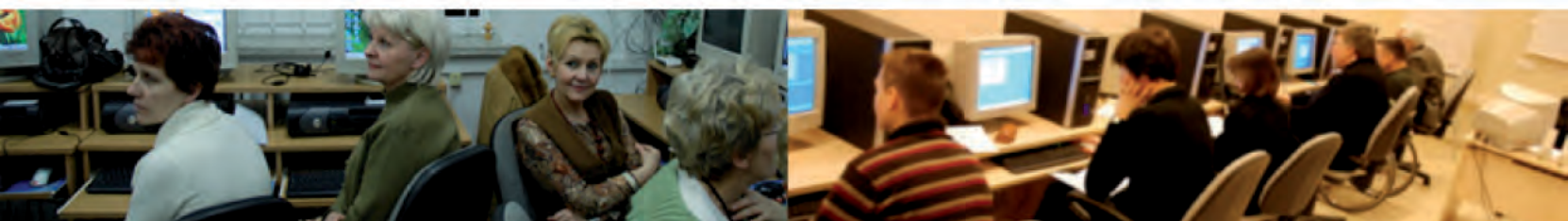


Bridging the e-Skills Gap in Central and Eastern Europe



The Growth of e-Skills and Employability Initiatives
in the Newly Expanded European Union



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Mark West, Maria Garrido

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This report is part of a series of papers under development at the Center for Information & Society, ICT and Development Program. The aim of this working papers series is the timely dissemination of preliminary research results. The views expressed in these papers are those of the authors. We welcome feedback and encourage readers to provide comments and critiques to the authors.

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TABLE OF CONTENTS

Executive Summary.....	7
Part I.....	11
A. INTRODUCTION	11
B. THEORY AND METHOD.....	12
Multidisciplinary Analytical Framework.....	12
Quantitative and Qualitative Methodology	13
Part II.....	16
A. BACKGROUND	16
Historical Challenges to Economic Development in Central and Eastern Europe	16
Innovation	18
Isolation.....	19
Acceleration.....	19
B. e-Skills and Employability in the EU	20
Filling the ICT Labor Gap in Europe	20
More Progress Needed in CEE10.....	21
The Role of NGOs in e-Inclusion Programs.....	25
Part III.....	28
A. Five Countries in Focus: Four Emerging Themes.....	28
The Meaning of Employability in the Knowledge Economy.....	29
B. Finding Jobs: The Relationship between e-Skills Training Programs and Employability	30
Long-term Unemployed	31
Structurally Unemployed: Macro-Economic Forces, Demographic Shifts, Social Barriers	32
ROMANIAN MINERS	33
BULGARIAN TEACHERS.....	35
PEOPLE WITH PHYSICAL DISABILITIES IN POLAND	37
Newly Entering the Workforce: The Case of Youth.....	38
Self-Employment and SMEs	40
C. NGO Approaches to e-Skills Training and Employability Programs: Context Matters.....	42
Integrated Approaches.....	43
Supply-Based Approaches	44

Demand-Based Approaches	45
D. Driving Growth: Role of e-skills in Increasing Business, Government, and Social Productivity	46
Business Productivity.....	47
Government Productivity	49
Social Productivity	51
Conclusions	54
Notes	54
Bibliography	59
Appendix 1 NGO Profiles.....	62



EXECUTIVE SUMMARY

The European Union is facing a labor gap that threatens its goal of becoming the world leader in the knowledge economy, and brings significant challenges to social inclusion and economic modernization, especially with the recent admission of ten Central and East European countries. This study examines the relationship between basic Information and Communication Technology (ICT) skills – or e-skills – and employability, focusing on several NGO projects in Bulgaria, the Czech Republic, Latvia, Poland and Romania. The study explores the ways that NGOs integrate employability outcomes into ICT training programs. Do these programs constitute a fragmented, patchwork approach or is there evidence of a larger, successful regional trend to build e-skills among underserved populations?

This research documents the experience with e-skills training and employability programs in a total of seven NGOs; all varying in size, target groups, and social mission. Based on in-depth interviews with program staff and beneficiaries, and the ongoing observations of the researchers, a variety of key factors have been identified for how e-skills training contribute to employability. The research also highlights other program elements that complement e-skills training. Together, these elements create conditions that help target groups find employment, fulfill new workplace demands for the currently employed, and acquire the much needed initial job experience for those groups that are new to the workforce, such as youth. Three questions guide this discussion:

- In what ways do NGO e-skills training programs achieve employability goals?
- What is the role of e-skills in boosting business, government, and social productivity?
- What value do NGO social networks add to accelerate the impact of these projects?

While the NGO programs in this research seem extremely different at first glance, their approaches are surprisingly similar. Four themes emerged:

THEME 1 | Finding Jobs: The Relationship between e-Skills Training Programs and Employment

- The definition of employability depends on context, job opportunities, personal motivation, and previous job experience.

- The ways that ICT training programs address unemployment vary based on the locality, demographics, and macro-economic forces. These programs are customized to address these differences.
- The programs are tailored to four emergent, fluid categories of employability: 1) Long-term unemployment; 2) Structural unemployment; 3) New workforce entrants; and 4) Self-employment.

THEME 2 | NGO Approaches to e-Skills and Employability Programs: Context Matters

- NGO e-skills training programs should be tailored to the contextual needs of target groups.
- E-skills training is one of many services that NGOs provide to make their programs more relevant to their beneficiaries and to the local labor market. The most common elements are: e-skills training (basic, intermediate, advanced); business skills training (communication, management, team work); legal and psychological counseling; employment services (jobs databases, internships); and financial and management training to jump-start a micro-enterprise.
- The experiences of the NGOs that participated in the study highlight three of the most common approaches to e-skills training and employability.

Integrated: Comprehensive training and services that guide beneficiaries down the whole employability path, from walking in the door to becoming employed.

Supply-based: Focused on a particular target group, the programs re-skill certain workers to enter or return to the workplace, or to improve performance.

Demand-based: Aimed at particular employers, the approach assesses the needs of industry or government and then trains current or new workers to meet those needs.

The approaches are not exclusive, rather the contrary. NGOs often combine multiple approaches depending on available resources, changes in the labor market, and their overall organizational capacity.

THEME 3 | Driving Growth: Role of e-Skills in Increasing Business, Government, and Social Productivity

Here the study's themes shift from discussion of e-skills training as a response to unemployment, and move on to another major area of e-skills and employability: the impact of e-skills training on productivity. The emergent themes reveal e-skills are a significant driver of business, government, and social productivity.

Business Productivity: Business productivity is an important economic goal. Business success in a global environment is increasingly tied to workers' e-skills. NGO-delivered e-skills training programs are key components in the effort to enhance business productivity.

Government Productivity: Economic development goes hand in hand with good governance: trustworthy, efficient governments are more likely to draw foreign investment; effective government services improve lives, attitudes and increase the likelihood that citizens will stay rather than emigrate abroad. As the CEE10 have entered the EU, the retraining of the state administration has become a priority. For newer entrants such as Romania and Bulgaria, this retraining of state workers is a major thrust of NGO ICT programs.

Social Productivity: "Work" in the 21st Century is more than just "jobs." Employability concerns economic *participation* – wherever and whenever it presents itself. One senior citizen in Poland underscored what many, many others expressed: "I need to feel relevant, I need to learn how to use online banking, email, etc., in order to survive in this connected world." Social productivity increasingly relies on e-skills; the knowledge economy increasingly relies on this modern social productivity.

Conclusions

The role of NGOs in e-skills training programs cannot be sufficiently emphasized. Through their efforts to create new telecentres and breathe new life into existing ones, and through innovative partnerships, the NGOs have demonstrated a wide impact in three main areas: an ability to help the unemployed find jobs, a commitment to enabling the most marginalized people to reconnect with society, and success in boosting the productivity of businesses and government during the transition from communism to free market democracies. The contribution of their work extends far beyond the immediate benefits to the labor market or to the economy. Through their programs, NGOs reach sectors of society left behind by all the major transformations that the region is experiencing. NGOs, and their partners, truly function as catalysts for an e-inclusive society, for an inclusive European society.

Local and national governments, the private sector, the EU Commission, and other civil society organizations, also make an important contribution to e-inclusion initiatives and to the work of NGOs in this area. Local governments often support NGO e-skills training programs providing them facilities, infrastructure, financial resources, and by sending more trainees through telecentre doors. National governments ensure that e-inclusion remains a pivotal component of the political agenda, and lead different agencies to coordinate policies and support for the programs. The EU Commission, through the

European Social Funds, brings much-needed resources to invest in e-inclusion, allowing the increase in scale and scope of the programs. Other civil society organizations bring to these programs strong social networks, and – when partnered with NGOs focused on e-skills training – the organizations create an enabling environment for these initiatives to succeed.

PART I

A. INTRODUCTION

Nearly twenty years after the fall of the Berlin Wall, and the ensuing collapse of the Soviet Union, the nations of Central and Eastern Europe continue to undergo dramatic changes. Many have now entered the European Union where they have encountered both a much-needed lift and still greater challenges. In the eyes of many observers, the entry into the broader European market and labor force is the fulfillment of the final stage of transition for these nations. The expansion of European Union member states from the “EU15” into the “EU25” on May 1st 2004, and finally into the “EU27” on January 1st 2007, has created the promise of an even playing field for the economies of most of Europe.¹ This promise of parity, however, is still at arm’s reach for many, many Europeans. These new citizens of the EU – whose homes stretch from the Baltics in the north, down through Central Europe, and into the Balkans of the southeast – are Europeans whose local social systems, institutions, infrastructures, and economies still bear the effects of over fifty years of communism.

This study addresses a research question at the center of the economic progress of Europe at the beginning of the 21st Century. The European Union has stated aspirations to be the world leader in the knowledge economy. It has simultaneously decided to extend its membership to ten new nations – each of which is undergoing the dramatic transition from a steady state economy to a market economy. And as the EU attempts this two-pronged effort, it also faces not only a substantial labor gap in the specific field of ICT, but also an e-skills gap across industries and government agencies. How can this new and fragile Union both tackle its need for a specialized workforce ready for the Information Age, while also assisting its new Central and East European members with their economic development and social integration? The answer lies in part in the practical ICT and development programs underway in Central and Eastern Europe, programs which aim to address the e-skills² and employability challenge, programs which are as yet under-researched. While there is substantial scholarship on the economic challenges facing Central and East Europeans, and a similarly large body of work on ICT skills in the region, what is missing is the practical connection between the two: how do ICT development programs address the e-skills and employability needs of the EU as a whole, and the needs of Central and East European nations? Moreover, how do the programs address these broad economic growth concerns while also fulfilling the social justice obligation of integrating the most at-risk populations into the workforce? And finally, how

do these e-inclusion programs address an even larger body of e-skills and employability needs: those already in the workforce, but needing the e-skills to keep up with the demands in their jobs?

The report on the Presidency Conclusions of the March 2000 Lisbon European Council outlined the basic challenges before Europe in the 21st Century. It emphasized the urgent need to meet a number of strategic objectives, including employment, economic growth and social cohesion, which would require a radical transformation of the European development processes. Furthermore, the Lisbon report established the primary method for achieving these goals: transformation to a knowledge-driven economy and society, based on the development of information and communication technologies, innovation and improving existing infrastructure. Thus, the Lisbon strategy has linked the future development of Europe with achieving a dynamic and competitive knowledge-based economy, and has established ICT and e-skills development at its heart.

NGOs, civil society organizations, and the telecentres they support are an integral part of the movement toward the 21st Century European vision. Telecentres – public places where people can get access to computers, the Internet and other technologies to gather information, communicate with others and develop e-skills to find better employment opportunities – are a key development intervention in this arena.

B. THEORY AND METHOD

Multidisciplinary Analytical Framework

The dynamic factors involved in this transnational study lead the research team to a multidisciplinary approach. The analytical framework for the study considers the intersection of three primary policy approaches to the question of ICT development programs: first, the employment and workforce models guiding European integration,³ second, the education and training approaches, and other services involved in the NGO e-skills programs,⁴ and third, the political economy of the socially excluded groups being served by the ICT programs – with a special consideration of the post-communist context and challenges.⁵ Throughout the study the research team returns to these three analytical perspectives, both in the review and analysis of existing research on ICT and employment, and during the field interviews conducted in the five countries of the study. By connecting employment, education, and social inclusion research approaches, the study tracks the intersection of the two pertinent EU objectives (filling the basic ICT skills

gap of underserved populations, and promoting social inclusion) while maintaining a research focus on the practical activities of the individual training centers. These practical benefits are examined through a critical lens aimed at the challenges facing socially excluded groups. The body of interviews bolstering the study consistently returns to these specific beneficiary needs. By using a multidisciplinary analytical framework the study is best able to recognize trends underway in the Baltics, Central Europe, and the Balkans, while also making policy recommendations for other regions of Europe, and beyond.

Quantitative and Qualitative Methodology

The research methodology for the study includes a quantitative analysis of several existing studies on EU trends in ICT readiness and employment, and qualitative research focused on in-depth interviews with the NGO staff, and the trainers and beneficiaries of the telecentres. The review of existing research on ICT and employment examines current trends throughout the EU and in Central and Eastern Europe in particular, with a special focus on the five countries selected for the study's field research: Bulgaria, the Czech Republic, Latvia, Poland, and Romania. Each country was selected in order to provide the best possible cross-section of the sub-regions in Central and Eastern Europe.

The five countries form a representative sample of the CEE10 through their diverse geography, population, and history. The Baltics to the north, Central Europe, and the Balkans in South Eastern Europe are each represented geographically. Diverse populations were also considered: the smaller territory and population of Latvia (2 million people), the mid-sized populations and territory of the Czech Republic (10 million people) and Bulgaria (7 million people), and much larger geographic boundaries and populations of Poland (38 million people) and Romania (21 million people) are represented. Each of the five nations has diverse recent histories representing the various backgrounds and challenges of the ten transitional states. Latvia is a former part of the USSR, like Estonia and Lithuania. Poland and the Czech Republic are closer to the center of Europe, and experienced some of the earliest uprisings against communism – the Prague Spring in 1968 in Czechoslovakia, and the Solidarity labor movement in Poland in the early 1980s – with each event forming major historical precedents leading to the fall of the Berlin Wall. As the newest entrants into the European Union, Bulgaria and Romania have significant similarities, but also differences: each represents the Balkans geographically, and they also share a common border, as well the common experience of the final entry into the EU. But they also represent two very different language families, cultures, and histories.

The field research in the five representative countries includes research visits to an average of five telecentres in each country, and a minimum of twenty in-depth interviews per country with NGO staff, trainers, and the beneficiaries of the programs (see Appendix 1 for the profiles of the NGOs that participated in the study). The interviews also include a cross-section of other relevant stakeholders to provide a broader perspective. These stakeholder interview subjects include donors, project managers, center directors, trainers, and employers. In order to maintain the typicality of the findings, a representative sample of interview subjects was obtained by following three sampling tactics: purposive sampling (by targeting specific interview subjects known to have pertinent information and experiences), cluster sampling (through visits to ICT training classes in session in order to increase the likelihood of obtaining relevant information from a cross-section of beneficiaries), and opportunistic sampling (by conducting interviews with otherwise more difficult to reach persons through their presence in the centers).⁶

Interview guidelines and protocols were established by the research team in consultation with other research associates at the University of Washington Center for Information & Society, and based on an initial phase of preliminary field visits in Central Europe in December 2007. During the interviews and analysis the research team kept a strong focus on participatory strategies of the NGOs being studied, looking at the ways – if any – that training programs involved the beneficiaries in curriculum development and project management. In addition to the one-on-one interviews, two other techniques are employed: observation of the centers visited, and, in some instances, opportunistic focus groups. In Romania, for example, the research visit coincided with a two-day e-skills conference in which different telecentre staff members and managers converged to discuss their work. The Romania conference served as an opportunistic focus group.

These several approaches – review of existing studies, field interviews, observation, and focus groups – were then cross-checked through a process of triangulation. Trends in the literature, reports by the donors and project managers, and the experiences of the beneficiaries were each compared, and led to the study's ultimate findings. Within this multidisciplinary analytical framework, and the blend of qualitative and quantitative research, the study emphasizes the importance of the individual experiences of the interview subjects. Until now, there has been little in the way of research on ICT and employability which highlights the actual experiences of the individual beneficiaries in Central and Eastern Europe.

Although valuable, most of the currently available research in this area is based on analysis of macro indicators and aggregated data. It is the objective of this research project to address this gap, and present the voices of those working in the trenches – against great personal and historical forces – to survive, and to succeed, in the information age and its knowledge economy.

