

KOSOVO ICT MARKET ANALYSIS

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projectGRAPHICS

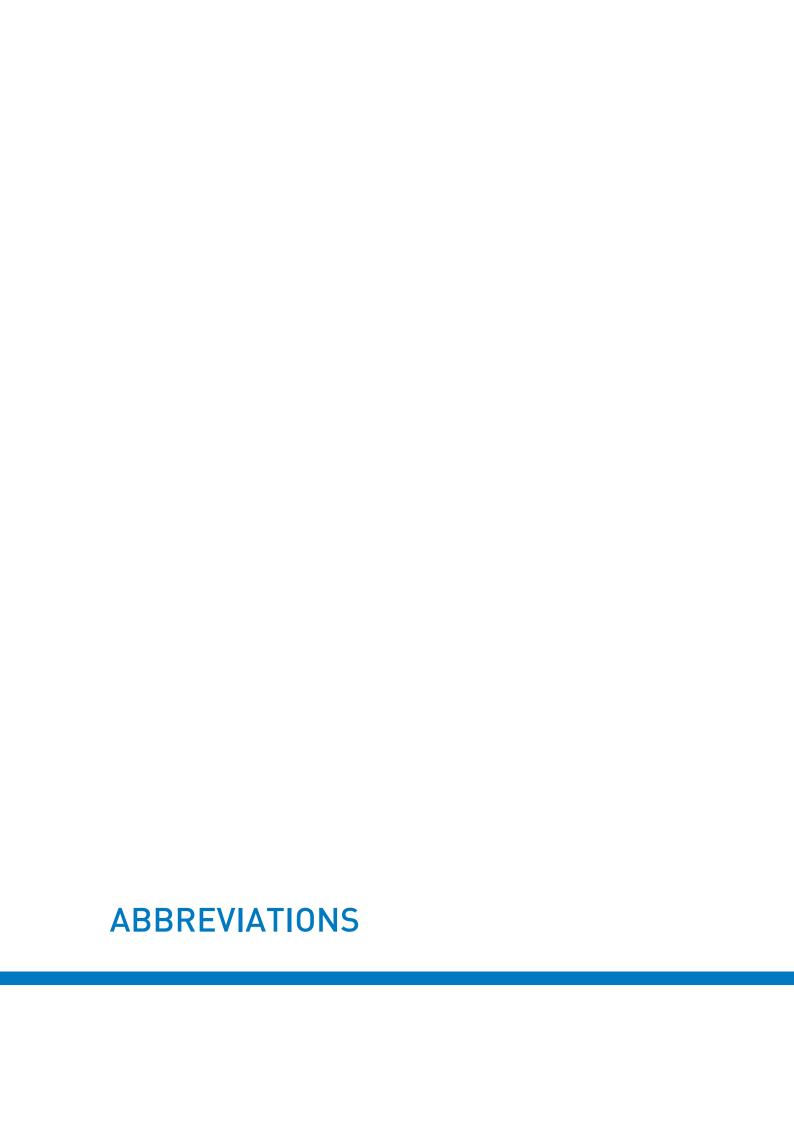
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The views expressed in this report are those of the survey respondents and authors, therefore they do not necessarily represent the views of STIKK.

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ICT - Information and communications technology

STIKK - Kosovo Association of Information and Communication Technology

BPO - Business process outsourcing

ESI - European Software Institute

EU - European Union

IDC - International Data Corporation

IT - Information Technology

IBM - International Business Machines

NGO - Non Governmental organization

1. INTRODUCTION

The ICT Market Analysis report is the first of two reports coming out of the research project commissioned to STIKK by the EYE¹. The report aims to provide a snapshot of the actual situation of the Kosovo ICT sector, identify the bottlenecks which impede ICT growth, and explore possibilities of inter-sector investment possibilities.

Since its incorporation in 2006 STIKK has been at the forefront of the developments in the ICT sector in Kosovo by implementing innovative and diverse projects such as organizing trainings that were not available earlier in Kosovo, fostering business linkages and organizing events in the interest of its members and society at large. STIKK has been involved in the working groups and have made the voice of the sector heard in all the public debates concerning policy changes affecting ICT sector. STIKK has conducted continuous research to increase and validate its own understanding of the sector, the current needs and the potential for growth. This report continues on such prior STIKK research, namely the studies of "ICT in Kosovo - A sector Decoded" and "ICT Skills-Gap in Kosovo" conducted during 2010 and 2011 respectively.

This research is a combination of efforts invested by STIKK, who provided the type of institutional memory needed for such research as well as its pool of resident ICT experts; of EYE, who also provided its expert and management capacities; of the contracted research company Index Kosova, who executed all the research and provided the raw data; and lastly, of each and every respondent who participated in the research. All errors and omissions in this report remain, nevertheless, the sole responsibility of the authors.

2. SUMMARY

This report is built upon the previous *ICT in Kosovo - A Sector Decoded* report of January 2010 commissioned to STIKK by USAID, in a way that it provides a comparison from the established baseline in the first report while, in addition, by expanding to include also a non-ICT Kosovo-wide business sample, it provides an opportunity for comparison between the ICT and non-ICT sectors, as well as the information on the potential for horizontal market growth of ICT in these sectors.

The ICT market in Kosovo, albeit smaller than that of the countries in the region, has been reported to register continuous growth which is higher than that in the surrounding countries, although coming from a lower base. During this research however, it has been indicated that a certain slow down has occurred, and it may happen that final growth results for 2013 come out lower than predicted.

The target industries of the ICT sector in Kosovo at present consist of telecommunications, financial sector, the government, and individual buyers/home users. The latter does not represent a major part of the ICT market in Kosovo and it seems to be served in most part by a breed of refurbished equipment retailers and by illegal imports of PCs and peripherals from nearby countries where levies stand at significantly lower level than in Kosovo.

ICT businesses expect to grow mostly locally, in areas such as Internet Service Providing, Software development /programming, maintenance and repair, vendor sales, engineering services, training/certification, information services and web development. Mobile applications development, online banking and e-commerce services are viable growth areas to only 2% of companies. Opportunities to grow by BPO and exports appear viable to only 5% of businesses.

The ICT sector in Kosovo, education for ICT, e-government, non-ICT businesses, and the society at large have yet to harness the full potential of ICT. Local sectors such as healthcare, transportation, agriculture, education, science-culture-art, and army-police-security are currently extremely underserved by the ICT sector in Kosovo and present practically untapped opportunities for growth which remains within reach.

Comparison to the non-ICT business included in this study shows that ICT sector provides more potential over many indicators including here the ownership structure better positioned to absorb foreign investment, higher percentage of businesses that export, higher tendency towards new products development and innovation therefore creation of higher value products and services, better gender balance and younger employees especially at managerial levels, higher involvement in the education of current and future employees, higher rate of internships offered, highly organized sector with strong professional association, and systematic involvement in advocacy for policy changes affecting the sector.

But, for any significant growth to happen, a number of conditions must be met, the most pressing being the creation of a favorable business climate for ICT by bringing tax and customs fees in par with that of the neighboring countries, and establishing other incentive schemes for ICT. A targeted policy intervention and investment could produce big impact both to the Kosovo ICT industry and to non-ICT businesses.

