Nadia El-Awady

The city of Fez has become an award-winning model for the effective use of ICTs in public service delivery in Africa.

Fez: The e-capital of Morocco

In a backroom office dating from the 1950s, dust and decay have left their mark on hundreds of handwritten records in Fez, Morocco. An employee in the Bureau d'État Civil (BEC) half-heartedly blows the dust off a book and searches for the birth certificate of one of the dozens of citizens who visited the office today. The employee will have to transcribe — by hand — all the information from the original certificate 10 times to provide the citizen with the copies needed to apply for a job. It will take hours, if not days, to fill this request along with the many others received that day. And citizens can do nothing but endure the long wait.

This scene is repeated daily all over Morocco. Keeping records of life events, such as births, deaths, marriages, and divorces, was only instituted in the country in the mid-1950s, toward the end of the colonial rule. During the 1960s and 1970s, after independence, mass registration began — all done by hand. Sometimes illegible, having been written by tired, bored, and underpaid employees, these records were formatted differently from one part of the country to another, leading to many inconsistencies.

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The laboratory's most important e-government activity has been the e-Fez Action Research Project, funded by Canada's International Development Research Centre (IDRC). This project had two main objectives: to design, develop, and implement an e-government system to automate delivery of citizen-oriented services, and to assess and analyze changes resulting from the introduction and use of ICTs in government. This latter analysis would include a road map to allow decision-makers in other parts of Morocco to follow suit.

A unique blend of old and new

The city of Fez is a unique blend of very old and very new. In its heart, the old walls of this 1 200-year-old capital still stand tall and magnificent, embracing the oldest part of the city — Fez Al-Bali. Most of its alleyways are so narrow that the only way to move around is by donkey or on foot. As a result, Fez Al-Bali is the largest car-free zone in the world.

On the outskirts is Fez Al-Jedid, or New Fez, which was built by the Merinids in the mid-13th century. Much later, during colonial rule in the early 1900s, the French built the Ville Nouvelle part of Fez.

Throughout Fez old and new merge, giving the city a unique atmosphere. Next to the shop of an old man selling hand-woven textiles, for example, is one of the city's many Internet cafés. Walking side by side past McDonald's in the modern part of the city are a young man in a T-shirt and an elderly woman, veiled and wearing the traditional hooded *jilbaya* or robe.

It is this delicately sustained blend of old and new that has allowed the people of Fez to lead Morocco into a new era, as they have done many times in the history of the country: the era of e-governance.

With a two-year grant from IDRC, the research laboratory had to prioritize. It opted for automating one of the most widely used services in BEC offices: providing birth certificates.

A pilot project, undertaken in partnership with the Université Laval in Québec and in collaboration with the Fez municipal government, was planned for the Agdal district. Its BEC office was set up in 1986, and had registered approximately 15 000 citizens. Groundwork was conducted to assess workflow and interviews were conducted with employees and citizens using these services.

Handwritten records wear out with time

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And the citizens of Morocco are not pleased. Applying for these certificates can take days. Although under-the-table bribes are common, the process can still be unbearably long. Those who finally receive their documents are often so elated that they fail to double-check the handwritten copies, resulting in a return visit to the BEC to fix poorly transcribed entries that have not been accepted at their final destination.

But an end is in sight. And it took the people of Morocco's spiritual capital city of Fez to usher in a new era of e-governance.

Automating government services

Dr. Driss Kettani, an associate professor at Al-Akhawayn University's school of science and engineering, stood in line at his local BEC office in Fez, waiting to register the birth of his daughter. Having just returned to Morocco after studying and working in computer sciences in Canada, Kettani wasn't prepared for the experience.

It took 10 days for Kettani to register his daughter. For him, that was a turning point. "Enough was enough. I could not believe that in the 21st century this [was the state in] a country like Morocco that enjoys a long history and civilization. I decided it was my challenge to change this situation," he says. And that is exactly what he did.

A laboratory for innovation

Kettani began by setting up his Information and Communication Technologies (ICTs) for Development Research Laboratory at Al-Akhawayn University in Ifrane, an hour's drive from Fez. In operation since 2004, the laboratory works in e-government, e-tourism, and e-transportation.

