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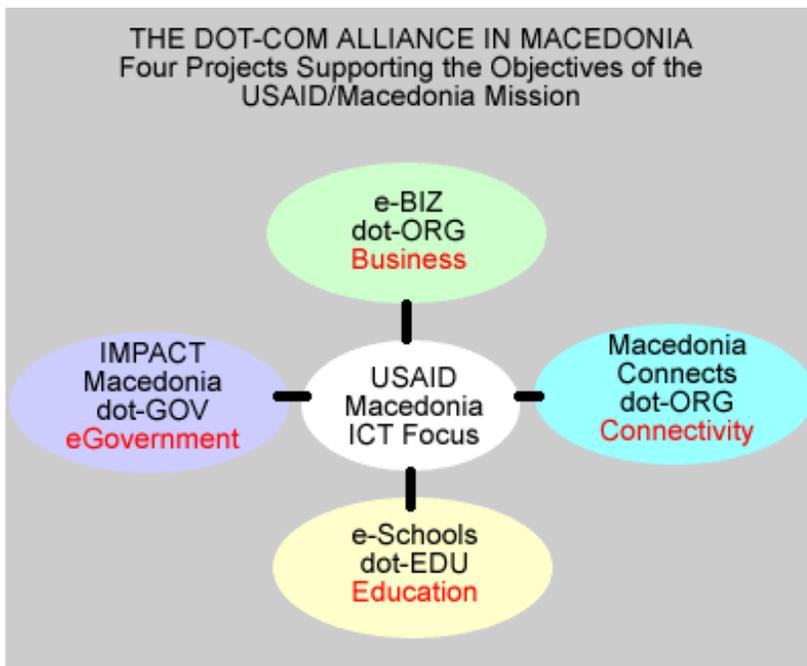
DOT-COMments eNewsletter - July 2005 (Issue 12)

Welcome to the DOT-COMments eNewsletter, the newsletter of the DOT-COM Alliance. You can access all articles individually by following the links below.

Working Together in Macedonia

Whenever possible, the dots have worked together within a country at the request of a USAID Mission to ensure that individual dot activities complemented each other in support of the Mission's objectives.

This issue of the DOT-COMments newsletter presents four facets of the DOT-COM Alliance's work in Macedonia, covering connectivity, small business, government and education sectors. Macedonia is a country where the USAID Mission has engaged all three dot mechanisms to support its objectives. In doing so, the USAID Mission has tried to leverage the potential of ICT across its program portfolio in the country.



Macedonia & its ICT Environment

- Relatively small country in South-eastern Europe - the size of Vermont.
- High literacy rates.
- Relatively access to computers: 27% of Macedonians have computers at home.
- Low internet penetration: 10% of household have Internet access, most have dial-up access rather than broadband access.
- New law passed in 2005 establishing the legal foundation for a competitive telecommunications sector.

To read more about Macedonia's ICT Environment and USAID's ICT-related activities in Macedonia, read the [ICT Assessment](#) that was recently prepared by Judith Payne (EGAT/EIT/IT) and Janice Brodman (EDC).

Economic Growth - e-BIZ Project - dot-ORG

The e-BIZ project (formerly referred to as I-LEAD Project) helps Macedonia address high unemployment by building the capacity of small and medium enterprises (SMEs) to use information and communications technologies (ICT) in local and international markets.

Read the [full article](#).
Visit the project [web site](#).

Education - e-Schools Project - dot-EDU

This project prepares Macedonian youth for employment through ICT -informed education programs and improves the quality and relevance of instruction at the primary and secondary school levels.

Read the [full article](#).

Connectivity - Macedonia Connects - dot-ORG

The main objective of this project is to provide low-cost and sustainable broadband access to 460 Secondary and Elementary schools dispersed throughout the country. Secondary objective is to spread broadband internet access to rural populations with emphasis on small business enterprises, local governments and consumer market with an eye towards increasing Internet use beyond existing low levels.

Read the [full article](#).
Visit the project [web site](#).

ICT and Government - IMPACT Macedonia- dot-GOV

The IMPACT Macedonia Project is aimed at improving productivity and accountability in the public sector leading to a smaller, more efficient, and less corrupt public sector. The environment for investment will be improved as the investment community gains confidence in a country where the public sector's financial operations are increasingly open and transparent.

Read the [full article](#).
Visit the project's [web site](#).

This issue also includes the following articles:

- [Last Mile Initiative Team Assesses Central Asian Republics & Starts eCenters Project](#)
- [Knowledge Product Highlights: The Energy Solutions Toolkit for ICT Projects](#)
- [Explore the DOT-COM Alliance Digital Library](#)



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USAID/Macedonia's e-Biz Project: An Innovative Approach to Building Competitive Industries

A year ago, industry experts pronounced the Macedonia apparel industry virtually dead in five years. The report was shocking – the apparel industry is one of the largest employers in the country. Today, these same experts have credited USAID's e-BIZ project with breathing new life into the industry and positioning apparel manufacturing SMEs to save and/or generate thousands of jobs over the next three years. The e-BIZ project, implemented by dot-ORG, is providing a similar job-development lifeline to other industries. Through strategic use of "high impact" ICTs, synergies with standard competitiveness activities, and creative links between universities and businesses, the e-BIZ project provides a new model for building SME competitiveness.