PART II

A. BACKGROUND

Historical Challenges to Economic Development in Central and Eastern Europe

The legacy of communism reaches far and wide in Central and Eastern Europe. One fundamental measure of the challenge faced by these transitional states is the economic status of their citizens. A basic economic comparison can be found in per capita Gross Domestic Product (GDP): at the time of their transition toward EU membership, more than half of the ten new Central and Eastern European entrants registered per capita GDP at 50% or lower than the European Union average.⁷ In individual, isolated societies the lower GDP levels wouldn't have as severe a recessionary effect. But in the newly integrated European Union market, many of these Central and East European nations are struggling.

Economic development is not the only challenge facing these transitional states. The legacy of communism has implanted governance difficulties at various levels of the states' institutions, difficulties that – over the past two decades – these states have addressed with great progress in the public and private sectors. The effects of communism that do remain, however, are both a common phenomena in Central and Eastern Europe, and also vary significantly between the states. In Bulgaria, for example, much of the reason for slow development of civil society is not due solely to the political events of the second half of the 20th Century, but is also due to the much older history of the Ottoman Empire (or “yoke,” as it is called locally), a history which had long delayed exposure to Western European practices of governance and social development. In Romania, the fist of totalitarianism was especially fierce under communism. In its later years, the Ceausescu regime grew in its pernicious social control, and was infamous for sewing mistrust between Romanian neighbors and family members.⁸ However, the experience of totalitarianism was not entirely black and white for Romania and for the other Central and Eastern European states. For example, during the invasion of Czechoslovakia by the Warsaw Pact armies in 1968, which followed a brief period of openness there (the “Prague Spring”), Romania refused to participate in the occupation despite its Warsaw Pact membership.⁹ Indeed, the local Czechoslovakian resistance to the Moscow-orchestrated invasion was widespread, and continued at great cost: 11,000 Czechoslovakian army officers and state police refused to sign an agreement supporting the occupation, and suffered severe social and economic consequences, along with many other citizens who resisted in various ways in the months and years that followed.¹⁰ Today, as members of the European Union, the Central and Eastern European states draw on

these histories of resilience and resistance, as well as their past difficulties, as they develop new practices of governance and civil society, and make their transitions.

Like Bulgaria, Romania, and the Czech Republic, Poland and Latvia have their own unique and complex histories which have enriched their own periods of transition. Located between two powerful neighbors, Germany and the former Soviet Union, Poland and its national identity is marked with a history of occupation and foreign invasions of different kinds – military, ideological, and cultural. Known among the locals as a gate between East and West, Poland has been the scene of massive social mobilizations – such as the Jewish Ghetto and Warsaw uprisings against Nazi occupation, and the Solidarity workers’ movement against the communist regime – mobilizations that nourished a society adaptable and capable of organizing during critical times. The development of civil society, although somewhat slow compared to more matured democracies, is taking deep roots among Poles, especially the younger generation¹¹.

Latvian history and culture relates the country more closely to the Nordic neighbors particularly Sweden, and to the former Soviet Union since Latvia – along with the other Baltic States – was part of the USSR before gaining independence in 1991. In this multi-ethnic culture, the growth and development of civil society is very much localized and regional, reflecting the need to revive the diversity of cultures and languages suppressed from public life during communist times. National civil society organizations are a rarity in Latvia, with the exception of LIKTA, one of the NGOs that participated in this study. Civil society is growing strong at the local level, with a variety of NGOs working to promote the social and economic development of the regions while also working to promote and preserve local cultures.

In addition to where they came from, these transitional states face a further obstacle in where they are headed. After World War II, Europe embarked on major rebuilding in the 1940s and 1950s during the peak of the industrial age. The Central and East European nations face a different context for development and growth today, a different economic era. Soon after the wall came down, the information age replaced the industrial age as the defining characteristic of modern European economies, and this evolution presented a further challenge to the transitional states of Central and Eastern Europe. ICT skills are recognized widely by EU policymakers as carrying a “considerable impact on the overall economy.”¹² Yet at the same time, for the nations of Central and Eastern Europe, there is the double challenge of the “bread and broadband” dilemma: with enormous policy transformations and vast national restructuring underway, difficult choices must be made about the areas of economic development on which to focus.¹³ Delays in ICT development have a broad multi-sector effect, hampering all corners of economic development and institutional reform. The result is a stark set of obstacles.

However, it is also a time of opportunity to accelerate some changes – and bypass old roads – by focusing resources on components of the information economy. The ability to seize the opportunities of the transition varies from state to state. Here are three examples of innovation, isolation, and acceleration.

Innovation

One telling example of the leaps that Central and East European nations can make during the transition is the introduction of mobile phones. After the fall of communism, in the early 1990s many citizens in the former Czechoslovakia clamored to establish phone lines in their homes – something taken for granted in the West, but a rare commodity in the East. Because of infrastructure limitations, bureaucratic delays, and corruption, however, getting phone lines hooked up became a dizzying and frustrating labyrinth. What might take a month in the West took years, and many Czechs simply bypassed the wait and got mobile phones. The result was that mobile phones – perceived as advanced technology in the West in the late 1990s – were becoming commonplace, indeed a necessity, for young people in the streets of Prague. To this day, home landline phones in the Czech Republic are not widely used, yet mobile phones are ubiquitous. They had become so among the younger Czech generations at the turn of the millennium, long before their dominance solidified in the United States.

A similar example is the growing penetration of personal computers and laptops in Poland. Once an unreachable luxury for many Polish citizens, today 60% have a PC at home¹⁴ and 41.5% of Polish youth age 15 or higher use the Internet. Of these, more than half use the Internet every day (65.7%) and only 19% reported using it fewer times a week¹⁵.

Skipping landlines is not a permanent solution, as the new necessity of personal computers and the Internet requires telecommunication infrastructure in the homes of urban and rural Central and Eastern Europe. But the example shows the possibilities and flexibilities of ICT, and the resourcefulness of the young labor force in the East. The lesson is the leap-frogging potential of ICT development, and the ability of an ICT-skilled workforce and business community to bypass some of the otherwise seemingly insurmountable challenges of institutional and economic development in transitional states.

Isolation

For every historical instance of innovation there is another reminder of the troubles still facing the transition to the European family. The dynamic nature of the change in the new EU member states can be seen not only in the actions of individuals, such as the Czech mobile phone revolutionaries, but also in the reaction of national economies to the upheavals of post-communist history. The struggles in the Baltics, Balkans, and Central Europe each carry different sets of challenges. While the CEE10 have many political, historical, and economic similarities, their transitions from steady state to market economies have been diverse. Much of these differing reactions are due to the accidents of history and geography.

Bulgaria, for example, is tucked away in South Eastern Europe on the far side of the former Yugoslavia. The Czech Republic is located in the very heart of Europe, just a few hours away from Berlin, Vienna and Paris. For Bulgaria, the fallen bricks of communism did not transition gracefully into a footbridge to the West. When the wall came down, and the promise of a connection to the rest of Europe emerged, Bulgaria was immediately cut off from the cultural and economic exchanges benefiting other Central Europeans like the Czechs. Instead of experiencing a surge in tourism, educational exchanges, and the initial steps of foreign investment, Bulgaria faced a new wall: ten years of war blocked its path to the West. Despite Bulgaria's laudable refusal to be drawn into the Balkan wars of the 1990s, the geographic effect on Bulgaria's integration with Western Europe was devastating. The conflicts in Bosnia, and then in Kosovo, blocked the two main gateways to the West from Bulgaria's capital of Sofia: Sarajevo and Belgrade. These two scenes of nearly constant war during the years of the 1990s delayed Sofia's hopes for ten years.¹⁶ The result was more than a broken connection for Bulgarians, but a broken promise – a promise enjoyed by many of the other CEE10.

Acceleration

The differences among the new EU member states are further highlighted by the case of red hot Latvia. While facing many of the same changes as its Central and Eastern European neighbors, Latvia is going through an economic explosion. In 2008, Riga began to face the limits of its rapid expansion, with an "overheated economy" marked by a budget surplus and rapidly rising inflation.¹⁷ The result is a Latvian unemployment rate in 2007 that stood at 7% (lower than the EU average of 7.5%), and basic ICT skills that are on par with the EU averages among both the youth and adult populations.¹⁸ The country's most substantial comparative advantage stems from its well-qualified and skilled workforce, and from "people's

knowledge and understanding of Europe's business mentality and broad linguistic abilities."¹⁹ But these employment and e-skills statistics form just a small part of a broad change underway in Latvia, and may be misleading. In a nutshell: are the high e-skills in Latvia a factor in the low unemployment rate? Or do workers have e-skills that they use at home, and then go to work at jobs that don't utilize these skills, instead generating paychecks barely covering the rising economic costs of EU membership? These are the questions that the broader European Union is beginning to ask itself, as the ICT skills gap in the overall EU workforce continues to limit the member states' economies. And these are the questions that guide this study of the CEE10: what trends mark the increase in e-skills and employment in Central and Eastern Europe, and how can these trends serve both the economic growth needs of the EU, as well as the social needs of the most underserved populations of its new member states?

B. E-SKILLS AND EMPLOYABILITY IN THE EU

Filling the ICT Labor Gap in Europe

When EU member states established the Framework of the e-Economy at the Lisbon Summit in March of 2000, they set out some ambitious goals. Namely, the EU agreed to the objective of "becoming the world's most competitive and dynamic knowledge-based economy within 10 years."²⁰ This objective of global e-dominance was immediately faced with significant challenges as the European labor market realized its limitations on several fronts, most notably a shortage of ICT skilled workers and underdeveloped national capacities for filling the gap. According to the diagnosis of the European Commission's ICT Skills Monitoring Group, several specific factors contribute to the labor gap: general technological progress at a rate faster than the labor market can keep up, the growth of the ICT industry and its need for workers, the increase of ICT itself and its role across the marketplace, the rise of e-business, the expansion of the Internet into all industry sectors, the increased specialization of ICT applications, and – contributing to all of these – the shortening of skill lifecycles due to the mismatch between industry needs and formal education.²¹ This myriad of limitations has manifested in hard numbers: over 5 million unfilled positions combined in the ICT skills and e-business sectors, with e-business positions experiencing the biggest gap with over 20% of the need unmet.²² The European Commission Monitoring Report projected that the shortage "is going to increase particularly rapidly in most EU countries."²³

Three years after publication of the report by the EC's ICT Skills Monitoring Group, evidence began to emerge that parts of the gap were beginning to be filled. While the unpromising trends for ICT specialists remained the same, an OCED study on general workers with a high rate of ICT use demonstrated that Europe – when compared with other similar regions – had begun to fill its gap.²⁴ The study concluded that “the trends for broad measure of ICT-intensive users and specialists diverged. In particular, the share of broad ICT-skilled employment is increasing in the EU15, but decreasing in the United States, Canada, and Australia.”²⁵ Much of this increase in ICT skills among generalists can be attributed to better match between industry needs and formal and informal education, an improvement that began earlier in Western Europe than Central and Eastern Europe.²⁶ While Western European workers report that the bulk of their ICT training has already occurred, and is now decreasing, many Central and East Europeans report the opposite: that they are taking more ICT training courses in the past year than they have in previous periods in their lives.²⁷

The increased preparedness of Central and East European workers is not just an accidental windfall for EU labor force ICT skills needs. One year after the EU Lisbon Summit, the Candidate Countries of Central and Eastern Europe held their own parallel summit on e-preparedness and intentionally addressed the objectives of the EU's e-Europe Action Plan. As part of their efforts to prepare themselves for possible EU accession, the thirteen Candidate Countries launched their own “e-Europe+ Action Plan” in 2001 at the Goteburg European Council in 2001. They submitted progress reports thereafter – including the final report based on surveys conducted in the ultimately successful CEE10 Candidate Countries.²⁸

More Progress Needed in CEE10

While the trends in ICT training do demonstrate that Central and Eastern European workers are taking more courses to increase their skills while such training among their West European counterparts is dropping (thus enabling these new EU workers to help fill the continuing ICT labor gap), the CEE10 have still not achieved ICT skill parity with their colleagues in the West.

Two recent European Union surveys conducted in 2006 and 2007 report that e-skills remain substantially lower in the CEE10.²⁹ The studies took place during the transition from the EU25 to the EU27, leaving complete statistics unavailable for all five countries involved in this study (Czech Republic, Poland, Latvia, Romania, Bulgaria). Nonetheless a majority of the five is represented across all of the questions, providing a reasonable window into the status of a cross-section of the CEE10.

In the areas of regular Internet use, regular computer use, e-commerce, and high computer skills, the EU25 average was substantially higher than the CEE10.³⁰ On the question of regular Internet use, 57% of the EU25 reported not regularly using the Internet, while the CEE10 answers were much higher: the Czech

Figure 1. e-skills level* in five CEE countries compared to EU27 (all individuals) | 2007

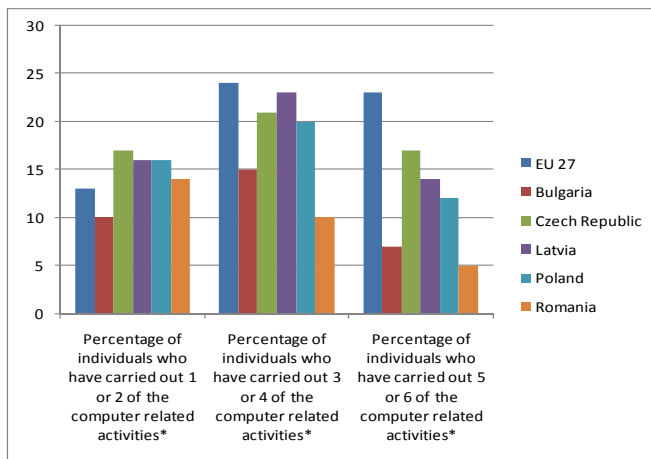


Figure 2. e-skills level in five CEE countries compared to EU27 (unemployed individuals) | 2007

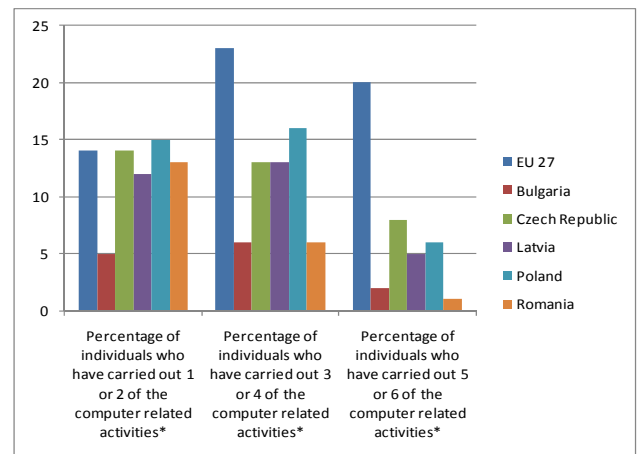
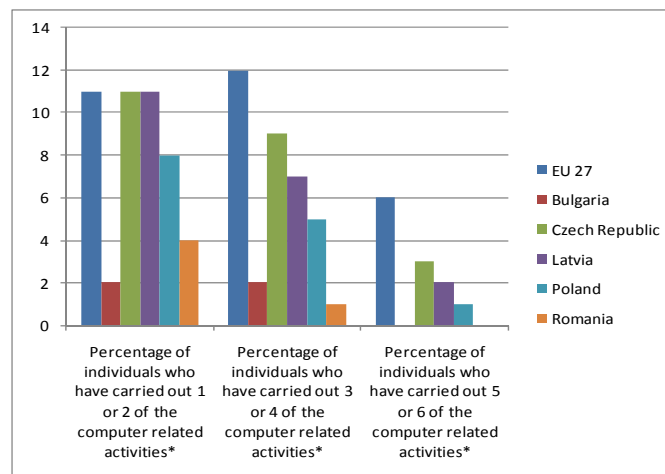


Figure 3. e-skills level in five CEE countries compared to EU27 (all retired/inactive individuals) | 2007



Source: EUROSTATS Information Society Indicators (2007)

*Computer related activities include using a mouse to launch programs such as an Internet browser or word processor; using copy or cut and paste tools to duplicate or move information on screen; using basic arithmetic formulae to add, subtract, multiply or divide figures in a spreadsheet; compressing files; writing a computer program using a specialized programming language; and connecting and installing new devices (e.g. a printer).

Republic reported 74% low Internet use, Poland 71%, and Latvia 64%. Regarding computer use, 34% of the EU25 stated they had never used a computer, while that number was 50% in Czech, 46% in Poland, and 44% in Latvia.³¹ When broken down by employment status, recent statistics from the European Union show a slight increase in computer and Internet use among the CEE10, but the countries still lag behind the EU27 average (Figures 1-3).

