

WSIS NATIONAL COMMITTEE

10 YEAR REPORT

2013 - 2014















tra.gov.ae F +971 2 611 8229 T +971 2 626 9999 PO Box 26662, Abu Dhabi, United Arab Emirates



TRA Chairman message	 (
WSIS Chairman message	 8

SECTION I EXECUTIVE SUMMARY

•	About the UAE	1
•	About the TRA	1
•	The 2014 report	1
•	Millennium Development Goals	
	implementation	1.
•	ICT surveys in the UAE	1
•	Transparent decision making	2
•	Trends in ICT awards	2
•	GCC E-Government award	2
•	The UAE & international ICT events	2
•	Dubai EXPO 2020	2

SECTION II REPORTING ON EACH

A(CTION LINE	
,	mGovernment	30
,	Dubai Smart City	31
,	WAAS	32
,	Ankabut	33
,	Semi-Autonomous Mobile Robotic	
	System	33
,	Amakin	34
,	UAE National Observatory	34
,	Ayaadi Electronic Library	35
,	Smart Learning	36
,	Direct Alarm System	37
,	Smart Passenger	37
,	Cyber C3 Program	38
,	IPv6 Strategy Project	39
,	UAEIX	40
•	Smart Investor	41
•	eGovernment: My e-Identity	42

•	eEmployment: PWD Employment	
	(El Kayt)	43
•	eScience: Think Science Program	44
•	eBusiness: eMart	44
•	eBusiness: Tejuri	45
•	eEnvironment: Hadreen	
	Campaign- Green Bill	46
•	eHealth: Malaffi	47
•	eHealth: Weqaya Disease	
	Management Program	48
•	eHealth: Schools for Health	48
•	eHealth: Sheryan	49
•	eLearning: e-Citizen Program	50
•	eLearning: Duroosi	50
•	Re Captcha	51
•	Kalima Project for Translation	51
•	IN5 Innovation Hub	52
•	Cloud Campus	52
•	Abu Dhabi City Guard	53
•	Child Protection Center	54
•	Strengthen the collaboration on	
	Telecommunications and ICT	55
CI	ECTION III Profiles of Progress	

SECTION III Profiles of Progress

MGovernment	56
Smart Learning	60
ICT Fund	62
UAEIX	63

SECTION IV THE UAE FORWARD AND	
THE VISION BEYOND 2015	65







H.E. Mohamad Ahmad Al-Qamzi Chairman, TRA Board of Directors

In what will be the one of the world's largest gathering of the ICT for development community, the WSIS+10 High-Level Event represents a key milestone for us all. Ten years after the first Summit took place in Geneva, the importance of information and communication technologies (ICT) has reached a level higher than ever before.

At each and every juncture the truth remains that ICTs continue to occupy a position right at the top of national agendas. With that in mind, it is the responsibility of all ITU Member States to ensure that this continues to be the case up until and long after 2015.

Casting our eyes back over the past decade, without question a great deal of progress has been achieved. Targets have been met, considered commitments have been made and perhaps above all, the spirit of collective action which has come to characterize the World Summit on the Information Society (WSIS) has been evidenced throughout.

The amount of people using the Internet is rising and thus access to vital information and knowledge has been extended even more so. This is welcome progress of course yet, there is still much to be done.

Before we take further steps forward, it is wise to review and conceptualize our journey to date. This is precisely the purpose of WSIS+10 High-Level Event coupled with the intention of developing proposals for a new vision beyond 2015.

As a long and active Member State of ITU, the United Arab Emirates (UAE) has too experienced a remarkable ten years of ICT sector growth. The UAE has continued to investigate and implement innovative ways to harness the transformative power of ICTs in order to move both itself and the world more generally, one step closer to the full implementation of the Information Society.

With that being said however, the UAE is also acutely aware of the need to not be content with the successes achieved to date. The UAE fully endorses the notion that it, alongside all everyone associated with WSIS, must strive forward with a concerted and ambitious agenda of change through modern technology.

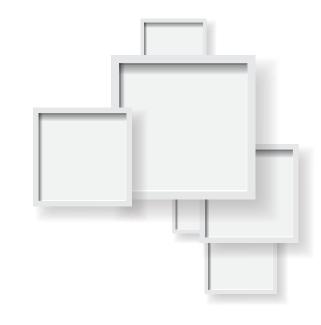
It is only by working collectively that we can solve the ICT problems that persist, the digital divide being a case in point.

Positively though, the digital revolution is still in full swing and continues to serve as an instrument to promote equality and foster inclusion. The UAE is committed to carrying this momentum forward.

So too is it committed to working with all relevant stakeholders from government, civil society and the private sector to ensure the maximum efficacy of our combined efforts to achieve the Millennium Development Goals by the fast approaching 2015 deadline.

The creation of an ambitious and inspiring post-2015 development agenda is the key priority as it stands as we look to make further headway in the quest to utilize ICT for sustainable development which is essentially, the overarching global challenge of our time.

WSIS has a track record of consistently delivering on its objectives, targets and commitments and there is no reason to think that this event will be no doubt follow suit.











H.E Mohammed Nasir Al Ghanim WSIS Committee Chairman

It is remarkable to think that over ten years have passed since the first phase of World Summit on the Information Society (WSIS) took place in Geneva in 2003. Phase two followed two years later in Tunis and both events, were designed specifically to establish a clear, ambitious and inclusive plan to enable a global information society in an increasingly technology driven world.

By any measure this goal has been accomplished as evidenced by the sheer number of promising case studies and ICT success stories emerging from each and every ITU member state over the past decade.

Under the guidance of WSIS initiatives, technology has developed at breakneck speed across the globe.

Above all, the benefits associated to the organic creation of a fully-fledged information society have been experienced by a greater number than ever before and this reality adds significance to our ultimate mission as active ITU member states.

And the United Arab Emirates (UAE) can proudly count itself within that number. Over the past ten years the nation has witnessed a sustained period of progressive industry growth which has seen the nation's ICT sector truly go from strength to strength. The resolute national commitment to realizing the vision of WSIS and striving towards the ultimate goal of extending the benefits of ICT has of course helped. However, so too has the strength of the nation's ICT regulator, the Telecommunications Regulatory Authority and the national goals issued

by the Leadership to pursue the development of ICT as a national priority. Coincidently so, 2013 also represented a significant year for the UAE TRA as in June of that year, the Authority celebrated its ten year anniversary. Much of its achievements to date directly correspond to the measures mandated in the WSIS outcomes and this close alignment in working streams has been mutually beneficial for both the UAE and the international ICT community.

Contained within the pages of this 'Country Report' is a wealth of information that outlines, in detail, the activities that took place in the UAE over the last ten years that not only meet but exceeds the requirements of WSIS action lines.

Being named 'Strategic Partner' for the WSIS Forum 2011 and 2012 is one such example as this gave the UAE a great opportunity to lead by example and encourage the wider region to buy into this technology centered global vision.

The past ten years will prove to be a defining period for the entire UAE ICT sector. From increasing competition in the market to launching the UAE national domain name (.ae), to preparing all government departments for Internet Protocol version 6 (IPv6) to launching the UAE mGovernment Initiative, this time will truly be a defining period for the entire UAE ICT sector.

Of course, the road that leads to improved technology infrastructure and an enhanced level of service for all who depend on ICT, is not always a

smooth one. Yet, with the unwavering support of WSIS alongside the international cooperation and knowledge transfer of its member states, the future of the UAE's association with WSIS and in turn ITU, is very promising.

Critically, the opinion that there is still a lot of work to do in extending the benefits of ICT even further is one shared by WSIS and its members. Promisingly so, the WSIS program looks beyond what has already been accomplished so far and with one foot firmly planted in today, has its eye cast on the possibilities of tomorrow.

The UAE National Committee will have the responsibility to coordinate the work for the future full assessment in 2015 by ITU and is working tirelessly towards that end. As the UAE continues to participate in WSIS related activities, we look forward to other key events that will help us work on advancing the information and communications technology sector in the country.





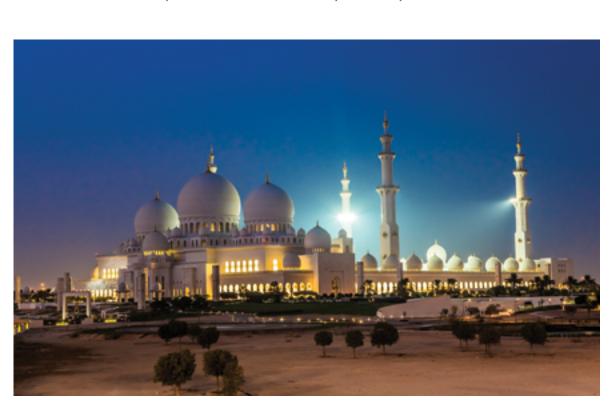
ABOUT THE UAE

During the past 42 years, the United Arab Emirates (UAE) has experienced growth in its vast sectors while attracting highly-skilled professionals from all around the world. Throughout the period, leadership in the UAE have focused on education as the solid foundation of the nation. With time, this has materialized into attracting several educational institutes to the UAE that has ensured that the country is a true international education hub.

The UAE is situated in Southwest Asia, bordering the Gulf of Oman and the Arabian Gulf, between Oman and Saudi Arabia; it is in a strategic location along southern approaches to the Strait of Hormuz, a vital transit point for world crude

oil. The total land area of the UAE is 83,600 km2. the largest emirate, Abu Dhabi, accounts for 87% of the UAE's total area. The UAE coast stretches for more than 650 km along the southern shore of the Arabian Gulf.

The UAE gained its independence in December 2, 1971, allowing all seven emirates to unit in the nation's formation. On that date, late president H.H Sheikh Zayed Bin Sultan Al Nahyan led the treaty and the signing of the constitution at the Dubai Guesthouse Palace. The UAE is a federation of absolute hereditary monarchies. It is governed by a Federal Supreme Council made up of the seven emirates Abu Dhabi, Dubai, Ajman, Fujairah, Sharjah, Ras al-Khaimah and Umm al-



Qaiwain In November 2004 and in accordance with the constitution, the UAE's Supreme Council of Rulers elected H.H Sheikh Khalifa Bin Zayed Al Nahyan President of the UAE.

Leaders of the UAE always shared a united a vision: develop the nation through knowledge and becoming an ideal example of development and growth. It consists of primary schools, middle schools and high schools. The public schools are government-funded and the curriculum is created to match the UAE's development goals and values. The medium of instruction in the public school is Arabic with emphasis on English as a second language. The literacy rate in 2007 was

91%. Currently there are thousands of nationals pursuing formal learning at 86 adult education centers spread across the country.

The UAE has accomplished several milestones throughout year 2013 that aim at fulfilling the action lines set by the WSIS. Several recommendations were implemented into policies, projects and new services that have created an atmosphere of strategic development in all sectors. Through the collaborative efforts of government authorities, the launch of mobile government in the UAE in 2013 is set to sigbificantly impact ICT trends in the country.











About the TRA

WSIS National Committee

The TRA was established according to the UAE Federal Law by Decree No. 3 of 2003- Telecom Law. The TRA aims to provide an optimal enabling environment in which the UAE's ICT sector will emerge as a leader in the global market place. This is accomplished through the support of the UAE ICT sector by safeguarding competition, to protect the interests of subscribers, to enhance the readiness of e-services, to encourage investment, innovation, development and education, to meet our corporate social responsibility and to implement best practices in regulation and supervision.

The National WSIS Committee has been established by Cabinet resolution number (28) of 2009 in order to follow up on the implementation of the WSIS recommendations and action lines. The National WSIS Committee is chaired by the Director General of the Telecommunication Regulatory Authority and has members from the Ministry of Foreign Affairs and The UAE Competitiveness Council. www.wsis.ae is the official committee portal which publishes the committee information and activities and reports.



The 2014 report

The fourth edition of the report will provide a comprehensive look into several initiatives all designed to accomplish the targets set by the WSIS.

.

