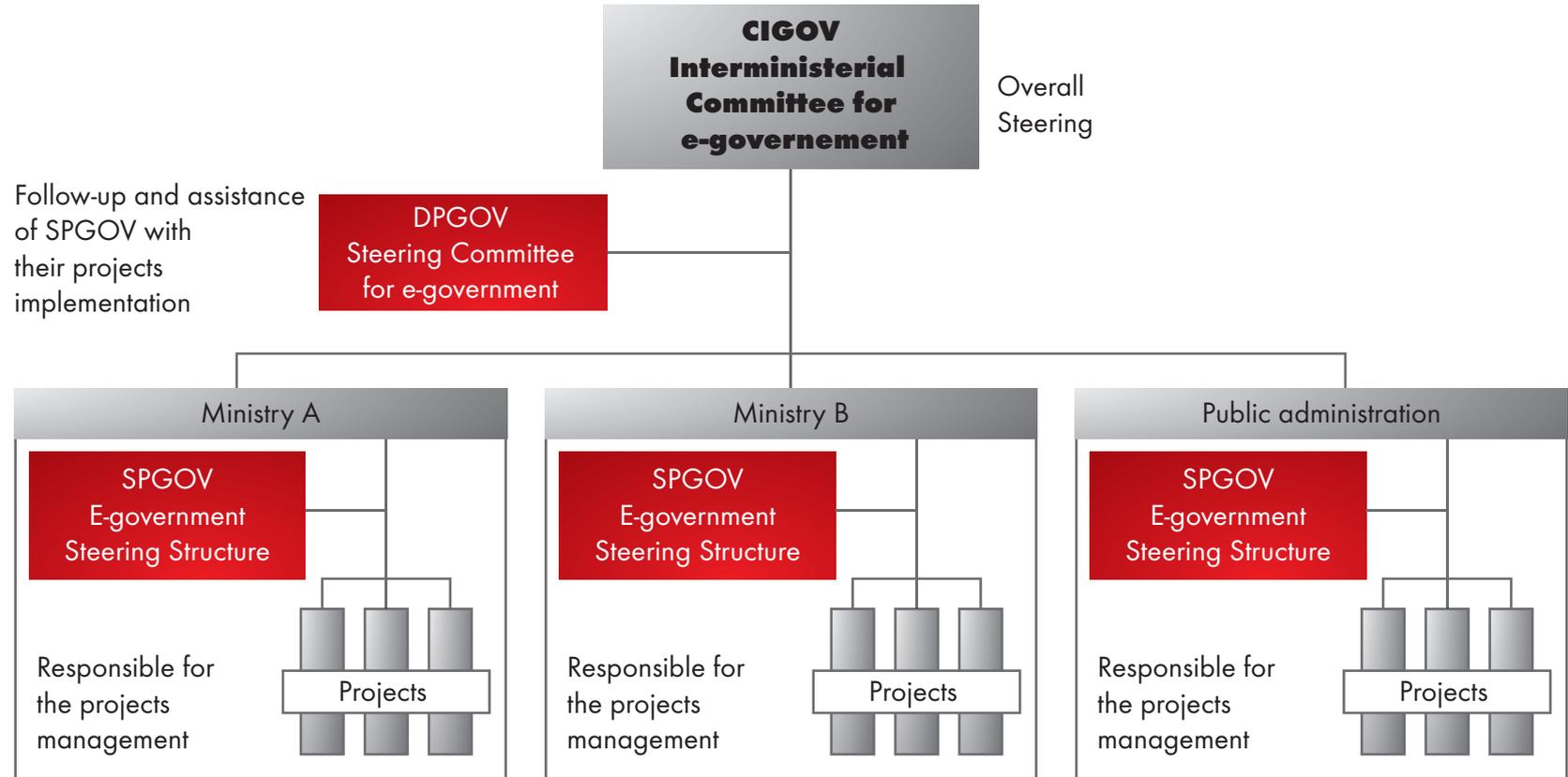
**Initiative 1 : Setting up a steering committee in charge of the e-government program**

**Actions**

**Description**

**11. Put in place a governance structure for e-government program**

- Set up steering committees for e-government program as of 2009



**Initiative 1 : Setting up a steering committee in charge of the e-government program**

**Actions**

**Description**

**11. Put in place a governance structure for e-government program**



- Roles and responsibilities of steering entities

E-Government

« set target and assesses »

Interministerial Committee

- Spell out vision and ambitions;

CIGOV

- Define the strategy and action plan;
- Ensure the allocation of necessary means and resources;
- Carry out interdepartmental arbitration;
- Assess results and reorient undergoing programs' difficulties.

E-Government Steering

« steer the implementation of the entire program »

Committee DPGOV

- Prepare e-government strategy;
- Propose action plan and assesses the necessary means;
- Follow up the implementation of the defined plan;
- Highlight and draw on interdepartmental synergies;
- Prepare results assessment.

E-government Steering

« steer the implementation within its entity »

Structure SPGOV in each  
ministry or public institution

- Prepare the ministry's or public institution's strategy;
- Propose action plan and evaluate the necessary means;
- Follow up the implementation of the defined plan;
- Report to CIGOV on achievements as well as discrepancies with the initial plan.

**Initiative 2 : Implement 15 keys flagships services and projects by 2011**

**Actions**

**Description**

**12. Implement 15 key projects**



• List of the 15 services and projects:

Services that improve efficiency and reduce administration costs

- Integrated management of public expenditure;
- Purchasing pool for administrations;
- Online bidding for public tenders;
- Setting up an electronic certification authority;
- Common identifiers and inter-operability among administrations.

Services that facilitate administrative procedures for enterprises

- Employee online social claims;
- Online VAT claims;
- Online Customs declaration;
- Paying Corporate Tax and Income Tax;
- Enterprise creation;
- Digitalisation of import and export procedures.

Services that put in place an administration at the service of individual citizens

- Civil registry and local collectivities information systems;
- E-learning platform and online registration;
- Health service refunds;
- Electronic consulate (consulat.ma).