Fostering collaboration

Initially, the research team met with resistance from government employees, who saw their office as a "preserve" that should remain untouched by modern technologies. The research team embarked on a massive educational effort to emphasize the importance of using ICTs and the potential to design programs that would meet all requirements. Technology does what we design it to do, they explained. Strong support from Agdal's president, Mohamed Titna Alaoui, and his conviction that this project was the way to a brighter future for Morocco, eventually gave the team a firm push forward.

Agdal district BEC Office
Nadia El-Awady

The research team soon discovered that automation required more than they had bargained for. Every birth certificate in the Agdal office would have to be digitized. This meant installing the necessary infrastructure in the office, which previously had no computers or Internet connections. Even the electrical service was prone to interruptions. The municipality of Fez played a major role by installing new electrical lines, Internet connections, and computers; the project provided cables and servers. The municipality was so highly motivated that it began automating two other offices at the same time.

The team then needed to find a way to digitize the existing records. They tried scanning, but the error rate was 60%. The only viable alternative was to enter the information on each birth certificate into a database.

"We had not planned on doing this," said Asmaa El-Mahdi, a research assistant at the ICT for Development Research Laboratory. "It was by working on the ground and by learning something new each day that we ended up with this decision," she said.

> "Our goal is to network all of our services with all the cities in the kingdom so that any kind of record can be obtained in any of the districts."
> Mohamed Titna Alaoui, president, Adgal district

Unprecedented results

Employees from the Agdal office regularly visited Houda Chakiri, the technical project manager at Al-Akhawayn University, in developing the program. The result was unprecedented. For the first time ever, Moroccan citizens' records were digitized. Data entry began in February and ended in November 2005. Ten full-time employees from various BEC offices in Agdal were assigned to learn, implement, later demonstrate the data entry process in other offices in the district.

Automating the workflow was the next step. Citizens now have three choices for obtaining a birth certificate. Rather than wait days to receive a handwritten copy, they can provide office staff with their serial number and the computer system generates and prints a copy of the certificate. In minutes, the certificate is signed and ready!

The electronic kiosk
Nadia El-Awady

Project partners and Fez officials celebrate the project's awards: e-Mtiaz, TIGA, UNPSA

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The second method is through an electronic kiosk conveniently located near the office entrance. By working closely with citizens, including focus groups of illiterate people, the project team designed a touch-screen application. Using audio instructions and easy-to-understand icons, in addition to text, citizens can request certificates without going through office employees. The certificates are printed in the back office and the citizen can have it signed by the civil affairs officer. The kiosk also provides information on other BEC services.

Finally, through an Internet portal that also provides basic government information online, citizens can request a birth certificate from home.

Enabling people, winning acclaim

The impact of the e-Fez Action Research Project has been far-reaching. At the local level, some 15 000 registered citizens now have access to government services instantly. Services are transparent, take less time and effort, and clients are treated with respect by local government employees. And local decision-makers have been sensitized to the real needs of their communities.

Perhaps even more important, says Kettani, the project generated collaboration between various sectors of society in Fez. An academic institution, citizens, elected officials, government employees, and an international organization worked together to make better local governance a reality. The project was viewed as the Fez project, rather than the Al-Akhawayn University project. Since its inception, the

project has won widespread recognition, winning Morocco's National Prize for Electronic Administration: e-Mtiaz 2006. And in 2007 the project earned a Technology in Africa Award (TIGA) and a United Nations Public Service Award (UNPSA).

The challenges ahead

The project continues to grow. A second phase initiated in December 2006 with support from IDRC and the Moroccan government will see BEC offices all over Fez being digitized and automated. The plan is for Fez to be completely digitized by 2008 and to have national coverage by 2012.

Research team members are sharing what they've learned with other offices in their district. "It's a challenge," says El-Mahdi. "It will rely on decision-makers' willingness to disseminate the experience within their government structures. This willingness will not come in a vacuum. We need to create it by raising people's awareness of the importance of such an experience and of the need to seize this opportunity through capacity building. It will involve the training of champions, and these champions will need to 'infect' additional champions." Eventually, Kettani's "contamination strategy" should reach all Morocco.

"It took a lot of time and energy," says Kettani, "but you don't have anything if you don't do anything. The only way to change is to have research in action. Expose your ideas and find the right people. And do things from the perspective of being happy, serving your country, and helping your people. We don't do things because of contractual or personal benefits. We do them because we know there is the possibility of changing the world. And changing the world starts by changing Morocco."

This story is a condensed version of a longer feature by Cairo-based journalist Nadia El-Awady.