This year's major accomplishment is highlighted by the role of government and its stakeholders that have collaborated under the vision of H.H Sheikh Mohammad bin Rashid Al Maktoum, Ruler of Dubai and Vice President of the UAE, titled the "UAE mGovernment". This subject will be explored further in the case study section of the report.

QUICK TOUR ON THE REPORT

The report outlines the UAE's recent accomplishments, both past and present, from an ICT perspective.. The chapter on 'MDG Implementation' summarizes the level of which each target line has been met from a national level. The report will also cover the latest ICT survey results conducted at a national level while considering the targets set by the WSIS.

Trends in ICT Awards encompass the newest ICT awards that encourage all sectors in UAE to develop their solutions to better serve public interest. Additionally, transparency in decision making from the UAE perspective is discussed that enables everyone from an enterprise to an individual level to share opinion and contribute to the enhancement of government policies and procedures. The report also features the most recent accomplishment of the UAE, that being, Dubai winning the host city status of the six month Expo 2020 exhibiton which will attract over 190 countries.

The report provides insight into two major components, the first component being the various

initiatives categorized as per the WSIS action lines and the second being the selected 'Case Studies' which provide comprehensive profiles on unique national initiatives.

There are 18 action lines as a result of the WSIS process. UAE initiatives were collected, analyzed and categorized according to the WSIS action action lines through a consistent dialect.

The categorized initiatives follow the listed classification:

- The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- Information and communication infrastructure
- Access to information and knowledge
- Capacity building
- Building confidence and security in the use of ICTs
- Enabling environment
- ICT Applications
- e-government
- e-business
- e-learning
- e-health
- e-employment
- e-environment
- e-agriculture
- e-science
- Cultural diversity and identity, linguistic diversity and local content
- Media
- Ethical dimensions of the Information Society
- International and regional cooperation







Millennium Development Goals implementation

United Arab Emirates National Bureau of Statistics

The United Arab Emirates (UAE) accomplishments during 2013 in the ICT developments have been consistent with the Millennium Development Goals (MDGs) set by the United Nations. The below information is based on the 2011 MDG Report conducted by the UAE National Bureau of Statistics in association with the United Nations Development Program.

The UAE is well on its way to achieve the MDGs by 2015. Enrolment rate in primary education is 98 per cent and the literacy rate among 15-24 year olds is 99 per cent. The number of females in tertiary education is double the number of males. Child mortality is 10.6 per 1,000 births and HIV/ AIDS prevalence rate is less than 0.2 per cent. The country is a WTO member and is engaged currently in bilateral trade negotiations with a number of countries (USA, China and EU). The UAE, however, is under growing pressure to maintain its competitive position and achieve advanced international standards in areas such as public management, legislation, corporate governance, and social welfare.

ERADICATE EXTREME POVERTY AND HUNGER

Citizens and residents of the UAE earn average incomes above the world poverty line of \$1.25 per day. Throughout the past couple of decades the UAE has experienced one of the highest growths and economic prosperity. Between 1990 and 2010 the year-on-year growth increase in income was 4.7% per year reaching AED 132,300 per capita in 2010 whereas similarly private consumption increased at an annual average growth of 10.1% to AED 78,000 in 2010.

UNIVERSAL PRIMARY EDUCATION

The UAE has accomplished the targets set by the



MDGs whereas during the past couple of decades primary education at the elementary level has increased from 95.5% in 1990 to approximately 99.5% in 2010. Due to the formation of policies, the statistics also provides the growth of infrastructure, education services, and numbers of students and graduates, as well as enforcing mandatory education till grade 9 of primary schooling.

PROMOTE GENDER EQUALITY AND EMPOWER WOMEN

The unique case of the UAE is that the ratio of literate females to males is great than 1 at the ages of 15 to 24 year old age group. The sustainable and inclusive policies that aim at equal participation between all members of society such as encouraging women education has enabled the government of the UAE to allocate resources towards empowering women and hence women's accessibility to information in various educational fields.

REDUCE CHILD MORTALITY

The government of the UAE has adopted programs over the past years that have strengthened the level of healthcare and its advocacy amongst the communities in the UAE whereas pediatric healthcare is provided to all segments of the population at world-class healthcare facilities.

National Bureau of Statistics The Millennium **Development Goals** United Arab Emirates (UAE)

IMPROVE MATERNAL HEALTH

The aim of this target is to reduce maternal mortality caused by pregnancy complications to zero. The UAE has experience no mortality cases ever since 2004 due to the supervision of medical specialists in the field of delivering newborns. This was also due to the development of scientific programs by health authorities that enhanced understanding of techniques of maintaining pregnancies in all its phases, henceforth, the UAE has one of the lowest maternal health in the world.

COMBAT HIV/AIDS, MALARIA AND OTHER CONTAGIOUS DISEASES

The UAE does not consider HIV/AIDS as a national problem due to the preventive measures that it takes into containing the disease prior to its spread. This is accomplished through the laws that have been set through the immigration authorities that provide residencies for foreigners whereas a health exam against the disease is checked prior to issuing a residency permit. As for tuberculosis (TB) the mortality caused by the disease has decreased from 0.60 cases per 100,000 people to 0.46 between 1990 and 2005. Contagious diseases are maintained because of the efforts placed by the health authorities and local municipalities that emphasize the need of a hygienic community and provide the population with annual flu shots at very low costs.

ENSURE ENVIRONMENTAL SUSTAINABILITY

The UAE National Environmental Strategy has outlined five main pillars that require addressing being potable water, pollution, marine environment, urban environment and earth resources and biodiversity. Even though the climate in the UAE provides a challenge to cultivating lands the amount of lands that have been cultivated increased from 222,824 hectares in 2008, compared to 214,185 hectares in 2007.

DEVELOP A GLOBAL PARTNERSHIP FOR **DEVELOPMENT**

The UAE ranks in the top ten countries that provide global assistance to underdeveloped countries and countries in need of basic education, primary healthcare, nutrition, safe water and sanitation. This has been proven through the several initiatives for global assistance such as the Dubai Cares program and the Dubai Humanitarian City.









ICT surveys in the UAE



During 2008 and 2009, the TRA conducted the most intensive survey of ICT in the history of the UAE. The survey focused primarily on ICT access (i.e. internet connections) and ICT use (i.e. utilization of internet).

The survey was executed over six months and covered seven sectors:

- 1. Households
- 2. Private Sector
- 3. Education Establishments
- 4. Higher Education Establishments
- 5. Government
- 6. ICT Business Sector
- 7. Public Internet Access Center (PIAC)
 Establishments

The survey targeted both households and

organizations. Face-to-face interviews were conducted with call backs to ensure the authenticity of responses. A total of 1,350 households, 1,510 private sector establishments, 194 educational establishments, 44 higher educational establishments, 154 public sector establishments, 403 ICT sector establishments, and 144 public Internet access centers participated in this study.

During the period 2010 and 2013 the TRA carried out a further 4 ICT surveys, two of which focused on households (conducted 2010 and 2012) and two focused on business users (conducted 2011 and 2013) in order to assess the extent of access and usage of ICT services and levels of satisfaction about the telecommunications services supplied to users. The goals of these surveys are to:

- Inform about the UAE's position compared to international standards
- Provide recommendations to enhance the UAE position
- Provide a reliable and comprehensive source for ICT information that can support the decision making process in the UAE ICT sector
- Fill information gaps in order to meet international ICT questionnaires requirements In the below section, we introduce the targets of consequently the UAE's indicator thereafter based on resources most of which were obtained through the TRA's surveys.

WSIS has set 10 targets to achieve the minimum required levels and each of which consists of a number of indicators.

Categories & Data Sources:

	Target	Description	Date Source
1	To connect villages with ICTs and establish community access points*	The goal of this target is to measure the extent to which urban and rural areas are connected with ICT services.	As of 2012, data provided by the TRA
2	To connect all secondary schools and primary schools with ICTs.	This target focuses on the benefits of ICT access in education sector. Internet and other ICT devices are considered to be an essential need for the students to acquire required skills and fulfill their educational objectives.	As of 2013, data provided by Ministry of Education
3	To connect scientific and research centers with ICTs	This goal of this target is to mainly connect the scientific and research centers with ICT devices at affordable and reliable high speed internet connections as this would ultimately facilitate knowledge sharing among these educational institutions and between their learners and researchers.	As of 2013, data provided by Ministry of Higher Education The National Network of Education and Research
4	To connect public libraries, museums, post offices and national archives with ICTs.	This target recognizes the importance of equipping the public libraries, museums, post offices and national archives with a reliable ICT infrastructure.	As of 2013, data provided by the UAE National Center for Documentation & Research
5	To connect health centers and hospitals with ICTs	This target discusses the use of ICT in the healthcare industry that enable complex and networked medical equipment and the Internet as a source of information about health.	As of 2013, data provided by the UAE Ministry of Health
6	Connect all central government departments and establish websites	This target reflects the importance of connecting government departments and equipping them with a web presence.	TRA National Survey 2009 UN-e-Government Survey 2012
7	Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances	This target reflects the importance of enabling schools to benefit from ICT with Emphases on teacher training and use of ICT. This target is linked to Target 2, which focuses on ICT connectivity of schools.	As of 2012 data provided by Ministry of Higher Education TRA National Survey 2009







	Target	Description	Date Source
8	Ensure that all of the world's population has access to television and radio services	This target reflects the importance of providing television and radio access to the whole population. While TV and radio are older ICTs, they remain very important for providing information to people.	TRA National ICT Survey 2012
9	Encourage the development of content and put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet	This target describes the importance of cultural and linguistic diversity to information Society.	TRA National ICT Survey 2012 Internet World Stats 2010 Wikipedia's Statistics
10	Ensure that more than half the world's inhabitants have access to ICT's within their reach and make use of them	This target reflects the importance of providing access to, and encouraging use of ICT.	TRA National ICT Survey 2012

Categories & Data Sources:

	Target	Sub Target	Population Stat
1	To connect villages with ICTs and establish community access points*	1.1 Proportion of rural population covered by a mobile cellular telephone network, broken down by technology.	100% 2G & 3G, one of first to deploy 4G LTE
		1.2 Proportion of households with a fixed telephone and mobile.	50% fixed telephone 99.9% mobile
		1.3 Proportion of households with internet access.	72%
		1.4 Proportion of Individuals using the internet	85%
2	To connect all secondary schools and primary schools with ICTs.	2.1 Proportion of schools with a television and radio used for educational purposes	100%
		2.2 Learners to computer ratio	7:1

	Target	Sub Target	Population Stat
		2.3 Proportion of schools with internet access for educational purposes	100%
3	To connect scientific and research centers with ICTs	3.1 Proportion of public scientific and research centers with broadband internet access.	100%
		3.2 Proportion of presence of a national research and education network (NREN), by bandwidth capacity (mbit/s).	10 mbit/s
		3.3 Proportion of scientific and research centers with internet access to NRENs.	19.2%
4	To connect public libraries, museums, post offices and national archives with ICTs.	4.1 Proportion of public libraries with broadband internet access	100%
		4.2 Proportion of public libraries providing public internet access	100%
		4.3 Proportion of public libraries with a website	70%
		4.4 Proportion of museums with broadband internet access	100%
		4.5 Proportion of museums with a website	50%
		4.6 Proportion of post offices with broadband Internet access (%)	100%
		4.7 Proportion of post offices providing public Internet access (%)	100%
		4.8 National archives organizations with broadband Internet access	100%
		4.9 National archives organizations with a web presence.	100%







SECTION I



	Target	Sub Target	Population Stat
		4.10: Proportion of items in the national archives that have been digitized (%)	35%
		4.11 Proportion of digitized items in the national archives that are publicly available online (%)	In process
5	To connect health centers and hospitals with ICTs	5.1 Proportion of public hospitals with internet access, by type of access	100%
		5.2 Proportion of public health centers with internet access, by type of access	58%
		5.3 Level of use of computers and the internet to manage individual patient information	100%
6	Connect all central government departments and establish websites	6.1 Proportion of persons employed in central government organizations routinely using computers (%).	93%
		6.2 Proportion of persons employed in central government organizations routinely using the Internet (%)	91%
		6.3 Proportion of central government organizations with a Local Area Network (LAN) (%)	81%
		6.4 Proportion of central government organizations with an intranet (%)	52%
		6.5 Proportion of central government organizations with Internet access, by type of access (%)	97%
		6.6 Proportion of central government organizations with a web presence (%)	94%