Background

Like many developing countries, Macedonia has made job creation a top priority in its economic growth program. Creating jobs, in turn, relies on strengthening SMEs, which account for more than 60% of the country's employment. ICTs are key to SMEs' ability to compete in international markets – to attract and communicate with customers, modernize their business processes, and employ efficient supply and distribution channels. Yet standard approaches used in other countries to help SMEs adopt ICTs have been less than a resounding success.

e-BIZ Approach

The e-Biz Project, launched in October 2003, aims to generate jobs through strategic use of ICT. The project created an innovative approach to using ICT to build competitive SMEs and promote economic growth. It begins with demand. "All our centers are demand-driven," emphasizes Janice Brodman, Program Director, "We identify a market opportunity and ICTs that will quickly ratchet up the Macedonian SMEs' ability to compete in that market." The project then works with local entrepreneurs to develop strong business plans for e-BIZ Centers that offer the "high impact" ICT services. The local partners co-invest with the project to create e-BIZ Centers, which aim to boost competitiveness of entire industries or clusters. Together, local co-investment and well-conceived business plans fortify the Centers' sustainability. The approach uses six key steps:

1. Identify "high impact" ICT applications. The first step targets key industries and clusters, and identifies ICTs that will quickly have a major impact on SMEs' competitiveness in local and global markets. "If the ICTs' impact won't be fast and

significant," says Brodman, "We aren't interested." The project also conducts market analyses, industry tours, and Executive Roundtables to determine the demand that exists – or will quickly arise – for the selected ICT applications. These "high impact" ICT applications, which are often sector-specific, form the core offerings of an e-BIZ Center.

2. Select local partner entrepreneurs. Using a transparent, competitive process, e-BIZ selects local partners that will co-invest in, own and operate the e-BIZ Centers. Local companies or SME consortia submit proposals with business plans, descriptions of their capacity, and investment bids for an e-BIZ Center. "Before we started, we weren't sure that entrepreneurs would be willing – or able – to invest," notes George Peterson, e-BIZ Chief of Party, "but we've gotten a great response." Independent advisory teams of industry experts drawn from around the world review the proposals and recommend e-BIZ Center partners. The e-BIZ project has also selected universities as local partners for two e-BIZ Centers.

3. Create a commercially sustainable business. e-BIZ works with its local partners to develop a strong business plan that provides the high impact ICT applications, as well as other ICT services, to entire industries or clusters. These are viable business plans, worthy of "venture capital" investment. "All too often, other development projects establish ICT access centers with purported business plans," says Brodman, "but their plans do not provide the financials of a serious business operation." In contrast, each e-BIZ Center business plan is rigorously based on credible financials that will make the e-BIZ Center sustainable. Each of the Macedonia e-BIZ Center business plans projects a break-even point within three years, at which point the Center will generate a profit. Centers established at the universities, like other e-BIZ Centers, have a solid business plan of services that will fuel SME competitiveness.

4. Co-invest to establish the business. Upon approval of the business plan, the local partners – local companies, SME consortia, or universities – co-invested with the e-BIZ project to establish the e-BIZ Center. In Macedonia, the local partners and the e-BIZ project co-investment ratio was 1:1. The co-investment ensures the local partner's commitment to making the e-BIZ Center successful, strengthening sustainability.

5. Build the e-BIZ Center capacity to strengthen entire industries or clusters. For each e-BIZ Center, the project provides business management and technical assistance from sector experts, links with international markets, marketing tours, and day-to-day advice on all aspects of business development and implementation of the business plan. The project is also helping universities understand and respond to needs of business and forging stronger ties between universities and the business community. In addition, the project is building the capacity of local ICT firms, who partner with e-BIZ Centers, to ensure that they can effectively serve SME demand for ICTs into the future.

Results

The e-BIZ approach uses a GDA-style investment model. In Macedonia, the project's \$1,000,000 investment into seven Centers has been matched by at least

\$1,000,000 from local entrepreneurs who will own and run the e-BIZ Centers. In addition, one e-BIZ Center has received \$200,000 in foreign direct investment from Italy, with the e-BIZ Center serving as the first step of a \$7mm Italian investment plan. In addition, a US firm has invested \$75,000 in one of the university-based e-BIZ Centers.

The five industry-focused e-BIZ Centers in Macedonia will directly serve 1,200 SMEs with at least 35,000 jobs, while the Online Management Training Center serves all industries as well as local government agencies. In addition, there are two university-based centers. One, at St. Cyril and Methodius University, provides small, local engineering firms with cutting-edge technology and skills that have opened significant new international markets. The other, at South East European University, serves all industries in the Polog region, while providing hands-on ICT-for-business experience to students. Industry experts have predicted that the e-BIZ Centers' impact on job creation and employment sustainability will create or save 10,000 – 23,000 jobs in the next three years. The Centers' direct benefits to SMEs include:

- Attract new customers
- Open new markets
- Increase sales
- Reduce costs
- Enable faster market response time
- Improve customer service
- Create greater international visibility
- Improve product design
- Enable faster, better quality manufacturing
- Improve resource utilization

The e-BIZ Centers

The seven e-BIZ Centers focus on specific industries, sectors, or clusters: •
National Tourism Portal

<http://exploringmacedonia.com>

The National Tourism Portal is essential to the growth of tourism, a key Macedonian industry. This entrepreneur-run, for-profit Portal is helping tourism companies convert from "exporting" Macedonian tourists to importing international tourists. Market analysis projects that the Portal will foster 30%/year growth of international tourism into Macedonia. Already, queries have come from tour operators from such new markets as China.