3. METHODOLOGY

The research methodology of this project consists of combined qualitative and quantitative research methods. In a chronological manner, the project started with desk research, and continued with individual in-depth interviews, quantitative/field research and focus group discussion.

- 1. The desk research consisted of literature review of the existing publications on the Kosovo ICT sector. The review concentrated on identifying any new publications and major developments in the Kosovo ICT Sector since the time the baseline situation was recorded by STIKK in its research of 2010, "ICT in Kosovo A sector Decoded" and 2011, "ICT Skills-Gap in Kosovo". To achieve this, a list of available publications on the subject matter was prepared by STIKK and the documents were reviewed independently by the contracted research company.
- 2. The individual in-depth interviews were conducted with limited sample of respondents coming from few companies' from both, ICT and non-ICT sectors. The in-depth interviews provided the means to verify the initial findings from the desk research and it assisted greatly with the finalization of the quantitative research questionnaires. Since the intent was to provide comparison and thus keep the same questionnaires as the ones used for the researches conducted by STIKK in 2010 and 2011, it was necessary to verify that the questions still remained relevant to 2013, afterwards to eventually modify some questions and formulate new ones as appropriate. In particular, it was essential to test if the same questions were relevant to non-ICT sector which was being included in this current research, and to generalize questions where necessary as to befit all intended respondents, ICT and non-ICT alike. At the end of this phase, a combined questionnaire was finalized, which comprised of two parts, basically two independent questionnaires, one on ICT Market Analysis and one on ICT Skills Gap Analysis that were both used, with minor differences, over the ICT and non-ICT sample.¹

The individual in-depth interviews (typically 35 minutes long) were conducted with key informants from ICT companies and educational and training institutions. There were 27 indepth interviews in total, 10 interviews with ICT companies and 17 interviews with educational institutions. The interviews took place during August 15- September 30, 2013,

3. The field research, initially planned for August 2013, had to be postponed upon suggestion from few early respondents and due to the prevailing unavailability of respondents during the summer holidays. The field research was finally completed during September 2013. It included 65 companies from the ICT sector and 448 companies from other sectors, such as: retail sales (47.5%), manufacturing and mining (13.7%), services and tourism (12.6%), construction (10.6%), healthcare (3.3%), transportation (2.9%), as well as few other sectors.

4. The final part of this research included a focus group discussion which, following the completion of field research with other groups, was considered as a more effective method to conduct qualitative research with students, interns, fresh employees and young professionals. While almost all available earlier research focused exclusively on ICT companies, on educational institutions or on government policymakers, we felt that including the personal perspective of the current and potential employees in the ICT sector in this discussion may contribute in adding another dimension to the understanding of the ICT sector in Kosovo. The focus group discussion, lasting about 90 minutes, included 8 participants in total. The focus group discussion took place in October 2013.

In the end, it presented considerable efforts to aggregate, analyze and summarize the sheer amount of raw data provided by the contracted research company, and adding to it all the comments, notes and input by stakeholders which accumulated throughout the duration of the project.

4. ICT MARKET ANALYSIS DATA SOURCES, OR THE LACK THEREOF

Identifying reliable source of systematic market data on Kosovo ICT industry, as well as any of the most of other systematic data on Kosovo, is notoriously problematic. Most of the available analyses, including this one, are based on information produced by custom surveys, using different questionnaires, different samples and methodologies that make it difficult to conduct comparison of results. In some respects, the lack of systematic information on the sector has become a barrier to the ICT sector development.

As pointed out in ESI report, 2011², despite all recent research in this area, including information collected by the National Statistical Office, the challenge remains to approximate the data collection methodologies in manner that ensures that data is comparable to that collected in the region and in EU. The methodologies and indicators worth considering here are:

- EU framework for measuring the availability and use of electronic services provided by the government to businesses and citizens.³ This includes the list of 20 basic public services; 12 for citizens and 8 for businesses, the so-called eGovernment indicators for benchmarking eEurope.⁴
- Global Information Technology Report, World Economic Forum⁵.
- Science&Technology, and Infrastructure indicators of the World Bank⁶.

- United Nations E-Government Survey⁷.
- Global Competitiveness Report, World Economic Forum8.

Probably the most accurate recent analysis of the Kosovo ICT market size and segmentation comes from the IDC study of 2012. All the data in the following section has been included in this report with permission by International Data Corporation/ IDC (www.idc-adriatics.com). Where available, the analysis will include more recent data coming from other sources.

4.1 ICT MARKET SEGMENTATION BY VALUE

The STIKK study⁹ of public data available from the government's procurement agency shows that, during the period of January 2010 - June 2012, public institutions in Kosovo have procured a total of €28,269,553.97 for ICT. Of this amount, central government and the Parliament of Kosovo have spent €7,110,795.99 through public tenders. ICT procurement by municipal authorities during this period has been €1,225,945.59, while the courts, public companies and other public enterprises have purchased a total of €19,932,812.39, which confirms that the Government of Kosovo is not any longer the biggest ICT customer in the country.

According to Ministry of Finance, the Kosovo budget for ICT during 2012 - 2015 is:10

Ongoing from	New from	Total	Estimates from	Estimates from	Total
2012	2013	2013	2014	2015	2013-2015
12.807.680	1.204.750	14.012.430	15.243.230	13.167.130	42.442.790

Detailed data on the ICT imports obtained from the Kosovo Customs show that, after a slight increase in 2011 to €61,109,178.13 (from €56,805,492.03 in 2011), there is a sharp decline in 2012 at only €23,600,100.53.

- 7 United Nations: E-Government Development Database. Online, http://unpan3.un.org/egovkb/
- 8 World Economic Forum: Global Competitiveness Report. Online. http://www.weforum.org/issues/global-competitiveness
- 9 Shaipi, K.: Public Procurement for ICT in the period June 2009-June 2012 Findings Report. STIKK, 2012. http://stikk-ks.org/uploads/downloads/Public_Procurement_for_ICT_June_2009-June_2012.pdf
- 10 Government of Kosovo, Ministry of Finance: Kosovo Budget for Year 2013. Capital Projects for Central Level. 2012. Online. http://mf.rks-gov.net/LinkClick.aspx?fileticket=af_LQXAMd10%3D&tabid=1323&language=sq-AL&forcedownload=true

KOSOVO ICT MARKET ANALYSIS

	Heading		2010	2011	2012
EX1	8443	Printing machinery, printers, copying machines and facsimile machines; and their parts and accessories;	30,297.91	195,222.21	19,503.13
	8471	Automatic data processing machines and units;	54,849.72	30,650.66	20,461.00
	8517	Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data (wired or wireless network)	166,038.68	96,400.16	12,436.12
	8528	Monitors and projectors, not incorporating television reception apparatus; reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus	18,116.78	6,185.53	6,348.85
	8542	Electronic integrated circuits	34,200.96	2,354.18	1,502.40
	8544	Insulated (including enamelled or anodised) wire, cable (including co-axial cable) and other insulated electric conductors; optical fibre cables;	5,677.06	60,870.62	27,405.30
	9002	Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of or fittings for instruments or apparatus, other than such elements of glass not optically worked	3,592.05	956.72	
EX1 Total			312,773.16	392,640.08	87,656.80
IM4	8443	Printing machinery, printers, copying machines and facsimile machines; and their parts and accessories;	4,670,947.33	5,643,471.90	2,390,947.26