	Target	Sub Target	Population Stat
		6.7 Level of development of online service delivery by national governments.	28 th rank in world as per UN e-Government Survey 2012
7	Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances	7.1 Proportion of ICT-qualified teachers in schools (%)	100% as per UAE Ministry of Higher Education 2012
	circumscances	7.2 Proportion of teachers trained to teach subjects using ICT (%)	90%
		7.3 Proportion of schools with computerassisted instruction (%)	100%
		7.4 Proportion of schools with Internetassisted instruction (%)	100%
8	Ensure that all of the world's population has access to television	8.1 Proportion of households with a radio (%)	53%
	and radio services	8.2 Proportion of households with a TV (%)	96%
		8.3 Proportion of households with multichannel television service, by type of service (%)	96%
9	Encourage the development of content and put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet	9.1 Proportion of Internet users by language, country level (%)	Arabic 46% Indian 29% Philippines 7% English 4% Other languages 14%
		9.2 Proportion of Internet users by language, top ten languages, global level (%)	18.8% in 2010 as estimated by Internet World Stats
		9.4 Number of domain name registrations for each country-code top-level domain, weighted by population	13.2 per 1000 .ae domains









	Target	Sub Target	Population Stat
		9.5 Number and share of Wikipedia articles by language.	224,491 in Arabic
10	Ensure that more than half the world's inhabitants have access to ICT's within their reach and make use of them	10.1 Mobile cellular telephone subscriptions per 100 inhabitants.	180.7
		10.2 Proportion of households with telephone, by type of network.	50%
		10.3 Proportion of individuals using a mobile cellular telephone.	99.90%
		10.4 Proportion of individuals using the Internet.	85%
		10.5 Proportion of households with Internet access, by type of access.	72%





Transparent decision making

The United Arab Emirates (UAE) has vastly developed its sectors through engaging into open discussions and brainstorming sessions with its stakeholders and most importantly the public. The outcome would lead to a higher level of enhancement to the sectors in concern. The UAE's strong belief in transparent decision making has recently been reflected through the recent UAE Cabinet "National Brainstorming Session" on December 7th, 2013 at Sir Bani Yas Island in Abu Dhabi that was led by H.H Sheikh Mohammad bin Rashid Al Maktoum, Vice President and Ruler of Dubai.



Several ideas, proposals and posts were received through H.H Sheikh Mohammad's portal and through social networking channels that are captured by the Dubai Media and PR Office in which within three days 65,000 were collated. Such an assembly of ideas and creative solutions aimed at the development of health and education sectors in the emirate of Dubai.

Through government portals, suggestions were submitted at www.uaepm.ae. Video emails were sent to brainstorming@uaepm.ae while twitter and Instagram were an alternative method of communicating with the government through

tagging #uaebrainstorm in posts.

Upon reviewing the thousands of ideas that were brought to attention during the brainstorming session several conclusions were made onto how to improve the UAE educational wherein ICT will play a vital role:

- Scrapping the preparatory year at university and developing subjects at secondary school level to match university requirements.
- Making teaching a more attractive option, with career progression and incentives.
- A licensing system, similar to that in western countries, for those who want to become teachers.
- A new system for evaluating and ranking universities.
- Assessment of educational performance at nurseries.
- Ridding the need for students to choose between science and arts streams early in secondary school.

As for health session that took place on the second day of the National brainstorming session, the Cabinet discussed quality of service, developing specialized care, raising the efficiency and competency of healthcare staff and making the career more attractive while looked at matters including measures needed to limit the spread of disease.

Trends in ICT awards

The following highlights some of the key national and regional ICT awards events that the UAE participates in to aid development and encourage the cycle of innovation and excellence within the UAE.

BEST M-GOVERNMENT SERVICE AWARD

The award originates from the recent mGovernment initiative launched of May 2013 by H.H Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai. The award encourages government entities to provide innovative and cutting-edge solutions through smart phone applications and mobile phones. Consistently, the award also aims at guaranteeing accessibility to public services through a transparent and cost effective platform.

The award has the following categories: UAE Federal government; local government; Arab region and the World and students category which is open for all UAE university students to submit work that has been developed in cooperation with another government entity. The m-Government award will focus on any government service delivery solution provided via the mobile phone using smart phone applications, mobile web applications and SMS solutions. The winners of this award are announced in the annual Government Summit.

SMART GOVERNMENT AWARD

'The Hamdan bin Mohammed Award for Smart Government' aims at inspiring and honoring the Dubai government agencies that achieve milestones and sustainable improvement in public services. In addition to awarding the centers that provide the service, the awards aims to highlight the work of all public service providers and celebrate their active role in creating the changing yet positive trend.



جائزة أفضل خدمــة حكوميــة عبر الفاتف المحمـول BEST M-GOVERNMENT SERVICE AWARD

The award's main category is recognizing the best government service award via mobile phone that originated from the similar criteria of "the best government service award via mobile phone" that was previously launched in May 2013 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai.. The award includes the following set of categories, namely:

- Best Service
- Best Partnership with the Private Sector
- Best Internal Cooperation for Improvement
- Best Shared Service
- Best Partnership with The Public
- Best Service Centre
- Best Improvement Leader
- Best Service Star
- Best Improvement Team
- Best Director of Service Centers

The evaluation and assessment will be in accordance with the internationally recognized standards of Dubai Model for government services. The award is extended to involve public voting by providing customers of Dubai, Emiratis and expatriates the chance to vote for the best initiative of service improvement, hence, relating government efforts to the public opinion.







GCC E-GOVERNMENT AWARD



The UAE hosted the third GCC eGovernment Award, Conference and Exhibition in December 2013. As a national expert in the field of ICT, the Telecommunications Regulatory Authority (TRA) encouraged all government entities to actively participate and showcase UAE unique achievements in e-government services and applications. The TRA hosted the award ceremony along with the conference and exhibition during the second week of December over a three day period. The three day event is consistent with the Gulf Cooperation Council's vision aimed at promoting knowledge based economies and societies.

The event provided deep insights into the methods

in which eGovernments of participating members have emerged and enhanced their current activities. Categories of the award include:

- · Best Government eService for Citizens and Businesses
- Best Government Interoperable eService for Citizens and Businesses
- Best Government-to-Government Shared Service
- Best Government Portal
- Best Application for Smart Devices
- Best Government eParticipation Practice
- Best e-Initiative

The UAE & international ICT events





THE FIRST UAE ECOMMERCE SUMMIT

Hosting both high caliber international and domestic expert speakers, the first UAE eCommerce Summit took place in September 9th, 2013 in Dubai where the latest trends in eCommerce and innovations were discussed...

The annual event tackles the latest innovations in the eCommerce sector and promotes the digital economy in the UAE. Hosted by the Telecommunication Regulatory Authority (TRA) the event gathered government entities eBusiness, eCommerce, eRetailers, eMarketers, SME and industry leaders, experts and entrepreneurs to discuss and highlight latest developments and elnnovations drivers and enablers in the sector to facilitate ebusiness and entrepreneurs challenges and concerns.

Several topics were discussed during the summit such as mCommerce strategies, eCommerce security, eCommerce competition, networking business opportunities, international business expansion, market regulations, elimination of eCommerce barriers and boosting eCommerce consumers' confidence and online protection.

The summit featured a digital showcase that brought together exhibitors that presented their creative ecommerce solutions under one umbrella. Delegates from all around the regional and international arena attended the summit classified as government officials, eMarketers, entrepreneurs, business owners, professional, researches and experts. The digital showcase provided a five minute opportunity for each of eight leading eCommerce and eBusiness UAE-based entities to demonstrate and display their latest innovations.









Dubai EXPO 2020



Dubai recently won its bid to host the Expo 2020 The World Expo in Dubai in 2020 would be the first to be held in the MENASA (Middle East, North Africa and South Asia) region and the exhibition will create a platform for connectivity to help pioneer new partnerships for growth and sustainability for the future.

THEME – Connecting Minds Creating the Future
The theme that has been sought for the Expo 2020
reflects the UAE and Dubai's rapid development.
Similar will be the energy and positivity that the
Expo site will be built upon to host all members
that will participate during the 6 month exhibition.

Moreover, the nation is logistically ready to host the World Expo through its state-of-the-art and highly advanced infrastructure, whereas two thirds of the world's population lives within an eight hour flight from Dubai and eighty thousand hotel rooms will be gracefully accommodate the Expo 2020 visitors. The site will provide a connectivity theme that



Dubai has always been well known for whereas a unique platform for a global community to meet and explore their creativity and pioneering solutions will be made available. Three subthemes will build the overall portrait of the Dubai Expo 2020:

Sustainability - lasting sources of energy and water

Mobility - smart systems of logistics and transportation

Opportunity - new paths to economic development

BID COMMITTEE

Reporting to the UAE Vice President, Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum, the Higher Committee on Hosting the World Expo 2020 is working on the bid under the chairmanship of Dubai Civil Aviation Chairman and Chief Executive of Emirates Group His Highness Sheikh Ahmed bin Saeed Al Maktoum.







His Excellency Mohammed Ibrahim Al Shaibani, Director-General of His Highness the Ruler's Court of Dubai, who serves as Deputy Chairman; Her Excellency Reem Al Hashimy, UAE Minister of State and the Committee's Managing Director; His Excellency Mattar Mohammed Al Tayer, Chairman of the Roads and Transport Authority; His Excellency Hussain Nasser Lootah, Director General of Dubai Municipality; His Excellency Helal Saeed Al Marri, CEO of Dubai World Trade Centre and Director General of Dubai Tourism and Commerce Marketing; and Major General Khamis Mutar Al Muzainah, Deputy Commander General of Dubai Police.







mGovernment

SECTION II



الحكومةالذكية mgovernment Description:

Telecommunications Regulatory Authority (TRA)

Objective:

The m-government project was initiated by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. The initiative aims at transforming the UAE government into a mobile version within two years. The aim of the Mobile Government initiative is to provide government services and information through mobile phones and other advanced technological means.

MGovernment is part of his vision to offer convenience to people by facilitating access to services wherever they are and at any time without the need for queuing up at government offices. The TRA issued the mGovernment guidelines which provide guidelines to the security of e-government applications; planning and setting priorities; usability; user experience; content and interactive features. This was also accompanied by the launch of the 'Best mGovernment Service Award' which aims to encourage government entities to provide innovative solutions in the form of smart phone applications.

[Further detailed Information can be found in Section III]



Dubai Smart City

Dubai Government

Objective:

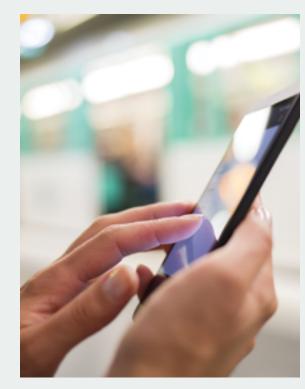
Launched by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, the Smart City project aims to ensure that government services will be accessible, quick and efficient through the use of hi-tech smart devices.

Description:

Smart City will transform Dubai into a smart city where education, healthcare and general security will be managed via smart systems. The project will enable the public to interact with public departments using smartphones any time, any day of the year. Dubai Smart City is collaboration between the emirate's public and private sectors.

According to the project philosophy, the population would be core of the current project through the provision of advanced infrastructure and the fiber optic network and high-speed wireless internet. The new project will also provide new information on weather, traffic, transport, health and education smart services, as well as entertainment and tourist services such as aviation services, restaurants among others.

