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ICT COUNTRY PROFILE

KOSOVO

2011

REGIONAL COMPETITIVENESS INITIATIVE

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government

TABLE OF CONTENTS

- I. EXECUTIVE SUMMARY 1
- II. ANALYSIS OF THE ICT SECTOR IN KOSOVO 2
 - A. PAST, PRESENT AND FUTURE TRENDS 2
 - B. ICT ASSOCIATIONS 4
 - C. PROFILE OF SELECTED COMPANIES..... 4
 - D. ACADEMIC PROGRAMS 5
 - E. STATE AGENCIES AND ORGANIZATIONS..... 6
 - F. NATIONAL STRATEGIES AND POLICIES FOR ICT DEVELOPMENT 6
 - G. DONOR PROGRAMS IN THE IT SECTORS 7
 - H. EXHIBITIONS, CONFERENCES AND EVENTS 9
 - I. IT NEWS: SOURCES OF INFORMATION 9
- III. IT FOR OTHER INDUSTRIES IN THE COUNTRY 11
- IV. QUALITY TENDENCIES 12
- V. SWOT ANALYSIS 13

I. EXECUTIVE SUMMARY

The purpose of this report is to provide a look from outside at the ICT development in the country and to reveal the possibilities for regional ICT cooperation. A research of this kind could clear up what kind of activities related to ICT are held in the country and what national strategies, policies and action plans for ICT development are conducted.

The report should reveal the real picture of the local Kosovo ICT market.

For the purpose of this report and with the aim of facilitating further research the author has used many relevant sources of information on the subject such as reports, analyses, legal documents published in English, action plans, statistics, and strategies, found in internet.

ICT is both a vertical sector with a high potential for growth and employment in its own right and a “horizontal enabler” that can contribute to the growth of all sectors across the economy.

There are several factors revealing the competitiveness potential of the ICT sector in Kosovo and one of them is the increase in the investments in almost all sectors of the economy which would inevitably lead to higher demand for new Information and Communication Technologies and would thence lead to development of the ICT sector in Kosovo.

Another factor which would influence the advance of the ICT sector in Kosovo is the fact that Kosovo has the youngest population in Europe which gives great potential for development in all kinds of industries. In that connection the high quality of technical university education, which is leading to a relatively high number of IT specialists ready to invest their knowledge in improving and maintaining the steady growth of the sector, must be mentioned.

At the moment the ICT sector in Kosovo is progressing ahead of plans but still there is a necessity for local capacity concerning internet supply, specialized IT trainings and consultations, and software development. Concerning market and investment safety and stability it is important to note that some of the largest international ICT companies such as Microsoft, HP, IBM, and Cisco have already found their partners among Kosovo ICT companies.

For the last ten years the number of internet users and IT services has rapidly increased. The hardware technology used in the private sector is mainly based on CISCO, IBM, Huawei, NERA, Iskra Transmission, Airspan, Motorola, Tsunami, etc. Software systems are mainly built on Microsoft and Linux platforms.

On its way towards EU integration Kosovo has formally liberalized its ICT networks and services through the Law on Telecommunications from May, 2003.¹

¹ [http://www.seeita.org/?Visar%20Doobroshti,%20Kosovo%20\(ICT%20Kosovo\)%20-%20ICT%20Industry%20in%20Kosovo.pdf](http://www.seeita.org/?Visar%20Doobroshti,%20Kosovo%20(ICT%20Kosovo)%20-%20ICT%20Industry%20in%20Kosovo.pdf)

II. ANALYSIS OF THE ICT SECTOR IN KOSOVO

A. PAST, PRESENT AND FUTURE TRENDS

The increasing number of vacancies for ICT professionals in Kosovo is reflecting the increasing progress of the industry, although thanks to the high quality of the university education of IT specialists, and the increasing interest of young people in modern technologies, there are no signs of systematic shortages in ICT employment, except a registered undersupply of specialists in the field of software development and programming. The number of ICT graduates grows each year and the leader in providing the needed skills to the industry is the Faculty of Electrical and Computer Engineering of the University of Pristina. ICT skilled professionals are also supplied by the University for Business and Technology, the American University in Kosovo, as well as a few vocational education providers.

As the average salary levels are similar to these in the region and due to the high demand for ICT specialists in Kosovo there is no evidence of brain drain in the country.²

The average number of employees in ICT specialized companies has risen with almost 4% in 2010. The highest paid positions are System Administrators, Business Development Managers and ICT Managers, while most represented are Telecommunication Networks Engineers, followed by Software and Application Programmers and ICT Project Managers.