In the areas of e-commerce and high computer skills, those surveyed were divided into youth and adults, and the study included the full EU27. For both youth and adults, the CEE10 lagged behind. In the EU27, on average 26% of youth and 21% of adults reported ordering goods or services over the Internet in the past three months, while the numbers were 10% and 7% for Czechs, 17% and 9% in Poland, 10% and 5% in Latvia, and 3% and 2% in Bulgaria.³² (See Figures 4-6). Those with self-described high computer skills were 39% of youth and 22% of adults in the EU27, while those with high computer skills in the Czech Republic were 32% and 14%, in Poland 28% and 11%, Latvia 30% and 12%, and in Bulgaria 14% and 6%.³³

Figure 4. Individuals using the Internet for different activities (% of total population) | 2007

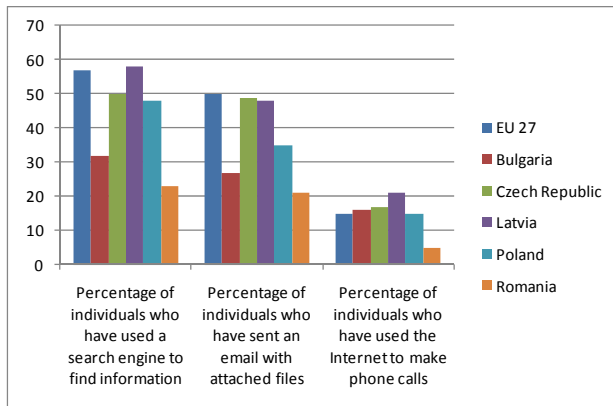


Figure 5. e-Commerce activities (% of youth and adults) | 2006 – 2007

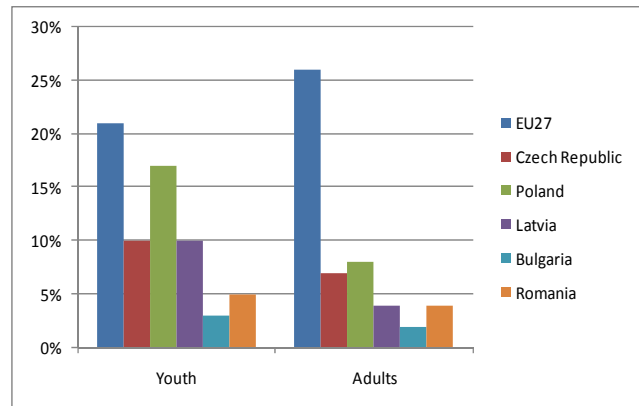
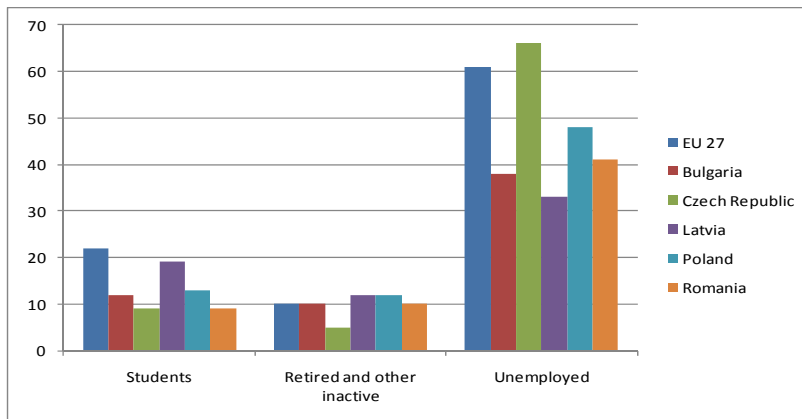


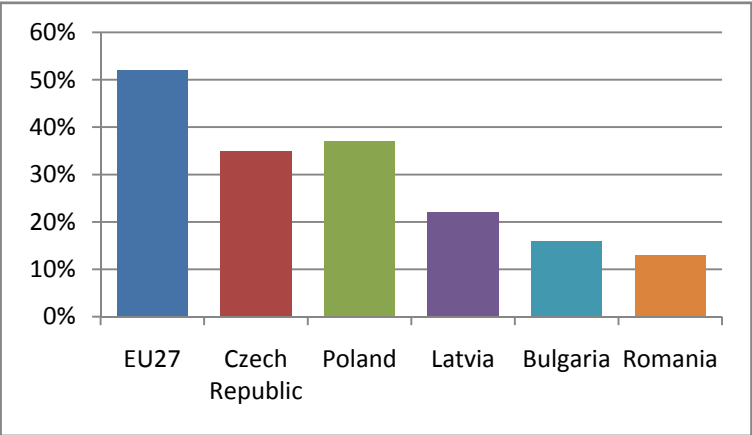
Figure 6. % of individuals who used the Internet (last 3 months) to look for a job or send a job application (2007)



Source: EUROSTATS Information Society Indicators (2007)

The overall picture for ICT skills and e-commerce shows a continuing skills gap in the CEE10. The way these skills play out in the actual workplace also demonstrates a substantially lower level of ICT use by the Central and East European workforce. In the 2006 EU study, 51% of those in the EU25 stated that they used computers “in their normal work routine.”³⁴ For those workers in Central and Eastern Europe, workplace use of ICT was substantially lower: 36% in the Czech Republic, 38% in Poland, 23% in Latvia, 16% in Bulgaria, and 14% in Romania³⁵ (See Figure 7).

Figure 7. Use of e-Skills by individuals in normal work routine (2007)



Source: EUROSTATS Information Society Indicators (2007)

In sum, when taken in combination with the earlier evidence of increased ICT skills training by CEE workers, these surveys reveal a substantial gap but also a positive trend. Central and Eastern Europeans – both in their roles as e-workers and e-consumers – are still significantly behind the needs of the EU, as stated in the Union’s Lisbon goal to be the worldwide leader in the knowledge economy. But these new member states are also addressing this skill lag through more recent training than their Western counterparts. The results, at first glance, are societies in transition toward the information marketplace. But at second glance the question emerges: which parts of these societies? What about the more at-risk and underserved populations within the CEE10? Is the trend toward increased ICT skill training a wave that lifts all boats, or are some heading to port while others remain lost at sea?

The Role of NGOs in e-Inclusion Programs

Worldwide there is a parallel trend to the rapidly increasing ICT demand in the marketplace, and the corresponding – albeit slow – increase in e-skills. The parallel trend involves a growing segment of the development field which is dedicated to providing the needed basic ICT skills to underserved populations. This study seeks to explore the intersection of these two trends in the context of the CEE10. Put succinctly: are local e-skills training programs, and the international development projects that support them, having an impact on e-skills and employability? Do these programs make a lasting mark on the communities they serve – a mark that can contribute to closing the ICT skills gap in the EU as a whole? Are these e-skills programs working towards an e-inclusive European Society, and if so, what are the elements that make these programs more relevant to the needs of the underserved populations?

In Central and Eastern Europe the phenomenon of assistance to the socially disadvantaged is evolving through different stages. NGO networks are growing, some with more activist roots and others with closer ties to the government. Civil society means different things to different people in different countries in the CEE10. In the Czech Republic, what may be referred to in the West as the “charity” role of corporations and private individuals is gaining increasing currency as corporate social responsibility obligations.³⁶ In Bulgaria, while the local NGO sector is growing, it is still in need of greater development. In Latvia, the development of the NGO sector is highly localized, influenced by the desire of people to revive local cultures, languages, and traditions that represent a unique multi-ethnic society. Some international aid agencies link the major components of their project work to the nascent civil society sector in order to provide a needed shot in the arm.³⁷ Throughout Central and Eastern Europe the civil society sector is increasingly focused on providing ICT development support to local communities. This growth in the ICT for development (ICTD) field is fueled by many areas of assistance, from transnational bodies like the European Union and its structural funds dedicated to telecommunications, to national-level projects like the United States Agency for International Development and its support for small and medium-sized enterprises, to private donors such as the Soros Foundation which charted the early waters of assistance in Central and Eastern Europe, and the Microsoft Unlimited Potential program which has joined the lead in recent years.

Together, the transnational, national, and private donors focus much of their assistance on providing a regional lift to the CEE10, while also targeting the most marginalized populations within these Central and East European communities. The areas of social need addressed by these programs are many, ranging

from paraplegics in the Czech Republic to the blind in Bulgaria to the rural unemployed in Romania³⁸, to the young entrepreneurs and farmers in Latvia, to the physically disabled and pensioners in Poland. Likewise, the factors contributing to the success or failure of the assistance programs are just as complex. In the context of the EU ICT skills gap, however, one gauge of the effectiveness of ICT development programs is not too complicated: jobs for those unemployed, and higher job performance for those currently economically active. Do the unemployed beneficiaries get and keep jobs? Do these jobs offer competitive wages that allow them to provide a sustainable living for themselves and their families? Do the skills (ICT and other skills) acquired through these programs help employed workers to increase their job performance and follow a career path? While these outcomes might be relatively easy to see, the particulars of the programs leading to these outcomes are much more fine-grained, and the barriers to these positive outcomes are multi-layered. In order to assess these programs, the individual needs of the targeted groups and the socio-economic dynamics of the local contexts must be carefully examined. Although this report does not claim to have answers to all these questions, it does advance understanding of the key elements that make NGO ICT training programs relevant to the needs of their target groups in relation to the workforce, economy, and the broader goal of social e-inclusion.

Of the many underserved populations targeted by ICTD programs in Central and Eastern Europe, two groups can be raised as examples: gender and youth. The gender divide in ICT skills is not just the province of the CEE10 – women are underrepresented in e-skills and related employment throughout Europe. In 2000, West European women made up only 5.6% of Internet networking professionals. Five years later – across the EU25 – men with “high level computer skills” (29%) were double the number of women with such skills (15%).³⁹ The problem is also the solution, however. According to the European Commission report on Central and Eastern Europe ICT benchmarks, addressing the gender divide may be one of the keys to closing the ICT labor gap: females are an “untapped source” and initiatives should be targeted especially at advanced training for women – the point at which women usually drop away from ICT skills.⁴⁰

Youth, in the Balkans in particular, are still a significantly underserved population. As the 2006 World Bank report “Young People in South Eastern Europe: From Risk to Empowerment” concluded, “policies and programs supporting youth employment are still very limited.” However, the good news is that while advanced ICT skills are comparatively limited among CEE10 youth, these young people are already strong in the e-basics, and programs focused on jobs are a good investment in regions like the CEE10. According to a 2007 World Bank report, “youth employment programs are more effective in developing countries

and transition countries than in developed economies,” and the “likelihood of success” of programs in such transitional states is 53-79% higher than in developed nations.⁴¹

The two examples of gender and at-risk youth show that there is a substantial body of research on the different quadrants of ICTD in Central Europe: the specific social obstacles, employment, e-skills, and program trends. But there is a dearth of information *linking* the quadrants. What is lacking is a focused, regional research approach to the specific practices of NGOs providing e-skills training in Central and Eastern Europe. What practices are working to close the digital divide in these underserved communities? And what are the tangible and sustainable results of e-skills programs leading to employability outcomes? While there is a great deal known about the e-readiness of Western and Eastern Europe, as reviewed above, research is extremely limited on the role of NGO programs in providing these e-skills to the most underserved populations. This study sets out to document the characteristics of these programs that manifest the e-inclusion trend, their contribution to closing the ICT skills gap in the region, and to better understand the best practices and the challenges of the NGOs which are leading this trend.

As EU market integration increases and the workforce increasingly crosses national boundaries, labor from Central and East European has the possibility of contributing to filling the ICT skills gap – both in Western European countries, and at home. There are some signs that elements of this trend may be materializing. This study seeks to gauge the nature and qualities of that trend. Is it possible to use the same energy and resources to bridge the digital divide, while also filling the labor gap? If so, the EU can tackle two goals at once: promoting the social inclusion and integration of the CEE10, while also becoming the world’s most competitive – and inclusive – knowledge economy.

PART III

A. FIVE COUNTRIES IN FOCUS: FOUR EMERGING THEMES

This section identifies three general areas of findings from the fieldwork in Bulgaria, the Czech Republic, Latvia, Poland, and Romania. Based on in-depth interviews with over one hundred program staff and beneficiaries, and the ongoing observations of the researchers, a variety of key factors have been identified in the contribution of e-skills training to employability. Furthermore, the research highlights other elements in the NGO programs that combine with e-skills training to increase the possibilities of the target groups finding employment, fulfilling new demands in the workplace if currently employed, or acquiring the much needed initial job experience if the target group is new to the workforce, as in the case of youth. These factors come together in three important sectors of an employability analysis: the different ways that NGO e-skills training programs achieve an employability goal; the role of e-skills in boosting business, government, and social productivity; and the value added by the social networks of NGOs in accelerating the impact of their work. Described here as *emergent themes*, these three areas demonstrate the observed effects of ICT development programs on jobs, productivity, and the broader goal of social e-inclusion.

The study's findings are structured around these themes, with pertinent and typical examples from the five countries provided throughout the analysis. When using demonstrative examples, the study has taken into consideration that the several national NGOs – and their local partners – vary widely in size, scope, and duration of work. An organization such as the Bulgarian iCentres has 109 telecentres serving broad audiences, uses the Microsoft Unlimited Potential (UP) Community Learning Curriculum⁴², and operates in a common network around the country. The PCs Against Barriers program in the Czech Republic, on the other hand, has fourteen centers, each operates independently, the program does not use a unified curriculum, and each of the centers serves people with disabilities as its primary clients. In the case of Poland, the Foundation Supporting Physically Disabled Mathematicians and IT Specialists currently provides training in four telecentres in Warsaw, and is expanding its network to bring training and other services through forty additional centers located in rural communities around the country. For its e-skills training program, the Foundation uses the European Computer Driver License (ECDL) as its main training material. In Latvia, LIKTA's initiative Latvia@World provides opportunities for different underserved groups to acquire the basic skills needed for using computers and the Internet while strengthening social networks at the local and national level through participation and cooperation. Within this e-inclusion initiative, LIKTA partners with local social organizations in different regions of the country, providing them with training materials, developed by the organization itself, and training-of-

trainer programs to build the e-capacity of these organizations. And in Romania, while Educating for an Open Society supports e-skills training curriculum in independent telecentres spread across districts nationwide, it also provides an unusual Johnny Appleseed role in sprouting the centers into action: EOS director Gabi Barna toured the country in her car, hand-delivering over one thousand recycled computers to enable the network to put down roots.

While these five programs may seem extremely different, their approaches to the development of e-skills training programs with an employability goal carries a surprising number of similarities as well as differences. It is important to recognize that e-skills training is, in most of the cases under study, one of many elements included in these programs, and it is precisely the combination of e-skills with other training (e.g. micro-enterprise) and services (e.g. jobs databases, internships) that allows NGOs to tailor programs to the needs of their target groups. It is this combination of unique and shared practices – in the five countries studied – which results in four common themes for the programs' beneficiaries:

1. Employability means different things depending on the context, the job opportunities, and the personal motivation and previous job experience of the beneficiaries.
2. NGO e-skills training programs need to be tailored to these context-driven needs in order to help their target groups achieve their employability goals.
3. When used as a continuing training program with existing private and public employees and the broader public, the resulting e-skills do lead to increased productivity in business, government, and society.
4. The local social networks of Central and East European NGOs – networks involving government, industry, and other social organizations – accelerate the impact of the programs the NGOs offer.

The Meaning of Employability in the Knowledge Economy

For the purposes of gauging the labor force benefits of NGO e-skills training programs, this study is concerned with the programs' contribution to employability. Within this limitation, the study has guided its research with several components of the meaning of employability: the ability to secure a job; the ability to keep an existing job or to improve that position in quality or rank; the ability of beneficiaries to use elements of the programs as platforms to gain job experience if new to the labor market; and the ability to contribute to the overall productivity of business, government, and social labor. These four areas of meaning – finding a job, security

and satisfaction in a current job, gaining job experience to enter the labor market, and productivity – are touched on throughout the study’s findings.

The last component, which includes what the authors call “social productivity,” is an essential cross-cutting aspect of the overall employability picture. In this modern era, economic productivity has left its isolation in the workplace, and has increasingly entered the home space and third spaces: cafés, commuter trains, dentists’ waiting rooms. In such an environment – where work is everywhere, where individuals change jobs and careers with great frequency, and where people work “on the fly” with the help of communications technologies – economic impact is no longer limited to a time or space. Instead, work is ongoing, with one of the only constants the ability of individuals to participate. This study argues that the *ability to participate broadly* in the information society is at the heart of the “the knowledge economy.” Furthermore, the ability to participate in the information society touches aspects of everyday life that go far beyond the information and communication demands of the labor market. The ability of citizens to access computers and the Internet, acquire the skills needed, and find along the way the social uses of ICT, increases the opportunities for participation in society and promotes social cohesion⁴³. As mentioned earlier, any discussion of the contribution of e-skills to employability must include the effects of these skills on the overall goal of social inclusion, in order to fully capture the work of NGOs in the area of e-inclusion.

