



Introduction

Tunisia was the host of the second phase of the World Summit on the Information Society (WSIS) in November 2005. This choice was justified considering that information and communications technologies (ICTs) are a priority sector in the country.

The use of ICTs in Tunisia started in the early 1990s. With the spread of the internet, ICT take-up has accelerated, particularly in the business world, which needed to meet the challenges of globalisation. Individual citizens first used computers at cybercafés, before gradually acquiring personal computers for home use. With recent e-transformation efforts, the government has prioritised the distribution of ICTs in education across the country, while the use of ICTs in the public sector has also increased.

The ICT sector has undergone an important expansion in recent years, contributing 10% of gross domestic product (GDP) in 2008, compared to 7% in 2005 and 2.5% in 2002. This contribution will reach 13.5% over the period 2007-2011. Outsourcing in the ICT sector also benefited from a significant investment of around EUR 3.5 billion for the period between 2007 and 2011, against EUR 230 million from 1992 to 1996.

There has been a huge increase in the number of websites created, especially in the private sector. The country has over 10.7 million inhabitants, 66% of them living in cities. A large part of the population is young: people between fifteen and 59 years of age constitute around 65.8% of the population. Perhaps because of this, blogs, social networking and personal websites are also thriving.

Policy environment

The development of e-content is a crucial and strategic issue in Tunisia. In 1998, the country started mobilising local and international communities on ICT issues. After WSIS in Geneva 2003 and Tunis 2005, governments, businesses and non-governmental organisations (NGOs) were committed to ICT development issues, particularly e-content development, e-accessibility and digital opportunities. Since then, Tunisia has worked hard to develop ICT accessibility and e-content locally, and to follow up on the WSIS action plan regionally.

The country has adopted a new and ambitious strategy that meets the needs of building the information economy and promoting e-content. The strategy is articulated around three main axes: the development and modernisation of ICT infrastructure; the promotion of digital content and the universalisation of ICTs; and the adoption of a legal framework that promotes e-services and e-content.

Both e-content and ICTs in education are cross-cutting features of the strategy. ICTs in education encompass all levels and subject areas. Today, 50% of primary schools are connected to the internet, while all secondary schools and universities are connected, and 10% of students at universities are specialising in ICTs. Remote schools have been connected to the internet through the work of an organisation called Internet Caravan.

Tunisia has also invested considerably in ICT training and has many world-famous institutions, such as the National School of Computing Sciences (ENSI) and the National School of Engineers of Tunis (ENIT).

Several initiatives have been launched to promote ICT take-up in the country. There are about 305 public internet centres and 196 call centres providing about 17,000 jobs. The El Ghazala technology park is considered an innovative environment offering modern infrastructure that helps to create a synergy between education, research and industry.

Tunisia is also determined to promote e-content, including Arabic content. Several specialised multilingual sites have been developed, with the aim of encouraging the use of the internet and access to information.

Legislative environment

A suitable regulatory framework has been adopted to help modernise the country through ICTs, to encourage the development of e-content, and to protect personal data. There has also been an agreement to incorporate the Creative Commons open licensing platform into Tunisian legislation.

Key acts that make up the ICT sector's legal framework are:

- Telecom Act (2001/2008)
- Electronic Business and Interchange Act (2000)
- IT Security Act (2004)
- Decree No. 6382 (2008) dealing with voice over internet protocol (VoIP).

In addition to this, Decree 2004-1250 obliges national institutions to conduct periodic computer security audits.

Other legislation relevant to online information includes:

- Legislation dealing with the digital economy (2007)
- Protection of Personal Data Act (2004)
- Intellectual Property Rights Act (1994) (under revision)
- A decree dealing with encoding services (Decree 2008-2639)

Open culture and the internet

E-content encompasses the creation, design, management and distribution of digital products and services and the technologies that make these activities possible. User-generated digital content is an important milestone on the road to the information society: social networking sites like Facebook, MySpace, Twitter, blogs and wikis continue to grow and compete for users' attention with traditional content.

E-content development in Tunisia is focused on different areas: e-business (banking, transport, telecoms, commerce, e-payment, human resources, tourism, crafts, information portals, etc.); e-government (municipalities, social security, tax, customs, education, investment, etc.); e-culture; e-health (hospital management, medical information); e-entertainment (games, travel portals, etc.); e-inclusion (content for children and people with disabilities, NGO portals); e-learning (eDuNet, the primary and secondary school portal, specific learning content, etc.).