- Textile Technology Center

In 2004, the Macedonian apparel industry was going head-to-head with the Chinese...and losing. The e-BIZ project identified a new, more value-added market niche in Italy, called "rapid response," that requires short runs and rapid turn-around. "Italian companies had tried to outsource this type of production to the Far East," explained Peterson, "but it was too far away. And Macedonia was right around the corner." What the Macedonian companies lacked was ICT, most importantly computer-aided design and computer-aided manufacturing equipment (CAD/CAM). Today, the e-BIZ Textile Technology Center offers CAD/CAM services to all textile companies, as well as links with the Italian market. An international industry expert has called the Textile Technology Center a "crucial contribution" to saving this industry and said the center will make a "quantum difference" that could save 5,000 jobs in the next couple of years.



- Shoe Technology Center

<http://modeur.com.mk>

When the e- BIZ Project began, the Macedonian shoe manufacturers were struggling to survive. Although they produced high quality products, they exported to European markets at very low prices. As with the apparel industry, low-cost competition from the Far East threatened to engulf the Macedonian shoe industry. They needed to enter new market niches that demand high quality design and rapid turn-around. The e-BIZ Shoe Technology Center is enabling the industry to do just that. By providing CAD/CAM and design services, the Center makes possible design, production and sale of higher margin products, and, say industry experts, will help generate up to 5,000 high value-added jobs in shoe manufacturing over the next couple of years.

- Online Management Training Center

<http://www.clearview.com.mk>

The National Entrepreneurial and Competitiveness Council identified improved management skills to be an essential component of Macedonian economic growth. Although several donor projects had provided management training and business services, the quality was problematic. The e-BIZ Online Management Training Center decided to fill the gap. The Center uses ICT, and partnerships with companies across the country that act as service centers, to offer consistent, high quality management training throughout Macedonia. For example, the Center offers a wide range of Web-based management training courses from Skillsoft, a US firm with an international client base. It also uses videoconferencing to "bring in" trainers from the world's top business schools.

- Fashion Industry e-Commerce Center

<http://www.fashionmk.com>

The apparel and shoe industries, as well as other fashion-related industries, need a

range of ICT services in order to compete in international markets. The Fashion Industry e-Commerce Center provides ICT solutions to strengthen SMEs' capacity in sales, marketing, freight consolidation and sourcing consolidation.

- Engineering Systems Center of Excellence

<http://www.cirko-mes.com>

Established at the College of Mechanical Engineering, St. Cyril and Methodius University, this e-BIZ Center utilizes Sun workstations, half of which were contributed by Sun Microsystems, to offer fee-based services to build the competitiveness of engineering firms. The Center targets SMEs in the machine tool and other engineering-related industries, offering training and facilities in advanced Java development and engineering design, 3D modeling, simulation, and other skills they need for outsourcing markets. In addition, it is developing a national engineering network to share and leverage the sector's design capabilities, as well as providing fee-based incubator-type services for engineering companies aiming to utilize advanced ICT technology for outsourcing to regional and/or overseas markets. The Center also provides hands-on training in advanced engineering programs to engineering students, who support the Center's day-to-day operations as part of an engineering internship program.

- The University Business Service Center

The Tetovo-Gostivar region of Macedonia, with 15% of the country's population, struggles with unemployment rates of over 35%. Yet the rapidly growing number of small businesses fuels demand for advanced business development services. The Southeastern European University e-BIZ Center provides hands-on ICT-for-business experience to students, consulting opportunities for faculty, and fee-based ICT-related services to price-sensitive local companies.

Conclusion

The e-BIZ model provides a powerful new approach to building competitive SMEs and expanding economic growth. The approach is applicable to all types of economic conditions, from countries with limited markets, poor ICT access, and tight workforce constraints, to those with growing markets, broad ICT access, and strong workforce resources. By beginning with demand, creatively identifying new market niches, using "high impact" ICTs to make SMEs competitive in new international markets, co-investing with local partners, and putting all operations on a firm business footing from the outset, the approach can make break-through advances in the competitiveness of entire industries and clusters.

For More Information, Contact:

Janice Brodman

Associate Director and Gender Specialist, dot-ORG

[Education Development Center](#)

Tel: (617) 618-2620

Email: jbrodman@edc.org

Related Resource Partners

- [Education Development Center \(EDC\)](#)

Related DOT-COM Activity

[Macedonia - e-BIZ - ICTs for Local Economic Activity Development](#)

Related DOT-COMments Newsletter Articles

- [Gender Strategies in dot-ORG Projects](#) From Issue 11, May 2005

Related Links

- [Annual Report - e-BIZ Project](#)
- [eBIZ project web site](#)



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Moving Beyond the Computer Lab: E-Schools.mk, Macedonia

E-School.mk is a project funded by the United States Agency for International Development's (USAID) dot-EDU initiative, which is using the computers donated by the Government of the People's Republic of China, in cooperation with the Ministry of Education and Science (MoES) of the Republic of Macedonia, to introduce a new concept of information and communication technology (ICT) use in education. The goals of E-School.mk are to install computers in every primary school and high school in Macedonia and to train teachers to use technology to support innovative student-centered and project-based pedagogy. E-School.mk is advancing the Macedonia National Education Development Strategy to base "the educational process on the principles of interactive teaching, with a focus on creative learning, critical thinking, problem-solving and implementation of modern education technology."