The number of the locally owned companies in Kosovo is very high – about 80%, while the foreign owned companies are less than 10%.

Over one fifth of the companies on the market have chosen vendor hardware and software for their main business activity, another one fifth do software development and programming. Maintenance and repair, consulting and engineering services are among the main secondary business activities of the ICT companies in Kosovo.

Most of the ICT companies are targeting their expansion mainly locally. However about one third of the companies are oriented towards expansion in the neighboring countries, and less than 20% seek opportunities for development either in Europe or in Asia and USA.

The Kosovo Private Enterprise Program (KPEP)³, a USAID-funded project implemented by Booz Allen Hamilton has done research of the market in the ICT sector. According to the survey the companies operating in the ICT field are mainly young small to medium size companies consisting of less than 20 employees. Half of these companies are individual businesses while one third are Limited Liability Companies (LLC), less than 5% are Limited Partnerships, and Joint Stock Companies comprise less than 3% of the companies in the sector. The rest of the enterprises are either public companies or are included in the category of NGOs.

More than 60% of the ICT companies in Kosovo import goods and services such as hardware, software, hosting, etc. necessary for their activities. In sales hardware holds the first place, followed by software, services, and sales from consultancies.⁴

In terms of infrastructure quite steady progress in the implementation and expansion of the use of optic cable for the communication networks is observed, linking regional centers and moving on to smaller towns as well. The private sector infrastructure is built mainly of optic, coaxial, and microwave network, which covers almost the whole Kosovo territory.

² http://www.stikk-ks.org/en/skills-gap-analysis-for-information-and-communication-technology/view_document/9-skills-gap-analysis-for-information-and-communication-technology

³ <http://www.usaidkpep.org/>

⁴ <http://www.stikk-ks.org/en/publikimet-rreth-ict-tregut/ict-business-catalog>

The telecom industry in Kosovo is now fully liberalized and the government has adopted almost all necessary legislation based on EU regulatory frameworks. However Kosovo still does not have its own country code and is expecting to receive one from the International Telecommunication Union in the near future. At present the network operators in the country use three other country codes – the ones of Monaco (+377), Slovenia (+386) and Serbia (381).⁵

The Post and Telecommunications of Kosovo (PTK) offers a wide range of services from Postal services to fixed and mobile telephony, and Internet (“Dardanet”). The rate of fixed telephony penetration is one of the lowest in Europe - only less than 5%. IPKO Net received the second fixed telephony license in July, 2006.⁶

In terms of mobile communications Kosovo has a growing number of operators – two network operators and a couple of mobile virtual network operators present on the market. Postpaid and prepaid tariff options are both available, as well as services such as SMS, MMS, GPRS and EDGE. Due to the increasing competition in the mobile communications market in Kosovo, supporting the growth and expansion of the services, the penetration levels for 2010 were estimated to nearly 90% with almost 75% of the population subscribed to mobile phone services. The two GSM 900 MHz networks are [PTK \(Vala Mobile\)](#) (+377 Monaco prefix), and [IPKO](#) (Si Mobitel) (+386 Slovenia prefix).

The two virtual operators are [D3 Mobile](#) and [Z Mobile](#).

Internet penetration in Kosovo is in the process of steady development due to healthy competition and mainly due to government policies and strategies adopted with the aim to reach the maturity of the neighboring countries and EU integration. Broadband accounts for the majority of Internet connections, with ADSL, cable and wireless available.

Currently there are three main internet service providers - [PTK](#); [IPKO](#); [Kujtesa](#), and a few smaller ISPs. According to the “Assessment of the Kosovo ICT sector” prepared for the USAID in November 2007, the IT sector experiences annual growth of roughly 20 to 25%.⁷

According to another "Kosovo IT Market 2008-2012 Forecast and 2007 Vendor Shares" by the research company IDC Adriatics, the IT market in Kosovo in 2007 reached 58.22 EUR (\$85.17) million. Measured in local currency, the market expanded approximately 30% year on year in 2007.

Moreover, following the same IDC study, IT expenditure in Kosovo is expected to increase at compound annual growth rate of 9.9% during the five-year forecast period to reach 93.38 EUR (\$136.73) million in 2012.⁸

COMPETITIVE INDEXES AND DATA⁹

The ICT competitiveness indicators of Kosovo, measured through the World Economic Forum competitiveness indexes show that the country has still a lot of work to do in order to be able to compete with its neighboring countries and the developing countries from the region.