**Initiative 3 : Implement all the e-government services and projects by 2013**

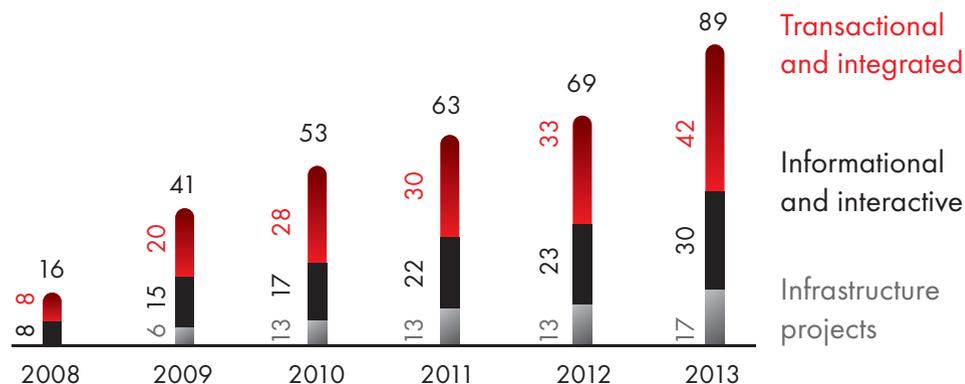
**Actions**

**Description**

**13. Implement all e-government projects and services**

- Implement by 2013 the 89 projects and services, including 40 transactional services.
- The transactional services focus on improving the efficiency of the delivery of frontline services which represent the most common interaction between the citizen/business and the administration.

**Expected launch calendar**  
-2009-2013-



**1- Social change**

**2- User-Oriented public service**

**3- Productivity of Small and Medium Enterprises**

**4- IT industry**

**The under-computerisation of Moroccan Enterprises has led to stagnant labour productivity, which undermines economic competitiveness**

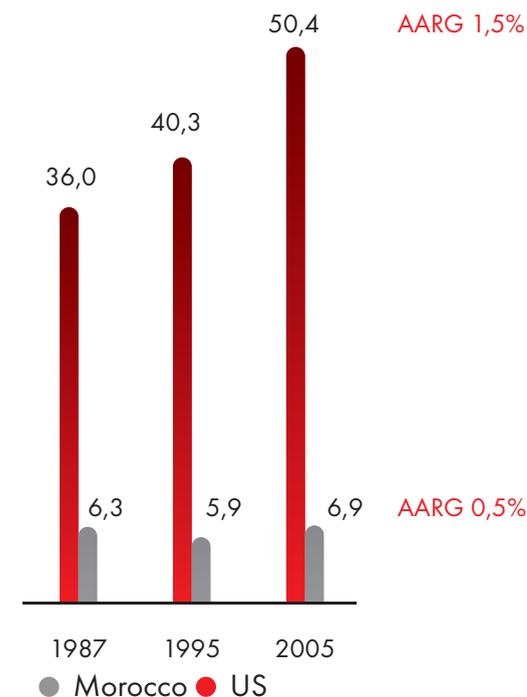
**(1) IT expenses in Morocco**

-% GDP, 2007-

	Morocco	France Comparison	Expected added value growth <sup>(2)</sup>
Banking, finance Insurance, real estate	3,2%	4,1%	24%
Business Process Offshoring	3,2%		
Energy	2,7%	3,1%	4%
Tourism and the hotel industry	1,9%	2,0%	3%
Transport	1,8%	3,4%	24%
Government	1,3%	3,4%	6%
Commerce	1,1%	1,4%	13%
Industry	0,9%	1,4%	15%
Education, health Social action	0,7%	1,8%	3%
Natural resources	0,2%	1,5%	0%
Construction	0,2%	0,8%	1%
Services	0,1%	1,4%	17%

**Labour Productivity trend**

-1987-2005, US\$ per hour of work AARG\* 87/05



\* AARG : Annual Average Rate of Growth

Note (1) : Including hardware expenditure

Note (2) : Added-value

Source : APEBI, Gartner, IDC, WITSA, OCDE, World Bank, The Conference Board, EIU, ILO Analyses AT Kearney

**SME investment in IT is hindered by lack of awareness as to its profitability, and by resistance to change**

“

The low use of IT in the SME is mainly due to the fact that managers do not believe that investing in IT is very profitable. The SME manager..., **does not know which application suits their needs** and fails to see the relation between **the benefits that such investment generates to the business**, and its long term benefits with the corresponding costs. ”

General Manager of a Computer Service Company

“

Many SMEs in Morocco **have not been able to adapt to the new changes**. A good number of Moroccan enterprises still use pen and paper, and never consider acquiring a computer. ”

Manager of a well-known Moroccan software design company

“

To make the best of IT investment, enterprises should first reach a certain **maturity** and have **an optimised production tool and well established processes**. The majority of Moroccan SMEs, especially, small ones, are far from this level of perception. ”

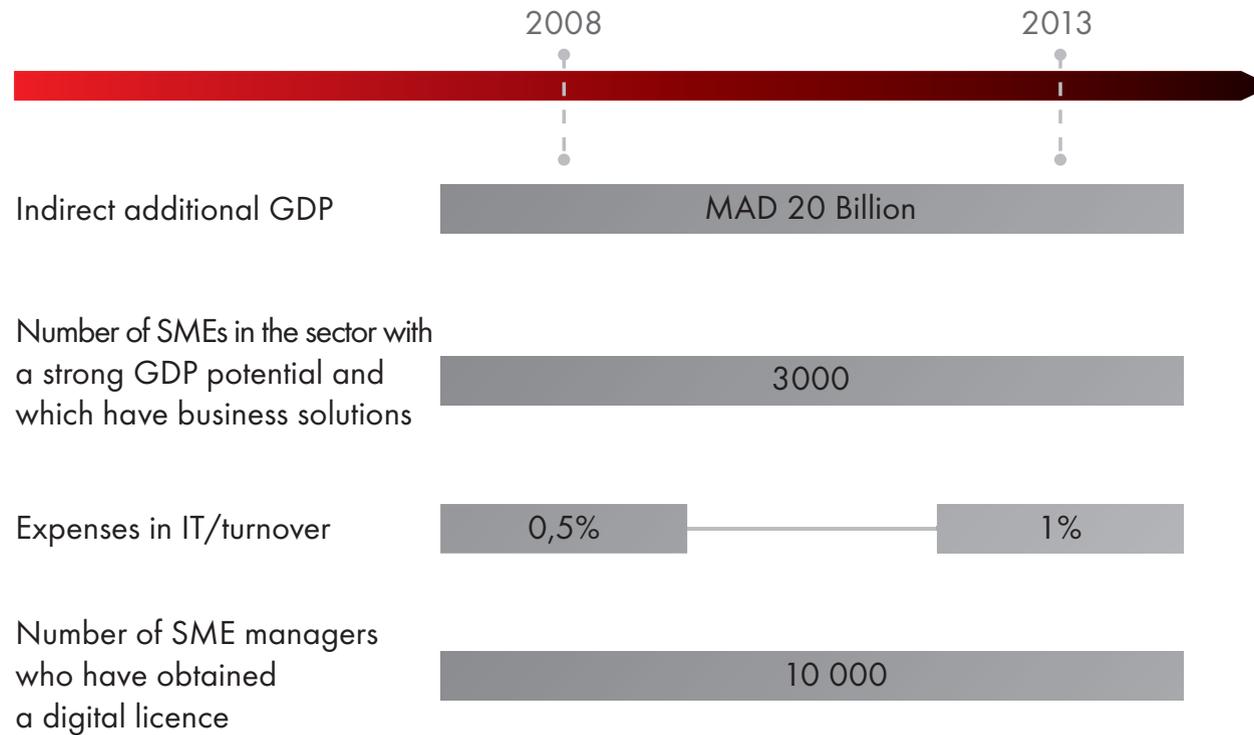
Designer of a Moroccan software

“

Many small enterprises are used to have liberties with tax regulations. Computerisation, especially that of their taxation, would oblige them to be **more transparent**, and that could be another reason for their reticence. ”