	8471	Automatic data processing machines and units;	14,355,695.21	13,364,684.23	4,331,380.02
	8517	Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data (wired or wireless network)	10,151,734.64	10,448,830.34	6,233,760.13
	8528	Monitors and projectors, not incorporating television reception apparatus; reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus	12,305,992.21	12,460,249.02	5,696,226.30
	8542	Electronic integrated circuits	693,410.06	661,490.75	128,714.65
	8544	Insulated (including enamelled or anodised) wire, cable (including co-axial cable) and other insulated electric conductors; optical fibre cables;	13,674,879.46	18,004,136.94	4,590,487.61
	9001	Optical fibres and optical fibre bundles; optical fibre cables; sheets and plates of polarising material; lenses (including contact lenses), prisms, mirrors and other optical elements;	916,342.90	479,700.30	138,322.49
	9002	Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of or fittings for instruments or apparatus, other than such elements of glass not optically worked	36.490.22	46,614.65	90.262.07
IM4 Total			56.805.492.03	61,109,178.13	23.600.100.53

Table: Register of the customs values of the ICT imports over the 2010, 2011, and 2012 $\,$

4.2 COMPANY PROFILE

OWNERSHIP STRUCTURE

Most of the Kosovo ICT companies (88%) are Kosovar owned, 2% have Kosovar majority ownership, 3% have equal ownership by Kosovar and foreign owners, and 8 % are foreign-owned companies.

It is important to note than there are more ICT companies of mixed Kosovo-foreign ownership and whole foreign ownership than non-ICT companies which are almost entirely locally owned. Therefore, the positioning for foreign investment through ownership acquisition is already present at ICT companies and less so at non-ICT companies.

Comparison to the reference of 2010 for four major ownership types shows some fluctuation which may be attributed more to different sample size than to a real shift of values.

Commonwhite	ICT 2010	ICT 2013	non-ICT 2013
Company ownership	%	%	%
100% Kosovo owned companies	80.2	87	95
Most of the company is Kosovo owned	0	2	1
50-50 Kosovo owned / foreign	3.3	3	1
100% foreign-owned companies	6.6	8	1
Other/refused	9.9	-	-

TYPE OF COMPANY REGISTRATION AND YEAR OF INCORPORATION

Most Kosovo ICT companies are registered as individual businesses —one owner (59%), followed by 23% registered as Limited Liability Company, 12% registered as Limited partnerships — Many owners, and 6% are registered as Joint-Stock Company type. In comparison to non-ICT companies, the ICT companies have more diverse registration form and ownership structure than non-ICT companies who are at vast percentage (81%) registered as individual businesses. Worth noting is also that the ICT sector is well organized, where over half of the ICT companies are members of an industry or professional association, while 80% of non-ICT companies are not.

Turns of commons registration	ICT 2010	ICT 2013	non-ICT 2013
Type of company registration	%	%	%
One owner - Individual Business	53.8	59	81
Limited partnership-Many owners	4.4	12	9
Limited Liability Company	28.6	23	7
Joint Stock Company	2.2	6	3
Other/refused	11	-	-

Military and the second of the	ICT	non-ICT
Which year was your company founded?	%	%
After 2010	8	8
2000 – 2009	73	64
Prior to 1999	19	28

BUSINESS ACTIVITIES

Compared to the reference STIKK ICT market survey of 2010, the types of most prevalent activities that IT companies in Kosovo engage are as follows: Maintenance and repair at 29% (up from 17.6% in 2010), Software development 28% (up from 13.2%), Internet Service Providing 25% (up from 7.7%), Training/Certification and Consulting each at 17% (up from 5.5% and 7.7% respectively), Network & Systems operation/management 12%, Information Services 6%, Manufacturing/ Assembling and Retail Sales at 5% each (Retail Sales down from 18.7%).

The table of reported business activities does not reveal the actual market segmentation by value, but the number of businesses engaging and competing in those activities. Analyzed in time, the data illustrates the dynamics of adjustment of the ICT businesses, concentration of competition and the trend of distribution of market share on the hands of select number of businesses. It can be seen, for example, that the lucrative IT services activities have fallen onto the hands of only 6% of businesses, while, for example, maintenance and repair has a spike at 29%, which can be interpreted that more businesses, presumably small or even one-man shops, engage in this otherwise small value market segment.

ICT business activities of your company (multiple answers)	% 2010	% 2013
Internet Service Providing	7.7	25
Training /certification	5.5	17
Maintenance and repair	17.6	29
Consulting	7.7	17
Information Services	11	6
Software development/programming	13.2	28
Vendor (hardware and/or software)	33	12
Manufacturing /assembling	8.8	5
Retail sales	18.7	5
Online Banking and e-commerce services	1.1	2
Network &systems operation /management, etc	-	12
Business process outsourcing (BPO)	1.1	-
Engineering services	4.4	-
Other	-	3

CLIENTS & LOCATION

The ICT sector consumers in Kosovo consist of telecommunications, financial sector, government, and individual buyers - home users. The sector is heavily affected by international organizations present in Kosovo, either by servicing directly their operational needs or by implementing various donor projects supported by these international players.

Percentage of client distribution groups shows close correlation to the income share realized from these groups.

Who are your clients?	Clients	Income share
(aggregated answers across all companies)	%	%
Individuals	15	14
ICT companies	24	23
Other companies	30	32
Government and public institutions	20	22
Other (NGOs etc)	11	9

Vast majority of ICT companies (87%) have their clients located in Kosovo, with a small number of businesses (13%) having clients located abroad (up from 3.3% in 2010). Non-ICT companies have a larger share of their clients in Kosovo (93%), compared to ICT companies, and a very small share in the Balkans (3%) and Europe/worldwide (4%).

Where are your primary clients?	ICT 2010	ICT 2013	Non-ICT 2013
where are your primary chems:	%	%	%
In Kosovo	96.7	87	93
In Balkan region	3.3	4	3
In Europe and the world	(cumulative)	9	4

The share of incomes by location of costumers corresponds closely to the location of clients, and it shows that ICT companies realize higher revenue share (13% cumulative) from customers abroad than non-ICT companies (7% cumulative).

Income percentage of business activities	ICT 2013	non-ICT 2013
according to client locations	%	%
In Kosovo	87	93
In Balkan region	3	3
In Europe and world	10	4

Finally, ICT companies do not pursue aggressive marketing and sales to get to new customers. In fact, most of them (34%) wait passively for clients to contact them, followed by companies who get business leads through their web sites (19%) and by phone (19%). This is an indicator of the general lack of sales and marketing skills among ICT companies.

LIMITED ICT EXPORTS (YET AGAIN MAYBE?)