⁵ <http://www.budde.com.au/Research/Kosovo-Telecoms-Market-Overview-Statistics-Forecasts.html>

⁶ http://www.eciks.org/english/publications/FactSheet_2010_Web.pdf

⁷ http://pdf.usaid.gov/pdf_docs/PNADK675.pdf

⁸ <http://www.newkosovareport.com/2008/12/22/1508/Business-and-Economy/IT-market-in-Kosovo-small-but-growing.html>

⁹ http://www2.unpan.org/egovkb/global_reports/10report.htm; <http://www.worldbank.org/>
<http://gcr.weforum.org/gcr2010/>; <http://www.networkedreadiness.com/gitr/>;

	Population (m)	GDP \$ (b)	GDP per capita \$	WEF GCR index Rank (value)	GCR innovation Rank (value)	WEF GITR Rank (value)	E-gov. development Rank (value)	E- participation Rank (value)
Albania	3,2	11,8	3,7	88(3,94)	121(2,57)	87(3,56)	85(0.4519)	86(0.1286)
Armenia	3,1	9,3	3	98(3,76)	116(2,63)	109(3,24)	110(0.4025)	135(0.0429)
Azerbaijan	8,9	51,1	5,7	57(4,29)	61(3,16)	70(3,79)	83(0.4571)	68(0.1714)
BiH	3,8	16,9	4,5	102(3,70)	120(2,59)	110(3,24)	74(0.4698)	135(0.0429)
Georgia	4,4	11,7	2,6	93(3,86)	121(2,51)	98(3,45)	100(0.4248)	127(0.0571)
Kosovo	1,8	5,6	3,1	n/a	n/a	n/a	n/a	n/a
Macedonia	2,1	9,1	4,4	79(4,02)	97(2,88)	72(3,79)	52(0.5261)	55(0.2143)
Moldova	3,6	5,8	1,6	94(3,86)	129(2,49)	97 (3,45)	80(0.4611)	58(0.2000)
Montenegro	0,6	4	6,4	49(4,36)	45(3,48)	44(4,09)	60(0.5101)	76(0.1571)
Serbia	7,3	39,1	5,4	96(3,84)	88(2,93)	93(3,52)	81(0.4585)	135(0.0429)
Ukraine	45,8	138	3	89(3,90)	63(3,11)	90(3,53)	54(0.5181)	48(0.2571)

B. ICT ASSOCIATIONS

KOSOVO ASSOCIATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (STIKK) (part of the Kosovo Chamber of Commerce) - <http://www.stikk-ks.org>.

Founded in 2006 within the Kosovo Chamber of Commerce (KCC) the Association of Information and Communication Technology started working actively as a joint initiative of six founder companies and the additional support of the Norwegian Government through Crimson Capital and the Norwegian ICT Association. At the moment STIKK has 69 members among which some of the biggest companies operating in the ICT sector in Kosovo.

The main objective of the Association is to support the development of a sustainable and prospering Information and Communications Technology (ICT) sector in Kosovo that can be a leading force in increasing innovation, technology and competitiveness as well as facilitating job creation and exports across Kosovo's economy.

C. PROFILE OF SELECTED COMPANIES

In 2008 there were more than 120 companies in Kosovo operating in the field of Telecommunications, Internet, IT individual experts, Computers and IT, and Web design. A few firms provide outsourcing of software integration or development services internationally. The local ICT companies point out as one of their major competitive advantages the low cost of production, but on the other hand that could be regarded as a sign of low salaries of the employees. The other typical advantages of Kosovo's ICT companies are qualified human resources and flexibility which could be a strong base for implementation of further process improvement models and activities of this kind. This could also help, to some extent, for the faster adoption of new processes and training of the companies' staff.

The ICT associations, clusters and other intermediate organizations aggregate the interest of the SMEs and have the necessary resources to facilitate communication among companies as well as between companies and government.

Some of the biggest and most important companies on the ICT market in Kosovo are:

COMTRADE COMPUTERS – www.comtrade-ks.com

Established in 1992 Comtrade Computers is one of the leading IT products, services, and solutions providers in Kosovo.

IPKO Net - www.ipko.com

IPKO is one of the fastest growing telecommunications companies in Europe. At present it is offering a full range of integrated services as well as content, in mobile communications, fixed telephony, digital cable television, Internet services as well as media.

CACTUS – www.cacttus.com

Cactus is an internationally recognized company offering a wide range of trainings in Information Technology, ICT consulting, Software Development, System Integration, Implementation and Support.