Manager of a well-known Moroccan software design company

**Encourage SMEs computerisation in order to increase their productivity and improve their competitiveness**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives**

**Initiative 1 :** Support the computerisation of SMEs that have branches with strong GDP potential.

**Initiative 2 :** Mobilise prescribers.

**Initiative 3 :** Sensitise, initiate and incite enterprises to use IT.

**Initiative 1 : Support the computerisation of SMEs that have branches with strong GDP potential**

- Focus will be on enterprises that are structured in branches that have strong GDP potential. These have been identified according to the following criteria: size of the sector of activity and its impact on the Moroccan economy, potential for productivity gains and favourable conditions for implementation.
- For these branches, sectoral business solutions will be proposed in partnership with professional associations.
- To facilitate the choice of IT investments for SME, guides offering information on the costs and benefits of different business solutions, and the listing of the most appropriate providers for products and services will be published.

**Initiative 1 : Support the computerisation of SMEs that have branches with strong GDP potential**

Actions	Description
<b>14. Identify ready-made business solutions for branches with strong GDP potential</b>	<ul style="list-style-type: none"> <li>Identify sectoral business solutions for branches with strong GDP potential, such as textile, leather, food industry, automotive, etc.</li> </ul>
<b>15. Support IT investment by sector based SMEs</b>	<ul style="list-style-type: none"> <li>Provide subsidies to acquire sector based computerization solutions that will go up to 60% of the IT investment, leveling off at around 400,000 MAD. This subsidy program can use the platform of "Moussanada" *.</li> </ul>
<b>16. Disseminate information on designed sector based offers</b>	<ul style="list-style-type: none"> <li>Design and implement communication plans about the identified sector based offers to sensitise SMEs to the benefits of IT investments.</li> </ul>

\* See the Industrial Emergence Pact, measure 58.

**Initiative 2 : Mobilise the prescribers**

- Mobilizing private and public prescribers (professional associations, contractors, etc., ) will promote, relay and accelerate SME computerisation :
  - Firstly, by inciting professional associations, accounting experts, etc., to recommend IT to SMEs;
  - Secondly, by asking main contractors to incite their SMEs providers to favour the use of electronic data exchanges.

**Initiative 2 : Mobilise the prescribers**

**Actions**

**Description**

**17. Assist SMEs supplying providers of the main contractors that are engaged in dematerialisation projects**

- Support SMEs in their projects of electronic exchange dematerialisation with their main contractors: initiation, consulting, etc.

**18. Involve main contractors to incite Very Small Enterprises to be equipped**

- Use the influence of the main contractors to incite Very Small Enterprises to acquire basic equipment tools (computers, basic applications);
- The first phase of this project will be in the "Commercial" branch, which will be a follow up of the "Rawaj" program on equipment and upgrading of proximity-based commerce.

**19. Involve professional associations in SME's endorsement to IT**

- Implement a communication plans around IT benefits among the members of professional associations;
- Develop an IT correspondent network at the level of professional associations to promote IT culture in Small and Medium Enterprises.

**Initiative 3 : Sensitise, initiate, and encourage enterprises to use IT**

- Lack of awareness on IT benefits and resistance to change have been identified as the main obstacles to the computerisation of SMEs.
- To overcome these obstacles, awareness and tailored IT training programs will be proposed, mainly a free national initiation program, for SME managers to switch to IT.
- In addition, the introduction of services of e-government program 2009-2013, especially services designed for enterprises, will further promote SMEs computerisation.

**Initiative 3 : Sensitise, initiate, and encourage enterprises to use IT**

**Actions**

**Descriptions**

**20. Train IT correspondents and accounting experts**



- Put in place training programs targeting IT correspondents of professional associations and accounting experts.

**21. Initiate SME managers to use IT: the Digital License**



- Provide free offers of IT, initiation to SME managers;
- At the end of the training programs, trainees will receive a “digital license” which gives them access to personalised backing to the SME support plans.

**22. Upgrade the legal framework to encourage the use of online services**



- Adjust the legal framework to encourage SME to use online services, especially for the payment of taxes and charges.