Reporting to the UAE Vice President, Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum, the Higher Committee on Hosting the World Expo 2020 is working on the bid under the chairmanship of Dubai Civil Aviation Chairman and Chief Executive of Emirates Group His Highness Sheikh Ahmed bin Saeed Al Maktoum.



His Excellency Mohammed Al Gergawi, head of the Sheikh Mohammed Executive Office, who serves as Chairman of the Higher committee; including Sami Dahen Al Qamzi, Director General of Dubai's Department of Economic Development, Major General Khamis Mattar Al Mazeina, Acting Chief of Dubai Police, Ahmad bin Humaidan, Director General of Dubai eGovernment, Helal Saeed Al Merri, Director General of Dubai's Department of Tourism and Commerce Marketing, Abdullah Abdul Rahman Al Sheibani, Secretary General of Dubai Executive Council, Ahmad bin Bayat, Chairman of du, Awad bin Hader Al Muhairi, Ahmad Julfar, CEO of etisalat, and Dr Amina Al Rostamani, Group CEO of Tecom Investments.









WAAS



Abu Dhabi Education Council

Objective:

ADEC has rolled out, in association with a Network and System Service Provider, the Wide Area Application Services (WAAS) that will enable the growth of networks for educational purposes.

This cost effective approach will also enhance ICT connectivity for educational institutes as part of the wider national e-strategies.

The solution will provide 270 public schools in the emirate of Abu Dhabi with Wide Area Network (WAN) optimization solutions that will accelerate the use of applications over WAN, provide local hosting of branch-office IT services and reduce the bandwidth and latency problems. The project aims at improving the learning experience of students in educational institutions and allows staff to develop themselves hence enhancing the overall performance of the educational sector.

This is accomplished through relevant solutions that will improve and provide connectivity to all educational institutions involved while enhancing the bandwidths that are currently available.

Description:

10 Years Report

2013-2014

Three years ago, ADEC began an ambitious project to raise the entire Emirate's standard of education by encouraging the design and production of ICT equipment and services so that everyone has easy and affordable access to them. This was conducted by investing in a next-generation education IP infrastructure and optimizing connectivity among major information networks whereas ADEC began furnishing computing devices to teachers and administrative staff at every school, and supplying every classroom with a computer, digital "smart board," and projector. The Council finally decided to install the WAAS solution to deliver an optimal experience for administrators and teachers as they access HR and ERP business applications from anywhere on the WAN, streamlining processes and enhancing productivity.



Ankabut

Khalifa University



Objective:

Ankabut is the United Arab Emirates (UAE) National Research and Education Network (NREN) offering academic institutions across the country access to non-commercial, high-speed connectivity and other education networks both locally as well as globally.

Currently, about 75,000 higher education students, faculty members and administrators are connected to the network out of about approximately 125,000 throughout the UAE.

Description:

Recently Ankabut signed an MoU with a leading value added distributor to deploy a service grade, managed unified communication service, based on a latest Real-presence platform. The managed service is for the exclusive use by Ankabut and its members to connect within the network and with other institutions within the UAE and abroad. Phase 1 will enable up to 10,000 members from Ankabut and its partners, to reach and connect with anyone easily with a single click, from any platform, powering rich media communication and sharing content and programs to increase productivity.

Objective:

ICT Fund

The Semi-autonomous Mobile Robotic System project aims at developing a semi-autonomous mobile robotic system for urban search and rescue (USAR) missions which are usually dangerous and time consuming. USAR situations include buildings under fire, collapsed buildings and other urban disasters.

Semi-Autonomous Mobile Robotic System

Description:

Robots can act as substitutes where possible to access unreachable or unexplored areas and reduce the workforce requirements and unwanted collateral and fatigue. This project will also involve the development of robot system that can collaborate autonomously to negotiate compromised and collapsed structures, find victims and determine their conditions, produce practical maps of their locations, identify hazards, process sensors and communicate with the command control base to allow human rescuers to quickly locate and extract victims



33





SECTION II

Amakin

UAE National Observatory



لل به دیک DUBAI MUNICIPALITY

Dubai Municipality

Objective:

Amakin aims at facilitating the organization of real estate and districts in Dubai while support the growth of the real estate market through ICT technologies.

Description:

The Dubai Municipality, part of Dubai Government has launched the New Amakin Viewer that is a comprehensive portal for all geographic information and data covering the Emirate of Dubai. It provides detailed data of lands, landlords and geographic address information in addition to the building regulations and mechanisms to inquire about all geographical data for the emirate. Moreover, Amakin aims to create an excellent city that provides essence of success and comfort of sustainable living through its smart service.



ICT Fund



صندوق تطوير قطاع الاتصالات وتقنية المعلومات Information & Communication Technology Fund

Objective:

The UAE National Observatory is to advance and facilitate scientific research in astronomy and astrophysics in the UAE, promote a solid astronomical base in the UAE, encourage scientific literacy and boost UAE nationals' interest in this area.

Description:

The project will facilitate scientific research and promote a solid base of astronomy in the United Arab Emirates (UAE), as well as support regional and international common astronomical research projects in order to raise public awareness in astronomy and space sciences. The UAE national observatory will be the figure head astronomy facility in the Arabian peninsula. The project will nurture collaboration and advice on other observing structures, in Saudi Arabia, Southern Iraq, or Jordan.

The UAE National Observatory will also create a path for future projects that are currently in planning phase such as the Space and Astronomy Academy that will offer courses in astronomy and a Science Centre are expected to be constructed after the national observatory is completed.

Ayaadi Electronic Library

Etisalat

Objective:

Ayaadi Etisalat believes that knowledge is power. Sharing this knowledge with others will lead to deeper community participation and engagement. The project aims at developing the intellectual capabilities of students via access to selfdevelopment books and online education resources while establish sustainable multi-purpose access points, digital libraries, that are free-of-charge for users in order to share and spread knowledge using electronic means.

Description:

The library will organize various interactive competitions to encourage students to read more and enhance their intellectual capabilities and broaden their mental horizon. The e-library portal includes applications on smart phones and tablets aimed at developing the student's intellectual skills by providing them mobile access to vital learning resources such as books, newspapers, research and academic papers.

In particular, the project provides a platform for:

- 1. Sharing knowledge
- 2. Intellectual development
- 3. Encourage reading and Knowledge building
- 4. Self-development

A reading competition, connected to the Ayaadi Electronic Library, organized by Ayaadi Etisalat and in cooperation with the strategic partner, The Ministry of Education aims at encouraging students to read and engage in self-learning, focusing of selfdevelopment, language and other skills to utilize their time for productive activities to expand their knowledge.

Ayaadi Initiative focuses on programs that advocate the national CSR of Etisalat through education, health, and social projects. The programs are also affiliated with the development of the intellectual capabilities of the youth that would enable them to assume future responsibilities. Intellectual development & youth empowerment.









Smart Learning



Mohammaed Bin Rashid's Smart Learnig **Program**

Objective:

The Smart Learning Program is a key element in achieving the UAE Vision 2021 which aims at ensuring First Rate Education in which all Emiratis will have equal opportunity and access to firstrate education. The initiative aims to shape a new learning environment in public schools through the launch of 'smart classes' that will provide every student with an electronic tablet and access to high-speed 4G networks by 2017.

> The Program's main objective is to positively affect education outcomes by profoundly updating learning environments with respect to blended forms of teaching & learning, student-teacher interaction, management of teaching & learning, amongst other pedagogical features. It will also use

technology in innovative ways to have a positive impact on affective factors of learning such as student motivation and engagement.

Description:

The project will be able to optimize the use of technology in the universities and colleges to bring a qualitative leap in knowledge, enhancing the capabilities of students to address future challenges. It will help them start a new career path in science and technology and open up new avenues for innovation and excellence and allow them contribute to building a knowledge-based

[Further detailed Information can be found in Section III]



Direct Alarm System

Dubai Civil Defense

Objective:

The Dubai Civil Defense has launched the 24x7 Direct Alarm System in all public and private buildings and establishments in Dubai while making it mandatory for implementation. The system will allow the DCD to actively monitor all buildings in real time for life and safety alarms. E-Monitoring of this magnitude will strengthen the safety infrastructure of the city to increase safety measures.

Description:

The systems will link buildings using remote communication technologies such as GPRS and GPS and provide real time information in regards to the buildings' emergency statuses. The full integration of this system also includes alarms to the nearest operations centers that will provide an automated evacuation and alert plan and the easiest route to the physical location of distress.



General Directorate of Residency and Foreigners

Objective:

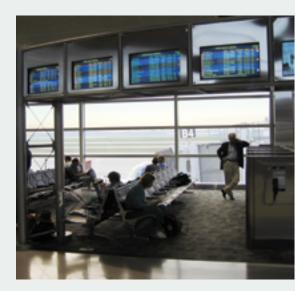
Affairs of Dubai

Smart Passenger

General Directorate of Residency and Foreigners Affairs of Dubai is to launch a 'smart' service to ease travelers' entry and exit across the airports borders in Dubai. Smart Passenger will allow them to sign in through an eGate without the need to show their passport or ID.

Description:

As part of the Dubai Smart City e-Transformation initiatives it will meet requirements to increase the number of tourists to Dubai by up to 20 million in 2020. A system upgrade will be installed into the e-gate that would allow the identification of passengers by getting their biometrical scan once they walk in. The smart gate will work on e-passport, identity card, Emirates' gate card or smart phone applications and take 20 seconds to proceed with the transaction.













SECTION II

Cyber C3 Program



Khalifa University

The Cyber C3 program is an initiative of knowledge point. The program consists of cyber safety awareness by preventing, detecting and responding to cybercrime and misuse of ICT, Moreover, the program contains a certification program and website portal that promotes user education and awareness about online privacy and the means of protecting privacy. The Cyber C3 program components focuses on the UAE government initiatives in frightening Common Forms of Digital Security Breach such as identity theft, phishing emails, hackers, crackers, cyber stalking and internet predators.

Description:

The Cyber C3 program provides good practices in the field of information security and network

security and encourages their use by all parties concerned through linking the topics & case studies mentioned in the Cyber C3 curriculum with the UAE cybercrimes laws that was announced in 2006. This will provide a solid foundation for cybercrime fighting at a national level.

The Cyber C3 curriculum highlights the UAE initiative that was run by the Khalifa University to establish the Cyber Operations Center of Excellence. The aim is to help develop expertise in cyberoperations, particularly in dealing with the security and risk issues increasingly faced by the Critical National Infrastructures (CNI), Industrial Control Systems (SCADA) and the Critical Information Infrastructures (CII).



IPv6 Strategy Project

Telecommunication Regulatory Authority

Objective:

The UAE IPv6 Strategy and Action Plan have been defined to raise the awareness and promote the adoption of IPv6 in the UAE to achieve an IPv6 ready UAE ICT market landscape where ICT service providers provide their services over IPv6 and ICT services users consume ICT services over IPv6.

Description:

Internet Protocol version 4 (IPv4), a fundamental building block of the Internet, is considered a finite resource that has reached depletion levels. While internet stakeholders worldwide have long started optimizing the use of IPv4 addresses, Internet Protocol version 6 (IPv6) is considered the only foreseen and long-term sustainable solution for the depletion of IPv4. As a result of the IPv4 depletion at RIPE NCC, UAE internet stakeholders with a high need for IPv4 addresses (Enterprises and Businesses in particular) are expected to experience more strict IPv4 allocation practices by Internet Service Providers. Consequently, the Telecommunications Regulatory Authority (TRA) of the UAE, and in line with its mandate, has embarked on September 2012 on the UAE IPv6 Strategy Development project which aimed at defining a national IPv6 Strategy and Action Plan to prepare the UAE for the looming IPv4 depletion and to secure the healthy levels of growth and development that have long characterized the UAE's ICT sector.