The scant information on imports and the information on location of clients and share of revenues from these clients show that Kosovo ICT sector continues to be net importer. The STIKK study of 2010 revealed that around 63% of ICT companies in Kosovo imported goods and services needed for their activities. Around 62% of the ICT companies reported to import goods for resale. As with most information on monetary values, companies did not provide data on the value of these imports, and very few provided information on segments such as €0-€250,000 (10.8%) and €250,000-€500,000 (7.1%). In 2010, only 3.3% of the companies had their primary customers outside of Kosovo and around 32% of companies declared to have secondary customers located abroad.

Of these companies, most of them (94.3%) did not pass the €100,000 monetary value of the goods/services they export. The revenues coming from these exports accounted for 6-10% of the total revenue for 42.9% of the companies. For around 90% of ICT companies who export, their exports did not exceed 30% of their total revenue.¹¹ The IDC study of 2012, on the other hand, following a different methodology which reveals the actual positive balance between the value of IT services supplied by Kosovo IT companies and the in-country spending for IT services, indicates clearly the nature of IT exports and that the IT services segment in Kosovo is practically the only segment actually having exports.

TARGET INDUSTRIES

The main industry currently targeted by most ICT companies in Kosovo is Telecommunications (66%), followed by Government, Police and Emergency Services (46%) and Financial sector (45%). Other targeted industries are retail, wholesale, professional, scientific and technical services, education and training, etc.

In which industries do you offer products and services?	іст
	%
Telecommunications	66
Government, Police and Emergency Services	46
Financial sector	45
Retail	39
Wholesale	34
Professional, Scientific and Technical Services	34
Education and Training	29
Electricity	25
Insurance Services	22
Transport and Postal	17
Building and Construction	15
Water and Waste Services	15
Health Care and Social Services	12
Accommodation, Restaurants and Food Outlets	11

SUPPLY WITH ICT PRODUCTS AND SERVICES

ICT companies have greater dependence on imports than non-ICT companies when it comes to getting ICT services and product supplies. ICT companies get IT services and products in Kosovo in a little more than half of the cases (59%), close to one third (29%) in Europe and worldwide, and just 12% in the Balkan region. On the other hand, non-ICT companies are primarily supplied with IT Products and Services in Kosovo (95%), with just a small portion supplied from abroad (2% in the Balkans and 3% in Europe and worldwide).

Where do you get IT services and products	ICT	non-ICT
(computers, toners, equipment maintenance, software service, etc.)?	%	%
In Kosovo	59	95
In Balkan region	12	2
In Europe and the world	29	3

ANNUAL REVENUES

ICT companies seem to be more hesitant, at 63% of cases, than the non-ICT companies (49%) in declaring their annual revenues. In an environment of onerous tax regime and regulation, it is understandable that most companies hesitate to provide real income data. In addition to legitimate reasons such as exposing weaknesses to competition, this reluctance adds somewhat to the level of perception of gray economy in the sector.

In 2010, the annual sales of the ICT companies in Kosovo distributed them among three major segments: €0-€50,000 (16.5%), €50,000-€250,000 (14.3%), and higher than €500,000 (15.4%). ¹² In 2012 however, the average annual turnover in the sector was €250,000, with an increasing number of companies reporting turnovers in millions of Euros. ¹³ In 2013, the distribution of companies by annual revenues ranges 11% in €5,000 - €50,000, 5% in €50,000 - €250,000, 6% in €250,000 – €1,000,000 and 15% have turnover more than €1M annually. ¹⁴

Annual revenues	ICT 2010	ICT 2013	Non-ICT 2013
Aimuai revenues	%	%	%
€0 – €50,000	16.5	11	12
€50,000-€250,000	14.3	5	17
€250,000 – €500,000	5.5	6 (cumulative)	12 (cumulative)
€500,000 - €1,000,000	15.4	6 (cumulative)	12 (cumulative)
>€1,000,000	(cumulative)	15	10
Refuse/Don't know	48.4	63	49

EMPLOYEE STRUCTURE

The average number of employees for the 65 surveyed ICT companies is 14.3, down from 15.4 a year ago. Extrapolating for the estimated total of 120 companies operating in the sector, it gives the estimated number of 1716 total employees in the ICT sector. These include full- and part-time employees as well as interns. The employee gender structure in ICT sector is 80% male and 20% female, which is the same proportion as in the non-ICT sector. At managerial levels, ICT companies have more balanced gender structure, though not by much: 80/20 ICT vs. 92/8 non-ICT, male/female.

The best paid employees are Database developers, with an average net salary of €571, followed by Managers (€532), Web developers (€488), Software developers (€444), Project managers (€435), and Network Engineers (€441).

The ICT companies included in the survey expect to hire a total of 79 new employees in the next year which, extrapolated for the estimated total of 120 companies operating in the sector, gives the estimated 146 total new job openings planned for the next year. Around 58% of the surveyed ICT companies plan to hire interns too. Following similar calculation as for job openings, it gives the number of 238 new interns needed for the next year.

ICT companies have slightly lower staff turnover (1.3) than non-ICT sector (1.9), and they lose staff mostly to other sectors for better payment in these sectors. It takes the ICT sector longer time to fill-in the open vacancies and it does so more by means of open public announcements.

WHY ENROLL FOR ICT CAREERS?

The focus group discussion with young ICT students and professionals revealed that there are not many differences between them and the businesses regarding the understanding of the situation in ICT sector in Kosovo. However, the young people seem to be more harshly affected by obstacles such as lack of investment in the sector and lack of access to financing, which to them translates into lack of scholarships and much higher price for equipment and for educational material compared to their counterparts in the region. It also seems that young ICT students are able to pick up some work experience early enough, significantly earlier than students pursuing other careers, and that they frequently chose to continue their studies while working, or intermittently. This is not a norm among the general student population in Kosovo, where an attitude of "finish the school first" has deep cultural roots, on top of the inability to land an internship or employment while studying.

Most of ICT students and young professionals see the web sites and simple software applications in prospect when they think of available and future ICT employment positions for themselves, which, incidentally, with minor variation is exactly what is being taught at educational institutions in Kosovo. Students think that the knowledge they get through education is pretty out of sync with the industry demands.

Almost all of the ICT students and young professionals lack a clear understanding of taxes and dues regime in Kosovo, especially if contracting abroad, and in general, they lack an understanding of the skills and requirements needed to start or run a business.

4.3 CURRENT AND FUTURE OUTLOOK OF THE KOSOVO ICT MARKET

Sector slowdown. This research showed that the ICT market in Kosovo has not changed significantly in the period 2010 - 2013, which is to say it has not developed as expected. The growth forecasts by the companies are grim, reflecting the reduced spending primarily by the government, lack of new entrants or major investments in telecommunications, and the decrease of purchasing power of retail buyers in Kosovo. "No money" (meaning no buyers) and "No work" at aggregate 28% of the overall business sample in Kosovo, followed by the complaint on "Competition" at 21%, indicate that the economic recession might be sneaking into Kosovo too, and that businesses are struggling due to lack of work. The IT services and BPO seem to be the only segments promising some growth.

Looking over IT sector as a whole, IDC¹⁵ believes that Kosovo's IT spending will increase 2.6% in 2012 and that it will continue to grow through to 2016, with traditional IT segments (IT services, software, computers and peripherals) performing better than networking.

