





MOSAIC

MOSAIC

Cooperation with Mediterranean Partners to build Opportunities around ICT and Societal And Industrial Challenges of Horizon 2020

Deliverable Title	D2.1 - Set of country reports highlighting major findings and relevant aspects towards the (Maghreb and Mashriq countries) highlighting major findings and relevant aspects towards the establishment of a MED-TP in each region – EGYPT
Deliverable Lead:	UM5A
Related Work package:	WP2
Author(s):	MOSAIC partners
Dissemination level:	PU
Due submission date:	30/09/2014
Actual submission:	20/01/2015
Version	1.0
Project Number	612076
Instrument:	Coordination and Support Action (CSA)
Start date of Project:	01/01/2014
Duration:	24 months
Project coordinator:	Universidad Autónoma de Barcelona (UAB)

Abstract	This document is the analysis of the ICT sector for Egypt.
-----------------	--

 	<i>MOSAIC is funded by the European Commission under the "Information & Communication Technologies" Theme of the 7th Framework Programme for Research and Technological Development.</i>
---	--

Disclaimer

This document has been produced in the context of the MOSAIC Project, which has received funding from the European Community's Seventh Framework Programme ([FP7/2007-2013] under grant agreement n° 612076.

The authors of this document have taken any available measure in order for its content to be consistent and lawful. However, neither the project consortium as a whole nor the individual partners that implicitly or explicitly participated in the creation and publication of this document hold any responsibility for actions that might occur as a result of using its content. The information in this document is subject to change without notice. Company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies. All rights reserved.

The document is proprietary of the MOSAIC consortium members. No copying or distributing, in any form or by any means, is allowed without the prior written agreement of the owner of the property rights. All information in this document is provided 'as is' and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability. This document reflects only the authors' view. For the avoidance of all doubts, the European Commission has no liability in respect of this document, which is merely representing the authors view.

All MOSAIC consortium parties have agreed to full publication of this document.

Versioning and Contribution History

Version	Date	Modification reason	Modified by
v.0.1	07/11/2014	First version	Bassem Amin Abdullah (TIEC)
v.0.2	19/01/2015	Second version	Rasha Yehia Tantawy, Bassem Amin Abdullah (TIEC)
v.1.0	20/01/2015	Final version	Rasha Yehia Tantawy, Bassem Amin Abdullah (TIEC)

Table of Contents

Section 1 - Introduction..... 5

 1.1 Purpose 5

 1.2 Scope of the document 5

 1.3 Structure of the document..... 5

Section 2 - Egypt 6

 2.1 Situation for ICT..... 6

 2.1.1 General overview 6

 2.1.2 Situation of research and innovation 6

 2.1.3 Situation of industry and academia 7

 2.2 Sectorial analysis and indicators..... 8

 2.2.1 Software & Services..... 8

 2.2.2 Electronics Media and Contents 10

 2.2.3 Telecommunications 11

 2.2.4 High Performance Computing 12

 2.2.5 Smart System integration..... 13

 2.2.6 Embedded Intelligence and Systems 14

 2.2.7 ICT for Transport..... 15

 2.2.7.1 ICT for Logistics 15

 2.2.7.2 ICT for Road..... 16

 2.2.7.3 ICT for Rail 17

 2.2.7.4 ICT for Aviation 18

 2.2.8 ICT for Environment..... 19

 2.2.8.1 ICT for Water Supply and Sanitation 19

 2.2.9 ICT for Food and Plants..... 20

 2.2.10 Industrial Biotechnology Platform 21

 2.2.11 ICT for Energy 22

 2.2.12 ICT for Health..... 23

 2.3 List of contributors 24

Section 3 - Conclusions..... 26

Section 4 - References 27

Annex I - Acronyms..... 28

Section 1 - Introduction

1.1 Purpose

This document compiles the analysis of the ICT sector in Egypt.

The objective is to identify in Egypt the critical mass per specific Information and Communication Technology where it is suitable to create Working Groups within the future Technology Platform of Mashriq.

1.2 Scope of the document

This document is produced as part of WP2 - Information and data intelligence analysis and identification of MED key stakeholders.