The E-School.mk project began with installation of computer labs in all 91 secondary schools in the Republic of Macedonia. The next step was to improve the quality and relevance of teaching, using ICT applications to facilitate communication, networking and interaction among the teachers and the students. Education Development Center, Inc. (EDC) conducted a series of trainings for two teachers from each of the secondary schools. The trainings

Professional Development Outcomes

- ✓ Teachers developed websites, publications, and curriculum units and lesson plans
- ✓ Teachers developed a digital library to house and organize what they developed
- ✓ Teachers made significant improvements in ICT skills and increased their knowledge of project-based learning methodology

focused on the use of ICT through project-based learning strategies and networking. As a result of the first round of training, each school team developed a school-based project including students and other teachers. The common thread for all projects was the use of ICT in a variety of topics, addressing different needs from the school and the community. Students with disabilities used ICT tools to do creative designs for their schoolyard; students used presentation software to raise public awareness that resulted in improved water quality for a town of 25,000 people; and math students conducted Internet research and demonstrated online learning modules to show the faculty that math learning can be fun and engaging. The cohort of 180 teachers, about to finish their second round of training in August, will serve as the core group of trained teachers that will further

disseminate their skills and knowledge in the use of ICT and innovative pedagogy to teachers in their respective schools.

The MoES as well as the Bureau for the Development of Education (BDE) are closely involved in all trainings and activities. They provide direct support both to the E-School.mk project team members and to the teachers, ensuring that the quality of education in Macedonia is improved by integrating the use of ICT into the regular curriculum.

The E-School.mk project will complete installation of computers in all 360 primary schools by September 1, 2005. A series of trainings will follow for primary school teachers, enabling them to use and apply ICT in their daily work with the students. The E-School.mk project is also in the process of developing an education portal that will link the teachers and the students in a virtual working environment. The education portal will provide on-line resources for the school directors, teachers and students, and will enable them to easily share their experiences and practices.

E-School.mk marks the beginning of a new education system that is dedicated to using ICT and innovative pedagogy to teach students critical-thinking, entrepreneurial, communications, leadership, technological, and other 21st Century workforce skills that are crucial to the future of Macedonia.

For more information about the E-Schools.mk project in Macedonia, please contact:

Sonia Arias

Project Director

[Education Development Center](#)

Tel: (202) 572-3700

Email: sarias@edc.org

For more information about dot-EDU, please contact:

William Wright

Director, dot-EDU

[Education Development Center](#)

Tel: (202) 572-3700

Email: wwright@edc.org

Related DOT-COM Activity

[Macedonia for EWoRLD \(Education and Workforce Learning Development Program\)](#)

Related DOT-COMments Newsletter Articles

- [E-school.Mk: Improving ICT Quality and Promoting Tolerance in Macedonia](#)
From Issue 7, Spring/Summer 2004



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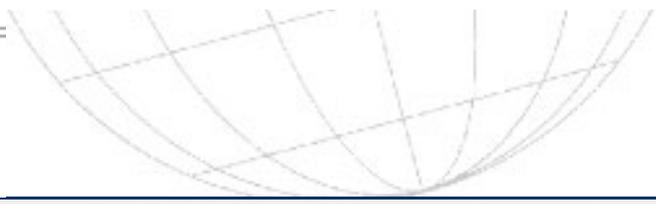
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Improving Public Management and the ICT Industry in Macedonia through e-Government Applications

Increasing efficiency and transparency of the Macedonian public sector is one of the main objectives of USAID/Macedonia's five-year e-gov Impact Project. The use of a transparent and open online tendering process is one of the innovations the project is bringing to Macedonia. The project makes extensive use of its webpage, www.impact.org.mk to help build a case for transparency in the procurement process.

Implemented by the dot-GOV/Internews, the e-Gov Impact Project has the mandate to develop and implement e-Government applications in the Republic of Macedonia for public institutions. e-gov Impact is designed to strategically solicit the Macedonian private sector in development of dynamic software applications for public institutions.

Paying Attention to Relevant Legislation & Real Needs of Users

After having identified the application, a System Description is developed, which determines the software needed, followed by the procurement of this software. However, the development of the software is only a part of the work required to implement a new e-Gov application. The relevant legislation also needs to be checked to make sure it allows the usage of information technologies (IT) for the specific application, which is not always the case. The legislation on public procurement is an example of this situation: the legislation foresees only exchange of paper-based information. To have an e-procurement system in operation amendments to or derogations from a number of articles in the law must be adopted.

The e-gov Impact Project always searches for solutions that will incur as few amendments as possible to the existing legislation, otherwise the amendments will become far too time-consuming to get through in a reasonable time period, and the application would also be blocked from usage for unforeseeable time.

The end users also have to be properly identified, such as possible vendors that would use a new e-procurement system. These end users need to be duly informed about and trained to use the new system and are given the opportunities to gain this information. Without an awareness of the end-user's needs and capabilities, the Project would be creating "white elephants" instead of functioning e-Gov applications with willing and interested users.

When a creative e-government application that could be useful to the Macedonian society has been identified by the Project, this idea is presented to the relevant authority in order to stimulate their interest. It is not possible to force an application on someone not wanting it. When an agreement is reached, this is often documented through a formally signed Memorandum of Understanding, normally on the request of the recipient.



Mr. Jerker Torngren e-gov Impact Project Director and Mr. Trifun Kostovski, Mayor of Skopje, signing MOU regarding e-procurement tender.

Drafting of the System Description

A few key persons from the recipient organisation are engaged for active participation in the drafting of the System Description. This is extremely important to ensure the recipient feels engaged and committed to the final implementation, and to insure there are no surprises once the application has been developed.

The drafting of the System Description is also used to enhance the application. There is one example where the recipient initially only accepted a rather minor application. During the work we managed to successively add more modules and ended up with a very comprehensive application.

Invitation to Bid

A formal *Invitation to Bid* is produced. This term is used rather than a *Request for Proposals* since the modalities for the software are already specifically defined through the System Description. The *Invitation to Bid* contains information about which companies are invited to bid - primarily specifying their nationality- the time schedule and all the formalities bidders must observe. It also includes a description of our evaluation process.