**1- Social change**

**2- User-Oriented public service**

**3- Productivity of Small and Medium Enterprises**

**4- IT industry**

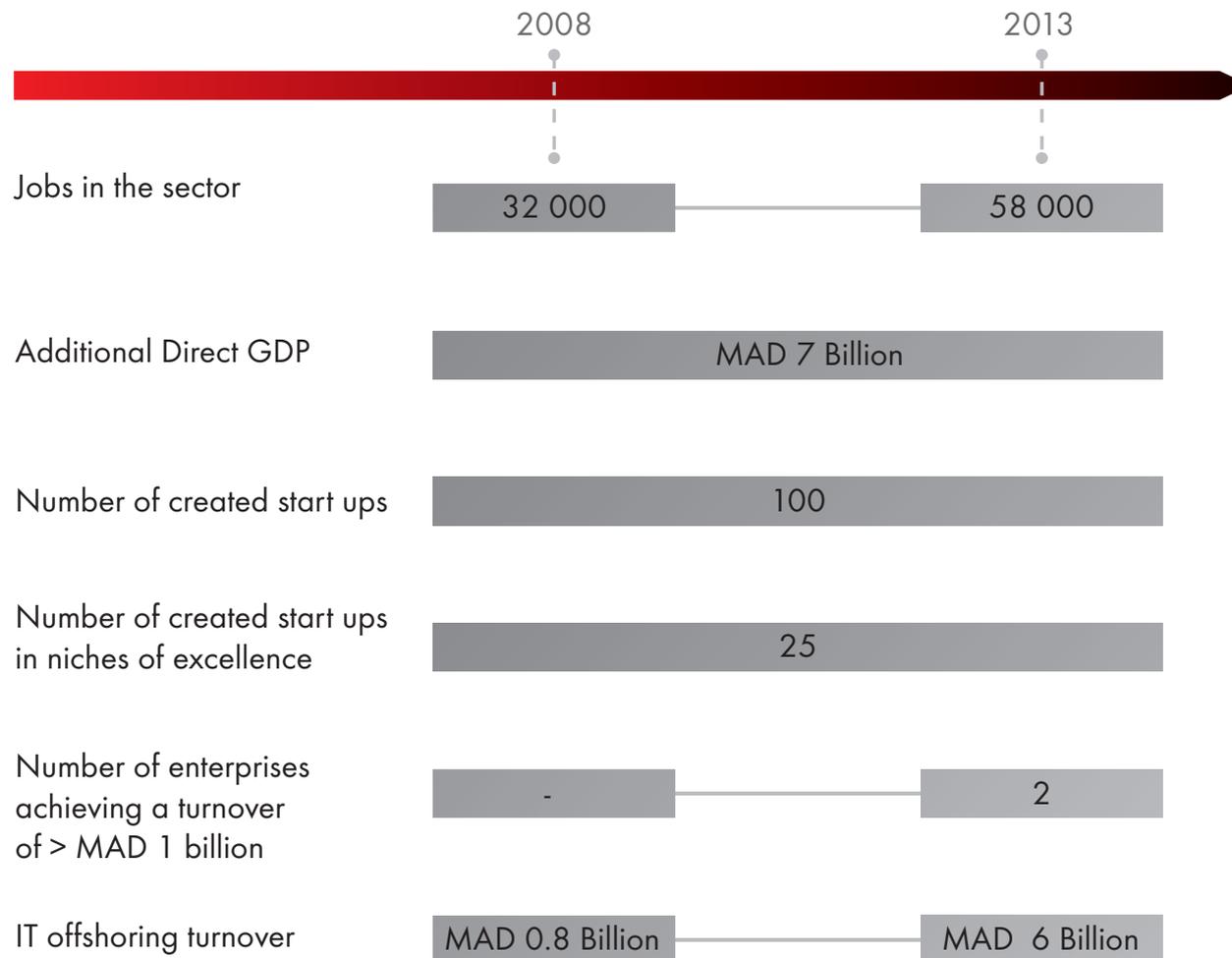
**Moroccan IT Industry suffers from a weak domestic demand and a limited export opportunity**

- Fragmented IT offer;
- Limited domestic demand largely catered by the import of high added value projects;
- Export is limited and has not reached the critical mass to compete at the international level.

**IT offshoring has shown rapid growth, creating tension on the market**

- IT offshoring growth has exceeded expectations (+270% of turnover based on 2008 forecast);
- The rapid installation of offshorers has induced competition on qualified IT resources;
- Special attention should be given to offshorers already installed.

**Develop local IT branches by sustaining creation and growth of local actors, and by creating areas of excellence with high export potential**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives**

**Initiative 1 : Facilitate the development of local IT actors.**

**Initiative 2 : Develop niches of excellence.**

**Initiative 3 : Boost and develop IT offshoring.**

**Initiative 1 : Facilitate the development of local IT actors**

- A package for initial financing and development will be provided to enable Moroccan start ups and small-size enterprises facing problems in raising funds, to carry out their first development phase.
- The government will also promote the set up of technoparks and incubation structures that provide entrepreneurs installation and coaching services that are adapted to their needs.
- Also, to encourage enterprise growth, assistance services for export will be reinforced and public demand will be used as a mean in order to assist local actors.

**Initiative 1 : Facilitate the development of local IT actors**

**Actions**

**Description**

**23. Implement national governance for innovation**



- Implement national governance for the coordination and follow-up of support and development schemes:
  - Innovation, supported partially by the Innovation Fund of the APEBI-Government Progress Contract;
  - Research and Development, supported by R&D Funds drawn from the contribution of telecom operators.

**24. Set up financing solutions for IT actors**



- Set up public-private investment funds such as risk capital and venture capital designed for new IT enterprises;
- A first 100 million MAD public-private risk capital to be concretised in 2009;
- Additionally, and on the basis of contract of growth, IT sector enterprises will be granted an investment bonus within the framework of the "IMTIAZ"\* program.

**25. Set up regional technoparks**



- Set up attractive technoparks that offer good quality infrastructure and general services for IT enterprises and start ups;
- Like Casablanca-Technopark, 8 new potential technopark sites have been planned in Casablanca, Rabat, Agadir, Oujda, Tangier, Marrakech, Fez and Meknes.

\* See the National Pact for Industrial Emergence, article 57

**Initiative 1 : Facilitate the development of local IT actors**

**Actions**

**Description**

**26. Improve and adapt the legal framework to the specificities of the IT sector**



- Put in place a regulatory framework in line with research and innovation.

**27. Promote the culture of entrepreneurship and innovation**



- Promote the culture of entrepreneurship and innovation by integrating specific courses and modules in curricula and high education programs, and by setting up university incubators.

**28. Set up assistance services for IT enterprises**



- Set up assistance services for export in the field:
  - Consulting and market benchmarking surveys;
  - Promotion at the international level of the Moroccan IT sector brought in par by APEBI-Government Progress Contract.

**Initiative 2 : Develop niches of excellence**

- This has to do with positioning Morocco on the IT world stage, by focusing on the creation of areas of excellence centered on technology niches where Morocco may enjoy a competitive edge.
- The challenge is enormous given the size of Moroccan actors in this field compared to international competitors. Nevertheless, Morocco must make smart approaches and master its investment choices in order to use efficiently and effectively the public resources.
- The government has identified priority technology niches to put in place through areas of excellence based on an ecosystem which includes industrial contractors, universities and researchers, and IT start ups.
- This ecosystem will be fully integrated with international scientific networks and will have a public-private governance structure, to guarantee the viability of start up projects. These small enterprises will then have easy access to international markets and benefit from Morocco's sustained efforts to promote the sector internationally.

**Initiative 2 : Develop niches of excellence****Actions****Description****29. Set up IT clusters**

- Put in place a mixed governance structure involving different actors: government, corporations, SMEs, universities, aimed at helping with the creation of innovative and high-added value projects in the following four niches of excellence:
  - Mobile services;
  - Electrobanking/ management of digital copyrights/ security;
  - Web design/ computer graphics / Multimedia;
  - Domestic developed softwares to meet the needs of government and enterprises.

**30. Put in place a financing scheme designed for activities developed in the clusters**

- Put in place financing modalities for projects developed in the clusters, by using the innovation funds that are set up within the framework of APEBI-Government Progress Contract, and the R&D funds drawn from the contributions of Telecom operators.