From a governmental perspective, the adoption of IPv6 ensures future IPv6-only connected citizens and residents are able to access e-Government services over IPv6. From a service provider perspective, the adoption of IPv6 ensures the progressive growth of

its subscriber base; indeed, service providers locally and globally are already experiencing the pressure of the IPv4 depletion and are resorting to short term workarounds such as more efficient IPv4 utilization practices while implementing IPv6 adoption plans to ensure IPv6 readiness on the medium to long terms. Private sector businesses will also have to adopt IPv6 for similar business reasons such as making their e-services available to IPv6-only users and ensuring the ability to perform e-transactions with partners over IPv6.

In addition, During September 8 - 12th 2013 the TRA conducted the fourth IPv6 (internet protocol version 6) Roadshow for UAE Government entities. Hosted at the Authority's Dubai office, the bespoke training program was provided by RIPE NCC, the Regional Internet Registry (RIR) for Europe, the Middle East and parts of Central Asia. The roadshow aimed at facilitating the UAE's migration in internet usage from IPv4 to IPv6.

The ultimate goal of the IPv6 training is to relay to participants the importance of adopting this latest internet protocol in their networks and to help build technical capacities to accommodate the various applications and services. Enabling participants to gain practical expertise in handling IPv6, the TRA also provided a virtual laboratory for the group allowing them to prepare networks and testing their settings as per the global scenarios. Covering IPv6 transition mechanisms, routing, addressing and security issues, the IPv6 training program includes important modules on IPv6 monitoring, security, access, servers and applications.











Telecommunication Regulatory Authority

Objective:

UAEIX

The UAE-IX main goal is to promote keeping local traffic exchanged locally. The UAE-IX and other similar initiatives in the region plays a vital role in changing the traffic behavior from having 96% long-hauled from Europe, U.S and Asia to 40% by 2016 and 20% by 2018.

Description:

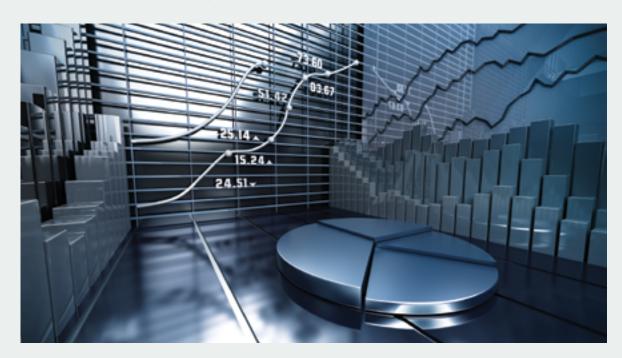
UAE-IX was launched because more than 96% of the Internet traffic in the Middle East is being long hauled from Europe, USA and Asia pacific and mainly delivered through high latency sub-marine cables that are prone to cuts. UAE-IX project is a neutral Internet traffic exchange platform that interconnects global networks and, above all, network operators and content providers in the

GCC region. It is built on a fully redundant switching platform located in a neutral secure datacenter in Dubai.

The new IX will reduce latency times by up to 80

per cent and costs by up to 70 per cent for GCC providers. UAE-IX delivers a highly available local alternative for regional traffic exchange, localizing Internet content. It will dramatically improve routing efficiency and the quality of the Internet experience for end-users.

[Further detailed Information can be found in Section III]



Smart Investor

Sharjah Economic Development Department

Objective:

Smart Investor application facilitates investor relations and communication with the Sharjah Economic Development Department.

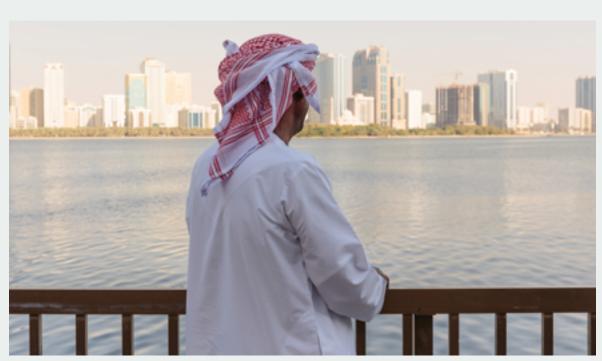
Description:

Sharjah Economic Development Department - SEDD is the first local economic department in the United Arab Emirates (UAE). SEDD is responsible for applying economic undertakings and to control all economic practices in the Emirate of Sharjah. SEDD prepares economic plans, conduct market research in finding and implementing the latest investing techniques to facilitate investors. All individuals, companies or corporations have to get commercial, industrial or service licenses from SEDD

based on their industry type to run any business inside Sharjah. SEDD is also responsible of regulating economic relations and providing maximum support to customers by providing simplified procedures and efficient services.

The Economic Development Department of Sharjah has launched the Smart Investor initiative that will allow investors to access their e-services through mobile devices and print their payment vouchers while renew business licenses and view details such as commitments and warehousing. The developed solution will allow users to communicate with the SEDD through SMS and via email through the application.





11





eGovernment: My e-Identity

eAgriculture: Sustain agriculture sector in Abu Dhabi through smart irrigation system



Dubai Smart Government

Objective:

Dubai eGovernment and the Emirates Identity Authority launched the 'My E-identity' initiative that will enable the public to avail the services of 20 government bodies through the mobile phone or the Internet by using their Emirates ID card from Q4 2013.

Description:

Emirates Identity Authority (EIDA) is an inde spendent federal authority that is responsible for execution of the Population Register and the ID card program. EIDA's activities reside within the domains of the ministries, naturalization, passports and entry and residence of expatriates, the organization of births and deaths, the organization of labor affairs and the amending laws thereof, in addition to decrees related to the General Authority of Information and civil service at the federal government.

The initiative is part of the attempt to move to smart government and aims to bring government services round-the-clock through the mobile phone within two years. The objective is to enable businessmen to avail of all government e-services through the internet or a smart phone using a single username and password. Dubai eGovernment, in coordination with all agencies of the government of Dubai, currently offers more than 1,500 electronic services to customers in various sectors (health, education, electricity, water, communications, licensing cars etc.), through the websites of the government agencies.

Abu Dhabi Food Control Authority

Objectives:

The objective was to introduce wireless soil moisture sensors in Abu Dhabi crop production after intensive evaluation of the system to be conducted with regard to accuracy; precision; and irrigation use efficiency as compared to the common practices. The system showed consistent water saving, which will help to save millions of cubic meters annually. The results declare these tools are good tool for automatic smart irrigation scheduling which provides growers with practical solutions for profitable and sustainable agriculture.

By combining sensor technology, internet and scientific knowledge, growers can continuously monitor and fine-tune their production process throughout the growing season.

Description:

The smart irrigation system project contributes to outcomes within the priorities of ADFCA in line with the agenda and policy of the Government of Abu Dhabi 2030 aimed at environmentally sustainable development for the farming sector and guaranteeing the safety and supply of food for the emirate and match with the national vision to meet the Sustainable agriculture.

Water conservation is a growing issue in UAE due to increased demands from a growing population. One of the areas with the largest potential for reducing water consumption is the agriculture sector.

eEmployment: PWD Employment (El Kayt)

Community Development Authority

Objective:

Elkayt Employment Program is devised to include People with Disabilities over 18 years old within the job market, in both the public and private Sectors. This program aims at providing those individuals with equal and fair opportunity to find jobs suited to their particular skill level, academic qualifications and physical abilities. El kayt also provides People with Disabilities with the appropriate training to enhance their personal skill set. In addition to raising awareness about disabilities and related topics within the community.

Description:

El Kayt has been launched by the Community Development Program part of Dubai Government. El Kayt provides the following services:

- · Candidate assessment: To facilitate their transition into the workplace
- Interviewing and Resume Writing Techniques: A dedicated team is appointed to help candidates prepare a detailed resume of their skills and abilities, as well as their disabilities
- Personal Mentoring: Every candidate successfully hired will be appointed a Personal Mentor to monitor his/her progress during the first six month of employment.
- Training: Based on the assessment and if deemed necessary, candidates are offered training prior to their employment.
- Professional Consulting Services: The team provided professional consulting services to candidates before and after they join the workforce to further enhance their performance and productivity.
- Ensure Candidates Welfare at Work: The



team conducts field visits to the candidates' workplaces to ensure they are accommodating of their disabilities.

- Raise Awareness about Disabilities to respective employers
- Personal Mentor Training: The team offers training services to personal mentors enabling them to address the special needs of People with Disabilities.









eScience: Think Science Program

eBusiness: eMart



Emirates Foundation

Objective:

'Think Science' focuses on encouraging young Emiratis, between the age of 15 and 24 years, to choose science for their studies and career path.

Description:

Think Science Program is a multi-dimensional scientific themed project that allows students to expand their knowledge in sciences using ICT solutions. Through the use of peer-to-peer technologies and efficient information collection and dissemination the project will allow the built of scientific data that will be utilized knowledge production and educational purposes.

The program is established to respond to the nation's demand for science talents. In addition, to support creating a National Scientific Critical Mass capable of participating in science-based policy making and utilizing Science and Technology in helping society to prosper.

Think Science has three interrelating projects:

- "Think Science Competition" which aims at launching nationwide competition to explore scientific talents.
- "Think Science Ambassadors" which will inspire, encourage and recognise youth to further develop their knowledge and analytical thinking and participate in solving local and global technological issues.
- · "Think Science Connect" which will be a platform for youth interested in science and will also create a talent bank of science related professionals in support of local industrial growth.

Dubai Land Department

Dubai Real Estate Market (eMart) is an online portal; specially designed for real estate professionals to list their properties for sale and rent in Dubai. The new system provides public with number of e-services allowing them to search for properties listed for sale or rent, communicate with landlords, brokers and management companies and also complete sale transactions online without the need for multiple visits to Dubai Land Department.

Description:

The launch of the innovative initiative that guarantees transparency and credibility in all data in line with the vision of the Government of Dubai coincided with the LD winning a coveted World Bank recognition in Oct 2013.

The portal also seeks to create a comprehensive set of globally outstanding options to attract real estate investors; LD is offering a system with complete transparency and full credibility while giving tenants, owners and brokers full operational efficiency and reliability.

eMart acts as a trusted single point of access to properties information for owners, brokers, developers, investors and management companies. It also allows users to interact directly with the portal and other users through sale and rent channels. All interaction channels operate under a set of laws and regulations enforced by Dubai Land Department (DLD).

All financial transactions will be processed through the e-payment gateway (Noqodi), providing users

with a safe and secure channel to complete their transactions online. Buyers have the option to use their credit cards or bank transfer from any of the banks around the world to the partnered banks with the payment gateway (Noqodi).

eBusiness: Tejuri

Dubai World

Objective:

TeJURI aims at facilitating retail through the elimination of physical need of retail space while ensure the security of trade using ICT solutions.

Description:

TeJURI, launched by Dubai World and supported by Dubai's Department of Economic Development (DED), aims are bringing Dubai's retailers selling a large selection of products to one another in one secure, convenient and 24/7 online portal in order to take smart decisions. The DED intends to promote the benefits of trade and the use of e-business through its newly launched portal. TeJURI requires all retailers to comply with consumer protection codes provided by the Ministry of Economy (MoE) and to be registered by the DED.

The portal will allow retailers to invest lower capital and increase their customer bases in comparison to bricks and mortar malls. This in turn will provide private sector stimulation while foster to new applications to materialize into partnership between users.

The online mall is not an e-store of various products, but a platform for actual retail stores to



have an online retail presence with minimal capital expenditure. It provides a convenient and safe virtual shopping mall experience for consumers to buy a product from a retail store of their choice. They are able to compare prices, promotions, offers and shop their desired product, just as they would in a mall, but with a simple click of a button. Tejuri.com currently has signed-up with over 100 international and local retailers that represent over 150 brands. The site trades in line with global e-commerce best practices, delivers the highest levels of security and availability, and is powered to sell in more than 190 countries.







eEnvironment: Hadreen Campaign- Green Bill



Dubai Water and Electricity Authority (DEWA)

Objective:

The initiative aims to protect natural resources and enhance efficiency, under the 'Hadhreen' campaign, announced by DEWA to highlight the services provided to its customers in accordance with the highest international standards. DEWA has set goals to achieve the highest levels of customer satisfaction. Hadhreen highlights the easy access for customers to DEWA's customer service centers.