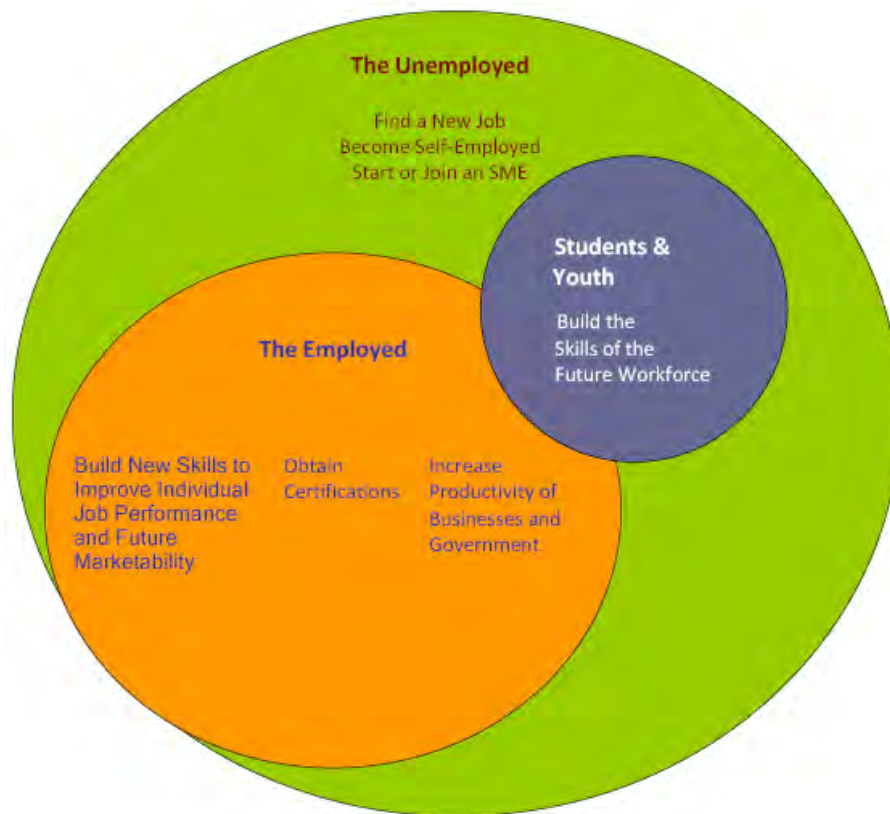
This ability to participate, while also made up of many other factors, is increasingly reliant on e-skills. Therefore, the study brings social productivity to the heart of the discussion of employability. The study also examines how NGO e-skills training programs can lead to new jobs in the traditional sense, and how the different elements of these training programs can increase business and government productivity. But around every corner, the study is concerned with the impact of NGO-delivered e-skills on “social productivity”: the ability to participate in, and drive, the knowledge economy – wherever it may be.

B. FINDING JOBS: THE RELATIONSHIP BETWEEN E-SKILLS TRAINING PROGRAMS AND EMPLOYABILITY

The ways that ICT training programs address the problems of unemployment across Central and Eastern Europe are as varied as the regions, demographics, and macro-economic forces affecting the citizens. These programs often approach their different audiences in different ways, sometimes focusing a particular course to reach a particular demographic. Other courses are offered to mixed classes with a variety of students experiencing different needs. The categories which follow are not firm and fixed areas,

but are trends emerging from interviews with program staff and students and generally capture the spectrum of beneficiaries.

The Many Roles of e-Skills in Relation to Employment



Long-term Unemployed

The goal of drastically reducing unemployment due to the introduction of new skills or a new work situation is an unrealistic expectation. In Latvia and Poland, program staff talk about the “culture of unemployment” that touches many aspects of what people are motivated to do and learn. Even for those unemployed persons who enter an ICT training course, thus expressing motivation by simply showing up, it cannot be assumed that they will be able to endure – both by acquiring the new skills, and by putting them into force in the job hunt.

Personal motivation is a problem for a variety of social and economic reasons: the economic disincentive to find work because of state benefits, a sense of disempowerment after years without work, the psychological shock of a lay-off or plant closure, child care pressures, or a fear of learning new skills. These factors can combine to create significant barriers for training programs, leading NGOs to integrate their programs with other training and services that encourage personal motivation in the long-term unemployed. The motivation

of people that previously had an active and professional life is very different from those people who have been living under the "culture of unemployment" for a long time, if not all their lives. NGOs need to recognize this important difference, exploiting the motivation of the former and providing incentives to the latter. This is a subtle but an important difference that must be taken into account when designing training and professional programs that have employability as main a goal. For those trapped in the "culture of unemployment" it is difficult to find a way out.

ICT fluency, on the other hand, carries certain transformative qualities that other work skills may not. Several trainers report the unique confidence-building effects that come from slowly developing e-skills. Moreover, access to the Internet can help otherwise isolated and unmotivated people to see more possibilities in life – including possibilities for work. One trainer in a rural mining community in southwest Romania, for example, spoke of the shattered confidence of some of her students who had been laid off. Slowly, she was able to rebuild their sense of self-worth, along with their skills. Several have found new careers.

Structurally Unemployed: Macro-Economic Forces, Demographic Shifts, Social Barriers

Unemployment is caused by a variety of factors, but is often the result of clearly identifiable macro-economic forces, forces which can be combated through the re-skilling of workers. Many of these cases were uncovered over the course of the study, and this population – the structurally unemployed – is a key target audience for e-skills training programs. For people laid-off by industry closures (e.g. mines shutting down in Romania), or people who lost their jobs due to a health problem or illness (e.g. physically disabled people in the Czech Republic, Latvia, and Poland), acquiring e-skills provides them not only with self-confidence, but with the ability to explore different career opportunities outside their previous area of work. While the traditional understanding of "structural unemployment" relates to systematic industry layoffs or demographic changes, the term may also find relevance in the experience of people with physical disabilities in Central and Eastern Europe. A systematic lack of awareness of the employability of disabled persons (and accommodation for their workplace needs) is still a structural barrier to their employment, a barrier confronted head on by some NGOs. In addition to their ICT training to re-skill disabled workers, these NGOs liaise with government and businesses, and develop public awareness campaigns to help break down these structural barriers. Many of these structurally unemployed workers – those affected by industry layoffs, by demographic shifts, and by a

workplace failure to accommodate people with disabilities – have a chance of finding work again, granted that their new e-skills are accompanied by personal motivation, government support, a progressive business culture, and new job opportunities in their locality.

In this study concerning employability, one of the most important objectives for the researcher is to determine the different ways that e-skills training programs can lead the unemployed back into the workforce. One of the core questions of e-skills and employability – the ability of training programs to lead beneficiaries to new jobs – involves numerous factors. These factors each were deliberated on by the broader CIS research team before the researchers entered the field, and were pursued at length during many of the interviews with program staff, beneficiaries, and employers. They also helped test, and explain, the employability statistic which has emerged from several of the NGOs studied: approximately 20-30% of employable graduates of established ICT training programs find work not long after completing their training programs.⁴⁴ Other graduates likely find work later, but their numbers are less easily gauged because they have often lost contact with their training provider by the time they become employed. This figure of 20-30% does not apply to all NGOs studied, because they differ in many ways, and often focus on target groups and programs addressing varied levels of employability. However, it is a statistic cited by several project managers, trainers, and beneficiaries in several programs for the structurally unemployed.

Over the course of the study many other contributing factors emerged as part of the “new jobs” story: the quality of trainers, the other social services provided by the NGOs and their partners, and the age, education, and the personal motivation and gumption of the graduates, just to name a few. All of these factors combined in different ways to clear the path for unemployed individuals to find work again. In some cases, participation in the NGO e-skills training program was the key to securing new employment. In other cases, it was the e-skills training combined with other important elements, such as jobs counseling or jobs databases. Three examples help illustrate how these programs are contributing to the goal of employability: 1) e-skills training for miners in the southwest of Romania; 2) e-skills training for Bulgarian teachers; and 3) e-skills training for physically disabled people in Poland.

ROMANIAN MINERS

The examples from southwest Romanian mining communities are strong evidence of both the resilience and adaptability of e-skills when changing careers, and also of the ability of e-skills to build self-confidence. In the town of Brad, two mines were closed in 2006 after many years of operation. The coal mine had been employing residents of Brad and the neighboring villages since the 19th Century, and when it closed 800 coal

miners were laid off. During the same period the gold mine also closed, and it had been open for 2000 years – since the time of the early Romanian, or *Dacia*, people. The gold mine closure laid off 8500 workers. Combined in such a short period, these lay-offs had a massive impact on the local community. Despite receiving severance or early retirement benefits which helped in the transition, thousands of residents are looking for work. There are jobs, but these workers need new skills. After generations of mastering the specialized trade of mining, retraining is essential for these individuals to reenter the market.

In addition to the need for new skills, many of the Brad area miners were psychologically devastated by the closures. Some came from families that had mined for generations. According to one gold miner, “it was like my world collapsed.” Depression set in for some, the frustration of needing to learn new skills at the age of forty or fifty affected others. All faced the challenge of putting food on the table to feed their families.

A telecentre called Association Maria set out to help alleviate the economic hit taken by the Brad community. As a member of the network of 18 telecentres supported by EOS – Educating for an Open Society – Association Maria had access to the Microsoft (UP) Community Learning curriculum, and offered the eight module training course that includes computer fundamentals, productivity applications (word processing, spreadsheets, etc), and information literacy. In its first year, 2006, the Association trained 360 students in Brad. In 2007 it trained another 400. And the courses continue.

While Association Maria – like many telecentres – does not keep comprehensive records of the unemployed graduates who find work after completing the courses, the project director reported that many have found new jobs. Three newly employed individuals were interviewed separately by the CIS research team in February 2008. All three attributed the ICT training program as the key to their new jobs. A former gold miner now worked in a post office. One coal miner was now an assistant manager at a petrol service station. Another coal miner now served as a deputy councilor to the Parliament, representing the Brad area. These three men each spoke matter-of-factly about the importance of their e-skills in finding work. The post office worker, a man of about fifty who overcame severe depression to succeed in his e-skills training, described the intense competition for his position: nine people had applied for one job, and he got the job because of his e-skills, and the Microsoft UP certificate provided to graduates (although it does not probe competences, but merely participation in the training program, the certificate is nonetheless a valuable outcome of the training course). The petrol station manager, when answering the same question – “were e-skills important in securing the new job” – answered: “categorically.” He went on to explain that he works at the computer all day, and runs the station inventory and distribution charts using spreadsheets. The third former miner, now the deputy councilor for Parliament, emphasized that the e-skills courses were essential from the very beginning of his job

search. He was looking for work, and noticed a position announcement for a job he wanted. The announcement said that e-skills were required, so he signed up with Association Maria, took the classes, and got the job.

BULGARIAN TEACHERS

The unemployed miners of Brad, and other regions in Romania, are not the only examples of the structurally unemployed finding work with the newfound confidence and e-skills delivered by ICT training programs. In Bulgaria, an equally compelling account comes from unemployed teachers. Like the mine closures, a major demographic shift has hit Bulgaria, with several hundred thousand young people leaving the country in search of work. Accompanying this migration pattern is a lowering birth rate among those remaining in the country. The result is a massive pattern of school closures, with hundreds of schools shutting down and thousands of teachers – nearly all women, and most between the ages of thirty and fifty – becoming unemployed. Practically every town describes one or two schools closing. According to one teacher in the capital city of Sofia, over two hundred schools were closed in the past two years.

Through a state-NGO partnership, the Bulgarian iCentres and the local labor offices have begun to address these shortfalls through ICT training courses directed at retraining the unemployed teachers. Called the “Optimism” program, Bulgarian iCentres have trained 450 unemployed teachers in intensive 300 hour courses offered by the iCentres and supported by contracts offered through the labor offices. The iCentres are now in negotiation to provide training for 600 more. The results of the trainings – accomplished in just two years – are powerful. This particular demographic (Bulgarian women of middle-age) is a difficult group to find work because of age discrimination. The graduates report a barrier to being hired because they are forty or fifty-years-old, although as former teachers they bring a great deal of knowledge and experience to the table. As one graduate described it, “I saw a job ad in the newspaper and it said no age requirement. I called them and asked, just to make sure it wasn’t a mistake!” Despite these barriers, the Bulgarian iCentres report a 30% success rate in job placement after the first year of training.

The CIS research team interviewed several graduates of the Bulgarian courses in three different cities of varying size. Some graduates had found work, and some were still looking. All were women, and their ages ranged from the late thirties to early fifties. The three women who had found work attributed their success to the e-skills and the Microsoft UP Community Learning certificate. (As mentioned earlier, different from ECDL

(European Computer Driver License) and other certificate programs, this certificate is designed to acknowledge participation in the training program not to measure the e-skills competences of participants.) One woman in the town of Vratsa was hired as a hotel receptionist in a resort in the foothills of the mountains just outside of town. Because it is a small city, she knew the hotel manager. But without her new e-skills she maintains that she would never have been hired. The skills were a perfect match: all day she uses Microsoft's Excel and the Access database to check-in her clients, and review their room bills and the hotel's services. These two programs were taught in her ICT course and she was, needless to say, pleased to find that they were the backbone of her new work. In addition to finding a job with a skills match, she is also satisfied with her salary which is nearly double that of her previous job. Her daily work tasks are much easier than the hard labor she was performing in a wood products factory to make ends meet. Now her new job is stable, it comes with health insurance, and her sense of self worth is much higher, she says. Again, the e-skills were indispensable for this or any job, the receptionist concluded. Echoing the comments of many interview subjects, she said: "no matter where you start looking for a job, every employer asks about your IT skills."

The two other unemployed teachers who found jobs also regularly use e-skills. One is a post office clerk in the small town of Driavna, and the other works as a receptionist with a security firm in the middle-sized city of Gabrovo. While the security firm receptionist enjoys her new job, she is earning less than she had made as a teacher. Nevertheless, she is resigned to her good fortune: she had no choice, she "was made redundant" in the teaching profession. The ICT courses were the direct cause of finding her new position, she said. It was literally a matter of days between completing the course and applying for – and getting – her new job. The e-skills were necessary, but not sufficient. Once on the job she had to get additional training...on the firing range. Because her position is in a security firm, everyone get firearms training, and this fortysomething former high school physics and chemistry teacher loves it – the sense of adventure compensates for the lower salary, to some extent. When asked why she had to receive weapons training when she is only the receptionist, she answered – with a smile and a twinkle in her eye – "because I'm the one who has to pass out the guns."

The demographic shift affects not only those teachers who are laid off, but also those prospective teachers completing their university studies in pedagogy and philology. There simply aren't any jobs for thousands of the new graduates. These individuals are counted by the state labor office as part of the structurally unemployed teacher demographic, even though they haven't yet received, and then lost, employment as a teacher. Although younger, their situation on the job market is very much the same. And for them, the ICT training is also essential. One young woman who recently graduated from Bulgaria's Blagoevgrad University in philology now works in a resort. She explained how the state labor office

provided bus fare and a small stipend to support her daily commute from her home in Blagoevgrad to the ICT training course in the neighboring town Smitli. She spoke highly of the course, but also noted that it was not decisive in getting her job – it was necessary but not sufficient. Also necessary was a college degree, and experience.

PEOPLE WITH PHYSICAL DISABILITIES IN POLAND

In addition to all the obstacles unemployed people encounter in the labor market, people with physical disabilities face the engrained perception in society that their disability impedes them from having an active and professional life. This misperception exists not only at the family level, but also – most relevant for our discussion of e-skills and employability – in the labor market. At the family level, the disabled face a form of overprotection that heavily impacts negatively their self-esteem and feeds the perception of themselves as incapable of having an active life, professional or otherwise. In the labor market, there is a slowly changing business culture that prevents employers from considering hiring disabled people for career-path jobs because of the perception that they can only perform a certain type of tasks and certain types of jobs. This perception often leads businesses to offer disabled people only low-skilled, low-paid jobs that are not rewarding and without a professional path.

The Foundation Supporting Physically Disabled Mathematicians and IT Specialists offers an interesting comprehensive approach to e-skills for employability programs, combining counseling, employment services, training and workshops, and awareness campaigns to help disabled people enter or re-enter the labor market. Many of the trainees interviewed during the visit to the Foundation's telecentres had something in common: they had a career and professional life before they got sick or injured, and fell into the poverty and inactivity. One trainer was a teacher in primary school before she fell ill 17 years ago with an extreme form of rheumatism that caused her to lose her job. As she bluntly put it: "They [the government] scratched me from the teaching profession for life. For them, I had no place in schools despite all my experience and dedication." Another trainer, and former trainee himself, was an art curator who fell sick and also lost his job. "I even tried to learn some ICT programs that could help me stay in my job, but to no avail." A trainee was a classical musician. Another trainee was an executive assistant. And the stories go on and on.

As of today, the Foundation has helped a total of one hundred and eighty beneficiaries to find jobs as a result of the training and services provided since 2006, services including basic and intermediate e-skills training

programs, job counseling, and links to employers. This integrated approach to e-skills training and employability, along with the government disposition and a changing business culture, are necessary conditions contributing to the Foundation's successful employment rate.