**Initiative 3 : Boost and develop IT offshoring**

- Morocco values most specifically the success of actors and operators already installed, as those contribute to enhance the credibility of Morocco as an investment destination, and to ensure its sustainability.
- To ensure and reinforce Morocco's competitiveness, the Government has accelerated the adoption of legal regulations to protect personal data. Generally, Morocco will continue to enhance the competitiveness of its incentive and legal framework.
- In this respect, speeding up the implementation of infrastructure of dedicated zones is also a priority.
- Training skilled human resources will be accelerated and the mechanism to ensure training homogeneity will be reinforced.
- Finally, the government will focus and structure the promotion of «Morocco as a destination» offer and will communicate on the operational assistance mechanisms for the implementation and the development of operators.

**Initiative 3 : Boost and develop IT offshoring**

**Actions**

**Description**

**31. Implement the law related to personal data protection**



- Ensure legal and legislative regulations in compliance with international norms and standards, to protect the personal data.

**32. Sustain the competitiveness of Morocco as offshoring destination**



- Maintain dynamically the competitiveness of Morocco offshoring offer\*.

**33. Provide sufficient and quality infrastructure**



- Set up additional capacities\*.

**34. Meet the needs of qualified human resources**



- Train human resources in terms of quality and quantity, to reinforce the development of IT offshoring\*.

(\* ) See the National Pact for Industrial Emergence; measure 1, measure 6 and measure 2

**Initiative 3 : Boost and develop IT offshoring****Actions****Description****35. Promote destination of Morocco as a destination to IT companies**

- Continue to attract French information systems companies\*.

**36. Ensure technology watch**

- Ensure a technology watch in collaboration with offshoring partners to decide which functional and sector based specialties Morocco should emphasis on to increase added value.

(\* ) See the National Pact for Industrial Emergence; measure 3, measure 4 and measure 5

# SUPPORT MEASURES

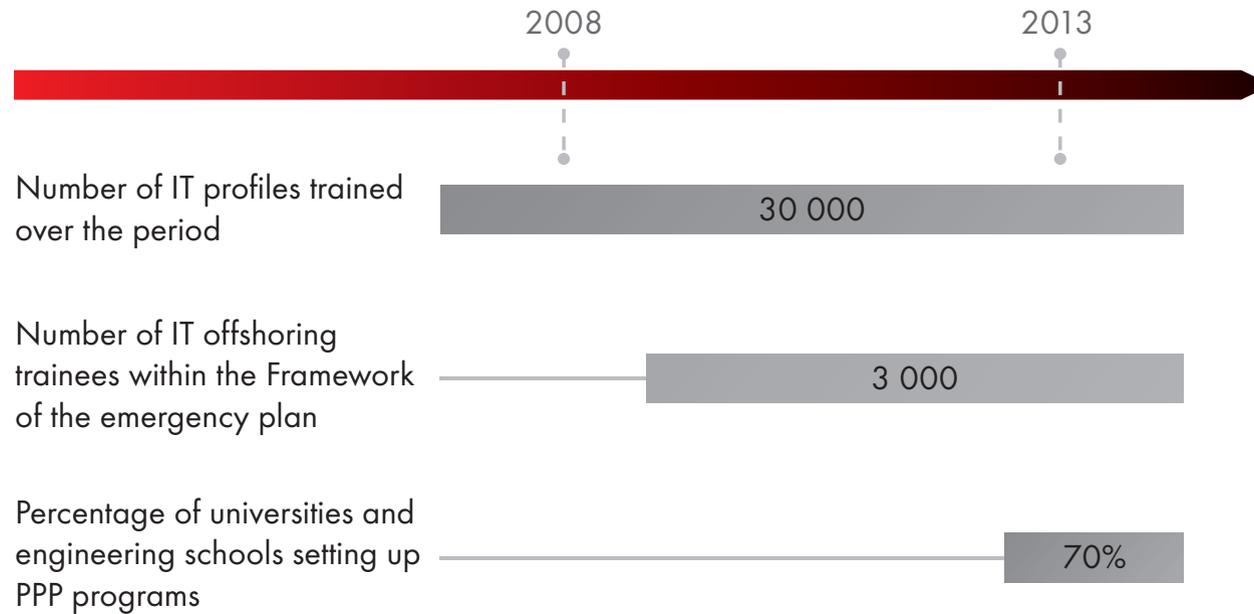
**1- Human Capital**

**2- Digital Confidence**

**The challenge of human capital is a key element of the successful development of the IT sector**

- The quantitative and qualitative availability of skilled human resources is a determining factor in the implementation of a national IT policy.
- Success in IT offshoring services has significantly increased the demand for training and prompted institutions to review their training policies accordingly.
- Generally, development prospects in the IT sector call for a dynamic anticipation of future needs of skilled, qualified, and readily employable human resources.

**Develop human capital that matches IT sector needs**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives**

**Initiative 1 : Putting in place governance dedicated to human capital.**

**Initiative 2 : Designing and putting in place training programs that meet the needs of IT sector.**

**Initiative 3 : Updating education programs to enhance IT graduates employment.**

**Initiative 1 : Putting in place governance dedicated to human capital**

- The constant relevance of training programs to the needs of IT sector requires institutional mechanisms that continuously review the objectives as well as the training materials and ensure that they match the demand for adequate and skilled IT human resources.

**Initiative 1 : Putting in place governance dedicated to human capital****Actions****Description****37. Putting in place a mechanism to manage, follow-up, and assess training plans in the IT sector**

- Putting in place an annual process to update initial\* training plans in close collaboration with the main actors involved.
- This process revolves around five principles :
  - Updating training needs in close consultation with professional players in the sector;
  - Consolidating the needs;
  - Impact of needs analysis on training systems;
  - Arbitration and approval of detailed annual training plans;
  - Assessment of the implementation of training plans.

(\* ) See the National Pact for Industrial Emergence, mesures 93 to 97

**Initiative 2 : Designing and putting in place training programs that meet the needs of IT sector**

- In order to meet the sector's needs in terms of sufficient and qualified staff, adequate training programs based on enterprises' forecasts will be implemented and matched with the existing training opportunities.
- The sector needs in human resources for the period 2009-2013 sum up to 30,000 trainees, divided as follow:

<b>IT sector</b>	<b>Training needs for the period 2009-2013 *</b>
Distributors/hardware	2 000
Offshorers partners	15 000
Software and services	4 500
Administration	1 500
Enterprises	7 000
<b>Total</b>	<b>30 000</b>

\* Including 2008 needs.