Description:

The GreenBill is an electronic version of the regular paper bill, which customers receive monthly via email, reducing paper consumption and driving environmental awareness. DEWA is encouraging its customers to take advantage of the electronic services it offers, and familiarise themselves with the wide range of offerings, by including the GreenBill communication messages in a number of campaigns that DEWA undertakes. Under Hadhreen, customers can access a range of options for e-Services, Mobile services, Green Bills, easy payment of bills, making suggestions and addressing complaints, if any. This in turn is expected to reduce time and effort for DEWA's customers. Hadhreen is an overarching communications platform for DEWA, whereby future products and services will reflect focus on customer service excellence, which are highlighted in this initiative. It is also in line with the Government of Dubai's efforts to strengthen a culture of excellence across all organizations and, as a utility provider similar to DEWA's service standards that are best demonstrated through strong customer relations and customer service excellence. Hadhreen - At Your Service builds on DEWA's earlier customer service initiative '365 Day



& Night - At Your Service, As Always Been' whereby DEWA demonstrated its support to customers around-the-clock. The new strategic approach takes it one step further by demonstrating DEWA's proven competencies and its commitment to enhancing them beyond customer expectations.

The initiative underlines DEWA's commitment to the community, environment and sustainable development.

eHealth: Malaffi

Abu Dhabi Health Services Company (SEHA)



Objective:

The initiative aims to enhance the provision of healthcare services to students through achieving a 'one patient, one comprehensive health record' for 111 public schools in Al Ain and 31 in the Western Region for the current academic year.

Description:

Ambulatory Healthcare Services (AHS), a part of the Abu Dhabi Health Services Company (SEHA), announced plans to roll out Malaffi, SEHA's digital health record system, across 142 public schools in Al Ain and the Western Region in the United Arab Emirates (UAE).

Malaffi, which adheres to the legal, regulatory and accreditation requirements of Abu Dhabi, is a unified suite of digital solutions that help streamline processes, reduce administrative costs and improve

patients' safety. The system also ensures that the time spent gathering information is cut down. Apart from eliminating paper dependent manual processes for school nurses, the system eases the generation of statistical reports, secures and backsup information, creates chronic disease alerts, allows for early intervention, while validating the role of school nurses in facilitating communications with SEHA facilities. The Malaffi system, in addition to being eco-friendly, provides convenient and quick access for medical staff to the electronic medical registry documents that includes its sizeable data base of some 230,000 patients. The electronic medical registry documents provide details of patients' symptoms and date or duration of illness.

Relevant details such as blood type and medicine prescribed, x-rays, and all other examinations related to the patient are also recorded.













eHealth: Wegaya Disease Management Program

SECTION II

eHealth: Schools for Health



Health Authority Abu Dhabi

Objective:

'Wegaya' aims to tackle no communicable diseases with an initial focus on cardiovascular disease (CVD, including diabetes) through the use of ICT solutions.

Description:

As the designated 'Health Custodian' for the Emirate, the Health Authority of Abu Dhabi ('HAAD') has created a novel program called Wegaya (Arabic for "prevention") comprises iterative screening, evidence-based care plans, and coordinated actions across the health sector and other key sectors (nutrition, physical activity and tobacco control).

To date, around 95% of adult Emiratis have been screened (n ~ 200,000) with much now receiving quality care; a second round of screening begins afterwards. Wegaya is IT-enabled with critical health data sitting in a comprehensive, unified HAAD database; the use of technology helps enable both appropriate standardization and scale-up. Moreover, since HAAD has invested in the technology, DMPs have a strong, unified platform for action which HAAD makes available without charge. The data platform also facilitates performance monitoring, enabling feedback and continuous improvement to the program. As a unified health regulator, HAAD has been able to drive innovation in regulation and incentives to help drive for measurable impact. In this context, HAAD seeks to create a novel market for disease management programs ('DMPs') in the Emirate building on lessons from other markets.

Abu Dhabi Health Authority

Objective:

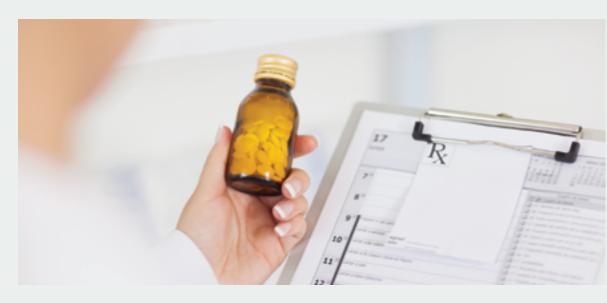
The HAAD Schools for Health Program is dedicated to the health and well-being of the school students in the Emirate of Abu Dhabi. The health program aims at promoting the health and well-being of children and adolescents improve access to appropriate school health services and enable children and adolescents to develop healthy behaviors to prepare them for all life stages.

Description:

HAAD foresees the links between health and education are well established. Healthy children are better able to learn, and strong health is highly associated with higher educational achievement. We therefore work very closely with education and healthcare professionals to improve the health and learning outcomes for children and young people and make schools a healthy place to learn, work and

The portal provides information that is disseminated by several physical and health care educators. The Schools for Health portal provides guidelines to all age groups through its "Eat Right & Get Active" series as well as "Oral Health" dentistry series. The Eat Rights 7 get Active campaigns provides students in schools with electronic evaluation tools, manuals, posters, activities for kids through electronic means, animated videos and the documentary film.

eHealth: Sheryan





Dubai Health Authority

Objective:

Sheryan is a system for issuing licenses to individuals to practice medicine in Dubai and for licensing of medical establishments and investments in the healthcare sector. The system allows those who practice medical professions to finalize all procedures for obtaining the necessary licenses in Dubai from anywhere in the world, thus sparing them the headache and expenses of first coming here. This also applies to investors interested in opening private hospitals and clinics as they can apply for the required license for their medical establishments directly through this service.

Description:

The Dubai Health Authority (DHA) has launched the Sheryan services as a comprehensive online system for licensing professionals and medical establishments in Dubai. This has come in light that the selection of qualified and professional

medical experts is a serious challenge to achieve this goal, particularly since Dubai is competing with many other countries destinations for healthcare professionals.

Sheryan system is an integrated online service where an applicant submits an application through the DHA website for verification. The system also allows professionals to apply for tests in the nearest location affiliated to Prometric testing centres, considering that the Sheryan system is electronically linked with the testing system. At a customer service level, the most important facilities include completing transactions speedily and sparing the licence applicants' efforts, travel costs and burdens.

Since its release in October 2011, Sheryan has executed more than 102,000 permits for individuals and corporates. The average number of applications received daily is between 600 and 1000.





SECTION II

eLearning: e-Citizen Program



Abu Dhabi Education Council and Family Development Foundation

Objective:

The eCitizen Program is a free training program with convenient training sessions aimed at enabling people to learn how to use computers and the internet. The program is specifically developed for people with limited knowledge of computers and the internet.

Description:

The e-Citizen Program is a strategic initiative adopted by the Government of Abu Dhabi that aims to bridge the digital divide in the society and enable the targeted segment that lacks basic skills to use Internet on a daily basis in e-services to obtain information, products and services and support e-learning. Since there is still large proportion of the population that do not have the appropriate skills to access the Internet. The Government proposed this program to achieve common goals to advance the skills of usage level in computer and Internet in the Emirate of Abu Dhabi.

eLearning: Duroosi

Etisalat

Objective:

Duroosi provides an interactive educational tool for high school students that accommodates to their visual learning abilities and enhances their level of knowledge in several topics.

Description:

Etisalat in partnership with the UAE Ministry of Education and Google have launched the Duroosi tutorial videos that will enable students in the grades 11 and 12 the tools to drive self-learning across a wide range of subjects. Videos provided by tutors handpicked by the Ministry of Education can be accessed upon students logging in wherein more than 600 videos are currently available. As part of the Smart Education scope of Etisalat's launches in 2013 Duroosi will revolutionize conventional education tools by providing instant and convenient portions for learning.



Re Captcha

ICT Fund

Objective:

Re Captcha aims at preserving Arabic content and enhancing linguistic presence on the internet.

Description:

The project "reCaptcha" aims to digitize Arabic manuscripts and improve Arabic content on websites used by millions in the Arab region. It will also enable search of Arabic text, including text of manuscripts and books, magazines and newspapers and any material of historic value. "reCaptcha" also aims to facilitate the digitization process through the participation of Internet users in the Arab world, as well as protection of Arabic-language web sites from online threats. In addition, the project will cover the digitization of Arabic text from national libraries to preserve old Arabic manuscripts that can be searchable via the Internet. This will also serve as a guide for searching for specific Arabic text or phrases within the scanned images of the manuscripts as they become available online.

Kalima Project for Translation **Abu Dhabi Authority for Tourism and Culture**

Objective:

Kalima is a non-profit initiative dedicated to funding the translation and publication of high quality works of classic and contemporary writing from other languages into Arabic, in addition to organizing events and activities related to translation.

Kalima encourages the book industry in the Arab World by establishing a platform for cooperation between Arab and international publishers and fostering a respect for intellectual property rights.

• Translating important books into Arabic and

then printing, publishing and distributing them.

- Marketing and distributing these translations to encourage reading.
- Treating translators as professionals and trying to enroll more talented translators.
- Diffusing knowledge by creating bridges between Arabs and other cultures.

Description:

Kalima's mission is to revive translation in the Arab World by increasing the number and choice of books available to the world's 350 million Arabic readers. Kalima's mission grows from the fact that Arabic is a beautiful, expressive language, one that should be celebrated and enriched by giving readers access to more good-quality translated titles. The idea of establishing a translation project arose at the Abu Dhabi International Book Fair in 2007, when the small number and the poor quality of the translated books available (mainly focusing on commercial subjects) were noted as causes for concern.

The project's key activities include:

- Translating books from different language into Arabic and opening up new subjects to attract readers.
- Enlarging the distribution network and launching new mechanisms to improve access and reach to all readers.
- Holding activities and events related to translation.
- Complete the updating and construction of a database for translation and the publishing industry in the Arab world.
- Organizing campaigns to promote the reading of translated books.
- Participating in international book fairs such as the Frankfurt Book Fair, London Book Fair and Bologna Book Fair.
- Supporting and complying with intellectual property laws and encouraging respect for them within the Arab World.







IN5 Innovation Hub



DUBAI INTERNET CITY Dubai Internet City and Microsoft

Providing support for entrepreneurs and small businesses, Dubai Internet City and Microsoft announced a partnership on the in5 Innovation Hub, which will use Microsoft software solutions in an environment that supports entrepreneurship and cultivates the development of the ICT and digital media start-up ecosystem in Dubai. The in5 Innovation Hub supports entrepreneurs from early stage idea creation, through implementation and commercial launch while focusing on developing partnerships and networks in the media.

Description:

Dubai Internet City and Microsoft's partnership will support the continuing development of the thriving ICT industry and entrepreneurship sector in the UAE. The agreement highlights DIC 's support for Microsoft's business partners as well as for startups and entrepreneurs. In5 companies will benefit greatly from the partnership and from the innovative technology provided by BizSparks. The in5 hub will allow entrepreneurs to set-up their frameworks through Tecom licensing; provide mentorship that will offer expertise, training, networking and access to funds.



Hamdan Bin Mohammed Smart University

Objective:

Cloud Campus is a ground-breaking yet affordable social online learning program which delivers e-learning services to all segments of society via personal accounts on Google+, LinkedIn and Facebook.

Description:

HBMeU is an institution with many opportunities on the horizon. Being one of the first movers in e-learning in the Arab World, and having been the first accredited e-learning academic institution by the UAE Ministry of Higher Education and Scientific Research have given the university a competitive advantage. The University's commitment to transform education in the Arab World remains strong. The university has a particular focus on areas of particular relevance to today's Arab World.