The motivation of people that previously had an active and professional life is very different from those that have been living under the "culture of unemployment" for a long time, if not all their lives. NGOs need to recognize this important difference and exploit the motivation of the former, and incentive that of the latter group of people. This is a subtle but important difference that must be taken into account when designing training and professional programs for disabled groups, and for other groups as well. From the NGO perspective, it requires an integrated approach that targets simultaneously employers, the government, and people with disabilities themselves.

Newly Entering the Workforce: The Case of Youth

The lack of specific work experience is a significant barrier to employment not only for the structurally unemployed looking for a new profession, but also for those who are entering the workforce for the first time. This category especially effects youth who are new to a difficult job market. The classic dilemma for young people is: no experience means no job, but also no job means no experience. Throughout Central and Eastern Europe youth face this challenge to finding work. In Romania and Poland it became clear that e-skills training programs can function as platforms from which to respond to the challenge.

NGO-run ICT programs are especially well-suited to provide people with the experience that is relevant to enter the labor market. Although evident across programs and countries, EOS' ICT training programs in Romania provide consistent examples of youth focuses. In the small medieval village of Sucevita, on the northern border with Ukraine, one telecentre manager who is also a teacher has set up computers in middle school classrooms and teaches several different ICT courses in addition to his normal teaching load. In the small towns of Lupeni and Brad, young graduates hang on to become trainers and get even more experience. In the mining town of Aninoasa, the pressure from elementary school students forces their teachers to go to the ICT classes – to keep up with the students' needs. And in Sannicolau, a suburb of the larger city Timisoara in western Romania, the local NGO seems to have ICT classrooms in every school in town: a small computer lab in a kindergarten, a large lab in a high school, another large lab in the school serving Roma youth, and training programs in the main telecentre office lab that cater to young high school graduates looking for work. The

result is a youth community brimming with e-skills and confidence. According to the vice mayor, Sannicolau has the lowest unemployment rate in all of Romania. In the eyes of one of the telecentre trainers there, this economic boom is both a blessing and a challenge: “With economic growth we have to keep up.”

Sannicolau illustrates the value of ICT training for youth – youth who might otherwise leave the country in search of employment elsewhere in the EU, or take a job that does not fully challenge their potential as an individual. One young man had, in fact, emigrated to Italy for a year in search of better work. But he returned to Romania, and his parents encouraged him to take the local ICT courses. Now he manages a Net Café in Sannicolau, and is happy with his combination of a good job and proximity to his family, friends, and culture. Another youth – a high school junior – showed special promise in the ICT area, but couldn’t get what he needed from his ordinary high school classes. He signed up with the advanced courses of the local EOS partner, and found himself hired by the regional Delphi automotive parts factory to design a human resources database. Not bad for a summer job. On a tour of the Delphi factory with the CIS researcher, the high school student ran into his old boss – the manager of firm with over 7000 employees. The manager immediately called out to the student and asked when he’s be coming back to Delphi. “Not till after university,” was the reply.

The ability for ICT training programs to provide a more complete job skills platform is particularly important for youth, especially for those who can culminate their e-skills acquisition with a stint as a volunteer trainer or paid trainer. This overall package of job skills is the case for programs not just focused on youth, but which use youth as trainers – organizations that may focus on senior citizens. In Poland, the work of the Responsible Business Institute falls under this different category of youth skills-building. It is necessary to broaden the employability lens to understand and appreciate the value of the RBI e-skills program towards the economic and social development of the Podlasie region, located in the northeast of the country. Agriculture is one the main economic activities in the region, and the accession to the European Union hit hard the small farmers who were not equipped to compete with bigger and consolidated farmers. Today, the unemployment rate in Podlasie is around 20%, four times higher than in Warsaw and almost double the national average. Faced with a massive migration of its labor force to Great Britain and Ireland, the Podlasie region is struggling to find ways to provide opportunities for the younger generation recently graduating from the University.

It is within this context that the RBI provides basic e-skills training programs for seniors and pensioners through six telecentres, while at the same time, it offers opportunities for young people to become the trainers of these programs. One result is that the students gain important skills and experience that can improve the chances of finding employment once they finish school. But there are many important contributions of a program of this

kind, and two are particularly innovative and relevant for the youth skills platform. First, by engaging young people as trainers for seniors or pensioners this program narrows the generational digital divide, and by fostering the feeling among youth of “giving back to their community” – according to one participant – it strengthens the feeling of community. Second, by offering young people the opportunity to gain skills such as team work, group management, and a culture of responsibility, the program provides a badly needed bridge between students and the labor market. One of the main motivations of students to become volunteer trainers is work experience, since one of the biggest challenges young people face on the job market is this lack of experience.

One of the volunteer trainers interviewed during the visit to the telecentre in Bialystok, Poland was recently offered a job working at the city’s Office of Tourism. She attributed the contribution of her experience as a volunteer trainer for RBI to her newly obtained job: “The skills and experience I’ve gained as a trainer made me a much more attractive candidate for this job [in the Office of Tourism] since one the main responsibilities I have is to constantly interact with people, and search the Internet to find relevant information for those visiting and learning about the history of my city [Bialystok]. As a trainer, I learned people skills, I improved my e-skills, and I developed a sense of responsibility and professionalism that I didn’t have before.” The RBI volunteer work offers opportunities to build some of these valuable job skills. As seen in the cases of youth employability efforts in Romania and Poland, relevance to the local context is one of the most important factors for understanding different employability programs.

Self-Employment and SMEs

Another area where the development of e-skills can reduce joblessness is through self-employment, and through the creation or support of small and medium-sized enterprises (SMEs). This kind of work requires a special person: one with gumption, self confidence, and the ability to be a salesperson and manager as well as a worker. A business also requires regular Internet access, something still limited in many homes in Central and Eastern Europe. However, e-skills are especially well-suited for such a business. And for persons with physical disabilities, the ability to work from home – without needing to navigate a cityscape of barriers to get to the workplace and back – can often be the best employability answer.

The numbers of people finding full time, gainful self-employment are not as high as with traditional job searches because of the above-described special skill set, but when the training opportunities are available, and the right person finds them, the results can be very effective.

The Paraple training center in Prague, Czech Republic provides paraplegics with a variety of post-trauma care, as well as vocational training. The e-skills training program at Paraple is one of the more advanced amongst those offered by NGOs in Central and Eastern Europe: it is part of the PCs Against Barriers program which has been serving disabled Czechs for over a decade. At Paraple, one student who had taken six ICT courses for over a one year period, described the breakthrough provided by self-employment. “Morning, evening, I can work whenever I want...I am my own boss.” This student completed some of the most advanced courses, and now designs websites for NGOs. He sold six in less than a year, providing him with more than enough income to supplement his modest disability check, and to invest in his web design business by buying a new computer. According to this student, he is not alone. He thinks of “about ten” of his fellow ICT course graduates who have found work – several at firms, but many more through self-employment like himself. “It is creative, liberating” he says of web design and work from home. And the connection it provides to the outside world is essential for his happiness and social well being: “The Internet is my life” and search engines are “my best friend.”

In addition to supporting self-employment through contract work from home, some e-skills training programs are specifically tailored to the development of SMEs and the jobs that they create. The Digital Center in Ventspils, Latvia provides support for young entrepreneurs to jump-start their business. Faced with a lack of professional opportunities, many young people are forced to migrate either to Riga, the capital of Latvia, or to other countries in Europe. To combat the migration of the skilled labor force, the Digital Center developed a program to support the creation of micro-enterprises by offering young entrepreneurs training in marketing, finance, and legal advice, in addition to full access to the infrastructure available at the Digital Center. As of 2008, the business incubator at the Digital Center is supporting eleven companies (including construction, web development, and fashion design) created mostly by young entrepreneurs. These companies pay rent to the Center and in exchange they have access to facilities, computers, and the Internet, and the business advice. The business incubator brings some revenue for the Digital Center, while at the same time offering opportunities for young business men and women to find economic opportunities at home.

C. NGO APPROACHES TO E-SKILLS TRAINING AND EMPLOYABILITY PROGRAMS: CONTEXT MATTERS

E-skills training is one of many other forms of training and services that NGOs provide to help their beneficiaries achieve an employability goal. This is the case not only for the organizations that are part of this study, but also for other NGOs working on e-inclusion programs in other countries of the European Union and around the world. NGOs often combine a variety of elements into their programs to make them more relevant to their beneficiaries and to the conditions of the local labor market.

Depending on a variety of factors – overall socio-economic context, specific target groups, organizational resources and partners, government support – NGOs design programs that reflect their social mission, the needs of their beneficiaries, and the characteristics of the local context. Organizations often use a variety of elements as part of the basket of training and services, and the combination of these elements shapes NGO approaches to employability.

Some of the most common elements present in NGO programs are listed below. The list is not intended to be comprehensive, and it does not apply to all NGOs, but it captures an important range of different training elements and services often available from the organizations included in the study.

- e-Skills training | basic, intermediate, and in some cases advanced training
- e-Skills certification | two kinds of certification programs are available: 1) certificates that demonstrate competences (e.g. ECDL, or IT Card); 2) certificates that acknowledge participation in the training program (e.g. Microsoft Digital Literacy and Microsoft UP Community Learning Curriculum)
- Complementary skills training | team work, management, interview techniques, business communication, public relations and marketing
- Workshops | on how to establish and manage a small business, how to expand the client's portfolio if self-employed and working from home (e.g. telework)
- Employment services | job counseling, job databases, internships, connections to employers
- Services for employers | listing of jobs currently available, assistance in the recruitment process, matching beneficiaries with employers' needs
- Counseling | legal, psychological
- Financial and marketing assistance to jump start a micro-enterprise
- Awareness campaigns to combat misperceptions of certain groups in the labor market | particularly relevant for more marginalized groups such as disabled people, older workers, and minority groups.

The majority of the NGOs in the study were not created with the exclusive goal of providing e-skills training. Rather, they were founded to promote particular social goals and – along the way – integrated e-skills training as part of their overall programs. This distinction seems subtle, but it is critical to understand the building blocks of e-skills training programs and their relationship to different employability goals of the NGOs. The experiences of the NGOs that participated in the study highlight three of the most common approaches to e-skills training and employability:

1. The integrated approach: a comprehensive set of training and services designed to guide beneficiaries through the whole employability path.
2. The supply-based approach: focused on a particular target group, the programs seek to re-skill certain workers to enter or return to the workplace, or to improve performance.
3. The demand-based approach: aimed at particular employers, the approach assesses the needs of industry or government and then trains current or new workers to meet those needs.

The approaches are not exclusive, rather the contrary. NGOs often times combine different approaches to employability depending on currently available resources, changes in the labor market, and their overall organizational capacity.

Integrated Approaches

An illustrative example of an NGO using an integrated approach to e-skills and employability is the Foundation Supporting Physically Disabled Mathematicians and IT Specialists in Poland. As its name suggests, the Foundation was created in 1990 as an initiative of the Polish Academy of Science to improve the technical IT knowledge of scientists with disabilities. One must remember that in the early 90's personal computers were prohibitively expensive and the goal was to provide computers and advanced training for scientists. As the initiative matured, the Foundation realized that the demand in the labor market for scientists was quite high and it decided to broaden the scope of the program to reach the physically disabled general population. Today, the Foundation mission is to foster the professional and social inclusion of the physically disabled, “by improving their employability and thus boosting both their self-esteem and their economic potential.”⁴⁵

The Foundation uses a comprehensive approach to achieve its employability goals, combining counseling (psychological and legal), employment services (Internet job searches, links to employers), training (basic, intermediate, and advanced e-skills), and workshops (e.g. how to start and manage a small enterprise). In

addition, the Foundation combats the misperception of disabled people in the labor market in innovative ways, promoting the “professionalism” of disabled people on different fronts.

On the employers front, the Foundation actively engages in awareness campaigns to educate companies about the benefits of hiring qualified employees, pointing out that their disability is not an impediment to effective performance in stressful environments, nor does it hamper the development of professional responsibilities. For employability programs that target disabled people, it is not enough to recruit employers as possible sources of jobs, which the Foundation also does. It is necessary to change the perception of the types of jobs they can do. As one of the trainees explained, “I don't want any job, I want a challenging and rewarding one.”

On the disabled people front, the Foundation promotes among the beneficiaries a culture of professionalism and “active minds” – as one of the counselors described it. For the disabled, the best promotion campaign can be the employment of beneficiaries in positions that were previously outside of their perceived boundaries. For many disabled people, especially older generations, it is not uncommon to believe that they don't have the right to work. The Foundation feels that it needs to constantly remind people about this right. The training programs are challenging and thorough (the ECDL training is 140 hours long), and embedded within them is the value of professionalism and the expectation of obtaining a “normal” job. As one of the trainees stressed, “I don't want special training or special treatment, I want specialized training. One that allows me to constantly challenge myself. One that pushes me to want to get to the next level. I don't want to feel special, I want to feel specialized.”

Supply-Based Approaches

When addressing the needs of the unemployed, and the needs of the marketplace, e-skills training programs often face a choice: offer training to a particular audience in need of work, or offer training for a particular industry in need of workers? These two approaches are described as a choice because there is often competition for resources – only so much money and time and telecentre space is available, and it must be dedicated in a particular direction. In the case of retraining the unemployed teachers in Bulgaria, a supply-side approach is used. There is a large supply of unemployed teachers, and with the proper retraining in e-skills many will be qualified for a variety of jobs. When such programs are supported by local labor offices, they seem to be the more cost-effective and efficient choice: the labor office funds the training and provides the students, the NGO delivers the training. The results, however, are more tenuous. There is no specific factory,

or firm, standing at the ready, waiting for the graduates – with their e-skills and certificates in hand – ready to work. The job search only just begins.

Nonetheless, because many of the NGOs studied also use integrated approaches, the telecentre (and its management, trainers, and fellow graduates) is often a source of continuing support. Some of the interviews with the newly employed were conducted amongst current or former classmates, and more than once a student who had gotten a job sat with another who had not yet, but was still searching. The graduates continued to provide encouragement and tips to one another even during the interviews. Telecentre managers regularly refer to their centers' role as an ongoing "help desk" or resource to graduates, assisting them with resume-writing and social networking as long as the assistance is needed.

Demand-Based Approaches

For demand driven training programs, however, the result of the training is more assured: specific employers have requested training, and they await the graduates' readiness. The difficulty with demand-side training programs is the search for prospective students. Often there is not a perfect match between the unemployed and the type of skills desired. According to the manager of the Vratsa Labor Office in northwest Bulgaria, there is a strong demand for certain types of skills in the near term: road workers and welders, for example. This is not to say that e-skills are not needed, but that they are not usually needed immediately, nor in discrete and identifiable "batches." E-skills are needed everywhere, in nearly every line of work, and they are general and necessary skills for advanced 21st Century job effectiveness. However, requests from firms to labor offices don't usually come in this way – HR departments don't usually approach labor offices and ask for more ordinary workers with e-skills.

Naturally there are some exceptions. Occasionally employers do make such requests, and they are often looking for a particular set of workers with certain skills or from a certain background. In these cases ICT training programs fill the need. In Sannicolau, Romania, for example, the manager of the Delphi automotive factory is looking for forty Roma employees to work on the factory floor. If he hires a percentage of Roma staff his company receives a valuable tax break, so the manager has been asking the local EOS partner to offer e-skills training for Roma youth. In Latvia, Apeirons – an NGO that works with disabled people – was approached by Mebius IT, an IT company, to offer advanced ICT training (database programming) for fifteen trainees. This advanced ICT training would open employment opportunities in the IT sector for the beneficiaries. During the visit

to Apeirons' telecentre in Riga, this training was underway and there was an opportunity to interview two of the beneficiaries attending the training. Both had graduated from the Microsoft UP Community Learning training a year ago and were working as trainers for the NGO. They mentioned the importance of acquiring basic and intermediate e-skills as a springboard to more advanced training, and the contribution of these skills to lifelong learning and the opportunity of a professional life. The demand for skilled workers is growing fast in Latvia. This demand, combined with changing perceptions of disabled people in the labor force, and government tax breaks for companies that hire them, are all aligning to make the job market more welcoming for this target group. These factors also converged in the Czech Republic, where IBM recently sought out PCs Against Barriers to provide ICT training to twenty people with disabilities for needed positions. The Barriers program was able to fill eleven of the slots.

Organizations actively engaged in promoting their work and their trainees in the labor market build confidence and credibility in government and private sector circles. This credibility is further extended when the quality of the trainees is high and employers find in the organizations a readily available wellspring of other human resources. As one of the program directors for the Foundation in Poland stated: "The quality of our trainees is our best promotional campaign among employers."

While these examples are an important and growing sector of demand-side ICT training, in most cases the demand-side approach from businesses and government is not to ask for unemployed workers who have new skills. Instead, demand-driven training typically comes in a different form: businesses and government request that ICT programs train *current* employees to improve their e-skills, and they do so by the tens of thousands. In the following section, this important part of demand-side ICT training will be viewed through the lens of increased productivity.