There are only two criteria to evaluate, quality and price, but it is nevertheless a rather complicated process. The right balance between price and quality is important. Furthermore there are several quality aspects to take into account such as the quality of the bid, the reference objects the bidder should list and of course the estimated quality of the proposed software. These different aspects are given different weight depending on the importance given to the individual issue. Each quality group is given points in three different grades, acceptable, medium and high quality and is not calculated in comparison with the other bidders.

The requested remuneration, however, is given strictly in relation to the remuneration requested by the other bidders; most points to the lowest price followed by a gradually decreasing scale.

Before points are given each individual bids are checked to ensure they meet all the formal requirements. Only bids that meet all the formal requirements proceed to the second phase where points are given. A basic quality is already requested as a requirement as such. This is the reason why points are given for “acceptable” quality. If the quality wasn’t acceptable, the bid would have been disqualified already before points are given.

We must always be aware of the fact that giving points for quality is a rather subjective assessment. Consequently two project staff are individually assessing one specific criterion at a time. Once this is done, a meeting with the entire evaluation team is held where each member of the team informs about the points given. When there is a difference in assessment on a specific criterion, the arguments are raised and a common understanding within the team is developed through this discussion.

The recipient organisation is not invited to participate in the evaluation of the bids. e-gov Impact has to strictly follow the USAID Rules and Regulations. Although the Invitation to Bid should adequately reflect these formalities we do not want to end up in a situation where the recipient authority would prefer a software developer the e-gov Impact project does not rate well based on the application through the process described above. Furthermore there is always a risk that there could be personal relations between the local authorities, being represented by their IT staff, and the software developer that we do not know about and thus can not take steps to avoid.

Impact Website used for Q&A

All tenders are published on the Impact webpage and can be downloaded after a simple registration. Questions are accepted, normally until one week before closing of the tender. Questions must be submitted in writing and are printed on the webpage together with the answers. Though this process we make sure that every potential bidder always has the same information.

Completed and Ongoing tenders

The project has completed this process for one tender on e-procurement for the City of Skopje and is in the middle of a second tendering process for a software application to support the Civil Servants Agency to recruit new staff. The second tender will increase the ability of men and women from all social, cultural, or economic groups to learn of civil service jobs and to apply for them on a timely basis, no matter where they are located in Macedonia.

For More Information, Contact:

Sarah Tisch, Ph.D.
Chief-of-Party, dot-GOV

[Internews Network](#)

Tel: 202 833-5740 x 203

Email: stisch@internews.org

R. Jerker Torngren

Chief-of-Party, Improved Fiscal Management through e-Government project

[Internews Network](#)

Email: torngren@internews.org

Related DOT-COM Activity

[Macedonia - IMPACT Macedonia](#)

[Macedonia e-Government](#)

Related Links

- [e-Government for Development in Macedonia: Recommendations from March 2004 Workshop](#)
- [eGovernment in Macedonia - Security Issues](#)
- [eGovernment Strategy: Theory and Practice](#)
- [Enabling E-Government for Developing Countries](#)
- [IMPACT Macedonia Project Description](#)
- [Macedonia Commission for Information Technology](#)



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Broadband Connectivity in Macedonian Schools by September 2005

At the beginning of the upcoming school year, all elementary and secondary schools in Macedonia will have broadband internet access. This will be achieved through the efforts of the Macedonia Connects Project, managed by dot-ORG. The project is funded by the United States Agency for International Development (USAID), in cooperation with the Ministry of Education and Science of the Republic of Macedonia. Recent changes in the regulatory environment and an innovative project design have contributed to what is now not simply an initiative to connect schools but a bolder effort to provide affordable broadband connectivity for the entire country by using the school-based network as the cornerstone of the country-wide wireless broadband network.

Schools Celebrate the Arrival of Connectivity before the School Year Starts

On June 7, 2005, the Braka Ramiz-Hamid and Petar Zdrawkovski-Penko Primary schools located approximately 15 km outside of Macedonia's capital city, Skopje, celebrated the delivery of Wireless Broadband Services. USAID\Macedonia and the Ministry of Education and Science jointly sponsored this event intended to highlight the Macedonia Connects project.



June 7 Videoconference event sponsored by USAID/Macedonia and the Ministry of Education and Science to highlight the Macedonia Connects project.



Student at the Braka Ramiz-Hamid School communicating with fellow students located at the Petar Zdrawkovski-Penko School via videoconferencing and Instant Messaging (June 7, 2005).

From Evolving Design to Implementation -Taking advantage of opportunities and addressing key challenges

The Macedonia Connects project was designed initially to complement the E-Schools project managed by dot-EDU. E-Schools would bring the computer labs to the schools and Macedonia Connects would bring internet connectivity to these computer labs in at least 496 primary and secondary schools as well as University sites throughout Macedonia.

Once Macedonia Connects was established in October of 2004, it became clear that so much more was involved than just the delivery of internet connectivity to schools. The policy and regulatory environment was changing, the project evolved to address broadband connectivity throughout the country rather than just in schools, making use of new wireless broadband technology solutions, and the whole endeavor needed to be designed with sustainability in mind.

Policy & Regulatory Environment

The first challenge for Macedonia Connects was to understand the impact of pending changes in the laws regulating telecommunications within Macedonia and the ending of the monopoly status of Macedonian Telecom. Both of these events would influence the writing of the Request for Proposals that would guide the selection of a vendor to provide Internet services to the 496 sites.

