GEORGIAN ICT INNOVATION CENTER FEASIBILITY STUDY

CONNECTING GEORGIAN ICT TO ENABLING RESOURCES

FINAL

Monday, August 13, 2012

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ABSTRACT

USAID economic growth portfolios have leveraged the model of an Innovation Center throughout the developing world, and with particular success in the E&E region, to increase the capacity of a nascent ICT industry. With this dynamic regional model in mind, the Economic Prosperity Initiative worked with subcontractor, SSG Advisors, to conduct this feasibility study for an ICT Innovation Center in February 2012. This report presents the findings of the feasibility study.

As readers of this report will observe, the potential of the ICT sector in Georgia is considerable. In facilitating the creation of the ICT Innovation Center, USAID has a unique opportunity to make a lasting, substantial and sustainable impact in the development of Georgia's ICT industry and workforce.

ABBREVIATIONS

B2B	Business-to-Business
B2C	Business-to-Consumer
B2E	Business-to-Employee
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CCID	Community Colleges for International Development
CEO	Chief Executive Officer
CIO	Chief Information Officer
CIS	Commonwealth of Independent States
CMMI	Capability Maturity Model Integration
COBIT	Control Objectives for Information and Related Technologies
CRM	Customer Relationship Management
DBA	Database Administrator
DEA	Data Exchange Agency
E&E	Europe and Eurasia
EBRD	European Bank for Reconstruction and Development
e-ID	Electronic Identification
EPI	Economic Prosperity Initiative
ERP	Enterprise Resource Management
EU	European Union
FDI	Foreign Direct Investment
G2B	Government-to-Business
G2C	Government-to-Citizens
G2G	Government-to-Government
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit, German Society for International Cooperation
GRENA	Georgian Research and Educational Networking Association
GTU	Georgian Technical University
HICD	Human and Institutional Capacity Development
HP	Hewlett-Packard
HR	Human Resources
IC	Innovation Center

ICT	Information and Communication Technology
ICT BC	ICT Business Council
ISV	Independent Software Vendor
IT	Information Technology
ITIL	Information Technology Infrastructure Library
JSC	Joint Stock Company
LAN	Local-Area Network
LED	Light-Emitting Diode
M&S	Manufacturing and Services
MCC	Millennium Challenge Corporation
MIC	Microsoft Innovation Center
MNC	Multi-National Company
MOU	Memorandum of Understanding
MSDN	Microsoft Developer Network
NGO	Non-Governmental Organization
OEM	Original Equipment Manufacturer
OPEX	Operating Expense
PKI	Public Key Infrastructure
PR	Public Relations
RFID	Radio-frequency Identification
RMS	Rights Management Services
S2B	Students to Businesses
SME	Small and Medium Enterprises
STTA	Short Term Technical Assistance
TOT	Training of Trainers
UN	United Nations
UPS	Uninterrupted Power Supply
USAID	United States Agency for International Development
VIP	Very Important Person
WAN	Wide Area Network

CONTENTS

I. EXECUTIVE SUMMARY

The Economic Prosperity Initiative (EPI), USAID's largest economic growth project in Georgia, views Information and Communication Technology (ICT) as both a key growth sector and instrumental in creating a dynamic enabling environment for all sectors of the economy. USAID economic growth portfolios have leveraged the model of an Innovation Center (IC) throughout the developing world, and with particular success in the Europe & Eurasia (E&E) region, to increase the capacity of a nascent ICT industry. With this dynamic regional model in mind, the EPI worked with subcontractor, SSG Advisors, to conduct this feasibility study for an ICT Innovation Center in February 2012. This report presents the findings of the feasibility study.