D. DRIVING GROWTH: ROLE OF E-SKILLS IN INCREASING BUSINESS, GOVERNMENT, AND SOCIAL PRODUCTIVITY

Here the study's themes shift from discussion of e-skills training as a response to unemployment, and move on to another major area of e-skills and employability: the impact of e-skills training on productivity. Although the scope and reach of the study doesn't allow for precise calculations of productivity gains due to e-skills training, it is nonetheless relevant to discuss in general terms its concrete contributions to the different kinds of productivity. In this area, the emergent themes point at the

development of e-skills as a significant driver of business, government, and social productivity. The question of get-training-find-a-job is also a significant part of the productivity story. But a very large area of e-skills training – indeed, in some programs it is the lion’s share of such training – is to use e-skills to improve the overall productivity of all beneficiaries, and thus, of the broader society.

Business Productivity

As described in Part 1 of this study, the European Union strives to become the world leader in the knowledge economy, and all member states – old and new alike – are taking steps to achieve this goal. Just as in the broader EU, in Central and Eastern Europe business productivity is an important part of that economic goal, and the success of businesses in a global environment is increasingly tied to the workers’ possession of e-skills. Speed, efficiency, and flexibility are expectations of modern businesses, and – especially for the foreign investors in the CEE10 – the fruits of e-skills are an important part of the business equation. Throughout this study, it became more and more evident that NGO-delivered ICT training programs are key components in the effort to enhance business productivity. Several examples follow.

In the town of Brad, Romania, the HR manager at the local textile factory started noticing that her fellow office workers, and the new hires, were developing more and more e-skills. She learned that the reason was ICT training at the local telecentre – Association Maria – so she signed up for her own training program. Soon the HR manager was not alone. The factory manager decided to offer to pay for these e-skills retraining courses, and give workers time off to take them. According to the manager of the 600 worker strong factory, the e-skills are “a big help, the labor for the factory was unskilled” before. The economic impact: “there was an increase in production,” according to manager who has directed the factory for eight years. The actual rate of textile fabrication did not increase, but the speed and efficiency of distribution did. The result is that the factory can hire more workers, explore new markets, or make other innovations. The economic impacts are not only for the community of Brad, but in the global marketplace they can have a wider reach. The Romanian textile factory operates with investment from Italy and Holland, and the result of increased productivity can include broader business confidence in Brad as a region and in Romania as whole.

Like in many factories, about 20% of the employees at the textile plant in Brad are office workers and they especially need modern ICT training. But at some factories, such as the Delphi automotive parts plant in Sannicolau, Romania, e-skills are necessary for line workers too. During a tour of the enormous facility that is

home to constant eight hour shifts performed by some 4000 line workers, it was clear that e-skills are essential to the lightening quick labor on the factory floor. Several of the assembly positions were driven by computers, one such position had sixty PCs governing its quality control of automotive electronics. With three shifts, that's 180 line workers – or “direct workers,” in Delphi parlance – needing advanced e-skills just to operate one part of the assembly floor. The Delphi director explained that there is especially a “deficit” of e-skills among the “indirect workers,” or office staff. The director currently manages two Austrian-based Delphi factories in Romania, and wishes to open a third. To do so, he must increase productivity. One strategy is a partnership he has developed with a local university called Aurel Vlaicu, where his business supports e-skills development. Another is through the local EOS partners, who have trained some of his staff through their several programs. One young woman who completed the full eight-module Microsoft UP Community Learning curriculum did so just to avoid the grueling line work at the factory. Her investment was worthwhile: she scored an indirect worker position (office staff) and now gets paid twice as much as the line workers without the heavy manual labor. For her, a new job. For the factory, increased productivity.

The relationship between e-skills training and economic productivity was also evident in the case of farmers in Preili, a small town in the southeast of Latvia. As in many other rural areas in Central and Eastern Europe, agriculture is the main activity driving the economy of these towns and employs a high percentage of the workforce. The accession to the European Union had a dramatic impact on small and medium size farms, many of which were not prepared to compete with major agro-businesses. LIKTA, through a local partner, the Society Preili NGO Center, implemented a training program specially tailored to help farmers improve the management and accounting of their farms. The NGO trained the farmers in spreadsheets and other accounting software to keep accurate inventories and harvesting quantities. Probably most important, farmers learned how to use the Internet to apply for government contracts. Many of the government services in Latvia have migrated to online platforms, and the lack of access to and knowledge of ICT really limits the possibilities for growth for small farmers. With organic and eco-friendly agriculture quickly developing in the region, farmers can take advantage of ICT to expand their businesses and feed a European society growing increasingly hungry for organic and natural products. This competitive advantage for Preili farmers can be exploited with access to and knowledge of ICT.

Government Productivity

While the business world benefits from the increased skills of its workforce as a result of trainings offered by NGO ICT development programs, so too does the work of government. Economic development goes hand in hand with good governance: the more trustworthy and efficient a government becomes, the more likely foreign investment will turn to that country; the more services a government can provide effectively to its citizens, the more their lives improve, their attitudes improve, and the more likely they are to stay and work for their home country rather than emigrate abroad. As the CEE10 have entered the EU, the retraining of the state administration has become a priority. For newer entrants such as Romania and Bulgaria, this retraining of state workers is a major thrust of NGO ICT programs.

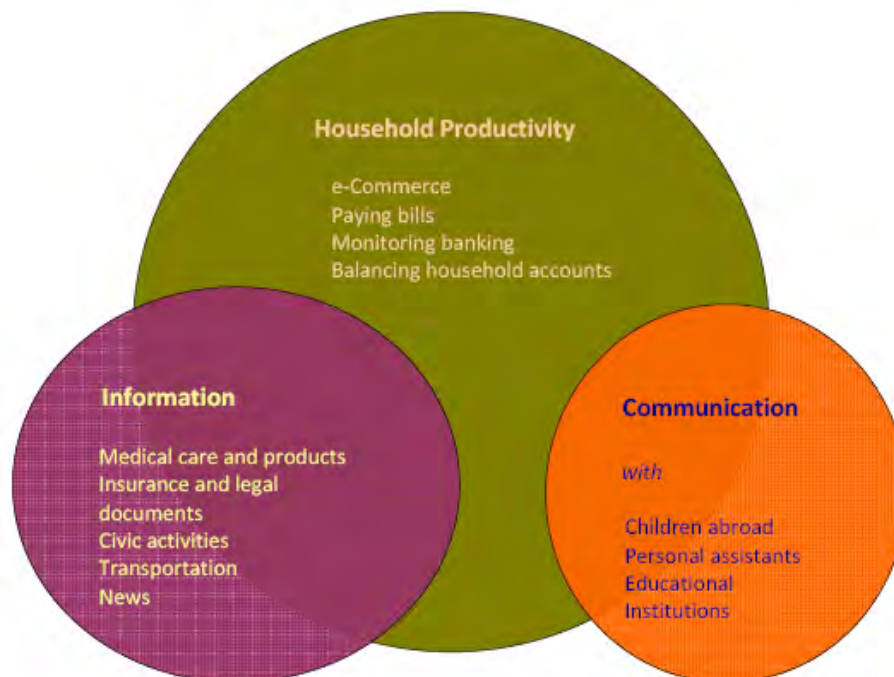
In Romania, a significant focus of the retraining of state employees is on currently employed teachers. Two elementary school teachers interviewed in the town of Aninoasa – women trained by an EOS partner telecentre – emphasized the importance of the new e-skills to their job performance. Although not explicitly mandatory, it is inevitable that the teachers must take ICT training courses one day soon: if not this year, or next, then in three or four years. Just to keep up with their students, the e-skills are essential. To keep their jobs, the teachers' personnel file must include evidence of ICT training and certification. According to the first and fourth grade teachers, the e-skills are necessary in two areas: first, to communicate with the school as staff members through email and the use of Word for documents; second, the e-skills are necessary to teach their students in the computer lab and to administer a required computer-based exam annually. Pressed on whether they could get away with not having taken the course, the teachers admit that they could always get an IT-savvy staff member at the school to help them. Pressed again about the lay-offs in the mining community, of which Aninoasa is a part, and asked whether they would really feel secure in their jobs if they had remained unskilled in ICT, they were silent. Then the fourth grade teacher said: "we need to keep up."

In Bulgaria, the 109-strong network of iCentres has embarked on an ambitious program to re-train tens of thousands of state administration workers. In the first two years of the program, the Bulgarian iCentres have trained over forty thousand state employees, and they hope to continue to train as many as 100,000 more in the coming years. The program involves a basic forty-five hour course, using the Microsoft UP Community Learning curriculum, and is offered to classes averaging about ten students (sometimes larger). Courses for higher e-skills are also offered to state employees: the intermediate course is 18 hours, the advanced course is nine hours. The state workers trained in e-skills are across the spectrum: customs officers, municipal workers, postal employees, firefighters, forestry workers, tax collectors, railroad workers, and education ministry

inspectors are a few groups who have been trained. A recent program that trained all one hundred town hall staff in the village of Mezdra resulted in a substantially improved municipal administration. According to the local telecentre manager, the chief secretary of the municipality reported that it is “easier to deal with her administrative responsibilities” now, and that “the quality of performance has improved a lot.” When asked how e-skills improve performance, the Mezdra telecentre manager explained that the impact on government efficiency and productivity is obvious: processing a citizen’s application form now takes seconds when it used to take fifteen minutes.

As the new EU member states complete their transition into the Union, their businesses and the governments must be able to compete with all other member states, while also providing equivalent services to their own citizens – as well as to the citizens of other EU members who visit and work in Central and Eastern Europe. These e-abilities of government are a significant part of the meaning of “the world leader in the knowledge economy” as pronounced in Lisbon. Beyond business and government productivity, there is one more area that is enhanced especially by NGO ICT development programs: social productivity. A truly ICT proficient society needs a labor force that is e-skilled not only “on the job” in firms, farms, and government offices, but also “on the job” at home and out in the world.

e-Skills Bolster the Social Productivity of People with Disabilities, Pensioners and Senior Citizens



Social Productivity

This study has offered a broad view of the relationship between NGO e-skills training programs and employability, covering traditional employment, self-employment, SMEs, improvement of current job skills, and the effects of e-skills on business and government productivity. Beyond these traditional areas of work and productivity, however, there is the broader question of the qualities of labor in the knowledge economy. As argued earlier, “work” in the 21st Century is more than just “jobs.” Employability in the information society concerns *the ability to participate* in the economy – wherever and whenever it presents itself. As the EU Commission emphasizes: “e-inclusion refers to the extent to which information and communication technologies help equalize and promote participation in society at all levels by enhancing social relations, facilitating economic opportunities for work and entrepreneurship, developing cultural aspects of society, and encouraging civic participation”⁴⁶. One senior citizen in Poland expressed what many, many other training program participants also expressed: “I need to feel relevant, I need to learn how to use online banking, email, etc., in order to survive in this connected world.” Indeed, social productivity is increasingly reliant on e-skills, and the knowledge economy is increasingly reliant on this modern social productivity. The findings which follow explore the role of e-skills in increasing social productivity at home, out in the world, and over time.

The contributions of e-skills to social productivity are sometimes instant, and sometimes slow. Many of those receiving e-skills training do not immediately go out and find jobs, yet their daily labor is significantly impacted by their new e-skills. As one Czech trainer put it: “it is a marathon, not a sprint.” In the Czech Republic, three interview subjects provided compelling testimony of how their social productivity dramatically improved with their new e-skills.

One beneficiary, a telecentre manager in Prague, describes how “work from home doesn’t just mean work for money, it means being in touch, using the ‘work center’ in my home for paying the bills” and coordinating daily duties. This telecentre manager has a form of cerebral palsy that requires a great deal of attention to detail in order to complete ordinary activities, activities that others would take for granted – such as getting dressed, or speaking. Through his use of e-skills developed at his telecentre, this manager, and thousands of other people with disabilities involved in ICT trainings in the five countries studied, have more valuable labor skills. These skills translate into valuable “work”: household work necessary for daily survival, such as banking and paying the bills, arranging transportation, coordinating with personal caregivers, and shopping through the use of e-commerce.

A second telecentre beneficiary from Prague describes the revolution that occurred when she applied her e-skills to her in-home care of her teenage son who is deaf and mentally disabled. For eight years it was extremely difficult to teach her son sign language because his dual disabilities prevented him from grasping abstract concepts, rendering the fundamentals of communication nearly impossible. Then, through her new e-skills, she was able to take digital photographs of objects in the world, capture them on her computer, and combine them with text in Word documents. The result: “this year is dramatically different than before, his vocabulary is increasing incredibly.” She can barely contain herself when discussing the impact on her daily labor. Her “work life” is dedicated to her son. She teaches him, cares for him, takes him to a private school once a week, and to the doctor regularly. Before when he visited the doctor he was terrified, and would throw fits because he was confused. He did not understand where he was going or what he was doing, he couldn’t remember. Now with the assistance of his mother’s new e-skills, he is calm. He sees the photo of the doctor’s office, he remembers the Czech word *doktor*, and together they set out on their visit. To say that this is not substantial improvement in the “work life” of this ICT graduate and her son would be to divorce the meaning of labor from the word work.

A retired Czech man in his late 70s provides the third typical – albeit less dramatic – example of the daily labor benefits of e-skills. Like many Czechs, he does not have Internet access at home. But he does have an early model laptop, and he uses his new e-skills to do “all of the normal paperwork you need” as part of the regular life of a pensioner. He keeps track of his medication schedule, his household bills, his health insurance payments, his doctor visits, car repairs, and his shopping needs – shopping he often does through e-commerce with the assistance of his daughter-in-law. Although this ICT graduate doesn’t have Internet access at home, his daughter-in-law does, and when he visits she helps find the best bargains online to help stretch his monthly pension check. He finds this world of e-skills such a windfall for his daily labors that he is now taking an advanced ICT course at his old telecentre.

These three examples of increased social productivity from the Czech Republic are mirrored by testimony from countless other program participants across the five countries studied. The comments share a common theme: they are expressions of a newfound ability to participate in the information society. Although relevant for Europeans of all ages and abilities, the e-experience of senior citizens is particularly illustrative to larger economic forces underway in the CEE10. Under the e-inclusion framework of the European Union, the promotion of active aging and social inclusion of seniors and retired pensioners is one of the building blocks behind the effort to build an inclusive European information society. The e-skills training program provided by the NGOs included in this research contributes towards this goal. One of the significant motivations for the

senior citizen beneficiaries interviewed is dealing with the problem of the massive migration of workers from Central and East European countries, primarily labor migration to the UK, Belgium, and Ireland. This is particularly true in Poland and Latvia, but is also the case across the CEE10.

The migration is damaging local economies (many of the people migrating are highly-skilled workers), and separating families – something especially worrisome in countries where the family is the center around which the whole society revolves. For seniors and older people fighting the feeling of social isolation and separation from their families, learning basic e-skills is not only a need but a question of survival. During group interviews with seniors and pensioners, almost all of them said that one of the biggest contributions of the training program was precisely the possibility of communicating with their sons, daughters, and grandchildren living abroad. In the trainees' own words: "We are learning how to be alive, how to feel useful in this fast-changing world. We are learning how to be relevant within our family, how to be humans."

Conclusions

The role of NGOs in e-skills training programs cannot be sufficiently emphasized. Through their efforts to create new telecentres and breathe new life into existing ones, and through innovative partnerships, the NGOs have demonstrated a wide impact in three main areas: an ability to help the unemployed find jobs, a commitment to enabling the most marginalized people to reconnect with society, and success in boosting the productivity of businesses and government during the transition from communism to free market democracies. The contribution of their work extends far beyond the immediate benefits to the labor market or to the economy. Through their programs, NGOs reach sectors of society left behind by all the major transformations that the region is experiencing. NGOs, and their partners, truly function as catalysts for an e-inclusive society, for an inclusive European society.

Local and national governments, the private sector, the EU Commission, and other civil society organizations, also make an important contribution to e-inclusion initiatives and to the work of NGOs in this area. Local governments often support NGO e-skills training programs providing them facilities, infrastructure, financial resources, and by sending more trainees through telecentre doors. National governments ensure that e-inclusion remains a pivotal component of the political agenda, and lead different agencies to coordinate policies and support for the programs. The EU Commission, through the European Social Funds, brings much-needed resources to invest in e-inclusion, allowing the increase in scale and scope of the programs. Other civil society organizations bring to these programs strong social networks, and – when partnered with NGOs focused on e-skills training – the organizations create an enabling environment for these initiatives to succeed.

NOTES

¹ In addition to Cyprus and Malta, the first major wave of new entrants into the EU included eight Central and Eastern European nations: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia. Three years later the Balkan nations of Bulgaria and Romania joined the European Union.