The Kosovar government passed an ambitious strategic document¹6 encompassing visions, goals, and policies for the development of country's ICT infrastructure and the provision of eGovernment services to businesses and citizens. Provided the government allocates actual resources to implement this strategy (estimated at over €100M¹7), it will have highly positive impact on the growth of ICT sector in Kosovo.

INVESTMENT AND GROWTH OPPORTUNITIES

Kosovo IT companies mostly see opportunities for growth locally. Areas expected to grow are: Internet Service Providing, Software development /programming, maintenance and repair, vendor sales, engineering services, training/certification, information services, web development, etc. BPO is explicitly seen as an area of growth by only 5% of companies. Mobile application development and online banking and e-commerce services appear as the least likely areas of growth, mentioned by only 2% of companies. Although few in numbers, these companies specialize and operate almost exclusively in BPO, mobile application or e-commerce services.

In which ICT area do you see potential for business growth?	%
Internet Service Providing	32
Software development / programming	25
Maintenance and repair	23
Vendor (hardware and/or software)	19
Engineering services (Network &systems operation /management)	19
Training / certification	17
Consulting	17
Information Services	12
WEB development	12
Business process outsourcing (BPO)	5
Retail sales	3
Mobile application development	2
Online Banking and e-commerce services	2

When asked the same question, 'how to grow?', ICT and non-ICT companies reveal subtle innate differences: ICT companies, more so than non-ICT companies, give more importance to adding new products and services, to expanding sales network, and especially to increasing ICT use within the company, increasing online sales and automation of production and work processes.

Which is the heat word a survey when it was 2	ICT	Non-ICT
Which is the best way to grow your business?	%	%
Growth of production capacity / service	75	76
Adding new products / services	91	80
Expansion of sales network	89	74
Application of ICT	62	42
Online sales of products / services	69	48
Digitalization of production and work process	75	47

ICT INDUSTRY POTENTIAL FOR GROWTH IN OTHER LOCAL SECTORS

The actual ICT penetration in non-ICT sectors is relatively low, and it provides an idea of growth potential in these sectors. Sectors such as healthcare, transportation, agriculture, education, science-culture-art, and army-police-security are currently extremely underserved by the ICT sector. This may come, among others, from reasons such as lack of communication between the ICT and non-ICT sectors; lack of information on the existing needs for ICT in these non-ICT sectors, lack of information among the non-ICT sectors that there exist out there ICT solutions appropriate for them to use, and from lack of experience on the part of Kosovo ICT companies to adequately market their services to these sectors.

Sectors that your company works with?	%
Sales, retail	41.4
Computers and IT systems	12.8
Manufacturing and mining	12.0
Services and tourism	11.0
Construction	9.3
Health and health care	2.9
Transportation	2.5
Agriculture	0.4
Education	0.4
Science, Culture, Art	0.2
Army, Police, Security	0.2
Other	5.6
Refused / Do not know	1.4

INTERNET PENETRATION AND ccTLD

The STIKK study from August 2013 on Internet penetration in Kosovo¹⁸ concludes that the Internet penetration is at levels comparable to that in developed countries: Internet penetration based on households is 84.8%, Internet penetration based on users is 76.6%. Internet is mostly used for social networking and Internet voice communication services. The study concludes that there will be a slowdown of the further Internet penetration in Kosovo due to market saturation.

This study is the second one on the same theme conducted by STIKK. While it provides ample amount of data and interesting findings, it may happen that the next study will need to utilize somewhat different methodology and definitions which will make the results directly comparable with those in the region and further.

Data gathered by Index Kosova in November 2013, show that Internet penetration based on households is 78.2%, while Internet penetration based on users is 80.8%. Compared to the STIKK study, the variation is small, and it may be attributed to different methodology and definitions used by the two studies.

Over the past two years, data on Internet penetration show that it is reaching plateau and that further growth requires some mechanisms of Universal Service Offering (USO) put in place by the National Telecoms Regulator. USO would increase availability of Internet service for all citizens, especially in rural, remote and areas, where it is not financially viable for businesses to grow on their own.

As of now Kosovo does not have a Country Code Top Level Domain and it is not clear if there are any ongoing efforts or developments to obtain this code. On December 10, 2009 Ministry of Transport and Telecommunications enacted the Administrative Instruction No. 1/2009 for the telecommunications regulatory authority for initiating the actions for establishment of the register and register manager for the country code top-level internet domain of the republic of Kosovo (ccTLD top-level domain).¹⁹ Following this, the last recorded initiative came from the Telecommunications Regulatory Authority, sometimes during 2010, when TRA initiated a series of discussions with major ISPs in Kosovo, associations, Universities and other government actors, in an attempt to coordinate and develop a strategy for obtaining the ccTLD for Kosovo, establishing the National Internet Registry and decide on the registrars' structure. However, the process has stalled and it is not clear where stands currently.

DISCUSSION OF MAIN CHALLENGES AND OBSTACLES

The fiscal policy, tax and customs for ICT goods and services, are the most unfavorable in the region, where they are at a much lower level or have been simply levied out. This is seen as a major incentive for a flourishing "gray economy", illegal import of ICT goods and services which are not taxed whatsoever, a phenomenon which has a grave effect on the rest of the otherwise struggling ICT sector. It is believed that bringing the taxes and customs for ICT at the same level as in the region will have a net positive total impact to the amount of taxes collected by the government, mostly because it will change the dynamics of "gray economy" making it a high risk venture and a low paying one at it, thus with a potential of increasing significantly inflow onto the

¹⁸ Fazliu, A: Internet Penetration and Usage in Kosovo. STIKK, 2013. http://stikk-ks.org/uploads/downloads/STIKK_raport_eng_2013_web_08.pdf

¹⁹ Government of Kosovo, Ministry of Transport and Telecommunications: *Administrative Instruction no. 1/2009*. http://gzk.rks-gov.net/ActDetail.aspx?ActID=8649

government's budget by the regularly taxed imports. It is also believed that bringing the taxes at the same level as in the region will help establish a healthy competitive environment, and will enable self-regulation and self-discipline of the sector.

The other phenomenon that is greatly spurred by the high taxes on ICT goods and services is the imports and local sales of second-hand /refurbished equipment: mainly computers, printers and supplies. Information on the size of this market segment is not available since no major vendor keeps track of second-hand equipment sales, while for a local importer it is very easy to declare these imports as something other than ICT, such as parts or materials, as it best befits the importers. The estimate is, however, that this market segment is many times the sales volume of that of the new computers and printers segment. The net impact of this phenomenon is that, while making available the purchase of still useful computers at a reduced price, it generally undermines access to modern technology, equipment and services. In addition, the old and ailing equipment will add significantly to the burden of recycling and environmental protection in the imminent future.

Corruption is yet another common problem perceived by all interviewees. This includes irregularities during public tendering processes, low quality of work being regularly accepted, if not enticed, just so to justify another spending in a yet another corrupt tendering process. There seems to be a very limited number of companies that regularly win most of the government tenders, while other local companies are suppressed and undervalued.