PRONET – <http://pronet-ks.com/>

Part of the Asseco SEE group the company offers IT solutions and consulting, development, deployment and integration of information systems for banks, government institutions, telecoms and other business organizations.

RROTA – www.rrota.com

The company's main activities include web design and development, logo design, multimedia and video production, and branding.

INTERADRIA – <http://www.interadria-ks.com/>

Established in 1989 the company now offers many services in the field of ICT such as the installation of satellite, security, phone switching systems, computer networking, Hardware and Software Development.

KUJTESA – www.kujtesa.com

Founded in 1995 the company developed itself into a major national telecom provider of IP-based services for organizations, businesses and individual users.

ATI-KOS – www.ati-kos.com

One of the fastest growing companies in Kosovo's ICT sector ATI-KOS provides Internet services, web-based software solutions, services connected with system integration, data security.

Other companies from the ICT sector in Kosovo are Logic Plus, Expik, Komtel, Infosoft, Albap-Soft, DV Media House, Login Systems Kosova, and Mitrosoft.

ADDITIONAL COMPANIES

More Kosovo IT companies can be found at <http://www.kosova-yp.com/yell/eng/>.

D. ACADEMIC PROGRAMS

UNIVERSITY OF PRISHTINA - <http://www.uni-pr.edu>

Faculty of Electrical Engineering and Computers

UNIVERSITY FOR BUSINESS AND TECHNOLOGY (AMERICAN EUROPEAN UNIVERSITY – KOSOVO) - <http://www.ubt-uni.net>

Faculty of Computer Science and Engineering

ILIRIA UNIVERSITY – PRISTINA - www.uiliria.org – no English version available

Bachelor programs in Management and Informatics and Computer Sciences

AMERICAN UNIVERSITY IN KOSOVO - www.aukonline.org

AUK Training and Development Institute

UNIVERSITY OF PRIZREN - <http://www.uni-pz.org/>

Faculty of Computer Sciences

Currently, more than half of the Kosovo population is under the age of 25. This leads to the encouraging trend that more and more university students in Kosovo are now majoring in fields such as computer sciences, information technology and electrical engineering.

E. STATE AGENCIES AND ORGANIZATIONS

KOSOVO CHAMBER OF COMMERCE - <http://www.oek-kcc.org>

The Kosovo Chamber of Commerce is a leading business association established in 1962 from the Assembly of Kosovo. Its main role is to legally represent the interests of the business community in Kosovo. It is a non-profit, independent organization, working under the objective of improving the market economy, entrepreneurship and triggering competition between its members. The Chamber members operate in different sectors of the economy including Technology, Telecommunications, Construction, Banking and Insurance, Metal Processing, Wood Processing, Food and Beverages processing etc. Kosovo Chamber of Commerce has been certified with the ISO 9001-2008 and is committed to ensure good quality management practices and deliver services that satisfy the member's expectations.

TELECOMMUNICATIONS REGULATORY AUTHORITY (TRA) - <http://www.art-ks.org>

The main objective of the Regulatory Authority is to develop the telecommunication sector of Kosovo, and to develop information based economy and society through the implementation of policies that are consistent with the sector reforms implemented throughout the European Union and the rest of the industrialized world.

MINISTRY OF TRANSPORT AND TELECOMMUNICATIONS - <http://www.mtpt.org>

The Department of Information and Communications Technology (ICT) is one of six departments of the Ministry of Transport and Communications. The Department consists of a Post Division and four Sectors - Sector for Policy Development, Projects Sector, Sector of Control and Monitoring, and Sector of Standards.

SME SUPPORT AGENCY OF KOSOVO - <http://www.sme-ks.org>

Established under the Ministry of Trade and Industry of Kosovo the Agency aspires to become an intelligence-gathering and coordinating hub in the multi-stakeholder environment of SME policy and to be a leading and dynamic National Agency that supports and further develops a vibrant, competitive and growing Small and Medium Enterprise sector in Kosovo.

INVESTMENT PROMOTION AGENCY OF KOSOVO (IPAK) – <http://www.invest-ks.org>

The Investment Promotion Agency of Kosovo (IPAK) is the primary Government Institution supporting foreign investment in Kosovo. IPAK provides a wide range of support programs to help international businesses achieve their relocation objectives.

MINISTRY OF EDUCATION, SCIENCE, AND TECHNOLOGY (MEST) – Innovation and Transfer of Technology center – <http://www.masht-gov.net>

The Department of Science and Technology is part of MEST and is responsible for applying the policies of the Government of Kosovo and MEST aiming to create a good infrastructure, institutional and financial basis for the development of science and science researches as well as to encourage the modern technology developments in Kosovo economy.