² The European e-Skills Forum provides the following definition: “E-skills should encompass a broad set of skills necessary in the modern workplace. Successful innovation in ICT services requires cross-disciplinary, cognitive and problem-solving skills as well as an understanding of the fundamentals of business and communication skills, including competence in foreign languages. They should also be seen in the wider context of a core set of competences equipping all European citizens for the knowledge-based economy and society.” The full document is available at <http://ec.europa.eu/enterprise/ict/policy/ict-skills.htm>

³ The background section of this study reviews the major ICT and employment studies from the European Commission, the World Bank, and several related white papers sponsored by the European Union.

⁴ For a review of ICT training practices in an international development context, see Maria Garrido, Chris Coward, and Andy Gordon, “ICT Training for Disadvantaged Populations: the Importance of Tailoring to the Local Context,” *Center for Internet Studies Working Paper Series*, Seattle: University of Washington, June (2007). An example of the importance of the learning theory approach is seen in the particular tendencies of receiving ICT training in the EU: in Eastern and Western European countries alike, by far the most likely method of obtaining ICT training is through either self-study (58%) and informal assistance from colleagues, relatives and friends (59%). Without awareness of this trend, training practices may not maximize their resources and best reach their target groups. See: Eurostat, “How Skilled Are Europeans in Using Computers and the Internet?,” *Statistics in Focus*, 17 (2007): 6. Regarding the phenomenon of “wraparound” and the emphasis of multiple care approaches in a youth context, see Bruns, E.J., Rast, J., Peterson, C., Walker, J., Bosworth, J. “Spreadsheets, Service Providers, and the Statehouse: Using Data and the Wraparound Process to Reform Systems for Children and Families,” *American Journal of Community Psychology*, 38 (2007): 201-212.

⁵ See the “Country Reports” on Bulgaria, Czech Republic, Latvia, Poland, and Romania for 2007 and 2008 published by the Economist Intelligence Unit, www.eiu.com, accessed January and February 2008. For an in-depth assessment of the final ICT benchmarks met by the CEE8 prior to accession in 2004, see Danish Management A/S, *Central and East European Information Society Benchmarks: Summary Report*, September (2004). A specific focus on the barriers to youth and employment in South Eastern Europe can be found in Gloria L Cava, Paula Lytle and Alexander Kolev, *Young People in South Eastern Europe: from Risk to Empowerment*, Washington D.C.: The World Bank, February (2006). For a discussion of the psychological effects on post-totalitarian societies, including Post-Traumatic Stress Disorder, see: Toma Tomov, “Psychoanalysis in a Post-Totalitarian society,” *Human Relations, Authority and Justice*, <http://www.human-nature.com/hraj/ttapsa.html>, accessed on February 10, 2008.

⁶ For more analysis on sampling and other field methodology appropriate for the international development area, see: Joachim Theis and the Regional Working Group on Child Labor, *Handbook for Action-Oriented Research*, Bangkok: RWG-CL, (2002).

⁷ See Philippe Bautier, “GDP Per Capita in 2004: GDP Varied by One to Five across the EU25 Member States,” *Eurostat News Release* (2005) 75: 1.

⁸ Perhaps the most instructive description of the effect of the Ceausescu regime is the final reaction of the Romanian people to its rule: mere days after the Romanian revolution succeeded in ousting Ceausescu in late 1989, he and his wife and son were executed on live television by a firing squad on Christmas Day.

⁹ Douglas A. MacGregor, "Uncertain Allies? East European Forces in the Warsaw Pact," *Soviet Studies*, 38 (1986): 227-247.

¹⁰ Interview with Svatopluk Manda, 23 March 2008, Hradec Kralove, Czech Republic. Mr. Manda was one of the 11,000 Czech army officers and state police to refuse to affirm the justification of the invasion by the Warsaw Pact armies, and was rewarded with a new employment position: years of shoveling coal in the basement boiler room of a lakeside resort for party members.

¹¹ Joanna Roszkowska, "The Creation of Civil Society in Poland in comparison with other European Countries", University of Szczecin, November 2004.

¹² See the European Commission study produced by the European E-Skills Forum, "E-Skills for Europe: 2010 and Beyond," *Synthesis Report*, September (2004): 4. The EC study explains that the "use ICT throughout the value chain contributes to improved business performance and trends suggest that ICT will continue to be a driver of growth." European E-Skills Forum, 4. Further, the 2005 ICT and employment study by the Organization for Economic Co-operation and Development described the connection between ICT skills and the value of labor as "robust," concluding: "value added per employee tended to be associated with a share of ICT-skilled employment." Desiree van Welsam and Graham Vickery, "New Perspectives on ICT Skills and Employment," *Working Party on the Information Economy*, April 22 (2005): 19.

¹³ Danish Management, *Central and East European*, 1.

¹⁴ <http://gospodarka.gazeta.pl/gospodarka/1,60070,4869292.html>

¹⁵ <http://gospodarka.gazeta.pl/technologie/1,82008,4913119.html>

¹⁶ A quick look at the map of South Eastern Europe reveals the international travel difficulties that faced Bulgarians during the war years. Much of the initial spark for development in Central and East European countries came from one-on-one, face-to-face exposure with Westerners, and from these encounters began the informal exchanges that led to firmer footing in the market: new practices such as customer service, new knowledge about culture and history, and new products and hard currencies that begin to be imported and which have dramatic effects on consumers. In Bulgaria, and to a large extent Romania as well, the door to West which was opened just a crack in 1989 and 1990 was quickly slammed shut until the end of the NATO-Serbia war in 1999.

¹⁷ *Economist Intelligence Unit*, "Latvia: Country Report," www.eiu.com, January (2008): 11.

¹⁸ Tim Allen and Louise Corselli-Nordlad, "Youth Summit in Rome," *Young Europeans Through Statistics*, Eurostat Press Office, <http://ec.europa.eu/eurostat>, March 23 (2007).

¹⁹ Else Rose Kuiper, Mara Jakobsone, et al, "Vit@al Society: The New Social use of ICT", EQUAL project, Riga, April (2006): 20-21.

²⁰ ICT Skills Monitoring Group, *E-Business and ICT Skills in Europe; synthesis Report*, June (2002): 7.

²¹ ICT Skills Monitoring Group, *E-Business*.

²² Ibid, 26.

²³ Ibid.

²⁴ van Welsam and Vickery, "New Perspectives," 19.

²⁵ Ibid.

²⁶ Eurostat, "How Skilled," 3.

²⁷ Ibid.

²⁸ Danish Management, *Central and East European*.

²⁹ See: Allen and Corselli-Nordlad, "Youth Summit"; Eurostat, "How Skilled."

³⁰ Ibid.

³¹ Eurostat, "How Skilled."

³² Allen and Corselli-Nordlad, "Youth Summit," 10.

³³ Ibid.

³⁴ Eurostat, "How Skilled," 6.

³⁵ Ibid.

³⁶ Interview with Iva Hausvaterova, Internal Communications Manager, Microsoft Czech, December 9, 2007, Prague, Czech Republic.

³⁷ The flagship USAID project in Bulgaria, the Judicial Strengthening Initiative, focused one third of its project tasks either directly on grants to NGOs or on NGO partnerships to support task areas. In three years, over fifty NGOs received over 1.5 million dollars to bolster rule of law initiatives developed with governmental institutions.

³⁸ In a suburb of Prague in the Czech Republic the Paraple training center offers focused care and rehabilitation programs to meet the specific needs of paraplegics. The center offers an array of ICT courses. In Bulgaria Foundation Horizonti focuses on the specific needs of the blind, and develops specialized software and curriculum to this end. In Romania, EOS has an important re-training program in regions hard hit by the unemployment due to industrial layoffs.

³⁹ Tim Allen and Christophe DeMunter, "More than a Third of EU25 Population Have No Basic Computer Skills: Large Differences Between the Generations," *Eurostat News Release*, June 20, 2006. See also: ICT Skills Monitoring Group, *E-Business*, 19

⁴⁰ Danish Management, *Central and East European*, 14.

⁴¹ Gordon Betcherman, Martin Godfrey, Susana Puerto, Friederike Rother and Antoneta Stavreska, *Global Inventory of Interventions to Support Young Workers: Synthesis Report*, Washington D.C.: The World Bank, July (2007) 47.

⁴² The Unlimited Potential (UP) Community Learning Curriculum was developed by Microsoft Learning in 2003 to support basic and intermediate ICT training in community centers. It is available in twenty-two languages and can be freely downloaded from its website. The curriculum contains eight modules that can be adapted by the NGO at will. In addition, the curriculum offers a set of notes for instructors and students and some learning assessment tools. For further information:

<http://www.microsoft.com/about/corporatecitizenship/citizenship/giving/programs/up/curriculum.msp>

⁴³ Else Rose Kuiper, Mara Jakobson, et al, "Vit@al Society: The New Social use of ICT", EQUAL project, Riga, April (2006): 20-21

⁴⁴ The figure of 20-30% employment is derived from field interviews with several individuals at several different NGOs and telecentres in Central and Eastern Europe. Those interview subjects include: a PCs Against Barriers trainer, Prague, Czech Republic; a PCs Against Barriers student, Prague, Czech Republic; a Bulgarian iCentres telecentre manager, Gabrovo, Bulgaria; a Bulgarian iCentre telecentre manager, Veliko Tarnovo, Bulgaria; the Bulgarian iCenters executive secretary. The percentage of new job placement assumes that the training provider is a veteran organization (has been established for at least three years), the employed person was previously unemployed, and the number assumes programs directed at employable individuals. The definition of "employable" tracks the local understanding used by social services agencies in the CEE10, meaning that it excludes persons over age sixty, mothers with young children, the homeless, and persons with severe physical or mental disabilities. Some veteran organizations also report strong jobs results among those who might be defined as "unemployable," including the Paraple training center in Prague, Czech Republic, which concludes that between 20-30% of its disabled ICT students get jobs after completing program courses.

⁴⁵ Documents provided by the Foundation to the CIS researchers.

⁴⁶ Commission of the European Communities, "*European i2010 Initiative on e-Inclusion: To Be Part of the Information Society. Impact Assessment*". COM (2007), 694 final SEC (2007) 1470, Brussels (2007).

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E-Skills & Employability NGO Profile*

NGO Profile

# telecentres	1
E-skills courses	4+
E-skills certification	3

Country Profile (2007)

EUROSTATS (2007)

DEMOGRAPHICS

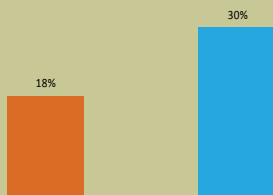
Population (million)	2.2
Unemployment rate (%)	5.9

INFORMATION SOCIETY

INDICATORS (% of total pop.)

Level of Internet access (%)	51
% Households w/Internet	51
% of people who used the Internet in the last year	59
% of people who used Internet in the last 3 months	56
% of individuals who have used a search engine to find information	58
% of individuals who have sent and email w/attached	48
% of individuals who have used the Internet to make phone calls	21
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	33
Students	19
Retired/Inactive individual	12

E-Government availability and usage



Latvia

The Organization of People with Disabilities and their Friends (APEIRONS)

CONTACT INFO

Phone: 371 7 299277
E-mail: info@apeirons.lv
Web site: www.apeirons.lv

April 2008

Organization Profile: E-skills & Employability

NGO Mission

The purpose of the organization is to promote the independence and integration of people with disabilities into society. It is dedicated to creating a more positive image of persons with disabilities, developing a more accepting attitude towards them and facilitating equal opportunities for disabled members of society.

APEIRONS was officially registered as a NGO in 1997, though it has been in operation since 1994. Since its founding the organization has been committed to the principle that all people are equally important and none should be relegated to a position of powerlessness on the basis of disability.

Through the OPEN DOOR initiative, the organization is creating educational, employment and social opportunities for disabled people by providing free access to computers, computer literacy, and IT skills development.

APEIRONS also assists policy makers to include disability perspective in government programs.

E-skills training

- Basic e-skills
- Intermediate e-skills
- Advanced e-skills

E-skills training materials and certifications

- ECDL (European Computer Driver License)
- Microsoft Unlimited Potential Community Learning
- Oracle Database Programming
- LIKTA Basic skills for Information Society in Latvian and Russian

Other training & services

- Public awareness campaigns to increase understanding of disability issues and the needs and abilities of disabled people
- Consulting services for

companies that want to make office spaces accessible for disabled people

- Human rights monitoring and protection
- Employment services: Business startup and management, job search skills, and CV development, etc.

Some Partners

GOVERNMENT | The Ministry of Welfare brings APEIRONS' expertise to promote accessibility policies. The University of Latvia's Computer Department provides free ECDL training and certification.

OTHER NGOs | LIKTA and its NGO partners

PRIVATE SECTOR | Microsoft Latvia, different employers that are part of the interactive job database the organization manages.

Target Groups

Physically disabled people (young and adults)

CIS Research Activities during field visit

Date of visit: February 2008

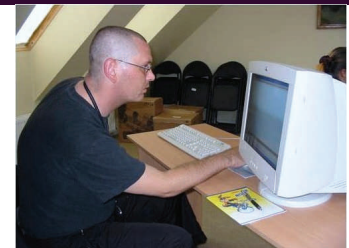
Partner NGOs Visited | 1

Telecenters Visited | 1

Telecentre, Riga

Interviews conducted

Beneficiaries	3
NGO Trainers & Staff	4



Through its training programs and awareness campaigns APEIRONS promotes equal opportunities for disabled people in the working places.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



Foundation Charta 77

CONTACT INFO

Phone: (+420) 224 214 452
Email: charta@bariery.cz
Web site: www.bariery.cz

E-Skills & Employability NGO Profile*

NGO Profile

# telecentres	15
E-skills courses	4
E-skills certification	1

Country Profile (2007)

EUROSTATS (2007)

DEMOGRAPHICS

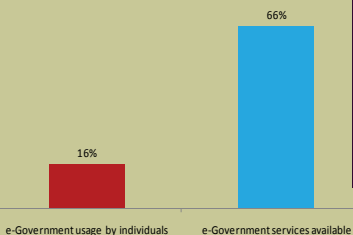
Population (million)	10.2
Unemployment rate (%)	5.3

INFORMATION SOCIETY

INDICATORS (% of total pop.)

Level of Internet access (%)	35
% Households w/Internet	35
% of people who used the Internet in the last year	34
% of people who used Internet in the last 3 months	49
% of individuals who have used a search engine to find information	50
% of individuals who have sent and email w/attached	49
% of individuals who have used the Internet to make phone calls	17
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	66
Students	9
Retired/Inactive individu-	5

E-Government availability and usage



April 2008

Organization Profile: E-skills & Employability

NGO Mission

The Charta 77 Foundation was created in 1978 in Stockholm and since 1989 has been working in Prague. Its activities have been focused on support for medical, social and cultural humanitarian projects to help develop human society.

An important aspect of Charta 77 is their support of disabled people. The goal is to provide disabled citizens with ICT skills and infrastructure to give them a chance at an equal social, economic and cultural life. Providing e-skills will help clients with the use of computers in the profession and help them find employment.

The organization offers scholarships to disabled students. They also help families of disabled people with funding to purchase tools & necessary services that allow the health-impaired to gain necessary employment skills. Charta 77 also supports schools and social welfare organizations with the latest ICT.

The organization has been running the BARRIERS account, one of the largest charities in the Czech Republic to help remove the barriers from the lives of disabled people. Some examples of e-skills training and other services are below.

E-skills training

- Basic computer skills
- Office productivity
- Basic application development
- Network administration
- Basic app. development
- Web development
- Java, PHP, Corel, Photoshop, Illustrator

E-skills training materials and certifications

- ECDL certificate
- Specialized handbooks "Using Word without Hands" manual, e.g.

Other training & services

- Physical rehabilitation
- Housing and child care

Some Charta77 Partners

COMPUTER HELP | Microsoft certified partner which created the e-learning center. It also assumed the role of certifying authority in the IT courses.

AUTOCONT ONLINE | Institution providing hardware equipment for the classrooms and for the portal.

EMWAC GROUP | Responsible for the creation of portal contents.

Target Groups

Young adults from ages 16-35, of all genders, disabled people, seniors, unemployed people.

CIS Research Activities during field visit

Dates of visit: December 2007 and March 2008

NGOs Visited | 5

Telecenters Visited | 5

Paraple, Prague
Elpida, Prague
Zeleny Ptak, Prague
Zivot bez Barrier, Novo Paka
Paracentrum Fenix, Brno

Interviews conducted

Beneficiaries 9
NGO Trainers & Staff 13
Employer 1



PCs against Barriers has brought e-skills to people with disabilities in the Czech Republic changing thousands of lives.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



**E-Skills & Employability
NGO Profile***

NGO Profile

# telecentres	22
E-skills courses	4+
E-skills certification	4

Country Profile (2007)

EUROSTATS (2007)

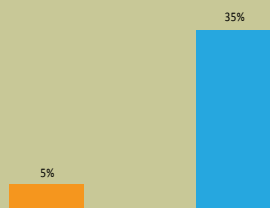
DEMOGRAPHICS

Population (million)	22.7
Unemployment rate (%)	7.3

INFORMATION SOCIETY INDICATORS (% of total pop.)