If not for the ending of the monopoly status and the creation of new communication laws the Macedonia Connects project would have had a very hard time achieving its objectives. Prior to January 1, 2005, Internet Service Providers had only one choice to obtain their Internet access. The only legal source of Internet access was Maktel, the monopoly operator. Maktel had pushed the price for connectivity so high that ISPs could not establish any type of profit margin. This high price of connectivity largely contributed to the low Internet penetration rate within Macedonia, reported to be 8%.

The ending of the Maktel monopoly, combined with the new telecommunications law assured present and future ISPs the ability to enter into agreements with ISPs from adjacent countries such as Kosovo, Albania, Bulgaria, Serbia and Greece. As a result, bandwidth pricing would decline by as much as 66-75% if vendors were not tied to Maktel and the overall pricing structures to consumers would decline accordingly.

More than School Connectivity

Initially, dot-ORG responded to a request from USAID/Macedonia to provide broadband connectivity to schools throughout Macedonia to complement efforts of the USAID-funded dot-EDU/ e-Schools project.

After careful analysis, dot-ORG determined that this project could do much more than provide broadband connectivity to a select number of schools. While the schools could serve as an initial footprint for connectivity and a way to leverage a large client base for an Internet Service Provider (ISP), a paradigm shift would be achieved if these schools were viewed as "points of presence" instead. As "points of presence, the schools could be used by the selected vendor as a springboard to build upon once the distribution infrastructure was established. For the selected ISP and for Macedonia Connects, this would represent a win-win situation. This evolution in thinking and vision enabled the project to take on the more ambitious objective of delivering broadband connectivity throughout Macedonia, including the most rural areas.

The Tender

This evolution of the vision meant that the RFP for these services had to take into account a desire to build out a nationwide network and select a vendor capable of designing and delivering the services for something that did not exist. The ultimate goal was to hit a target, in this case low cost services, while building out a network that would exceed the financial capabilities for any ISP in Macedonia.

The other innovative approach for the RFP process was that it would subsidize services rather than purchase equipment. One dilemma for Macedonia Connects was that there were only 5 ISPs in Macedonia plus a small number of companies which through partnership with an ISP would be able to meet the requirements of the RFP. Another, perhaps more critical issue was that there was no way to determine whether the resulting cost for connectivity would be affordable since there was no history of a free market for Internet pricing. Finally, the need to exclude Maktel from the RFP process would likely create tensions and possibly lead Maktel to try to derail the efforts of Macedonia Connects.

The later concern came true when Maktel announced in early February that they would provide free DSL services to 350 schools throughout Macedonia with the support of the Ministry of Education and Sciences.

Macedonia Connects moved ahead with the tender process and received four high quality responses to the RFP. After an extensive review by an independent panel, Macedonia Connects selected On.net on April 27. Since April, On.net has finalized connectivity for 20 schools, visited every primary and secondary school on the Macedonia Connects list, and has assured the project that connectivity for all sites will be completed by August 15, 2005.

Macedonia Connects is so much more than just a school connectivity project. At the end of the project, the following achievements will have been realized:

- The entire country will be covered with some form of wireless connectivity;
- The cost for consumer connectivity will be as low as 9-15 Euro (~\$11-18) and commercial accounts will cost as little as 50 Euro (~\$60)
- Each point of presence established under this project will enable additional connectivity other than the schools and we expect to see an exponential increase in the use of the Internet throughout the Republic of Macedonia.

What's the Technology Behind it?

In support of the Macedonia Connects project, On.net is deploying the Motorola Canopy solution as the backbone to distribute broadband connectivity throughout the country. In addition, they will deploy a MESH Wireless solution in the six most populated cities in Macedonia. This MESH solution is WIFI compliant and will provide nearly 100% WIFI coverage in these six cities. This means that people with WIFI enabled laptops and desktops will be able to access the Internet wirelessly. In addition, a WIFI repeater will be installed at each of the 531 locations that includes primary, secondary, university and local government offices as part of the main delivery of services within the Macedonia Connects project.

Sustainability Strategies

Working with a broad range of constituencies

By the start of the school year 2005 Internet access will be live but that is only the beginning of our work at Macedonia Connects as the project is also responsible for establishing an E-literacy campaign that will target various constituencies such as local governments, NGOs, schools and consumers. The project will also work with the ISP to make certain that the needs of these users are understood well and to establish a marketing plan to ensure that those groups have increased access to Internet resources.

Macedonia Connects has two positions on staff specifically targeted towards "marketing"

internet connectivity solutions to five very specific constituencies - schools, NGO/nonprofit organizations, small business owners and home consumers. The Connectivity/Applications director is responsible for developing the "PUSH" by working with the selected ISP to provide services that are specifically targeted at these five constituencies. The Communications Director is responsible for creating the "PULL" and will work with the same constituencies by going into the field and extolling the virtues of internet service offerings. In addition, this person will create publications illustrating IT success stories and the need to be E-literate.

Affordable connectivity beyond 2007

Macedonia Connects is bringing free connectivity to schools from the start of the 2005 school year through September 30th, 2007. One of the challenges of the project has been to create a solution for the delivery of broadband access that would be sustainable beyond the initial period of subsidy. The cost of connectivity per school for 2007 is estimated at \$19-25 Euros per month and the cost of connectivity for home access for teachers and students will be between 9 and 14 Euros per month. It was essential for the project to create a solution that would not result in costs that would exceed the financial resources of the schools.

In addition, by September 2007, school expenses will be covered by the municipalities as part of an effort to decentralize government services. This will present some interesting challenges for the schools and municipalities since the municipalities have no history of managing school budgets.