Through interviews with leading Georgian and international firms, universities, industry associations and other stakeholders, the team discovered that the ICT industry in Georgia suffers a severe shortage of qualified labor, particularly of workers with technical and project management skills. This dramatic staffing shortage raises the price of labor and in turn raises the cost of services but— perhaps more importantly—limits the ability of Georgian ICT firms to develop new products, grow into new sectors or even fully fill their own market niches. An ICT Innovation Center, created as a public-private partnership, has the potential to address these workforce constraints and significantly strengthen the performance of the ICT sector. The Innovation Center would successfully leverage the existing Tbilisi training facilities, strong local firms, dynamic government agencies, established educational institutions, and the resources of multinational firms to develop the capacity of the Georgian ICT sector towards a trajectory of growth. Importantly, our analysis suggests that, with targeted support from USAID and key industry partners, the Innovation Center should become fully sustainable by year 2 of its operations, ensuring that the Center continues to deliver value to the Georgian ICT industry after the conclusion of EPI.

To make the ICT Innovation Center a reality, USAID, EPI and its key partners will need to take several steps in the coming weeks and months. Namely, we recommend the following next steps:

a) Sign Memorandum of Understanding (MOU) with all partners, stating firm resource commitments

b) Finalize details about the selection and preparation of the Center's location

c) Form the Steering Committee

d) Facilitate steering committee appointment of a Management Team

e) Finalize delivery of resources from all involved partners

f) Finalize offerings and training schedule

As readers of this report will observe, the potential of the ICT sector in Georgia is considerable. In facilitating the creation of the ICT Innovation Center, USAID has a unique opportunity to make a lasting, substantial and sustainable impact in the development of Georgia's ICT industry and workforce.

II. APPENDICES

A. METHODOLOGY

B. FINDINGS

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A. METHODOLOGY

INTRODUCTION

Information and Communication Technology (ICT) contributes to national economic growth by one or both of the following means: directly by development of ICT products and services for internal consumption or export and/or through the use of ICT products and services to increase the productivity of various industries/sectors, including agriculture, tourism, food processing, finance, education, healthcare, manufacturing, etc. This document summarizes the results of a feasibility study for an ICT Innovation Center as one of the ways for USAID to support, not just the ICT industry, but catalyze growth of the broader Georgian economy. SSG Advisors conducted this feasibility study under subcontract to EPI. The team included Emilie Kornheiser (Project Analyst) and Tomislav Bronzin (Innovation Center Senior Consultant) with support from the EPI team, led by Malkhaz Nikolashvili (EPI ICT Project Management Consultant) and Giorgi Akhalaia (EPI M&S Deputy Component Lead).

METHODOLOGY

The feasibility study incorporates both desk-based review of relevant background materials (identified in Section D1 of Appendix D) and semi-structured interviews with key stakeholders (identified in Section D7 of Appendix D) conducted during fieldwork from February 13-19, 2012. Finally the team conducted a follow-up survey with all interviewees.

Pre-Fieldwork

In consultation with in-country staff, the team compiled a list of possible stakeholders to interview. Interviewees were contacted based on their involvement in relevant sectors (ICT or education) and compatible sectors (e.g., hospitality, logistics).

Fieldwork

Interviews with stakeholders began with a tailored presentation explaining key components of the Innovation Center (please see the storyboard in Section D8 of Appendix D). The team then garnered feedback on the initiative through a semi-structured interview. A full list of interview questions can be found in Section D3 of Appendix D.

Key questions included:

   a) Do you think that the ICT Innovation Center idea is interesting for your company/institution?
   b) What are key areas the Innovation Center should cover?
   c) How would your company/institution like to participate in the Center?
   d) What are "show stoppers" in your opinion?

Interviews were conducted with a range of stakeholders: ICT companies; multinational companies (Microsoft, Cisco, Intel); telecom companies (Magticom, Silknet,); non-profit organizations (ICT Business Council, Georgian CIO Association, AmCham, Georgian Chamber of Commerce); donor and investment organizations (SEAF); legal entities representing associated industries (Georgian Incoming Tour Operators' Association); Georgian Government Institutions (Ministry of Justice/Data Exchange Agency, Ministry of Education and Science); educational institutions (including Tbilisi State University, Georgian Technical University, Free University, and Ilia State University); and government agencies

(including GRENA, USAID, and MCC). All respondents shared a fairly consistent message of a stifled Georgian ICT sector, in need of trained staff and market knowledge.