Level of Internet access (%)	22
% Households w/Internet	22
% of people who used the Internet in the last year	28
% of people who used Internet in the last 3 months	24
% of individuals who have used a search engine to find	23
% of individuals who have sent and email w/attached	21
% of individuals who have used the Internet to make phone calls	5
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	41
Students	9
Retired/Inactive individu-	10

E-Government availability and usage



Romania

**Educating for an
Open Society (EOS)**

CONTACT INFO

Phone: 0040 744 770687
Fax: 0040 256 498172
E-mail: office@eos.ro
Web site: www.eos.ro

April 2008

Organization Profile: E-skills & Employability

NGO Mission

The mission of EOS (Educating for an open society) in Romania is to bridge the digital divide by providing opportunities for all the members of society to acquire the skills and abilities required for information handling and knowledge creation, essential for participation in the development of democracy and open society, i.e. Knowledge Society. Social and economic development depends on the ability of individuals to access and exploit information in order to create and communicate knowledge.

E-skills training

- Basic computer skills
- Office productivity
- Teacher Training to use ICT in schools

E-skills training materials and certifications

- Microsoft Unlimited Potential Curriculum
- Microsoft Partners in

Learning Curriculum

- EOS ICT Teacher Training Curriculum
- UP Digital Literacy Curriculum
- Microsoft Official Academic Courseware Curriculum

Other training & services

1. In-Service Teacher Training Program (ongoing since 1998) is a training program dedicated exclusively to teaching staff in the pre-university education system.
2. Microsoft IT Academy Program (since June 2005) program started as a consequence of new challenges brought about by the ever changing job market.
3. Mobile Training Unit provides access to communities which are very remote geographically.
4. E-Chance Program provides e-skills to adults with little or no formal education to improve employability opportunities.

Some EOS Partners

NATIONAL CENTER FOR TEACHER TRAINING | An agency of the Romanian Ministry of Education and Research, EOS delivers ICT teacher training courses under the coordination of this agency.

MICROSOFT ROMANIA | EOS works in cooperation with the ICA-UP program to support underserved communities in Romania.

BRITISH COUNCIL, ROMANIA | Cooperation to support the development of Information and Knowledge Society in Romania, acting as moderator/facilitator during Towards an Information Society for All conferences.

Target Groups

Children/youth, unemployed people, general population, civil servants.

CIS Research Activities during field visit

Date of visit: February 2008

Partner NGOs Visited | 6

Telecenters Visited | 9

EOS Main Office, Timisoara
British Library Telecentre, Timisoara
Telecentre, Lupeni
Telecentre, Aninasa
Telecentre, Brad
Sannicolau network (4)

Interviews conducted

Beneficiaries	9
NGO Trainers & Staff	13
Gov. Official	1
Employers	3
Focus Group w/35 telecentre managers	1



EOS supported telecentres address critical sectors of the unemployed, like the hundreds of miners retrained for a new chance in the workforce.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



E-Skills & Employability NGO Profile*

NGO Profile

# telecentres	2
- Regional Centers for 2008	40
- Support for e-Centrum	340
E-skills courses	2
E-skills certification	1

Country Profile (2007)

EUROSTATS (2007)

DEMOGRAPHICS

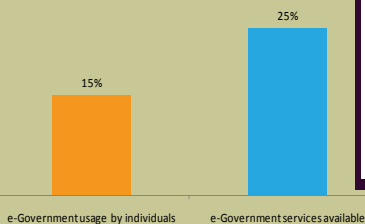
Population (million)	38.5
Unemployment rate (%)	9.6

INFORMATION SOCIETY

INDICATORS (% of total pop.)

Level of Internet access (%)	41
% Households w/Internet	41
% of people who used the Internet in the last year	41
% of people who used Internet in the last 3 months	44
% of individuals who have used a search engine to find information	48
% of individuals who have sent and email w/attached	35
% of individuals who have used the Internet to make phone calls	15
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	48
Students	13
Retired/Inactive individual	12

E-Government availability and usage



Poland

Foundation Supporting Physically Disabled Mathematicians and IT Specialists

CONTACT INFO

Phone: 48 22 848 98 21
E-mail: fpmiinr@idn.org.pl
Web site: www.idn.org.pl

April 2008

Organization Profile: E-skills & Employability

NGO Mission

The organization's main mission is to foster professional and social development of people with physical disabilities. Currently, the Foundation has 2 operational telecentres in Warsaw and is expanding the network with 40 regional rural centers around the country. In partnership with other entities (Microsoft Poland, ECORYS, Ministry of Education, etc.) the organization received resources from the European Social Funds to set up 340 e-Centrams in rural areas of the country. As its name suggests, the Foundation was created in 1990 as an initiative of the Polish Academy of Science to improve the technical IT knowledge of scientists with disabilities. One must remember that in the early 90's personal computers were prohibitively expensive and the goal was to provide the computers for the scientists. As the initiative matured, the Foundation realized that the demand in the labor market for scientists was

quite high and decided to broaden the scope of the program to reach the general disabled people population.

E-skills training

- Basic e-skills
- Intermediate e-skills
- Advanced e-skills

E-skills training materials and certifications

- ECDL (European Computer Driver License)
- Microsoft Unlimited Potential Community Learning
- EduK On-line: e-learning platform with 10 courses, including a two-year Graphic Designer Program

Other training & services

- *Counseling*: free of charge face-to-face, e-mail or phone counseling offered to disabled people who are seeking a place in the labour market.
- *Employment services*: the labor agency offers services

for both job seekers and employers

- Training and Workshops: for starting a SME, managing a small business, etc.

Some Partners

EUROPEAN UNION | European Social Fund.

GOVERNMENT | The State Fund for the Rehabilitation of Disabled Persons. The National Bank of Poland and local governments.

OTHER NGOs | The Kronenberg's Foundation, the Bathory Foundation, ECORYS.

PRIVATE SECTOR | Microsoft Poland, different employers that are part of the active job database of the Foundation.

Target Groups

Physically disabled people (young and adults)

CIS Research Activities during field visit

Date of visit: February 2008

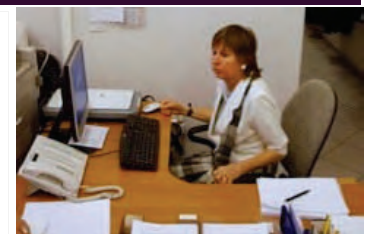
Partner NGOs Visited | 1

Telecenters Visited | 1

Telecentre, Warsaw

Interviews conducted

Beneficiaries	30
2 Group Interviews	
NGO Trainers & Staff	8
Partner NGO Staff	1



The Foundation promotes among its beneficiaries a culture of professionalism and "active minds", promoting self-esteem and combating prejudice against disabled people in the labor market.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



E-Skills & Employability NGO Profile*



Bulgaria

iCentres

CONTACT INFO

Phone: 359 2 949 2252
Fax: 539 2 949 2350
E-mail: info@icentres.net
Web site: www.icentres.net

NGO Profile

# telecentres	109
E-skills courses avail-	7
E-skills certification	4+

Country Profile (2007)

EUROSTATS (2007)

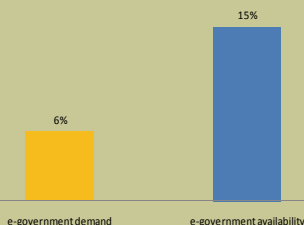
DEMOGRAPHICS

Population (million)	7.3
Unemployment rate (%)	6.9

INFORMATION SOCIETY INDICATORS

Level of Internet access (%)	19
%Households w/Internet	19
% people who used the Internet in the last year	34
% people who used Internet in the last 3 months	31
% of individuals who have used a search engine to find information	32
% of individuals who have sent and email w/attached	27
% of individuals who have used the Internet to make	16
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	38
Students	12
Retired/Inactive	10

E-Government availability and usage



April 2008

Organization Profile: E-skills & Employability

NGO Mission

iCentres was created in 2004 to narrow the gap between today's Bulgarian civil society and the information society, by improving the technological and informational skills of citizens and business in rural areas and facilitating the flow of information.

iCentres offer access to information, content and knowledge to the civil society in Bulgaria and allows the affordable distribution of educational, informational, and value-add services to citizens and businesses throughout the country. This contributes to increase the educational level of the society, further the standard of living, contribute to the development of the economy, and create new jobs.

E-skills training

- Basic computer skills
- Office productivity
- Network administration
- Hardware repair
- Basic app. development

- Advanced application development
- Web development

E-skills training materials and certifications

- Microsoft Unlimited Potential Community Learning
- CISCO Network Academy
- Edmit200 English for everyone
- Edmit200 Business English
- ECDL European Computer Driver License
- European Software Institute IT Card

Other training & services

1. Basic Internet services - basic services to access the internet and basic computer applications.
2. High quality continuous education - each iCentre is an educational center providing IT, local business, government and university distance learning courses.
3. E-Government Services - provide Government information and assistance

Some iCentres Partners

GOVERNMENT | State Agency for Information & Communication Technology. Provides government support and strategic planning.

EUROPEAN UNION | Institute for Public Administration and European Integration. Participates in the selection of trainees and the promotion of the training courses.

INTERNATIONAL ORG | United Nations Development Program. Aids with the implementation of the program "Job Opportunities" through business support.

OTHER NGOs | SOME NAMES

PRIVATE SECTOR | Microsoft Corporation. Contributed with a three-year grant to provide e-skills training to socially disadvantaged groups.

Target Groups

Children/youth, unemployed people, general population, civil servants, physically disabled.

CIS Research Activities during field visit

Date of visit:

Telecenters Visited | 7

Telecentre, Sofia
Telecentre, Vratsa
Telecentre, Mezdra
Telecentre, Gabrovo
Telecentre, Driavna
Telecentre, Simitli
Telecentre, Veliko Tarnovo

Local NGOs visited | 1

Bulgarian iCentres

Interviews conducted

Beneficiaries	10
NGO Trainers & Staff	15



Re-skilling the changing labor force is a key focus for the Bulgarian iCentres, including hundreds of unemployed teachers working toward a new profession.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



E-Skills & Employability NGO Profile*

NGO Profile

# telecentres	20+
E-skills courses	6+
E-skills certification	4+

Country Profile (2007)

EUROSTATS (2007)

DEMOGRAPHICS

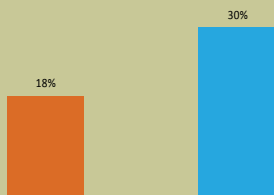
Population (million)	2.2
Unemployment rate (%)	5.9

INFORMATION SOCIETY

INDICATORS % of total population

Level of Internet access (%)	51
% Households w/Internet	51
% of people who used the Internet in the last year	59
% of people who used Internet in the last 3 months	56
% of individuals who have used a search engine to find information	58
% of individuals who have sent and email w/attached	48
% of individuals who have used the Internet to make phone calls	21
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	33
Students	19
Retired/Inactive individu-	12

E-Government availability and usage



Latvia

Latvian Information and Communications Technology Association (LIKTA)

CONTACT INFO

Phone: 371 7311821
E-mail: likta@dtmedia.lv
Web site: www.likta.lv

April 2008

Organization

NGO Mission

LIKTA is a professional association encompassing the ICT industry and ICT professionals. Established in 1998, the organization promotes the development of the information society, supports ICT education and digital literacy, and encourages the growth of the ICT industry.

The NGO represents over eighty organizational members from the ICT industry, research and educational institutions, and over 100 individual members (ICT professionals). LIKTA employs a total of twenty thousand people around the country. The Latvia@World Initiative was created with the objective to diminish the digital and social gaps in the country. Through this initiative, LIKTA and its partners provide opportunities to the general population for acquiring the skills needed for using computers and the Internet, regardless of age or social status. Within this initiative, LIKTA

provides training programs and pilot trainings for more advanced e-skills to more than twenty NGO partners around the country.

E-skills training

- Basic e-skills
- Office productivity
- Web development
- Advanced e-skills

E-skills training materials and certifications

- CEPIS/ECDL program
- LIKTA training in computer and Internet use (available in Latvian and Russian).
- Microsoft Unlimited Potential Community Learning.
- LIKTA specialized training: 1) Digital skills for SMEs; and 2) Digital skills for families.

Other training & services

LIKTA is collaborating with the national development programs, such as eLatvia and eGovernment. It organizes conferences,

seminars and monthly member meetings.

It also provides expert advice to governmental institutions on legislative and other matters related to ICTE (Information and Communications Technology and Electronics)

Some Partners

GOVERNMENT | Ministry of Social Welfare is strategic partner for LIKTA in implementing Latvia@World initiative and project.

OTHER NGOs | LIKTA partners with civil society organizations all over the country to provide e-skills training.

UNIVERSITIES | The University of Latvia provides ECDL (Europe Computer Driving License) program training and certification.

Target Groups

Unemployed people, rural populations, pensioners and elderly citizens, small and medium entrepreneurs, minorities.

CIS Research Activities during field visit

Date of visit: March 2008

Partner NGOs Visited | 2

Telecenters Visited | 2

Digital Centre, Ventspils
NGO Society Preili Telecenter, Preili

Interviews conducted

Beneficiaries	25
3 group interviews	
NGO Trainers & Staff	9
Librarians	6



Together with NGO partners, LIKTA provides opportunities for unemployed people to gain much-needed skills to re-enter the labor market.

* This NGO profile is meant to provide a snapshot of some of the organization's relevant activities and services, and is not intended as a comprehensive description of all the work of this organization.



E-Skills & Employability NGO Profile*

NGO Profile

# telecentres	6+
E-skills courses	2
E-skills certification	1

Country Profile (2007)

EUROSTATS (2007)

DEMOGRAPHICS

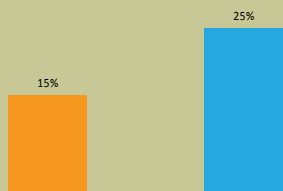
Population (million)	38.5
Unemployment rate (%)	9.6

INFORMATION SOCIETY

INDICATORS (% of total pop.)

Level of Internet access (%)	41
% Households w/Internet	41
% of people who used the Internet in the last year	41
% of people who used Internet in the last 3 months	44
% of individuals who have used a search engine to find information	48
% of individuals who have sent and email w/attached	35
% of individuals who have used the Internet to make phone calls	15
% of individuals who have used the Internet to look for a job or send a job application last 3 months	
Unemployed people	48
Students	13
Retired/Inactive individual	12

E-Government availability and usage



Poland

Responsible Business Institute (RBI)

CONTACT INFO

Phone: 48 22 48 94 210
E-mail: info@spolecznpracownie.pl
Web site: www.spolecznpracownie.pl

April 2008

Organization Profile: E-skills & Employability

NGO Mission

Instytut Odpowiedzialnego Biznesu (Responsible Business Institute - RBI) is an association and it undertakes a range of activities usually associated with training, consulting and research or "think tank" entities.

RBI provides modern strategies, tools, talents and IT solutions enabling NGOs to achieve better results. As a "think tank" RBI creates new concepts and promotes the idea of corporate social responsibility.

Ever since its inception RBI has been active in the following fields: education, human rights, ethical investments, cause related marketing, social advertising, fair trade, sustainable development, ecolabeling, responsible leadership, and others.

RBI was officially registered in January 2004, but it has been operating since early 2003. RBI is funded from its own operations as well as donations from NGOs and the corporate sector.

RBI has been functioning as a social company/ social enterprise - an organization focused on turning social problems into economic opportunities.

RBI is now partnering with libraries in the Podlasie region of the country to provide basic e-skills training for volunteers, pensioners, and the elderly in 118 Ik@onka public access points located in the libraries.

E-skills training

- Basic e-skills for pensioners and elderly people
- Training of volunteer trainers
- Basic e-skills training for librarians

E-skills training materials and certifications

- Microsoft Digital Literacy Curriculum

Some RBI Partners

GRUPO TROP | Supports the development of training skills for RBI volunteer trainers.

THE SOKOLKA FOUNDATION | Started-up 7CTLCs in 7 different cities, which right now are managed by local NGOs.

BIALYSTOK LOCAL GOVERNMENT | In every city, the RBI programs have the cooperation and support of local authorities.

PODLASIE LIBRARIES | The RBI is partnering with libraries in the region to provide basic e-skills training using the IK@NKA public access points.

Target Groups

Youth, elderly, pensioners, general population

CIS Research Activities during field visit

Date of visit: February 2008

Partner NGOs Visited | 2

Telecenters Visited | 3

Telecentre, Bialystok
Library, Wape
Ik@onka Public Access, Wape

Interviews conducted

Beneficiaries	30
NGO Volunteer Trainers & staff	8
Librarians	2



RBI volunteers created an enabling and welcoming environment for pensioners and elderly people to overcome fears and learn ICT.

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