This document is produced as an outcome of:

- Task 2.1 Definition of methodology for the study and interviews
- Task 2.2 Collection of country information and analysis of collected data
- Task 2.3 Consolidation and harmonisation of the analysis

1.3 Structure of the document

The document is structured as follows:

- Overview of the ICT Sector in the country.
- Analysis per Technologies following the ETP model.
- List of contributors / stakeholders.

Section 2 - Egypt

2.1 Situation for ICT

2.1.1 General overview

ICT in Egypt is one of the fastest growing economic sectors as it contributed with about 0.5% to 7% of GDP in the fourth quarter of 2007–2008 (MCIT, Oct., 2008). The Egyptian government has stated the development of the IT industry as a national priority, and both public and private sectors are keen to engage in this area. The government has launched few initiatives to establish the required infrastructure and environment to stimulate growth. This includes enhancing the telecommunication backbone, Internet services and wireless local loop, and smart village (NZTE, 2006). The quantitative targets for MCIT are shown in Fig. 1 (MCIT Egypt 's ICT 2020 Strategy).

	2013/2014	2020/2021
ICT GDP	EGP 58,3 Bn	EGP 195 Bn
Contribution to GDP	3.8 %	8.43 %
Growth Rate	10 %	16 %
Job Opportunities (Direct/ Indirect)	15/ 45K	250/ 750 K
ICT Services Exports (O&O)	EGP 11 Bn	EGP 23 Bn
Electronics Industry	EGP 14 Bn	EGP 70 Bn
Broadband Penetration (Fixed)	13.95%	40%
Broadband Penetration (USB)	4.49%	15%
Broadband Penetration (Mobile)	22.61%	44.4%

Figure 1 Egypt's ICT sector quantitative targets (MCIT Egypt 's ICT 2020 Strategy)

2.1.2 Situation of research and innovation

Among MCIT achievements are encouraging Open Source and mApps technologies, with EGP 70 Mn budget and 549 SMEs involved in this initiative, Cloud Computing Center with EGP 25 Mn budget, training university students & graduates according to the market needs, and establishing a complete ecosystem for innovation and entrepreneurship supporting and assisting in creating 81 companies (MCIT Egypt 's ICT 2020 Strategy).

Moreover, Egypt has been adapting its legal and regulatory systems to accommodate trademark, patent, and intellectual property rights (IPR) protection. Figure 2 shows status of Egypt among

Arab States on Intellectual Property Rights. Furthermore, Egypt has enacted Patent and Industrial Models Act in 1949, Trademark Act in 1969, and Copyright Act in 1992 (M. E. Coury,2002).

	WIPO Treaties									
	WTO Member	Paris Convention	WCT	PCT	Madrid Agreement	Hague Agreement	TLT	PLT	Nairobi Treaty	TRIPS
Gulf										
Kuwait	✓	×	✓ (1998)	×	×	×	×	×	×	✓ (1995)
Saudi Arabia	×	×	✓ (1982)	×	×	×	×	×	×	×
Bahrain	✓	✓ (1997)	×	×	×	×	×	×	×	✓ (1995)
Qatar	✓	✓ (2000)	✓ (1976)	×	×	×	×	×	✓ (1983)	×
U.A.E.	✓	✓ (1996)	✓ (1974)	✓ (1999)	×	×	×	✓ (1999)	×	✓ (1996)
Oman	✓	✓ (1999)	×	✓ (2001)	×	×	×	×	✓ (1986)	✓ (2000)
Levant										
Lebanon	×	✓ (1924)	✓ (1986)	×	✓ (1924)	×	×	✓ (2000)	×	×
Syrian AR	×	✓ (1924)	×	×	✓ (1924)	×	×	×	✓ (1984)	×
Jordan	✓	✓ (1972)	✓ (1972)	×	×	×	×	×	×	✓ (2000)
Egypt	✓	✓ (1951)	×	×	✓ (1952)	✓ (1975)	✓ (1999)	×	✓ (1982)	✓ (1995)
Maghreb										
Tunisia	✓	✓ (1984)	×	×	✓ (1982)	✓ (1930)	×	×	✓ (1983)	✓ (1995)
Algeria	×	✓ (1966)	✓ (1975)	✓ (2000)	✓ (1972)	×	×	✓ (2000)	✓ (1984)	×
Morocco	✓	✓ (1917)	✓ (1971)	✓ (1999)	✓ (1917)	✓ (1930)	×	×	✓ (1993)	✓ (1995)