Its mission focuses on lifelong learning and the technological dimensions of education that are becoming increasingly important in an increasingly competitive educational market.. HBMeU has much to be proud of and a strong base on which to communicate its many offerings to their target audience and positively contribute to the social and economic development of the Arab World.

Cloud Campus is the result of a strategic partnership with one of the Global Learning companies, specialized in modern learning methods and techniques. Participants have access to over 1,600 interactive online lessons in the fields of mathematics, sciences and IT for school students from first to twelfth grade, as well as business skill development for adults via 180 certified programs in Leadership, Communication, Marketing and Islamic Banking, among many others. Over 600 online lessons in the English language for all age groups are provided as well. Program benefits include Academic Support, Certification, and Multi-Screen

Abu Dhabi City Guard





Abu Dhabi Government

Objective:

CityGuard is a mobile application offered for free to all Abu Dhabi residents that allows the public to report incidents and submit complaints related to the Abu Dhabi Emirate directly to the government. With its slogan "Your City, Your Community, Your App", CityGuard aims to increase civic participation and collaboration between the public and the government in order to improve the Emirate at all levels.

Description:

Through Abu Dhabi CityGuard, the customer can instantly report any incidents around the Emirate by taking a photo, movie or audio of the reported incident and use an embedded interactive map to locate the exact geographic position of the incident.

The application automatically creates a case with the Abu Dhabi Government Contact Centre which promptly assigns the case to the appropriate government entity for resolution. From open to closed, the case can be monitored by the customer

within Abu Dhabi CityGuard or online on abudhabi. ae or by contacting the Abu Dhabi Government Contact Centre on (800 555). The customer can call the Abu Dhabi Government Contact Centre (800 555) to report any technical issue that is encountered during the usage of CityGuard, or to provide any feedback regarding the application, its features and potential enhancements.

The aim of the app is to improve government services and the city image with the help of the public. Therefore, several incident types such as public safety, consumer protection and environmental issues have been identified. Participating government entities are the three Municipalities of the Abu Dhabi Emirate, Abu Dhabi Police, Department of Transport, Abu Dhabi Food Control Authority and Health Authority -Abu Dhabi amongst others.

CityGuard is another cornerstone in the Abu Dhabi Government's drive to engage with its customers across multiple channels in order to maximize their feedback and collaboration in the service delivery enhancement process.







SECTION II

Child Protection Center



Ministry of Interior

Objective:

Child Protection Centre (CPC) is operated by the United Arab Emirates (UAE) Ministry of Interior, with a mandate to protect children across the UAE. The CPC's remit spans a broad range of responsibilities, including educating the public about and making policy/legislation recommendations related to children and transport safety, building safety, bullying, employment exploitation, offender monitoring, the internet and more.

Description:

The UAE is the only country in the Middle East region to be a member of the Virtual Global Taskforce (VGT), collaboration between law enforcement agencies, NGOs and industry across the world in the fight to protect children against online child abuse.

The UAE Mol is proud to be hosting the 5th biennial VGT Conference in Abu Dhabi in December 2012, which brought together key global figures in online policing and technology to help make the internet a safer place for our children.

The following lists campaigns conducted by the Child Protection Center:

CBC Mobile App Solution:

CPC Mobile App is designed to help with the family. The App provides instant communication with family members along with their locations. There are even family safety alerts for emergencies. Preparing for emergencies like earthquakes, floods, and fire should be an essential part of every family's regimen. In event of an emergency, communicating with families and locating family members can be critical. The CPC Mobile App map shows where



all your family members are and our Family Group feature allows everyone to communicate at once. If there is an emergency, a Panic Alert is sent and an email notification to every family member.

Three Day Event:

Targeting teachers and some 250 supervisors of nurseries across the UAE, the initiative is aimed at raising awareness of violence against children and will set a model for institutional partnerships, identify methods for identification of assaults, and set up a system for the reporting of violence against children at nurseries.

The initiative will focus on training and explaining the basic aspects of protecting children from abuse and negligence, as well as the legal aspects of supporting victims of abuse and the trainees will be responsible for coordination with the MoI on child protection and for reporting any risks to children at nurseries.

Strengthen the collaboration on Telecommunications and ICT



MOU between the UAE TRA and IDA of Singapore

Objective:

Telecommunications and Regulatory Authority of the UAE (TRA) and the Infocomm Development Authority of Singapore (IDA) have strengthened their collaboration in the field of telecommunications

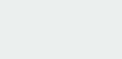


and ICT through the signing of a Memorandum of Understanding (MoU) at the ITU Telecom World 2013 in Bangkok, Thailand.

The MoU pledges both countries' commitment to promoting closer co-operation and knowledge exchange pertaining to various aspects of international and regional ICT in the public and private sectors.

Description:

Keyareas of co-operation include proactive exchange of information relevant to eGovernment and ICT, co-guidance and co-consultation on preliminary processes related to future enhancements, as well as joint research and analysis of information on new and existing technologies and development of systems and tools.



IDA INFOCOMM
DEVELOPMENT
AUTHORITY OF
SINGAPORE





MGovernment

SECTION III

The fast developments in the ICT and Mobile technologies coupled with strong penetration of mobile phones around the world has led a number of countries to seriously consider and adopt this new trend as a new channel of providing services to citizens. This has resulted in a move from good-oldfashioned eGovernment, based on fixed networks, to mGovernment where the governments can utilize mobile technologies to enhance as well as to improve eGovernment services. The UAE is no exception. Moreover, the UAE seems to have a robust infrastructure already in place and great potential to convert mGovernment opportunities into a big success and create a global leadership in the area.

This was recently made public when Vice President and Prime Minister of the UAE and Ruler of Dubai H.H Sheikh Mohammed bin Rashid Al Maktoum announced the initiative for implementing mGovernment in order to improve the quality of the residents and nationals

"We are embracing the most modern concept in innovative government by moving towards the delivery of government services through mobile phones. We have one of the best communication infrastructures in the world today, with mobile phone subscribers in the UAE reaching 14 million, which represents an average of two mobile phones per individual."

At a forum, organized by the UAE Government with the participation of more than 1,000 government officials, H.H Sheikh Mohammed launched the mGovernment initiative. UAE aims not only to bring an innovative service to citizens but also reach a leading position within international practices.

H.H Sheikh Mohammed stated that all federal and local government entities are entitled to implement innovative services of mGovernment effectively within 24 months and the government is equipped with sufficient sources to enable this success.

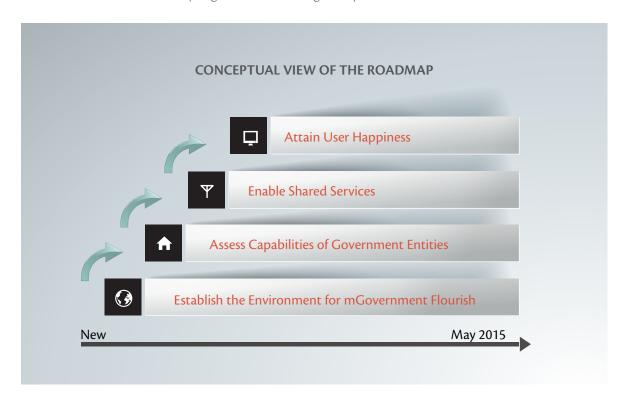
Mobile government involves adoption of mobile business techniques and enterprise mobility in the public sector. It has three sets of stakeholders the industry, service providers and the users. In the industry the stakeholders include all businesses in the mobile value chain from Mobile Network Operators (MNOs) to solution and content producers to the device manufacturers (i.e. phones, tablet PCs, and Laptops). The service providers include the government entities and other organizations often supporting them. For example, banks may help government organizations to enable mobile payment services and a Trusted Services Manager support safe secure transactions and protection of data. All services are directed to certain groups of users, the largest of which are the citizens. Other government entities and their employees may also be users if mGovernment services were designed for the government employees to use.

A View of Mobile Government Ecosystem



Roadmap & Tracks

Mobile Government involves a strategic utilization of advanced Information and Communications Technologies (ICT) and mobile technologies for offering public services. The use of mobile technologies is at the heart of any Mobile Government implementation. Developing a countrywide Smart Government is a challenging task for any government in the world. Such effort should first go through a more foundational and core set of actions in adopting mobile technologies in public services.



Establish the environment for mGovernment to flourish

This track contains milestones, which focus on creating necessary foundations for the mGovernment to exist and be sustained. This starts with establishing a strong and competent management group to plan and implement the mGovernment transformation. Other milestones deal with understanding how the government at a national level operates and the government entities are connected to one another in terms of information and work flows; what can be done in improving stakeholder involvement and partnerships; in building capacity of the users and government entities; in creating a supportive mobile (ICT) industry and a legal framework. All of these are essential for having mGovernment to take of a countrywide program and achieve the desired goals.





Assess capability and capacity of government entities

SECTION III

This track mainly deals with understanding and finding out the ways for improving current situation with respect to readiness of the government entities to implement mGovernment. This track solely focuses on situation assessment with regards the government entities capabilities so that the next tracks could be implemented in a more effective and directed manner. For example, understanding capabilities of government entities in terms of their abilities to share data and applications will help to develop more realistic approaches for shared services (Track 3). Similarly, understanding security needs will lead to development of better security directives that is part of the next track. There may be strong dependencies between this track and the other tracks.

Establish shared resources across government entities at the national level

This is the core track for improving readiness of the all government entities, especially from the point of technological view and sharing of a number of nationwide systems such as, Establishing Federal Network (FedNet) mobile payment (mPayment) and creation of mobile ID (mID).

Achieve citizen happiness

This track contains milestones that support a citizen centric mGovernment transformation especially with regards to underserved communities, citizens living in remote areas and those who form small communities such as farmers, unemployed and students. It also deals with promotion of the mGovernment services in order to speed up and assure adoption among the citizens.

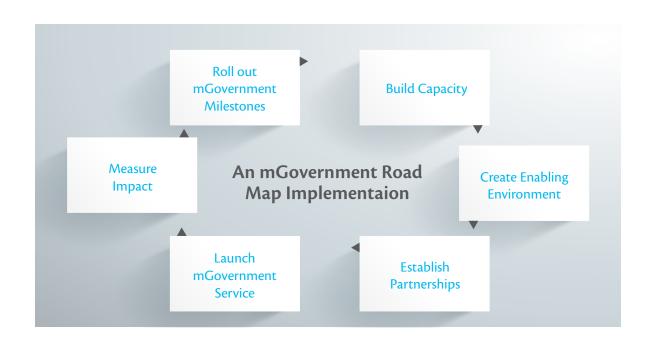
Implementation

The existing infrastructure and ICT readiness in the United Arab Emirates (UAE), owing to the successful development in eGovernment, is at a level that could support one of the world's most advanced mGovernment implementation. The essence of the mGovernment program involves utilization of frontiers of mobile technologies and related know-how to offer services to citizens, where either the government organizations or the users are supported to be reasonably ready to take up these services.

The implementation of the mGovernment requires significant amount of preparations, planning and capacity building even before mGovernment program starts. These will followed by adaptive monitoring, evaluation and impact measurement while services are gradually wide spreading in the country.

There are two critical and practical factors that are in need of addressing should the implementation of the mGovernment program be a successful one:

- Recognizing that the implementation of mGovernment across the entire country (a nationwide program) represents a significant contribution to the overall socio-economic development of the country.
- Recognizing that implementing mGovernment as a nationwide project will be very challenging in some ways, including existing management structure and different levels of maturity among existing eGovernment implementations, data integration, and required capacity building efforts in government and among users.



Challenges

There is no doubt that a proper implementation of mGovernment in the UAE will set one of the best examples in the world with its strong resources, readiness and political support. Currently, there are a number of areas, which could potentially present risk to this endeavor:

- Data integration and interoperability among government entities may not at a level of quality that facilitates advanced mGovernment services, such as intelligent and interactive location based services.
- The collaboration and cooperation required among the government entities and eGovernment authorities may fall short of what is required from the nationwide implementation of the mGovernment transformation.
- The shared services are at the core of the overall success of the mGovernment program and they are interdependent. Failure or a substandard implementation in one may lead to a domino effect of failures in other parts of the mGovernment transformation.