F. NATIONAL STRATEGIES AND POLICIES FOR ICT DEVELOPMENT

In the last few years Kosovo managed to adopt few very important laws, policies and strategies that support the government's efforts to regulate, manage and improve the development of the ICT sector in Kosovo. Some of the most important that have influenced the progress of the sector are:

- **Telecommunications law** – Adopted in 2002, the law governs all telecommunications services and all telecommunications service providers in Kosovo. The main objective of the Telecommunications law is to

create a transparent legal and regulatory environment for the promotion of more investments in the sector and encourage competition.

- **Law on Information Society Services** – Approved in 2005 with the aim to enable the legal use of electronic documentation, and facilitate the implementation of e-Commerce, e-Signature, and Personal Data Protection.
- **Law on The Administrative Procedure** – created to control the electronic execution of activities of the public administration.
- **Law on Copyright and Related Rights and Law on Scientific Research Activity** have also been adopted in 2004.
- **Law on the Protection of Personal Data and Law on Prevention and Fight of the Cyber Crime** are drafted and expecting approval by the government.
- **National strategy for information society 2006-2012**– The strategy was adopted by the Government of Kosovo in 2006.
- **Electronic Governance Strategy 2009-2015** – Published by the Department of Information Technology of the Ministry of Public Services of Kosovo in 2008 ensuring the provision of governmental institutions' services through information technology and communication (WAN, Internet, mobile network) to citizens, businesses and others.
- **E-learning strategy for Kosovo 2010 – 2015** – Prepared by the Ministry of Education, Science and Technology with the main objective to transform e-learning into an integral part of the overall national educational system.
- **Strategy for Development of Pre-university education 2007–2017** – Adopted by the Ministry of Education, Science and Technology and used as a foundation for the development of the education system of Kosovo.
- **Kosovo Education Strategic Plan 2011-2016** – Drafted in September 2010 the Strategic Plan is going to include eight priority programs among which are Capacity Building and Information and Communication Technology. The objective implemented in the ICT program is to fully develop and integrate ICT infrastructure and technical support needed to implement and sustain modern pedagogy.

G. DONOR PROGRAMS IN THE IT SECTORS

A huge number of donor organizations and implementing agencies are currently active in Kosovo. GTZ/GIZ and USAID are to be mentioned, UNDP, EBRD and EIB as well. These donor support programs are strongly aware about the need to increase the competitiveness by process improvement and the contribution to the ICT sector in Kosovo is a part of their plans. In 2003–2005, the overall grant assistance to Kosovo totaled 769 mln. Euro. An additional 169 million were expected for 2006. In addition to this grant financing, the European Bank for Reconstruction and Development and the European Investment Bank are lending to the private sector (2006 EBRD: 17 mln. EUR, EIB 20 mln. EUR). The European Commission is by far the biggest donor in Kosovo, followed by the EU Member States and the United States.¹⁰

USAID

In October 2008 USAID launched the Kosovo Private Enterprise Program (KPEP) which is going to be conducted in a period of four years and its goal is to stimulate and develop the competitiveness of the private sector in Kosovo by workforce training and development, business services support, creating business enabling environment and developing the private sector. The program's goals are to improve and promote the quality of the goods and services, the efficiency of the labor force and support Kosovo's further integration in the region.

Among the key sectors targeted by the program is the information and communications technology sector (ICT) in Kosovo which is showing a very high growth potential. KPEP has provided Marketing trainings and supported international certifications for the ICT sector in Kosovo. The program also works together with the Kosovo Association of Information and Communication Technology (STIKK) and contributes to its development..¹¹

¹⁰ http://www.entwicklung.at/uploads/media/Kosovo_Country_Programme_2008_2011_02.pdf

¹¹ http://pdf.usaid.gov/pdf_docs/PDACR142.pdf

The \$17.8 million program is being implemented by Booz Allen Hamilton. It builds upon a previous USAID business project, the Kosovo Cluster Business Support project.