Figure 2 Status of Egypt among Arab States on Intellectual Property Rights(M.E. Coury,2002)

A challenge for the ICT market in Egypt, as well as for all low income countries is to preserve the ICT skilled personnel who can usually earn much higher wages in other countries (N. El-Demery,2009). In July 2008, the proportion of faculties/institutes at the university education level with communication specialty was 9.6% of public education (Egypt ICT Indicators Portal), 4.7% of Azhar University and 11% of private education. As for IT specialty, it constitutes 14.4% of public education, 6.3% of Azhar University and 42.7% of private education. These percentages are high enough to cover the market needs in terms of quantity. ICT’s expenditures represent 6% of GDP(Egypt ICT Indicators Portal). However, in most cases, graduates, once entering the employment market, they face the inadequacy between what they have learned academically and the tools that the professional life requires.

There is an initiative to create centers of excellence according to which, each center is created in the form of a consortium consisting of leading industrial organizations, Egyptian expatriates and both public and private sector entities, in collaboration with Egyptian universities and research institutions (N. El-Demery,2009). Three centers are being established in the following areas: data mining and computer modeling; wireless technologies; mobile and e-service and electronic design. In 2006, Nile University was established dedicated to excellence in technology and related fields. In 2003, the ‘Smart Village Pyramids’ project was founded. It is a high-tech business park that has attracted big local and international companies. In 2001, the Software Engineering Competence Center which is the first center of its kind in the Middle East and Africa was established aiming to promote and support the development of the local software industry.

2.1.3 Situation of industry and academia

The main pillars for the MCIT strategy are shown in Fig. 3 (MCIT Egypt ‘s ICT 2020 Strategy).

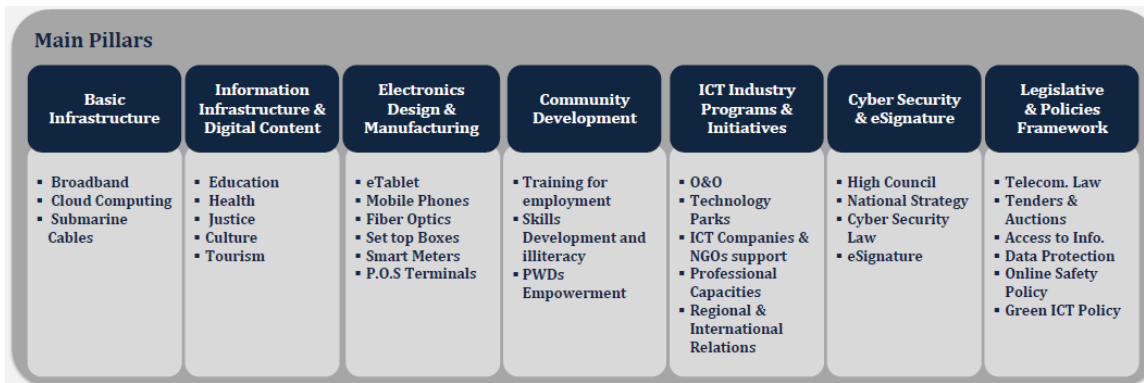


Figure 3 MCIT 2020 ICT strategy main pillars

SMEs represent about 92.7% of private-sector businesses in Egypt (MCIT year book 2007). The Information Technology Industry Development Agency' (ITIDA) was established to support the Egyptian ICT industry and exports. An A.T. Kearney study (2005) focusing on service offshore business in Egypt shows that from a financial perspective, including office renting costs, Egypt is an attractive location for foreign companies. When taking into account the spending on specialized personnel, infrastructure costs and tax regulations, A.T. Kearney ranked Egypt among the top five most financially attractive offshore locations, before countries such as Indonesia, India, Thailand and China.