**Initiative 2 : Designing and putting in place training programs that meet the needs of IT sector**

**Actions**

**Description**

**38. Design initiation training programs \***



- Define initiation training plans that respond to the needs of IT enterprises in terms of qualified resources over the period 2009-2013.

**39. Launch an emergency training operation for the IT offshoring sector**



- Put in place, in partnership with the sector's representatives, an emergency training program for complementary IT offshore (around 3,000 graduates to train between 2009 and 2013) to meet the peak demand forecast of IT offshore operators over this period.

\* See the National Pact of Industrial Emergence; measures 86 & 98

**Initiative 3 : Updating education programs to enhance IT graduates employment**

- The recurrent obligation of IT enterprises to provide training for young graduates represents a significant cost. This results in slowing down the integration of young graduates in professional life.
- Alongside putting in place new governance and regularly updated training programs, it is necessary to improve the employment rate of IT graduates by impacting at two levels:
  - Effective upstream implication of IT professionals in training programs in partnership with the players of higher education;
  - Systematic and significant immersion of IT students within enterprises during their training period.

**Initiative 3 : Updating education programs to enhance IT graduates employment**

**Actions**

**Description**

**40. Develop training initiatives within public-private partnerships**



- Promote and encourage “IT Academy” within the university, in partnership with professionals of the sector, particularly software editors and private operators.
- Provide students, during their curricula, national professional/certified training programs with the least cost credentials. The content of these training programs will be made available by the professionals and trainings are ensured by professors from the IT Academy.

**41. Improve the employment rate of second-cycle university graduates at the end of their training program**



- Reorient, in collaboration with professionals, second-cycle university teaching and curricula to better respond to the needs of enterprises and professionalize training by integrating long-duration training in the curricula (minimum of 6 months) to allow student immersion in the professional world.

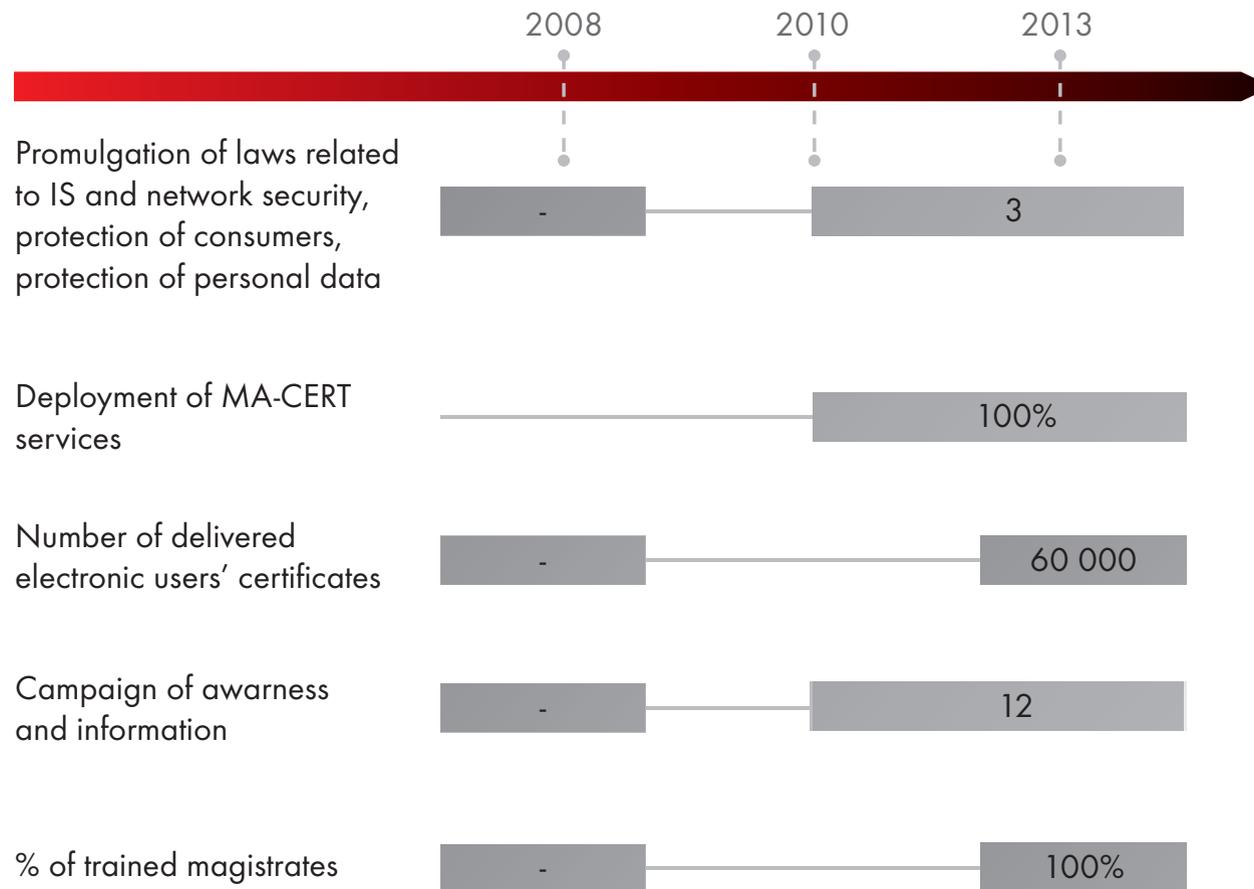
**1- Human Capital**

**2- Digital Confidence**

**Users' lack of confidence in secure electronic exchanges constitutes a major barrier for the development of IT usage**

- E-commerce usage is still under-developed for both individuals and enterprises.
- Enterprises consider that they are not fully informed about existing legal regulations and future legal provisions.
- While pedagogic effort on the theme of digital exchanges are necessary, a limited communication campaign towards both enterprises and individuals hinders the development of IT usage.

**Introduce conditions to raise confidence in e-commerce among individual citizens and enterprises**



**The fulfilment of identified ambitions requires the implementation of 3 key initiatives**

**Initiative 1 : Update and reinforce the legislative framework.**

**Initiative 2 : Put in place appropriate organisational structures.**

**Initiative 3 : Promote and sensitise social operators to information systems security.**

**Initiative 1 : Update and reinforce the legislative framework**

- Ensuring conditions for digital confidence requires the implementation of an appropriate legal and legislative framework that will enhance the confidence of enterprises, administrations, and individual citizens.
- The Moroccan legislative framework must keep the pace of the technological development and users' changes. It should support the development of the digital society and provide greater protection of Moroccan internet users in commercial domains.
- The expansion of e-commerce and electronic services depend on the confidence of individual citizens in the protection of their personal data. The protection of electronic exchanges can be also achieved by developing the services of electronic certification and cryptography.