A 6-stop 'Roadshow' was organized in January-February 2009 in order to present the USAID Kosovo Private Enterprise Program in different cities in Kosovo in front of business people, associations, institutions and donors.¹²

WORLDBANK

Public Sector Modernization Project (PSMP) (US\$8 million). The project was approved in February 2010 and its closing date is 30th June, 2013. Among the Project's development objectives is the goal to create conditions for further automation of government work processes and for the development of e-government applications. The expected results of the project include:

- Increased bidder participation in public procurement tenders and cost savings through Quick Gains actions and e-procurement modules.
- A transparent and coherent pay and grading structure introduced in the civil service, supported by improved ICT systems that enable effective fiscal and management controls in payroll administration.
- Enhanced security, efficiency, and interoperability of Government information systems (through centralized data storage and systems maintenance, security standards, and interoperability frameworks).

The Project was prepared in close cooperation with the Ministry of Economy and Finance (public financial management reform) and the Ministry of Public Administration (civil service reform, ICT infrastructure), which will be the key institutions responsible for the Project's implementation. Key Development Partners to the Project include DFID, the European Commission, and USAID.¹³

EU

Under the EU fund Instrument for Pre-Accession Assistance Kosovo was financially supported to improve its infrastructure, build public institutions and improve cross-border cooperation in order to accelerate its EU integration. Kosovo is expected to receive €68.7 million during 2011 and €70.0 million during 2012 from the fund. The EU is the main trading partner and the biggest foreign investor in Kosovo.

EU IT Pilot Project in the Field of Education – The project is funded by the EU and managed by the European Commission Liaison Office to Kosovo. The main goal of this project is to support the Government of Kosovo in improving the quality and efficiency of education and training services by supporting the introduction of ICT technology in the teaching and learning processes. In this connection, guidance and recommendations for the future development of network, eContent and IT trainings and other related topics will be provided by the project. The project began its initiation phase on 01 February 2010.¹⁴

ECIKS – Economic Initiative for Kosovo - <http://www.eciks.org/>

ECIKS is a non-for-profit organization founded in April 2003 in Vienna, Austria with the main objective to support a sustainable long-term economic development of Kosovo and the regional economic cooperation. So far the Economic Initiative for Kosovo has had 18 projects, 3 of which have been in the ICT sector.¹⁵

¹² <http://www.usaidkpep.org/Default.htm>

¹³ http://siteresources.worldbank.org/KOSOVOEXTN/Resources/Kosovo_Snapshot.pdf

¹⁴ <http://www.itpilotproject.eu/>

¹⁵ http://www.eciks.org/english/lajme.php?action=total_news&main_id=1094

H. EXHIBITIONS, CONFERENCES AND EVENTS

- 3rd October – 5th October 2012
ITTF – Information Technology Trade Fair – 8th edition – Pristina
Takes place every second year¹⁶
- 18th April, 2011
IT Pilot Project event ‘Bringing ICT and e-Learning’ to education in Kosovo’ – Pristina
The IT Pilot Project organised this event in order to present two specific project outputs developed together with the Ministry of Education, Science and Technology (MEST) – e-Content developed for use in Kosovo schools and the e-Readiness report. The e-Readiness report presents the current situation and efficiency of ICT in the education system in Kosovo, the readiness for adopting ICT, as well as what are the challenges and recommendations for further development of the ICT usage in education.¹⁷

As a result of the conducted desk research, it could be concluded that it’s too hard to find any current and valid information about forthcoming IT events in Kosovo. This could lead to problems regarding the access of the majority of people and organizations’ managers that do not live in the country to find the appropriate data which they are looking for. There are surely some ICT events and conferences held or scheduled to be held in Kosovo but they are just not mentioned or shown in Internet. Unfortunately, the lack of any reference point in Internet for future ICT events in the country could be considered as a serious disadvantage. Thus, the attracting of foreign investments could be easily restricted as well.

I. IT NEWS: SOURCES OF INFORMATION

ITBM Group (Information Technology & Business Media Group) - (<http://www.itbmgroup.com>)

This is the only technology media publishing company in Albania and Kosovo dedicated to the ICT industry. Its mission is to support the development of the ICT industry in the region by providing its customers a communications bridge that will be used to reach its enterprise and consumers technology target groups. With presence in print media and online media and a special focus on ICT market research and ICT Events the company will help and inform its customers about the ICT market trends and market growth.

CIO - (http://www.itbmgroup.com/site/index.php?option=com_content&view=article&id=37&Itemid=251)

Launched in December 2010, CIO is a monthly technology magazine published in Albanian language for Albania, Kosovo and Macedonia targeting IT Leaders, Executives, Managers and Senior Professionals.