This report presents findings from these interviews as follows: summary of Georgia's ICT sector, ICT Innovation Center project description, project considerations, start-up schedule, financial projections, recommendations, and conclusion.

B. FINDINGS

SUMMARY OF GEORGIA'S ICT SECTOR

ICT SECTOR PROFILE

It is difficult to determine exactly how many ICT companies exist in Georgia because there is no precise statistical information to differentiate between OEMs, software developers, telecom firms and sales firms. However, it is estimated that about 60 companies in Georgia provide *additional* value through software development or development of new products (websites, electronic content, on-line services, graphical design, games, etc.). It is estimated that the Georgian ICT market is worth $793 million and has developed at 14.5 CAGR (2005-2010), one of the highest growth rates in the CIS/Caucasus region. It shows significant growth potential going forward.

At present the ICT sector is domestically focused on a far-from-saturated market. Existing firms are operating at capacity and do not see a strong need or capability for growth. The Government of Georgia, in collaboration with multilateral and bilateral development agencies, is trying to establish an environment to support strong market growth—creating a low-regulation, high-transparency environment for investment. One component of the new face of Georgia is a push for e-government initiatives, led by the Data Exchange Agency. In fact, Georgia is emerging as a leader in e-government initiatives with e-ID, e-parking, electronic customs processing, and high-level IT support and transformation at every agency.

Development Obstacles

A number of specific challenges for development of the ICT sector in Georgia emerged in interviews. These include the following:

a) Small and fragmented domestic market

b) Domestic demand largely led by the public sector

c) Strong competition within the region

d) Outdated secondary- and tertiary-education curricula, lecturing staff, professional-development services, and resources

e) Deficit of skilled ICT professionals and high cost of qualified labor

f) Lack of managerial skills/business acumen

g) Lack of information on and experience with foreign markets

h) Limited access to financing

ICT companies interviewed, ranging from micro (5 employees) to large (more than 500 employees), all maintained that they had more work than they were able to handle. Growth is restricted by the difficulty of hiring qualified staff. Recent graduates lack project management qualifications and often even up-to-date technical skills. Companies actively compete for technical staff and salaries are quite high as a result; the average gross salary for an ICT software developer can vary from $800 to $1500 per month. As such, senior staff do not willingly seek out new markets or opportunities for growth. Most companies work within their established niches and take new work as it comes to them.

IT training academies and university programs currently operate in Tbilisi. They offer basic computing classes within both the Microsoft and Cisco frameworks. Simultaneously, universities offer classes in computing theory. However employers report that these students enter the workforce with no applicable knowledge or skills, unprepared for the tasks required of them.

Key results of this labor shortage causing the lack of growth include:

a) Compatible sectors such as hospitality or logistics are not "sold" on the business value of IT;

b) Competition between ICT firms over the available workforce inflates salaries and, in turn, inflates the costs of services;

c) Companies have limited time or incentive to develop new or innovative products for either direct-to-consumer or business-to-business markets.

Needless to say, these factors severely limit growth of both the ICT sector and the broader Georgian economy including: retail, banking, and logistics that require dynamic and cost-effective ICT services.

The Georgian government also requires ICT services in order to achieve its goals of transparency, a robust business-enabling environment, and optimal efficiency. Leaders in the Georgian government, especially in the Data Exchange Agency, deal with this challenge by developing all ICT needs internally and paying labor costs in excess of private-sector salaries, actually competing with the private ICT sector to further inflate salaries beyond market sustainable rates. Indeed, the only Georgian firm that has grown large enough to export products and services outsources its international work to India and Europe—the company CEO cited lower costs and better project management capabilities as the two key factors in their decision.

Given the limited available workforce, competition from a dynamic government sector, and an outdated educational infrastructure, significant work must be done domestically before Georgian firms can look internationally.

Many of these challenges can be mitigated and perhaps even solved through the training, capacity development, and market knowledge gained from an Innovation Center.