Note; The full detailed UAE mGovernment Roadmap and Guidelines are published for public on the official government website www.government.ae







Smart Learning

SECTION III

Introduction

The United Arab Emirates (UAE) is one of many nations who are continually seeking to reform and improve their education systems. The last decade has witnessed an extraordinary level of international education reform and a myriad of different approaches to educational provision. Whilst many of these reforms have proven to be transient in nature, there has been a developing consensus that a paradigm shift is required in educational provision to successfully meet the present and future social, political and economic needs of nations and the aspirations of learners.

In the drive to improve the quality of education provision and outcomes it has been reasonable to assume that the transformation in working practices, efficiency savings and creative developments that were and are taking place in the private sector through the application of emerging technologies could be transferable into education systems.

The Mohammed bin Rashid Smart Learning Programme (MBRSLP) is a joint venture between the Ministry of Education (MOE) and the UAE Telecommunications Regulatory Authority (TRA) in cooperation with the UAE Prime Minister's office. The MBRSLP which is part of the UAE Vision 2021, was launched in 2012 by His Highness H.H Sheikh Mohammad bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai.

Objective

The Programme's main objectives are "to encourage the integration of teachers, students, parents and administrators within a unified electronic platform, to change the 20th century traditional methods of teaching to an interactive one, and to create a student-oriented educational system that identifies students' particular learning styles, intelligences, strength and weakness and enhances their skills according to their abilities." The initiative aims to create new advanced learning environments throughout the public schools by means of 'smart classes' that will provide every student with an electronic device and access to high-speed 4G networks by 2017 with "the aim to improve the educational system in the UAE and keep pace with the latest global developments in education".

Timeframe

The MBRSLP programme began in 2012 with the roll-out in Phase One in eight schools for grade 7 students. This was followed by the roll-out in April 2013 of Phase Two, which included an additional six schools and in September 2013 of a further 107 schools in Phase Three. Further phase developments will ultimately lead to ubiquitous use of technology for all students in all six Emirates which are participating in the programme.

Unique Approach

Whilst the programme is similar to many international ICT developments in that it represents a major technology roll-out of one-to-one devices with some additional classroom technologies, the intention is that the MBRSLP will differ in four significant aspects from many of those previous international rollouts. The programme will be:

• Educationally Led - The strategy will be focused on the delivery of a set of educational objectives rather than a prime emphasis on a technology implementation.



- Informed by Evidence The strategy will be informed by lessons learnt from other international contexts.
- System Wide The strategy will impact the entire education community from students to teachers, from parents to principals.
- Supportive of National Aspirations The strategy will be developed in line with the broader social, cultural and economic aspirations of the UAE.

Essentially the programme is viewed as a catalyst for change within the education system to support the broader national vision for 2021.

Challenges

The Smart Learning program has been able to continuously develop and place a roll-out plan but

yet faces challenges as follows:

- Very high aspirations and expectations
- Large scope as it is national level deployment
- Very Short time frame to deliver especially for September roll-out
- Lack of global past experience in national level deployments
- Challenges in training and developing teachers and schools leadership on new technologies and to embrace this transformation and change management process.
- Managing different set of stakeholders and partners to achieve the program objectives.
- Dealing with technological challenges and adapting it to educational context and learning requirements.











ICT Fund

Introduction

The ICT Fund is an initiative of the Telecommunications Regulatory Authority that aims to spur the creation of a significant ICT industry in the United Arab Emirates (UAE). To achieve this, ICT Fund provides targeted funding and support services to individuals, academic institutions and companies, and empowers them to develop the innovation and knowledge capital of the UAE ICT sector through education, applied and basic research, and entrepreneurship. The ICT Fund strives to promote a culture of entrepreneurship in the UAE ICT sector and to develop linkages between industry and academia. Additionally, it promotes the involvement of UAE nationals in the realm of scientific and technology research in order to foster technology creation and development in the UAE.

The ICT Fund is driven by a strong vision to reinforce ICT as a leading sector in the UAE economy. The ICT Fund believes that a global leadership position for the UAE ICT sector can be attained by investing in innovative ideas that contribute to the intellectual growth of the sector, yielding measurable results.

The ICT Fund is driven by a strong vision to make the ICT sector the leading sector in the Middle East through enabling and fostering progressive innovation in the field. At ICT Fund, we believe that a global leadership position for the UAE ICT sector can be attained by investing in innovative ideas that contribute to the intellectual growth of the sector, yielding measurable results. The Fund's mission is to provide targeted funding and advisory services to companies and individuals, empowering them to develop the innovation and knowledge capital of

the UAE ICT sector with their research, education and entrepreneurship.

Objectives

The ICT Fund's key objective is to drive the strategic development of the UAE ICT sector in order to strengthen the innovation and knowledge capital level of the market by providing research, education and entrepreneurial opportunities. The ICT Fund will initially focus its funding and technical and advisory services on supporting the following core areas to create significant, sustainable innovation:

- Incubators: Nurturing business incubators in the UAE that support the development of new ideas and provide early stage startups with financing, management expertise and infrastructure support.
- R&D projects: Enabling research teams to carry out world class research, both basic and applied, and advancing the level of theoretical understanding of ICT subjects as well as their real world applications.
- R&D institutions: Supporting the creation of high-quality R&D institutions in the UAE that focus on basic and applied research and that contribute positively to the ICT sector of the country.
- Educational scholarships: Providing educational scholarships to support the education of motivated and capable individuals who are keen to work in and contribute to the UAE ICT sector.
- Educational institutions: Strengthening and setting up educational institutions that offer quality ICT related courses and that will groom future talent for the country.

UAEIX

Introduction

UAE-IX is an Internet exchange in Dubai, United Arab Emirates (UAE) and was founded on October 1, 2012. UAE-IX is the first carrier-neutral Internet exchange platform for the Middle East, interconnecting global networks, Internet service providers, content delivery networks, research and educational institutes and content providers in the Middle East region.

UAE-IX is built on a fully redundant switching platform located in two neutral, secure data centers in Dubai. Initiated by the UAE's Telecommunication Regulatory Authority (TRA) and operated by DE-CIX, the world's largest Internet exchange based in Frankfurt, Germany, UAE-IX delivers a highly available local alternative for regional traffic exchange.

Objectives

UAE-IX fills a need that had previously been unmet in the Middle East region. Unlike developed markets, there was no central Internet hub dedicated for the region. Until now, Internet Service Providers (ISPs) in the region have had to exchange their traffic via Europe, Asia or North America, leading to high latency rates and lower-quality service. UAE-IX addressed the wholesale service provider market's need for advanced, reliable and robust peering and exchange infrastructure. The presence of an Internet exchange in the region also allows for reduced traffic latency, better network security, reduced risk of network outages and a better experience for the end-user.

Located in the heart of the Middle East, UAE-IX's Dubai location positions it well as a transit hub between Europe, Africa and Asia. With its

close proximity to a multitude of submarine and terrestrial fiber-optic networks that traverse the Arabian Gulf and the Indian Ocean, UAE-IX enables reliable and secure connectivity between the Middle East, Europe, Asia and Africa and can cover a wider population of about 2 billion people within 80ms latency. Just one year after its launch, the UAE-IX customer base has grown substantially and delivers connectivity to more than 55 percent of all eyeballs in the GCC region.

Goals & timeframe

With more than 96% of the Internet traffic in the Middle East is being long hauled from Europe, USA and Asia pacific and mainly delivered through high latency sub-marine cables that are prone to cuts, UAE-IX's main goal is to promote keeping local traffic exchanged locally. Other goals of the UAE-IX are to:

Establish regional peering to enhance content reachability

- To deliver improved customer experience through decreased latency
- To provide substantial cost saving for network operators
- To provide better resiliency and security
- To provide diversity and alternative to peering in Europe and Asia
- To become the digital hub for Middle East, Indian sub-continent and East Africa
- To increase the average usage of Internet in GB by minim 80% by 2015







UAEIX

The UAE-IX and other similar initiatives in the region should play a vital role in changing the traffic behavior from having 96% long-hauled from Europe, U.S and Asia to 40% by 2016 and 20% by 2018.

Relevance

The Internet continues to grow substantially and rapidly. There were 2.4 billion global Internet users in 2012, and the number of Internet users continues to grow each year.

In the Middle East, Internet traffic volumes grew a substantial 92% between 2008-2012. Yet only 4% of IP traffic in the Middle East is generated and delivered within the region. In a part of the world with more than 350 million people, traffic continues to be primarily driven inter-regionally. Trends show IP traffic moving via the Middle East to Europe, Asia and Africa, which makes the Middle East a good example of a region ripe for strong Internet Exchanges.

Internet Exchanges provide a regional peering location to allow providers to deliver content locally at faster rates with lower latency and delay. A local Internet exchange in any region delivers substantial cost savings for network operators.

Delivering content locally also increases network infrastructure resiliency and security, with a reduced risk of outages and sub-marine cable cuts. Since its launch, UAE-IX has improved routing efficiency and created an improved broadband experience for

end-users. The new Internet exchange has reduced latency times by up to 80% and costs by up to 70% for GCC providers. UAE-IX has also improved IP network resiliency, enabling more reliable connectivity within the GCC and reducing the risk of network outages.

Challenges

Some of the challenges the UAE-IX is facing is convincing the incumbents to play a role in this initiative which serves a good cause for the society in general by participating and actively peering with other peers to encourage drive of traffic locally.

Some other challenges like how operators reach the IX are equally important and can sometime be seen as a show stopper to some due to the high cost of reaching the IX platform.

Some of the operators have two different teams, one is looking to make sales and generate revenue and the other is responsible for reducing cost and enhancing customer experience. It is quite challenging to get a quick decision made between the two teams to actually move forward with the connectivity to the UAE-IX even though the advantages are recognized.

The UAE-IX with its partners is striving to make everything possible for networks to reach and connect to the exchange in the most efficient way despite all the challenges faced.

THE UAE FORWARD AND THE VISION BEYOND 2015

The United Arab Emirates (UAE) has been able to prove its capabilities in advancing its ICT frontiers to run in parallel with leading nations in the field and coping with the standard set by the recommendations of the World Summit of the Information Society.

As the government encourages the development of the sectors through the progression of research and development in ICT, this has created a shift in industrial trends that possesses a great challenge for both the government and private sector. The public sector is the strategic driver of the fast-paced learning curve causing a domino effect in the private sector to accommodate such technologies as realized through consumer demand. Accordingly, the future will prove an intersection between both these efforts in standardizing ICT derivatives to provide the public with accessibility and knowledge in a blink.

The collective achievements point towards one direction. Henceforth, the mGovernment initiative is emphasized through all government entities as it aims at providing a unity in processing public services through a consistent platform. This has encouraged leaders in the UAE to consult with one another through a multi-stakeholder approach. We now see large conglomerates rushing in a similar manner to cope with the ICT directives of the government.

During 2014, the UAE has additionally seen the dissemination of information into the dispersing of its outcomes through ICT driven portal for the aim of bringing several users in a virtual playground.



This allows us to recall the basics of ecommerce but the difference is that not only merchants enjoy that capability any longer but also people that share similar ideas, thoughts and beliefs.

The 2014 results have reflected the recommendations set in the goals of the United Nations Millennium Development Goals (MDGs) that provided the UAE with the empowerment of continuously enhancing their ICT infrastructure and promote the funding of potentially leading core-ICT projects for the long run. The Ministry of Interior of the UAE through its Child Protection Center has fully focused allocating its resources and efforts into the well-being of children as set by the MDGs via ICT means.

The UAE will thrive yet for another year to come in showcasing its ICT milestones as the 2015 full review approaches while address the arising issues with all decision makers to aim at the success idealized by the WSIS.