**Initiative 1 : Update and reinforce the legislative framework**

**Actions**

**Description**

**42. Protect the personal data**



- Equip the Moroccan legislative arsenal with efficient protection tools for individuals with respect to personal data processing, in compliance with the European framework in effect.

**43. Encourage and promote e-commerce development**



- Elaborate the necessary legislative and regulatory texts to protect user online transactions.

**44. Encourage the dematerialisation of electronic transactions**



- Implement Law n° 53-03 related to electronic exchange of legal data.
- Elaborate regulatory texts to facilitate the utilization of encryption means and electronic certification.

**Initiative 2 : Put in place appropriate organisational structures**

- Strengthening e-commerce confidence is a condition upon implementing support mechanisms to assist social operators on issues related to Information Systems Security, mainly for:
  - Entities in charge of offering expertise in the field of Information Systems Security;
  - Entities in charge of guaranteeing the protection of critical information infrastructure;
  - Entities in charge of protecting personal data and setting up a dedicated control body.

**Initiative 2 : Put in place appropriate organisational structures**

**Actions**

**Description**

**45. Set up a committee in charge of Information Systems Security**

- In relation with the National Council of Information Technology and Digital Economy, a committee in charge of Information Systems Security will be set up and will be mainly responsible for elaborating the policy related to the protection of critical information infrastructure in the country.

**46. Put in place MA-CERT**

- Put in place a centre of coordination and response to incidents related to Information Systems Security (ma-CERT) at a national level.
- This centre's main role is to respond to security incidents, coordinate responses at the national level and propose different services related to the handling of these incidents, the analysis of their vulnerability and the restoration of systems under attack.

**47. Set up certification authority**

- Put in place and develop the first service provider of electronic certificates, whose role is to ensure electronic exchanges viability, authentication and data integrity by issuing and delivering electronic certificates.

**Initiative 2 : Put in place appropriate organisational structures****Actions****Description****48. Put in place the National Commission for Data Protection (CNDP)**

- Set up CNDP, to be responsible for informing individual users about their rights and obligations, proposing to the government legislative and regulatory measures for the protection of personal data while taking into consideration technological evolutions, to ensure law enforcement for the protection of personal data.

**49. Develop back-up sites**

- Encourage the development of back-up sites within the framework of public-private partnership, to ensure the sustainability of the kingdom's critical information infrastructure.

**Initiative 3 : Promote and sensitise social operators to information systems security**

- The improvement of the Information Systems Security requires the development of a real culture of security. The awareness of individual citizens, administrations and enterprises to the challenges of Information Systems Security is of a paramount importance.
- In addition to developing a good understanding of Information Systems Security, this awareness program should allow individual citizens to be aware of the measures taken to promote digital confidence.

**Initiative 3 : Promote and sensitise social operators to information systems security**

**Actions**

**Description**

**50. Implement a sensitisation and communication program about ISS**

- Define and launch programs of awareness and communication on the ISS issues for grand public, companies and administrations.

**51. Provide training programs on ISS for engineering students**

- Define and provide training programs on IT and ISS for engineering students, to help them acquire adequate qualifications according to their area of expertise.

**52. Provide training programs for legal professions**

- Provide training to introduce to all magistrates the basic IT and ISS skills.

**53. Design a charter for retail websites**

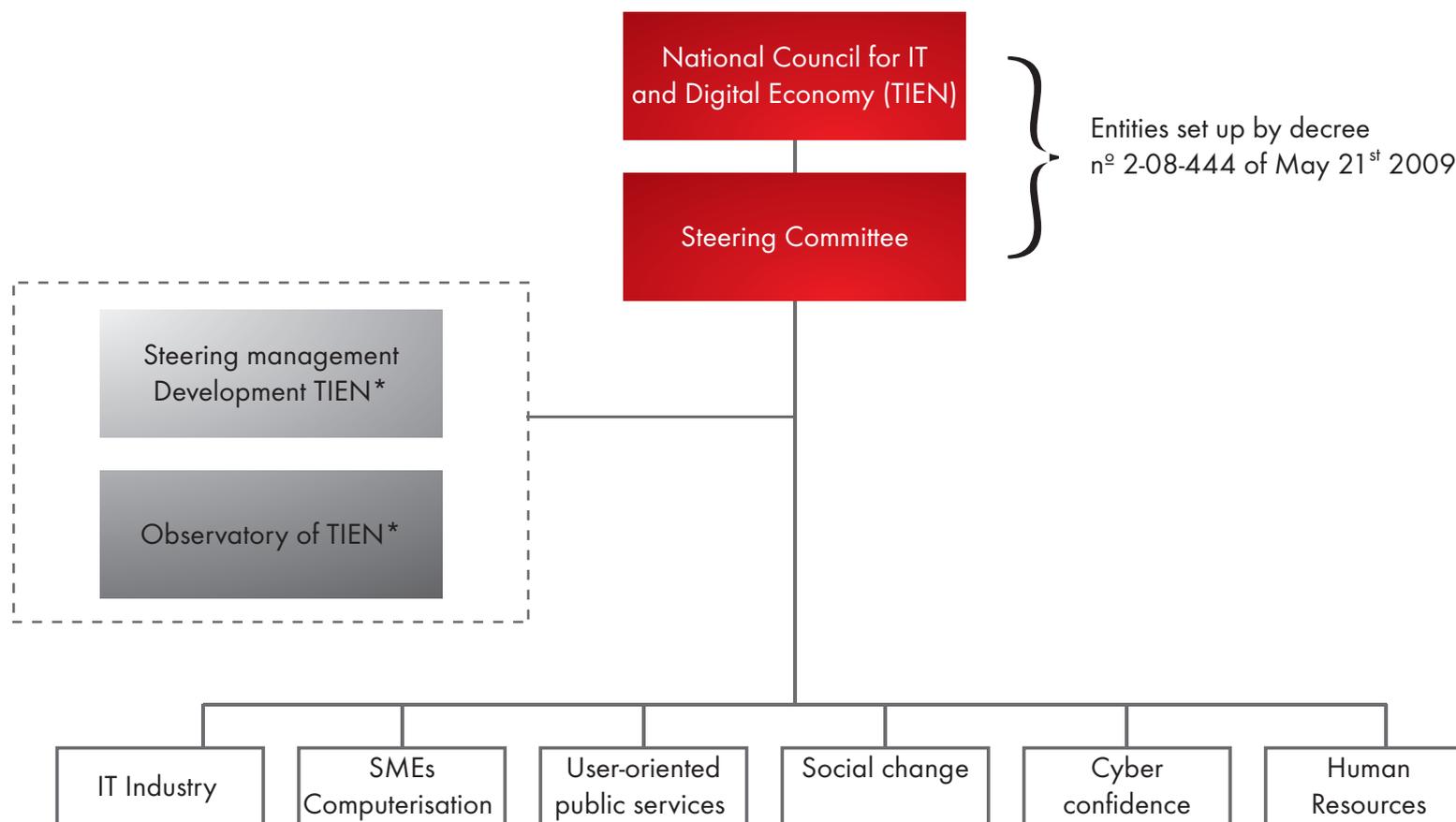
- Boost public confidence in e-commerce by setting up a label of retail websites, in partnership with business federations, and notably the Confederation of Moroccan Companies (CGEM).