Problems with the **supply of public utilities such as energy**, followed by road infrastructure and then other public utilities, continues to have high negative influence to the business operations for both ICT and non-ICT companies. A recent study by USAID calculated that the cost to doing business in Kosovo, as a result of the need to invest in generators, equipment failures and idle time, is around \$456 million per year.²⁰

The insufficient **enforcement of the law on author's rights**²¹ prevents any serious development of the local software development sector, among others. In Kosovo however, this has not presented significant problem this far. Most of the software market segment in Kosovo comprises of international vendors, with the government and other high value customers being the main users, thus the enforcement /prevention of software piracy has been very high, and is considered as the highest in the region.

Barring the recent Innovation Center of Kosovo²², there cannot be identified an intentional system of **innovation** in Kosovo, either private or public.^{23 24} The public investment in R&D in ICT is practically inexistent. The private sector is small and can not afford investing in R&D - the risk is high; the Kosovo ICT brand doesn't have wider recognition, and the cost of capital remains the highest in the region thus preventing serious private investment in R&D and innovation.

The ICT education providers feel that private sector in general does not give much importance to the ICT and ICT education and, thus, there is **not much investment in ICT education**. Surprisingly, the same attitude on the lack of investment on staff development goes towards the government sector too, which leaves somewhat half measured the government's policy to provide special salary increases for ICT staff throughout government.²⁵

The impression by ICT employers is that the supply of **new professionals** from the education system is not adequate, and that they **lack technical skills but even more so lack soft skills**. The students and young professionals entering the ICT area meet many obstacles: high cost of equipment, outdated curriculums, lack of scholarships, lack of access to financing, and very few opportunities for internships and jobs. Although, they seem to be in better position than the general student population, in that they are able to land occasional engagements while studying. However, they focus almost exclusively on technical side and generally lack social skills and have no understanding on how to start or run a business of their own.

Kosovo does not have yet an Academic and Research and Network that would help exposure of ICT education, among others, to relevant international developments.

eCommerce did not take off in Kosovo and it is very difficult to achieve online ICT sales using Kosovo bank accounts. But, situation regarding payments may improve beginning of next year, when it is believed that PayPal will start operating in Kosovo too.

Lack of Internet domain name for Kosovo is not perceived as a direct obstacle at the current level of services offered by the ICT sector, but it impedes emerging of newer online services, contributes to a situation where there is no recognizable Kosovo ICT brand, and no exposure to the international market.

Finally, there is **not one central policy government body** to address all concerns from the sector. Although the Law No. 04/L-145, published on May 15, 2013, establishes an Agency for Information Society out from the existing Department of e-Governance and Administrative Processes, it merely changes the name of the department, without truly empowering it with the role of a policy making body such it may be inferred by "Information Society" in its new title. This new agency continues to be responsible for ICT within the government only, while another department within the Ministry for Economic Development remains in charge of developing most of the country-wide ICT policy.²⁶

The opinions coming from ICT and non-ICT respondents revealed that there is not much difference over their perspective on the main obstacles and challenges to the ICT development in Kosovo. Key part of the discussion is common and regards human resources, which are deemed to be scarce, with a lack of highly qualified staff in production and huge lack of ICT experts in education sector. The respondents from the ICT sector indicate that there is limited demand for ICT services from the local private sector which they regard as small and weak, while the foreign investment is at low level because of unfavorable business environment and lack of incentives by the government.

- 25 This incentive policy, however, will not be continued in 2014.
- 26 Parliament of Kosovo: Law No. 2012/04-L-145 on Information Society Government Bodies. Online. http://www.kuvendikosoves.org/common/docs/ligjet/Law%20on%20information%20society%20government%20bodies.pdf

5. MAIN FINDINGS

Sector slowdown. This research showed that the ICT market in Kosovo has not changed significantly in the period 2010 - 2013, which is to say it has not developed as expected. The growth forecasts by the companies are grim reflecting the reduced spending primarily by the government, lack of new entrants or major investments in telecommunications, and the decrease of purchasing power of retail buyers in Kosovo. "No money" (meaning lack of demand, no buyers) and "No work" at aggregate 28% of the overall business sample in Kosovo, followed by the complaint on "Competition" at 21%, indicate that the economic recession might be sneaking into Kosovo too, and that businesses are struggling from lack of work. Worrying is also the fact that companies report measures such as decrease of the total number of employees, on average from 15.4 to 14.3, year-on-year. Despite some more optimistic forecasts, the IT services and BPO seem to be the only segments promising some growth in the near future.

Opportunities for growth are seen mostly locally. Areas expected to grow are: internet Service Providing, Software development /programming, maintenance and repair, vendor sales, engineering services, training/certification, information services, web development, etc. BPO is explicitly seen as an area of growth by only 5% of companies. Mobile application development and online banking and e-commerce services appear as the least likely areas of growth, mentioned by only 2% of companies. The ICT sector which was grown to serve the infrastructure and rebuilding projects that have dominated ICT market in Kosovo in the past decade, is slowly embracing newer business.

Local sectors such as healthcare, transportation, agriculture, education, science-culture-art, and army-police-security are currently extremely underserved by the ICT sector in Kosovo and present practically untapped opportunities for growth which remain within reach.

The business environment for ICT, specifically: **customs and taxes** remain the same as before: the most unfavorable one in the region.

Gray economy. Among other factors, onerous tax and customs regime for ICT products provides favorable conditions for continuation of the "gray" economy, which has a cancer effect not only to the government's revenue collection but to the ICT sector as well.

Re-sale of **refurbished ICT equipment** in Kosovo is flourishing. It serves mainly the segments of individual users /home users and small office/home office businesses with computers, printers and supplies. This market segment is unaccounted for by any of the main vendors. It has developed as a result of the unreasonably high levy on ICT goods and services in Kosovo, which increases the prices of ICT products such that even refurbished equipment frequently comes close to the price of new equipment in the neighboring countries. In these conditions, while it provides access to still useful equipment and overall relative good value to the users, at the same time it undermines access to modern technology and services. In addition, the old and ailing equipment will add significantly to the country's burden of recycling and environmental protection in the imminent future.

Little innovation, no R&D. There seem to be very little innovation, and almost no R&D in ICT in Kosovo. This is a result of many factors, the primary ones being shortage of highly qualified staff, absence of academic and research network, and lack of public investment in R&D which, combined with generally high cost to capital and lack of recognizable brand, presents a high risk of return for private investment in innovation and R&D.

Motivated students, lack basic business skills. Students and young professionals entering the ICT area meet many obstacles: high cost of equipment, outdated curriculums, lack of scholarships, lack of access to financing, and very few opportunities for internships. Although they seem to be in better position than the general student population, in that they are able to land occasional engagements while studying. However, they focus almost exclusively on educating themselves on the technical skills and generally lack social skills and have no understanding on how to start or run a business of their own.

Non-ICT firms, as expected, see fewer rewards from employing ICT, online sales, or digitalization of their work processes, than the ICT firms.