2.2 Sectorial analysis and indicators

2.2.1 Software & Services

According to IDC, Egypt's packaged software market in 2005 is estimated to be \$131.95 million, which is considered to be the highest ration of software to total IT market size in the Middle East. Egypt's software exports are estimated to be \$66 million, based on a survey of major software companies by American Chamber of Commerce. Around 40% of the exports of these companies are directed toward North America, 28% toward the Middle East, 19% to Europe, and 8.3% to Africa. The Egyptian software sector is mostly focused on customizing existing software for specific businesses (e.g. providing the service of customizing banking or human resource applications) (United Nations Human Rights Reporting Program). Egypt's competitive edge lies in labour-intensive services as opposed to one-time products (AmCham 2007).

N°	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
N°	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium High
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Medium
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
N°	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	High
15	Researchers operating in the targeted field	AC-02 (1-5)	High
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
N°	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.2 Electronics Media and Contents

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	High
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.3 Telecommunications

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Medium
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Medium Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.4 High Performance Computing

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.5 Smart System integration

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.6 Embedded Intelligence and Systems

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	High
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium High
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.7 ICT for Transport

2.2.7.1 ICT for Logistics

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.7.2 ICT for Road

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.7.3 ICT for Rail

N°	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
N°	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
N°	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
N°	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.7.4 ICT for Aviation

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.8 ICT for Environment

2.2.8.1 ICT for Water Supply and Sanitation

N°	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
N°	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
N°	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
N°	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Medium Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.9 ICT for Food and Plants

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Medium Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.10 Industrial Biotechnology Platform

N°	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
N°	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
N°	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
N°	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Medium Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.11 ICT for Energy

Nº	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
Nº	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
Nº	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium
15	Researchers operating in the targeted field	AC-02 (1-5)	Medium Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
Nº	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Medium Low
21	Innovation policy and/or initiative	GE-02	Yes

2.2.12 ICT for Health

N°	Indicator - Political Support	Indicator	Results
1	National or State Policies	PO-01	Is foreseen
2	Funding mechanisms to support ICT research	PO-02	Yes
3	Future Plans, Priorities and Strategies in ICT R&D	PO-03	Yes
4	Support to MED-TPs	PO-04	Yes
N°	Indicator - Industrial support	Indicator	Results
5	Presence of Large ICT Industry doing Research and Innovation	IN-01 (1-5)	Medium Low
6	Presence of Research and Innovation Intensive SMEs	IN-02 (1-5)	Low
7	Involvement in European funded projects	IN-03 (1-5)	Low
8	Independence of local industry	IN-04	No
9	Foreign Direct Investment (FDI) and presence of development centres	IN-05 (1-5)	Medium
10	Market Demand	IN-06	Is foreseen
11	Number of Patents	IN-07 (1-5)	Low
12	Support to MED-TPs	IN-08	Yes
13	Already existing commercial cooperation with European industries	IN-09 (1-5)	Medium Low
N°	Indicator - Academic support	Indicator	Results
14	Number of Universities, Research Centres and Higher Education Institutions	AC-01 (1-5)	Medium Low
15	Researchers operating in the targeted field	AC-02 (1-5)	Low
16	Number of yearly scientific publications	AC-03 (1-5)	Medium Low
17	Previous participations in FP6-FP7 R&D projects in the ICT priority	AC-04 (1-5)	Low
18	Existing cooperation with EU countries	AC-05	Yes
19	Support to MED-TPs	AC-06	Yes
N°	Indicator - General	Indicator	Results
20	Previous participations in FP6-FP7 R&D projects in the ICT priority	GE-01 (1-5)	Low
21	Innovation policy and/or initiative	GE-02	Yes

2.3 List of contributors

The following table compiles the list of contributors to the analysis (data collected by interviews or by email campaign).