# IMPLEMENTATION MODALITIES

**1- Governance**

**2- Budget Allocation**

**Ensure the effective implementation of «Maroc Numeric», such is the objective of setting up an overall governance at the highest level of government**



\* Information Technologies and Digital Economy

**The roles and responsibilities of the different structures have been clearly defined****National Council for IT  
and Digital Economy**

« Impetus »

- Make proposals to the government regarding the broad orientations of a national strategy for the development of new information technologies.
- Propose measures of legislative or regulatory nature designed to contribute to such a development.
- Propose relevant measures to promote the use of new IT in the public and private sectors.
- Coordinate and assess progress made by the implementation of national policies geared towards IT development, and arbitrate possible priority conflicts.
- Make recommendations for the conception, preparation, implementation, and evaluation of actions taken to develop the information society and digital economy.

Interministerial  
entity chaired  
by the Prime  
Minister

**Steering committee  
for IT and Digital  
Economy**

« Set the course and evaluate »

- Set out vision and ambitions
- Define the strategy and the action plan
- Coordinate action plans to be implemented, and arbitrate when necessary.
- Ensure the allocation of relevant means and resources.
- Prepare follow-up and evaluation reports on the progress made with regards to different action plans in order to be submitted to the National Council; redirect programs running into difficulty.
- Make proposals to the National Council regarding measures to be taken to promote and develop new IT.
- Prepare an annual report on CNTI activities and on new IT development in Morocco, to be submitted for the Council's approval and to be presented to the government.

Interministerial  
entity chaired by  
the Minister in  
charge of New  
Technologies

**The roles and responsibilities of the different structures have been clearly defined**

**Steering management  
for TIEN Development**

« Manage overall implementation »

- Prepare IT and digital economy strategy.
- Propose action plan and estimate necessary means.
- Oversee the implementation of set plan.
- Highlight and use inter-project synergies.
- Prepare assessment of achievements.
- Take part in international forums to promote Morocco and attract available funds.

Structure chaired by the Minister in charge of New Technologies or his representative

**National IT  
Observatory**

« Assess »

- Set up dashboards to monitor IT trends in Morocco.
- Assess and account for discrepancies between plans and actual achievements.
- Provide information to focus on measures or recipients of measures likely to optimise results.

Structure chaired by the Minister in charge of New Technologies or his representative

**1- Governance**

**2- Budget Allocation**

**Allocate, over five years, adequate and sufficient financial resources to implement initiatives and measures related to «Maroc Numeric», and to ensure its effective implementation.**

<b>Rubrics</b>	<b>2009-2013 period (in MAD million)</b>
Social change	<b>2 128</b>
User-oriented public service	<b>2 186</b>
SME productivity	<b>320</b>
IT industry	<b>481</b>
Cyber confidence	<b>35</b>
Gouvernance	<b>37</b>
<b>Total</b>	<b>5 187 *</b>

\*Excluding private investment

# SYNTHESIS OF ACTIONS

### Social Change

1. Provide hardware, internet access and multimedia resources to public educational institutions.
2. Provide multimedia resources and internet access to public higher education institutions.
3. Subsidise computer equipment and internet connection for teaching staff.
4. Subsidise mobile computers and internet connection for engineering students or similars.
5. Adopt policies focused on the development of broadband by category of the zone and income levels.
6. Promote low-cost equipment offers.
7. Promote internet access and IT use outside the home by setting up community access centers.
8. Support the development of digital informational content.
9. Support the development of digital entertainment content.
10. Support the development of educational content.

### User-oriented Public services

11. Put in place a governance structure for e-government program.
12. Implement 15 key projects.
13. Implement all e-government projects and services.

### Small and Medium Enterprises Productivity

14. Identify ready-made business solutions for branches with strong GDP potential.
15. Support IT investment by sector based SMEs.
16. Disseminate information on designed sector based offers.
17. Assist SMEs supplying providers of the main contractors that are engaged in dematerialisation projects.
18. Involve main contractors to incite Very Small Enterprises to be equipped.
19. Involve professional associations in SME's endorsement to IT.
20. Train IT correspondents and accounting experts.
21. Initiate SME managers to use IT: the Digital License.
22. Upgrade the legal framework to encourage the use of online services.

## **Information Technology Industry**

23. Implement national governance for innovation.
24. Set up financing solutions for IT actors.
25. Set up regional technoparks.
26. Improve and adapt the legal framework to the specificities of the IT sector.
27. Promote the culture of entrepreneurship and innovation.
28. Set up assistance services for IT enterprises.
29. Set up IT clusters.
30. Put in place a financing scheme designed for activities developed in the clusters.
31. Implement the law related to personal data protection.
32. Sustain the competitiveness of Morocco as offshoring destination.
33. Provide sufficient and quality infrastructure.
34. Meet the needs of qualified human resources.
35. Promote destination of Morocco as a destination to IT companies.
36. Ensure technology watch.

### Human Capital

37. Putting in place a mechanism to manage, follow-up, and assess training plans in the IT sector.
38. Design initiation training programs.
39. Launch an emergency training operation for the IT offshoring sector.
40. Develop training initiatives within public-private partnerships.
41. Improve the employment rate of second-cycle university graduates at the end of their training program.

**Digital Confidence**

- 42. Protect the personal data.
- 43. Encourage and promote e-commerce development.
- 44. Encourage the dematerialisation of electronic transactions.
- 45. Set up a committee in charge of Information Systems Security.
- 46. Put in place MA-CERT.
- 47. Set up certification authority.
- 48. Put in place the National Commission for Data Protection (CNDP).
- 49. Develop back-up sites.
- 50. Implement a sensitisation and communication program about ISS.
- 51. Provide training programs on ISS for engineering students.
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- 53. Design a charter for retail websites.





Kingdom of Morocco  
Ministry of Industry, Trade  
and New Technologies