Over the same issues, compared to non-ICT sector companies, the ICT sector companies:

- Are more organized compared to general non-ICT sectors. Over half of the ICT companies are members of an industry or professional association, while 80% of non-ICT companies are not.
- Comprised of younger companies, mostly from 1999 and on.
- Have more clients out of Kosovo (13%) than non-ICT companies (7%).
- Have more revenue share from clients outside of Kosovo compared to non-ICT companies, (13%) vs. (7%).
- Consider developing new products, as a growth strategy, more often than non-ICT companies, 91% vs. 80%.
- **Have more diverse business incorporation** types and ownership structure, while the general sample of non-ICT companies consists of mostly single-owner, individual businesses.
- Have more balanced gender structure at managerial levels, though not by much: 80/20 ICT vs. 92/8 non-ICT, male/female. (For all employees though, the balance is the same: 80/20%).
- **Hire more often through public announcements** 60% vs. 39%, and rely less on family members, personal contacts and references: 45% vs. 76%, ICT vs. non-ICT.
- Takes them longer to fill in the vacancies, only 28% within two weeks, 17% within 3-4 weeks and the rest up to 2 months. Non-ICT companies can hire within 2 weeks in 48% cases.
- Are more willing to hire interns (58%) than non-ICT (29%).

6. RECOMMENDATIONS

RECOMMENDATIONS FOR THE GOVERNMENT

- Create favorable business environment for ICT; adjust fiscal policies on VAT and TAX for ICT products and services matching or surpassing those in the region.
- Enact TAX holiday policy for ICT start-ups: 3 years from start-up, for the next 10 years.
- Enact TAX holiday policy for ICT exports and BPO, for the next 10 years.
- Establish the Ministry for ICT, similar to that in the region (Albania, or Macedonia).
- Establish effective mechanisms to monitor ICT imports and exports.
- Implement e-procurement system to help fighting corruption.
- Provide incentives for ICT start-up investments, Venture Capitals and Angel Investors.
- Establish awards programs for best ICT companies, best BPO, and exports.
- Implement Universal Service Offering mechanisms for Internet access.
- Establish National Internet Name Registry.
- Increase public funding for ICT innovation and R&D.
- Establish Academic and Research Network of Kosovo.
- Establish scholarship program for ICT students.

RECOMMENDATIONS FOR STIKK

- Launch an ICT "Barometer" project, to gather systematic and comparable data on the sector.
- Set up an online match-making platform, between the local ICT and non-ICT businesses.
- Continue producing position and policy papers, on issues affecting ICT sector in Kosovo.
- Set up an "Invest in Kosovo" information platform and catalogue
- Set up an online platform for Kosovo ICT brand promotion, catalogue, and investment.
- Support the outsourcing and education clustering between members and partners.

RECOMMENDATIONS FOR POTENTIAL DONORS AND INVESTORS

- Focus on BPO and IT services. Aid local companies to increase technical competence and competitiveness in international markets.
- Promote Kosovo ICT sector and solutions to sectors you're already working with (e.g. among agribusinesses, healthcare, tourism etc.)
- Provide grants and subsidies to local non-ICT companies to implement ICT solutions from Kosovo ICT companies.
- Foster business linkages with companies and associations in other countries (e.g. matchmaking, ICT fairs, study trips etc.)
- Provide assistance to STIKK in activities which serve its role as a central hub for ICT information, advocacy, trainings and other support to ICT in Kosovo.
- Provide assistance to STIKK to continue conducting market research and other ICT related research of interest.

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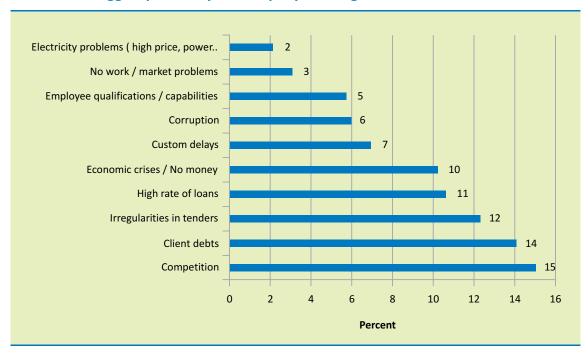
8. FIELD INTERVIEWS - QUANTITATIVE SURVEY

The field interviews were conducted during September 6-28, 2013. They were face to face, paper and pencil, "in offices" of the respondent. The sample size consisted of 513 effective interviews, out of which 65 were representatives of ICT companies and 448 of other businesses, medium sized with around 50k to 1M and over 1M in turnover, chosen by random sampling from the database of active registered businesses. The questionnaire was composed of close-ended, precoded open-ended, and open ended questions, and it took around 30 minutes on average to complete. The interviewees were company owners, higher management representatives or IT Managers. About 17% of the interviews were back-checked in the field.

A. MARKET ANALYSIS (ALL BUSINESSES)

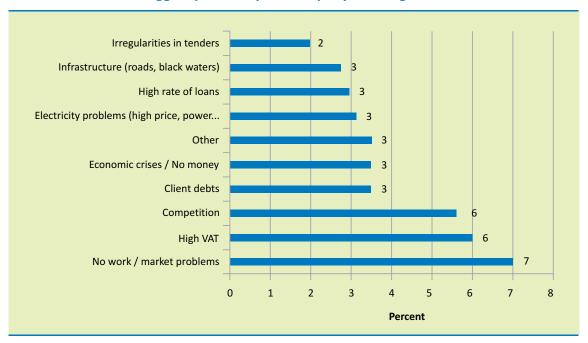
Q1: WHAT IS THE BIGGEST PROBLEM YOUR COMPANY IS FACING? OPEN QUESTIONS. ONE ANSWER

What is the biggest problem your company is facing?



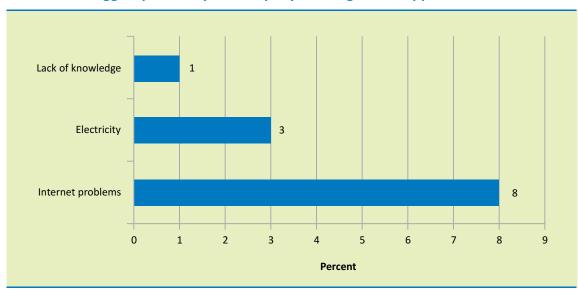
Q2: WHAT IS THE SECOND BIGGEST PROBLEM YOUR COMPANY IS FACING? OPEN QUESTIONS. ONE ANSWER

What is the second biggest problem your company is facing?



Q3: WHAT IS THE BIGGEST PROBLEM YOUR COMPANY IS FACING ON THE APPLICATION OF IT? OPEN QUESTIONS. ONE ANSWER

What is the biggest problem your company is facing on the application of IT?