For More Information, Contact:

Glenn Strachan

Chief of Party, Macedonia Connects

[Academy for Educational Development](#)

Tel: 202-884-8108

Email: gstrachan@aed.org

Related DOT-COM Activity

[Macedonia Connects](#)

Related Links

- [Macedonia Connects](#)
- [Macedonia Connects Press Coverage](#)
- [Macedonia Connects Web Site](#)



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Last Mile Initiative Team Assesses Central Asian Republics & Starts eCenters Project

In April 2005, Last Mile Initiative (LMI) coordinators Michael Tetelman and Steve Rynecki of AED's dot-ORG team conducted assessments in Kazakhstan and Kyrgyzstan. The focus of this regional assessment was to examine the condition of telecom access in rural areas and small towns, the usage of e-services (such as e-procurement and e-commerce systems by small businesses) and to determine the potential for new LMI projects in the region.

Last Mile Initiative Coordinator Mike Tetelman evaluates Kyrgyz Telecom's Cholpon-ata office.



This was a dramatic time to conduct this assessment. Kyrgyzstan had experienced a revolution and ousted its president only three weeks before the LMI team arrived. Many people encountered by the team were interested in how information and communications technologies (ICTs) could help mitigate conflict and catalyze more equitable economic growth.

Contrasting Findings

The assessments revealed contrasting findings. Kazakhstan, for example, is experiencing rapid development thanks largely to significant oil revenue. Major construction and infrastructure projects are well underway throughout the country. The capital city, Astana, rises from the steppe with an impressive array of modern architecture and clearly looks like a city of the future. There are two major fiber-optic networks offering enormous potential and the country plans to launch its own regional telecom satellite (KAZSAT) by 2006. The team recognized that

to liberalize Kazakhstan's telecom sector effectively, many regulatory and policy changes are needed. However, the government's rollout of an e-taxation and e-procurement system is setting Kazakhstan apart in the region as a leader in both ICT access and application service delivery.

Kyrgystan

In Kyrgystan the picture contrasts greatly. Without the advantage of oil revenue or other marketable natural resources, Kyrgystan's development has been modest in comparison to neighboring Kazakhstan. Recent political turmoil underscores the need to create better communication linkages between rural areas and larger cities. Over 60% of Kyrgyzstan's population lives in rural areas where many subsistence farmers struggle to find potable water.

The assessment revealed that social tensions could be relaxed if reliable and affordable communications were created between the central government and rural constituencies. The dot-ORG team determined that LMI resources could be used to great advantage in secondary cities (e.g. 20,000 people and above) to support such efforts as conflict mitigation, improving SME and citizen awareness about laws and taxation issues, and enabling citizens to use new payment mechanisms (e.g. for utilities).

eCenters

Given recent events and the need to bridge urban and rural areas, the assessment suggests that an LMI pilot project should be launched to establish a minimum of four public ICT access fee-for-use "eCenters" in secondary cities. The project will, via a competitive and transparent national selection process, establish four eCenters across Kyrgyzstan. Municipalities will be encouraged to propose public / private partnerships that include land grant privatizations in support of local eCenters and community microvoucher initiatives.

Working with Partners

In July 2005, AED/dot-ORG selected US-based project partner Openworld to develop and provide toolkits and model business plans for local private and public sector champions on structuring land-grant-enabled projects to promote high bandwidth telecommunications access (using such potential affordable technologies as VSAT earth stations and extended-range Wifi links) to the designated land grant areas, to endow local microvoucher funds for grassroots access to new telemedicine and eLearning resources, and to increase the ability of public sector bodies to connect directly with Kyrgyz citizens.

AED selected the Civil Initiative on Internet Policy (CIIP), a Kyrgyz based NGO, to coordinate the project during its initial 18-month pilot phase. The project partners will organize Kyrgyz and international providers of affordable telemedicine and online skills development and certification opportunities on an introductory basis in affiliation with the selected Kyrgyz eCenter initiatives. The project will also implement strategies to ensure the sustainability of the eCenters. For example, the eCenters will receive guidance on forming an association to share best practices, aggregate their procurements, help coordinate technical support, and serve as the eCenters' collective voice in important forums. The eCenters will also be encouraged to deploy innovative uses of connectivity – e.g. acting as a reseller of connectivity via wireless to small businesses and local governments, donor agencies, etc.

Identifying potential local partners, locations and focus areas

AED's Steve Rynecki and Openworld's Mark Frazier went to Kyrgyzstan in July to evaluate potential project partners and locations. Visits to the Chui, Osh, Jalalabad and Naryn oblasts indicated that there was sufficient local know-how and interest to move the project forward. Rural tourism was one of the highlighted areas where the project could make a strong impact. Other areas identified include agribusiness and improved government delivery of social services using Internet applications.

These actions can help move the country forward in offering an improved business climate for local and international private sector growth, strengthen understanding of democratic and accountable public sector institutions, and help ensure the spread of skills valued in the global marketplace.

See the accompanying [Photo Presentation](#).

For More Information, Contact:

Michael Tetelman
Acting Director, dot-ORG
[Academy for Educational Development](#)
Tel: 202 884 8856
Email: mtetelma@aed.org

Steven Rynecki
Senior Program Officer, [Academy for Educational Development](#)
Tel: 202-884-8948
Email: srynecki@aed.org



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Knowledge Product Highlights: The Energy Solutions Toolkit for ICT Projects

Developed by dot-ORG in collaboration with Winrock International, the web-based interactive Energy Solutions Toolkit for ICT Projects helps users select the most cost-effective mix of ICT and energy systems for projects across sectors.