PC World Albanian -

(http://www.itbmgroup.com/site/index.php?option=com_content&view=article&id=15&Itemid=61) Launched in June 2008, PC World Albanian is a monthly technology magazine published in Albanian language for Albania, Kosovo, Macedonia and Montenegro markets, targeting over 6 million Albanian speakers. The magazine provides readers in these countries with the best IT advice and detailed opinions in clear, understandable language. It also stands as the best representation of the emerging and fast-growing IT markets in the region.

PC World Albanian Online - (<http://www.pcworld.al>)

¹⁶<http://www.kosovafair.com/FairsinKosovo/Fairs2012/tabid/61/language/en-US/Default.aspx>

¹⁷ <http://www.itpilotproject.eu/index.php/events-category/92-project-event-bringing-ict-and-elearning-to-education-in-kosovo.html>

This is a one-stop-shop and the market's leading source for daily technology information in Albanian. It features up-to-date content about hardware, software, mobile technology and business news, as well as topical information and reviews.

The ICT Business Catalogue -

(http://www.itbmgrou.com/site/index.php?option=com_content&view=article&id=16&Itemid=62)

The catalogue is a reference handbook for local, regional and international businesses and organizations that operate on the local and regional ICT industry markets. With basic information such as company profiles, products, services and contact information this catalogue will help investors, manufacturers, business people and consumers to identify potential partners on the markets and receive information about the company's expertise, product or service specialties.

Koha Ditore (Independent), Pristina, no English version available. (www.koha.net)

Kosova Press (News agency), Pristina – an independent and free media source in Kosovo, currently editing news in Albanian and English Languages. (www.kosovapress.com)

Kosova Sot, no English version available. (www.kosova-sot.info)

New Kosova Report – (www.newkosovareport.com)

A non-profit information portal about Kosovo/ and its neighbors providing reliable and free information on the internet geared towards foreign audiences.

ADDITIONAL INFORMATION

More media and it websites can be found at:

http://www.itbmgrou.com/site/index.php?option=com_content&view=section&layout=blog&id=7&Itemid=72 and <http://www.abyznewslinks.com/kosov.htm>

III. IT FOR OTHER INDUSTRIES IN THE COUNTRY

The ICT sector could have direct or indirect impact on the country's economy – either on the economy as a whole or influencing other key sectors and supporting enterprises to achieve higher efficiency and growth, and thus raise the productivity across the economy.

Companies in Kosovo are not specialized in the production and development of only one particular product. Thus they interfere the manufacturing of the other industries in the country and contribute to the development of the latter and to the market growth.

There are already locally developed IT solutions for various sectors such as justice, banking, insurance, wholesale, retail, production, education, etc.

A few Kosovo companies are presented on the web platform IT2Business (<http://it2business.org/default.aspx>), an online catalogue with successful practices and Information Technology (IT) solutions for the business, aimed at increasing the ICT competitiveness in Eastern Europe and Caucasus. The platform is designed and launched by the USAID funded RCI (Regional Competitiveness Initiative) project through the European Software Institute - Center Eastern Europe. It fosters the direct contact between the IT and other economic sectors. This enables the promotion of the local industry and the region as a whole. Currently there are 51 companies from the region offering 117 products/solutions from which 3 are from Kosovo.

IV. QUALITY TENDENCIES

ISO

ISO is the most popular certification in Kosovo. Businesses offering maintenance, consulting, information services, and especially those engaged in software development and vendors are extremely supportive of the idea of ISO certification. However, less than 10% of the companies in Kosovo have applied for ISO standards.

The company **“Progresi”** (www.cfprogresi.com) producing electrical cables, became the first company in Kosovo to receive the internationally recognized certificate ISO 9001:2000. This came as the result of a project implemented by EBRD BAS Program in Kosovo and funded by the European Agency for Reconstruction (EAR).

“Intracom” is another ISO 9001:2000 certified company with a branch of the firm situated in Kosovo (also in Macedonia and Greece) - Intracom Branch Office Kosovo. The company offers services in the sphere of telecommunications, constructions and IT solutions.

Management Development Associates (MDA) is a Kosovo based company which is ISO 9001:2008 certified and one of the many services it offers is Quality Management Consulting, i.e. technical assistance for developing and maintaining Quality Management Systems according to ISO 9001:2000 standard.¹⁸

The desk research revealed a scarce look at the whole information about ISO certified companies in Kosovo. The reason is that most of the companies in Kosovo still don't have the necessary resources or the wide spread reputation to face the steep challenges in meeting international standards or EU technical requirements. They realize the need and the forthcoming advantages of such implementation if their products are to be exported or if they want to increase their competitiveness on the international markets.