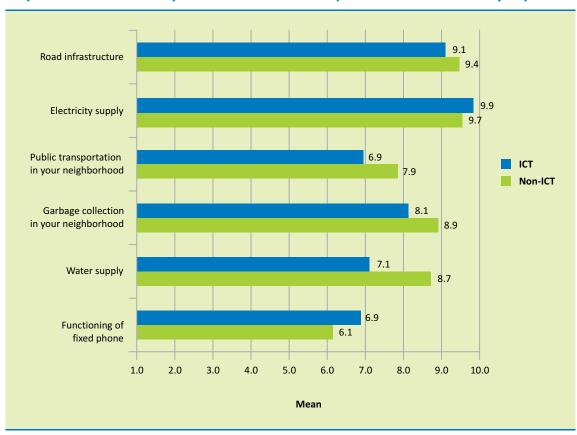


Q4: WHAT IS THE SECOND BIGGEST PROBLEM YOUR COMPANY IS FACING ON THE APPLICATION OF IT? OPEN QUESTIONS. ONE ANSWER

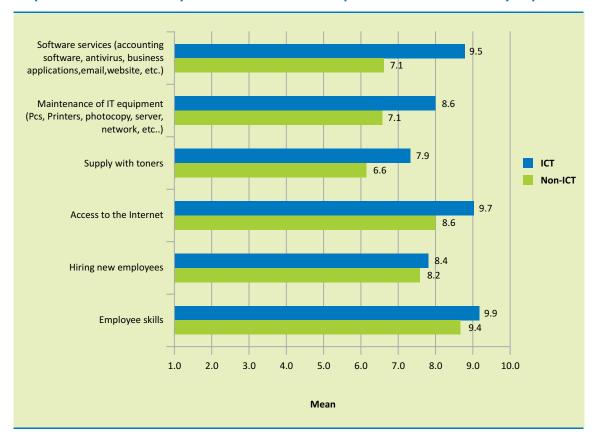
NO graph, a very low responded rate (0.6%)

Q5: CAN YOU TELL ME HOW IMPORTANT THESE SERVICES ARE TO YOUR BUSINESS OPERATIONS:

Importance of business operations where 1-not important at all and 10- very important



Importance of business operations where 1-not important at all and 10- very important



Q6: CAN YOU TELL ME WHERE YOUR CUSTOMERS ARE? WHAT PERCENTAGE IS LOCATED IN KOSOVO, AS IN THE BALKANS AND THE PERCENTAGE IN EUROPE AND THE WORLD?

Where are your primary clients?	ICT 2013	Non-ICT 2013
where are your primary chemes.	%	%
In Kosovo	87	93
In Balkan region	4	3
In Europe and the world	9	4

Q7: CAN YOU GIVE US AN ESTIMATE ON THE PERCENTAGE OF YOUR OWN INCOME FROM BUSINESS ACTIVITIES ACCORDING TO THE LOCATION OF YOUR CUSTOMERS?

Income percentage of business activities	ICT 2013	non-ICT 2013
according to client locations	%	%
In Kosovo	87	93
In Balkan region	3	3
In Europe and world	10	4

Q8: WHERE DO YOU GET YOUR SUPPLIES AND SERVICES AS IT, COMPUTERS, TONERS, SERVICING OF EQUIPMENT, SERVICES, SOFTWARE, ETC.? WHAT PERCENTAGE OF THE PURCHASE IS IN KOSOVO, IN THE BALKAN REGION AND BEYOND?

Where do you get IT services and products	ICT	non-ICT
(computers, toners, equipment maintenance, software service, etc.)?	%	%
In Kosovo	59	95
In Balkan region	12	2
In Europe and the world	29	3

Q9: HOW DO YOU SEE THE OPPORTUNITY TO EXPAND YOUR BUSINESS? DO YOU SEE THE OPPORTUNITY THROUGH...

	ICT	Non-ICT
Which is the best way to grow your business?	%	%
Growth of production capacity / service	75	76
Adding new products / services	91	80
Expansion of sales network	89	74
Application of ICT	62	42
Online sales of products / services	69	48
Digitalization of production and work process	75	47

B. MARKET ANALYSIS (ICT COMPANIES ONLY)

Q1: CAN YOU TELL ME WHO YOUR CUSTOMERS ARE? HOW MANY PERCENT OF THEM ARE INDIVIDUALS, ICT COMPANIES, COMPANIES FROM OTHER SECTORS, GOVERNMENT AND PUBLIC COMPANIES AND OTHER ORGANIZATIONS?

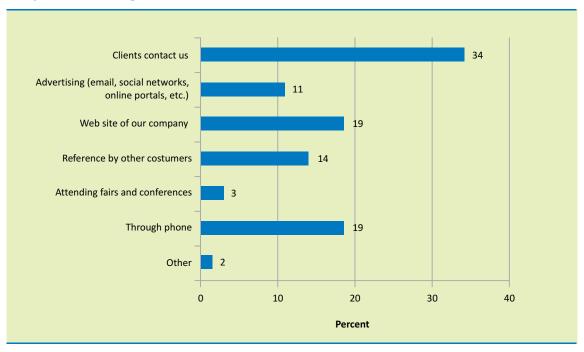
Type of clients?	ІСТ
	%
Individuals	15
ICT companies	24
Other companies	31
Government and public institutions	20
Other (NGOs etc)	11

Q2: CAN YOU GIVE US AN ESTIMATE ON THE PERCENTAGE OF YOUR INCOME FROM BUSINESS ACTIVITIES BY TYPE OF CUSTOMER?

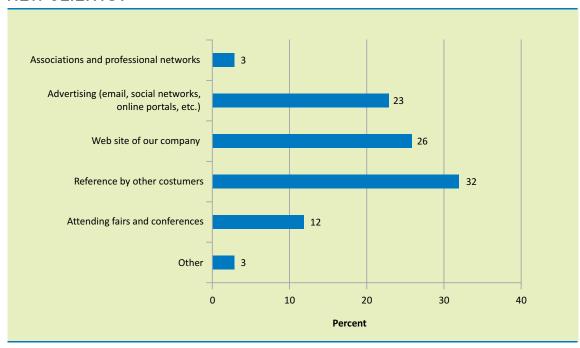
Income percentage of business activities by type of clients	ІСТ
	%
Individuals	14
ICT companies	23
Other companies	32
Government and public institutions	22
Other (NGOs etc)	9

Q3: HOW DO YOU CONTACT YOUR CLIENTS?

Ways of contacting clients that are used most often



Q4: BASED ON YOUR EXPERIENCE, WHAT IS THE BEST WAY TO GAIN NEW CLIENTS?



Q5: PLEASE TELL US WHICH INDUSTRY YOU OFFER PRODUCTS AND SERVICES THE MOST?

In which industries do you offer products and services?	ICT
	%
Telecommunications	66
Government, Police and Emergency Services	46
Financial sector	45
Retail	39
Wholesale	34
Professional, Scientific and Technical Services	34
Education and Training	29
Electricity	25
Insurance Services	22
Transport and Postal	17
Building and Construction	15
Water and Waste Services	15
Health Care and Social Services	12
Accommodation, Restaurants and Food Outlets	11

Q6: IN WHICH AREAS OF INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS (ICT) YOU SEE POTENTIAL GROWTH OR EXPANSION OF YOUR BUSINESS?

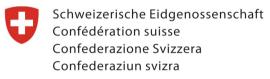
In which ICT area do you see potential for business growth?	%
Internet Service Providing	32
Software development / programming	25
Maintenance and repair	23
Vendor (hardware and/or software)	19
Engineering services (Network &systems operation /management)	19
Training / certification	17
Consulting	17
Information Services	12
WEB development	12
Business process outsourcing (BPO)	5
Retail sales	3
Mobile application development	2
Online Banking and e-commerce services	2





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Enhancing Youth Employment Project



Swiss Cooperation Office Kosovo