It provides useful information about the energy requirements of ICT equipment, energy solutions for rural ICT projects, and decision-making support tools in the form of spreadsheets as well as web-based calculation tools. You'll also find case studies from around the world and many links to other related resources on the web.

For more background information, click on the slide to the right to view the [Introductory Presentation](#)



Two Quizzes

1. How much do you know about the energy requirements of ICT equipment?

[Go take a quiz!](#)

2. How much do you know about all energy solutions that are available to support ICT projects in off-grid areas and other areas that lack of reliable electricity supply?

[Go take a quiz!](#)

An Interactive Learning Tool

LCD monitors consume much less energy - 50-66% less than CRT monitors. Try this [interactive learning tool](#) based on a real project in Rwanda and see the impact of replacing CRT monitors with LCD monitors on overall energy consumption and energy costs.

... and More to Explore

Would you like to explore the rest of the toolkit? Click on the toolkit navigation map to the left.

The toolkit is still in prototype form and we would very much like to make improvements. Don't forget to fill out the [feedback form](#) and let us know what you liked and didn't like about it.

Thank you!

For More Information, Contact:

Barbara Phillip

Information and Dissemination Coordinator, DOT-COM

[Academy for Educational Development](#)

Tel: 202 884-8003

Email: bfillip@aed.org

Michael Tetelman

Acting Director, dot-ORG

[Academy for Educational Development](#)

Tel: 202 884 8856

Email: mtetelma@aed.org

Related Links

- [Power Systems for Rural School- Robert Foster Presentation](#)
- [Lessons Learned: Sustainable Backup Power Solutions for Community Internet Centers in Rwanda](#)
- [ICT for Low Resource Environments - Winrock Presentation](#)
- [Energy Solutions for ICT Projects - Toolkit](#)
- [Energy for Rural Development: Powering ICTs and the Internet in Hard to Reach Places](#)
- [Using ICT in a Low Resource Environment - Greenstar Presentation](#)



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Exploring the DOT-COM Digital Library

The DOT-COM Digital Library is a repository of documents related to activities undertaken by dot- ORG, dot-GOV and dot-EDU. It includes project documentation, activity reports, presentations and fact sheets, as well as links to project web sites and other web sites directly related to DOT-COM activities.

Searching the DOT-COM Digital Library

The search options include the following:

- **Title**
You do not need to know the exact title of a document to use this search option. You can use the "title" search option to search by country. For example, if you enter "Mali", the results page will list all documents related to DOT-COM activities in Mali.
- **Author(s)**
If you know the name of the author or authors of the document you are searching for, you can use it to locate the document within the digital library.
- **DOT**
This search option allows you to search for all documents in the digital library that relate to one of the three dots: dot-ORG, dot-EDU or dot-GOV.
- **DOT-COM Resource Partner**
Example: If you select "Winrock" among all the DOT-COM Resource Partners listed, the results page will list all documents in the digital library that are connected to an activity where Winrock was a Resource Partner.
- **Document Type**
Example: If you search for all "Fact Sheets", the results page will show links to all the fact sheets developed by dot-GOV on topics related to ICT policy issues.
- **DOT-COM Activity**
This search option allows you to narrow your search based on the selection of a specific project or activity. Most activities are listed by region or country.
- **Development Sector**
Searching by development sector allows you to look at DOT-COM activities

across the dots that focus on specific sectors.

- **ICT Intervention**

Interventions refer to ICT tools, methodologies, approaches, and sub-sectors specific to the ICT for development sector.

Recently Added Documents

- **[A Tale of Two Countries - Kyrgyzstan & Kazakhstan](#)**

This is a photo presentation complementing an article in the July 2005 DOT-COMments Newsletter and relating to an assessment mission conducted by dot-ORG's Mike Tetelman & Steven Rynecki in March 2005.

- **Programa Para o Futuro**

A very comprehensive [Final Report of the Programa Para o Futuro project](#) - in English

[Appendix V](#): Students Reflections and Testimonials - in Portuguese

[Appendix VII](#): Collection of News Articles about the Project - in Portuguese

- **Democratic Republic of Congo: [Mid-Term Evaluation Report](#) -**

Community Learning and Resource Center / Complementary Instructional Strategies, June 2004.

- **["Online Teacher Professional Development: Exploring Lessons from Namibia and Uganda"](#)**, by Heidi A. Soule, June 2005.

- **Macedonia Connects - [Press coverage](#)**: A national newspaper listed Macedonia Connects as one of the TOP TEN best things to happen in Macedonia in the year of 2005 - in Macedonian

- **RITI-Access Project - Romania**

Project Fact Sheets:

- o [Giurgiu](#) - E-governance Pilot Project (Document Management & Tax Automation System)

- o [Slatina](#) - E-governance Pilot Project (Infosocial Network)

- o [Valcea](#) - E-governance Pilot Project (Environmental Integrated Informatics System)

- o [Library Informatics System](#) - E-governance Pilot Project (National Collective Catalogue & Digital Library)

- o [Calafat](#) - E-governance Pilot Project (Local Economic Development through eLearning Facilities)

- o [RITI-Access Telecenters](#) (ICT4U / Netpoints)

- o [RITI-Access Telecenters](#) (Workspace Center Project)

- o [Targoviste](#) - E-governance Pilot Project (Hospital Integrated Informatics System)

- o [Agrilinks](#) - E-business Pilot Project (Agricultural Portal)

[Go explore the library!](#)

For More Information, Contact:

Barbara Phillip

Information and Dissemination Coordinator, DOT-COM

[Academy for Educational Development](#)

Tel: 202 884-8003

Email: bfillip@aed.org



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