The BAS Programme of the European Bank for Reconstruction and Development financed from the EU and the Government of Netherlands also supports Kosovo SMEs to obtain ISO certification.¹⁹

SOFTWARE PROCESS IMPROVEMENT

The survey showed that currently there is still no company in Kosovo which has tried to implement an advanced process improvement program in the field of software development such as CMMI. The companies are still accumulating resources but the research reveals that they have a strong interest in awareness workshops of this kind as a first step. However in 2010 one company from Kosovo received ITMark certification.

Kosovo IT companies need to gain awareness of the benefits to be part of the common capacity fund of ICT training and certification providers in Eastern Europe.

The web platform Quality2IT – Eastern Europe Training and Certification Network, provides excellent opportunities to participate in the establishment of a common regional ICT brand based on high quality and innovations. The platform is designed and launched by USAID funded RCI (Regional Competitiveness Initiative) project through European Software Institute - Center Eastern Europe. For the time being there are 19 companies with 90 services registered in the platform and 2 of them are from Kosovo.

¹⁸ http://seemda.com/index.php?option=com_content&task=view&id=76&Itemid=75

¹⁹ <http://www.bas-ks.org/?cid=2,1>

V. SWOT ANALYSIS

The SWOT analysis of Kosovo's ICT environment generated the following conclusions:

Strengths:

- In general Kosovo's companies are aware of the need to implement the latest standards relevant to IT companies;
- The ICT companies in Kosovo could boast of relevantly qualified human resources, flexibility, short time-to market period;
- Labor costs are considerably lower than in Western Europe;
- Companies have key knowledge of emerging markets in the Balkans and the Eastern markets;
- Modern, EU-compatible legislation;
- Low tax burden and modern business support institutions;
- The Government has already realized the need of faster ICT development in all sectors of the country;
- Kosovo has the youngest population in Europe;
- Due to the long international presence, English is just short of an official language;
- Consolidation of the telecommunications operator market and plans for development of a national infrastructure with optic fiber cable;

Weaknesses:

- Country does not have the image of an IT supplier;
- Outdated products/services;
- Lack of quality certification and development methodologies;
- Lack of specialization among firms;
- Lack of international marketing and up to date analysis and information;
- Company size and resources of many ICT companies are too small for international expansion if they do not cooperate with each other and with other companies in the region;
- Lack of project management skills and/or industrial production of software;
- Lack of capital for implementation of new competitive standards which can ensure the potential clients the quality of the provided services;
- Lack of objective information in Internet about the ICT sector in Kosovo;
- Business environment has insufficient incentive for using new information and communications technologies and for opening to e-business;
- Slow implementation of the legislation concerning copyright in IT, which results in high rates of the software piracy;

Opportunities:

- Focused multilingual presentation in Internet about Kosovo's ICT potential could support foreign investments in the sector;
- Improved ICT industry image through implementation of world recognized models and practices;
- Access to European Union market potential;
- Partnerships with significant foreign companies can subsequently support the „professionalization“ of ICT companies;
- Strategic alliances with foreign companies could increase exports;
- Clustering with other competitive sectors in Kosovo and the region can increase the capacity of the small companies;
- Strengthening business-education links can increase the workforce qualification and labor efficiency;

- Expected ICT market growth is relatively high both in IT and in Telecomm;
- Establish research institutes and create active involvement of local companies in public ICT projects that is currently limited;
- Process improvement and implementation of ICT in other sectors can increase the competitiveness of Kosovo's economy;

Threats:

- The industry's representation may remain fragmented and significantly dependent on low labor cost as a main competitiveness advantage;
- Lack of domestic market demand to enable industry to develop expertise;
- Lack of a coherent industry image;
- "Brain Drain" of IT specialists in search of higher salaries;
- Challenges in gaining an image of new-born IT supplier;

CMMI IMPLEMENTATION CAN SUPPORT FOLLOWING OPPORTUNITIES:

- Improved ICT industry image through implementation of world recognized models and practices;
- Partnerships with significant foreign companies;
- Strategic alliances with foreign companies could increase exports;
- Clustering with other competitive sectors in Kosovo and the region can increase the capacity of the small companies;

CMMI IMPLEMENTATION CAN HELP MITIGATE THE FOLLOWING WEAKNESSES

- Country does not have the image of an IT supplier;
- Outdated products/services;
- Lack of quality certification and development methodologies;
- Lack of project management skills and/or industrial production of software;
- Potential for work-sharing in the region is not extensively used;
- Lack of focused international marketing strategy;

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