The public sector is a major player in developing e-content. It has developed several portals allowing online access to information and encouraging the development of e-content. These include the Tunisian government portal,¹ which offers a set of online services (social security, municipal services, etc.) and a variety of content in three languages (Arabic, French and English). The use of these portals is encouraged through various incentives and media campaigns.

To develop e-content and technical skills, government departments have also put several electronic services online using the e-dinar for virtual currency. The e-dinar was introduced by the Tunisian Post Office to help Tunisians shop online.² Tunisian Post also acts as a multimedia service provider and facilitator for many public services (transportation, utilities operators, municipalities, universities, schools, housing, insurance, etc.) to help the public access these services and pay bills online.

A school portal³ delivers a variety of high quality content and offers online support for students. Students can register online, participate in open learning sessions, get support from tutors, and access materials, amongst other things. At the same time, Tunisia's education portal, EduNet,⁴ provides users with a variety of educational services, such as web hosting, email and collaborative work platforms.

In order to improve exchanges within the community of teachers, researchers and students, and to encourage the use of modern pedagogical tools with rich e-content resources, the government has developed communication tools to promote e-learning and e-content.⁵ Other platforms that support e-learning include eCircle.⁶

Universal Postal Union members from over 30 countries are also using the virtual school set up by Tunisian

Post. This is a unique showcase of virtual-learning services used all over the world – especially by some countries that cannot afford the investment on their own – and is open to contributions.

In the field of science, an online portal⁷ has been dedicated to supporting scientific communities, researchers and students with updated information on scientific events and research. In this way it contributes to the diffusion of scientific knowledge and enhances the accessibility of scientific information.

Many in the technology sector contribute to the development of e-content. For example, the El Khawarizmi Computing Centre (CCK) announces technological events and publications, and the National University's Centre of Scientific and Technical Documentation (CNUST) offers various content relevant to the scientific and technical community.

The most developed e-culture website⁸ offers content and information related to things like cultural events, museums, movies, and a cultural directory.

The availability of content in the Arabic language will be key to increasing the use of the internet at all levels of society. The Tunisian Ministry of Technology has made substantial strides in working with partners in the public and private sectors to foster a vibrant and active e-content industry in Tunisia, with a particular focus on encouraging Arabic e-content. However, Tunisia is a multilingual country, and its proximity to Mediterranean countries means that many citizens are fluent in several languages, including Italian, English, French and Spanish.

Several national and international competitions have been established in Tunisia to encourage the use of e-content, such as the Tunisian Best e-Content Award and the World Summit Award (WSA). This approach is reinforced through things like the adoption of the Creative Commons licensing framework in Tunisian legislation, and the role of associations and NGOs in developing a digital culture.

New trends

- *Outsourcing development applications:* Offshore outsourcing has gained popularity in recent years in Tunisia, as a result of business strategies aimed at developing e-content and e-applications.
- *Using open source applications:* The open source community in Tunisia is very active: the country has a secretary of state dedicated to the development of open source, and there are several non-governmental open source groups and student clubs focusing on open source (ATU2L, Libertysoft, etc.). The private sector is also active and develops services based on open source applications.

1 www.bawaba.gov.tn

2 www.laposte.tn

3 www.postelearning.poste.tn

4 www.edunet.tn

5 www.uvt.tn

6 www.ecircle.rnu.tn

7 www.annonces.rnu.tn

8 www.villedetunis.com

- *Social networking applications*: Social networking has become a very effective way to access information. Tunisian communities on Facebook have reached more than 150,000 members. Several thousands more use LinkedIn, Viadeo, and the like. The importance of this new wave is increasing as people are becoming more involved by submitting all kinds of announcements advocating causes and appeals for action.

Action steps

A number of action steps are necessary in Tunisia:

- Promoting Arabic e-content. The use and distribution of Arabic digital content reflecting the richness in culture and tradition and the intellectual progressiveness of the Arab community is essential. This is especially true in the areas of creative e-content and quality applications.
- Increasing the number of nationally based websites and improving the quality of their content.
- Increasing the number of web hosting services in Tunisia and reducing the costs of hosting.
- Establishing centres dedicated to the creation and promotion of e-content. ■

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