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INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) BRIEFER



USAID has implemented a wide range of ICT projects in the fields of education, good governance and economic growth, which are described in this briefier. Major results have already been achieved. Most significantly, in 2005 Macedonia became the world's first wireless country. Macedonia has now set a goal to become a new regional hub for IT.

With the challenge of globalization, USAID's ICT projects assist Macedonia to address the increasing demand for a highly skilled workforce, the need to promote better governance, to reduce corruption and to attract investment to enhance its economic development.

Providing access to technologies for everyone

Initially, the greatest ICT challenges facing Macedonia were access and connectivity. Working together from 2003-2007, USAID's *Macedonia Connects* and *e-Schools* projects installed 6,000 computers (donated by the Chinese government), trained over 10,000 teachers in the use of ICT, created an education portal that linked the school communities and all teachers in a virtual working environment (www.schools.edu.mk), and connected all of Macedonia's primary and secondary schools to the internet. The internet network created with the help of Macedonia Connects resulted in Macedonia becoming the first wireless country of its size in the world. By breaking the monopoly on internet service provision in 2005, healthy competition in the sector appeared, resulting in a 75% reduction in internet prices and the nationwide expansion of affordable and accessible broadband internet.



Enhancing the use of ICT in the classrooms

Continuing the legacies of the Macedonia Connects and e-Schools projects, USAID's Primary Education Project, started in 2006, is supporting the computerization of Macedonian primary schools by providing educational software, training teachers, developing maintenance solutions and introducing innovative uses of ICT in traditional subjects, such as math and science, plus less traditional areas such as robotics, electronic music, and video and audio recording. In response to the lack of adequate school staff to provide user support and maintenance, the project came up with a very innovative initiative - Student Support Technician Clubs (SSTC). The clubs are composed of older primary school students (supervised by teachers) who are in charge of preventative maintenance of the school's hardware infrastructure, basic network management and assisting the teachers in their day-to-day computer operation. The overall aim of the project is to help students gain essential IT skills to meet the challenges of the 21st century.





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Strengthening the administrative capacity of national and local government and expanding services to citizens and businesses

The decentralization process in Macedonia started in 2005. As a result, municipalities were transferred important responsibilities to manage their finances and administer local taxes. To support this process USAID, in collaboration with the Ministry of Finance, designed software for financial management and tax administration. Ninety percent of Macedonian municipalities are now equipped with high quality hardware and software for financial management and tax administration. The new system has led to a 30% increase in local tax collections.

The USAID funded *E-gov* project contributes to improving efficiency and transparency in Macedonia by designing, developing and implementing modern e-government (e-gov) solutions and opening new channels for doing business in a transparent, efficient and secure manner.



The *E-procurement* system, a modern electronic system for public procurement was introduced in April 2006 and is beginning to reduce corruption. It has saved tax payers money by reducing the cost to the Government of Macedonia (GOM) for commodities (approximately 5%) and increased business opportunities for local and international firms. The government has fully embraced this system and is mandating its full usage by 2012. In addition to USAID's work in public procurement, this project has successfully implemented e-gov solutions that enable businesses to file taxes, apply and obtain international transport licenses, export/import licenses and quotas, and electronically comply with GOM requirements to register employees.

One example of the impact these applications have is the "apply online" system, which was created to provide candidates with a fair and transparent method to apply for jobs within the state administration. The application process tests the candidates electronically thus eliminating most risks from human error. It is a cost effective process and also reduces the potential for discrimination and corruption. Already, 97% of candidates applying for civil service positions are using this system!



Another illustration of the benefits of the introduction of ICT in the business sector is the automated system for management of international cargo transport licenses, which was launched in 2006. All applications for licenses are submitted electronically and the available licenses distributed on strictly determined formula and criteria. The system is now mandatory and enables efficient and accurate monitoring of the use of distributed licenses, increasing transparency and reducing the possibility for corruption in the distribution process. This application was featured in an International Harold Tribune article as an effective tool to fight corruption.



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Revitalization of traditional industries through new technologies

Modern information and communication technologies can stimulate growth in the traditional industries such as tourism, footwear, apparel and tool-and-die. In 2003, USAID launched the e-Biz project with a goal to make these technologies (such as Computer Aided Design/Computer Aided Manufacturing (CAD/CAM), Internet portals and e-commerce) accessible to a multitude of small and medium-sized enterprises (SMEs) and help them introduce more competitive products and services to the global markets. The project implemented an innovative model of partnering with Macedonian entrepreneurs to build six e-Biz centers that offer “high impact” ICT services to SMEs.



Two years after the completion of the project, four e-Biz centers are fully sustainable and still offering a wide range of services. The apparel (www.newtrend.com.mk) and footwear e-Biz centers provide CAD/CAM services for pattern grading, maker making, spreader and cutting the fabric and leader. The tool-and-die e-Biz center (<http://www.cirkomes.com>) located at the SS. Cyril and Methodius University’s Faculty for Mechanical Engineering facilitates the design and testing of the machines that produce various plastic parts and components and is helping the machine companies integrate into global supply chains. These e-Biz centers provide a number of services which increased the quality of production, enhanced flexibility, and reduced production costs and response times. This enabled companies to attract higher end clients and increase the value of their products. In the tourism sector, an e-commerce portal www.ExploringMacedonia.com was created to promote the Macedonian tourism industry and enable Macedonian tourism service providers to sell their services globally via the internet. Approximately 40,000 people visit the portal each month.



Macedonia as a regional hub for IT

USAID, through two generations of Competitiveness Projects, directly supports the ICT industry in Macedonia. Macedonia was named one of the five fastest growing global IT/Business services markets in 2003 by the *Organization for Economic Cooperation and Development*. Given the rapid expansion of ICT outsourcing throughout the region, this sector has enormous potential for growth. USAID assisted in positioning Macedonia as a desired near-source destination, acquiring quality certifications and organizing presentations on European Union markets through export consortia. Current assistance focuses on market linkages, introduction of new management practices and attracting Foreign Direct Investment. USAID assisted the industry to articulate and quantify its need for a qualified workforce with Government and with education institution. This resulted in the opening of several public and private ICT faculties. Ongoing initiatives incorporate training individuals to develop specific skills and credentials needed in the market.



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USAID, recognizing the importance of the ICT industry's need to represent itself effectively both domestically and internationally, is also supporting the Macedonian Chamber of ICT Industry (MASIT) which represents over 70 ICT companies. USAID is assisting MASIT to increase its capacity to become a recognized industry voice and resource for the industry, to provide services to its members and be an effective advocate with the Government.



Digital Media - visual effects for film and 3D animation - is a small but rapidly growing skill-based industry in Macedonia with a strong export orientation. USAID's major capital investment in this area is the Digital Media Park which houses multiple complementary companies from the digital media industry that benefit from co-location and sharing of resources otherwise too expensive for any single company to afford. Currently 80 people are employed in these companies, but the number is expected to grow to 300. Investments in building market linkages in the U.S., business development and training of animators have already resulted in Macedonia's leading special effects firm securing profitable deals with renowned studios on blockbuster movies such as the "Aviator" and "The Golden Compass" (which won an Oscar for visual effects), as well as an EMMY nomination for special effects for the mini-series Path to 9/11.

Additionally, USAID is supporting a Macedonian company to acquire the global rights for an innovative communications technology which increases the throughput of existing communications networks and lowers the development costs of new ones. Developing skills and applications around this promising new technology will provide Macedonia with the opportunity to become a global telecommunications hub for the next generation of internet applications.

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