No.	Name	Organization	Type
1	Karim Ghoneim	KMG	Large Industry
2	Mohamed Bakry	Brilliance Tech	Large Industry
3	Mohmed Dessouki	Innovtive Digital Solutions	Large Industry
4	Ehab Nafei	Engaz For Integrated Solutions	Large Industry
5	Ayman Rashed	IT-Blocks Professional Software Services	Large Industry
6	Ahmed Kamal	Cloud Niners	SME
7	Hassan El-Meligy	Cequens	SME
8	ayman esmat	tebas	SME
9	Mohamed Gad	Alpha Misr Information Systems	SME
10	Mrs. Reem Essam	Amadeus Egypt	SME
11	Mr. Hashem Mohamed	AVIT	SME
12	Eng. Heba Farag	Com Stream	SME
13	Muhammad Abdullah	Exon IT	SME
14	Mr. Ahmed Farrag	Fifth Dimension	SME
15	waseem mahmoud	Fox Media Production	SME
16	Dr. Amr Rifai	Future Communication Systems	SME
17	Mrs. Hala Ahmed Talaat	Future Business Information Technology	SME
18	Ms. Magda Hasan	Future Information Technology	SME
19	Mr. Mahmoud Abdul latif	Future Systems	SME
20	Dr. Hafez Fouad	AinArabia	SME
21	Maha Mohamed Kamal	Edge-pro	SME
22	Mohamed Hamdy Ahmed	E-Motion	SME
23	Wael Khalifa	NRG Solutions	SME
24	Ahmad Elkaragy	IRWAA for Software & IT, LLC	SME
25	Amgad Morgan	NetCare	SME
26	Heba Mushtaha	Esri Northeast Africa	SME
27	Aleya Serageldin	Nile University	Academia
28	Samar El tanbouly	Faculty of commerce, damanhour Univeristy	Academia
29	Abdelrahman Yasser Hosni	Alexandria Univeristy	Academia
30	Mohamed Dawoud	Ainshams Univeristy	Academia
31	Dr.Amr Ali-EIDin	Mansoura Univristy	Academia
32	Hazem Said	Ainshams Univeristy	Academia
33	Mohamed Aouf	Cairo International Academy	Academia
34	amr mohamed	Tanta Univeristy	Academia
35	Aiman Badawi	KACST - King Abduelaziz Univeristy	Academia
36	Howaida Ahmed shedeed	Ainshams Univeristy	Academia
37	Nagwa Alfy Badr	Ainshams Univeristy	Academia

38	Menna elbadawy	Ainshams Univeristy	Academia
39	Aliaa Yousef	Helwan Univeristy	Academia
40	mohamed hassaballah	south valley univeristy	Academia
41	Islam Elmaddah	Ainshams Univeristy	Academia
42	Emad Hegazy	Ainshams Univeristy	Academia
43	Mohamed Elmagy	Mansoura Univeristy	Academia

(*) Industry (large), Industry (SME), Academic, Government

Section 3 - Conclusions

As a key player in Egypt's economy with high contribution to its growth, ICT sector in Egypt has the potential to become a basis for cooperation with European ICT industry opening opportunities for investment in a wide range of ICT fields in different private and governmental organizations and research institutes.

Technology platforms are essential for linking large industry, SMEs, universities, and research institutes with the purpose of exploiting available resources to support the ICT industry, increase competitiveness, and stimulate growth in addition to creating entities for collaboration with European technology platforms.

In particular, SMEs play an important role in ICT industry in Egypt with Software industry highly contributing to its growth. Furthermore, as the government has launched initiatives to boom the IT industry in Egypt such as broadband internet and as it has encouraged training and research in areas such as cloud computing, open source, and mobile applications, in addition to providing an innovation culture as can be seen from enhancing IPR, further growth is expected for ICT industry in Egypt.

Hereafter are the fields where there is critical mass in Egypt to bring to a Working Group in the future Technology Platform of Mashriq:

- Software & Services
- Electronics Media and Contents
- Telecommunications
- High Performance Computing
- Embedded Intelligence and Systems
- ICT for Transport

Section 4 - References

- [1] NZTE. 2006. Egypt, country brief. Available at <http://www.marketnewzealand.com/common/files/egypt-cb.pdf>
- [2] Mazen E. Coury, Soumitra Dutta, "ICT Challenges for the Arab World", 2002.
- [3] El Demery, Noha, "ICT Diffusion in Egypt: Market Dynamism and Public Policies," 2009.
- [4] American Chamber of Commerce in Egypt, official website, www.amcham.org.eg
- [5] MCIT Yearbook 2007, Egyptian Ministry of Communication and Information Technology, official website, www.mcit.gov.eg.

Annex I - Acronyms

Term / expression	Description
ETP	European Technology Platform
ICT	Information and Communication Technology
LatAm	Latin America
LATP	Latin America Technology Platform
SRIA	Strategic Research and Innovation Agenda
TP	Technology Platform