State of e-Government services in Georgia

In spite of the number of obstacles, it is possible to find potential competitive advantages: the government's ambitious approach to e-governance has created a lucrative market for the private sector. A number of Ministries and Agencies have implemented e-Government initiatives, and this trend is likely to continue. In the UN E-Government Survey 2012 (http://www.e-government.ge/news-208-4.html, 12.03.2012), measuring e-governance institutionalized development, policy making and building appropriate infrastructure, Georgia scored 0.5563 points, which is a little above the world average of 0.4877. Georgia currently holds 72nd place out of 190 countries globally, which is a 30-place improvement compared to previous years, and makes Georgia the regional leader, ahead of Turkey, Azerbaijan, Syria, and others. Regarding e-governance services such as e-ID implementation, Georgia is mentioned alongside high-GDP countries such as Canada, Finland, and Japan. Georgia is also referenced as an excellent integrator and user of social networks (Facebook, Twitter, LinkedIn, etc.).

USAID EXPERIENCE WITH SIMILAR PROJECTS IN THE REGION

USAID has considerable experience and success in reaching development goals more quickly, cost-efficiently, sustainably, and at a wider scale through partnerships. In the area of

ICT, USAID has successfully partnered globally and locally with multinational companies (MNCs) like Sun Microsystems and Microsoft. Recent examples of such partnerships can even be found in the Caucasus at the *Armenia Microsoft Innovation Center*.

The model of USAID and Microsoft partnering in a *Microsoft Innovation Center* has been successfully executed in several Central and Eastern European countries, including Armenia, Croatia and Slovenia. It has proven that the model of an *ICT Innovation Center* is functional and suitable for the state and regional economy. Past centers were founded in partnership with the following private partners: Microsoft, Hewlett-Packard, Cisco, and local telecom companies with the support of their respective Governments.

EPI and USAID have an opportunity to tailor an ICT Innovation Center that meets the explicit status of the Georgian ICT ecosystem. Training must be project based, and responsive to the evolving needs of the sector. By cooperating with existing training institutions—providing TOT and sharing training facilities—the Innovation Center can strengthen the ICT sector and training facilities throughout Tbilisi. By working directly with businesses to identify and fulfill their needs—as an "outsourced" employment, training, and capacity building facility—the Innovation Center can continually adapt to the changing needs of Georgia.

INNOVATION CENTER PROJECT DESCRIPTION

VISION AND MISSION

Vision

The Georgian ICT Innovation Center is envisioned as a state-of-the-art technology and human resource infrastructure that creates an innovation ecosystem by providing access to technology resources, experts, and facilities and promoting collaboration and skills development for government, academic, and industry participants.

The ICT Innovation Center promotes everything from technical innovation to business innovation. By raising the competence of each individual professional, the ICT Innovation Center also raises competence across the board: it creates the necessary operating environment for innovation to happen. The ICT Innovation Center provides infrastructure programs and services to help small and medium companies create innovative products and bring those products to market. This in turn promotes competitive, sustainable businesses and opens the space for joint cooperation and investment.

Mission

The ICT Innovation Center provides a comprehensive set of programs and services to help build the capacity of ICT companies and the ICT workforce, to help increase the competitiveness of other sectors/industries through the use of ICT, and to support the Government of Georgia with e-Government applications and implementation.

PURPOSE AND OBJECTIVES

USAID, the Government of Georgia, MNCs such as Microsoft, HP, Intel and Cisco, and domestic ICT firms share the same goal: to stimulate the development of the ICT sector in Georgia, leading to growth and job creation in the sector. At the same time, USAID recognizes that companies in other compatible industries need to be modernized and driven by new technologies and next-generation methods of management in order to raise productivity and build capacity to deliver higher-quality goods, products, and services at affordable prices. Further development of the ICT sector in the country will result in the creation of new IT tools for businesses, enhancing their ability to compete in regional and global markets, thus stimulating growth and job creation at the national level.

As discussed, one solution that USAID has used throughout the developing world is the model of an Innovation Center: a partnership between USAID and ICT companies to train and develop ICT capacity in a region. While Innovation Centers differ from location to location depending on USAID goals, ICT capacity, and local capabilities, there are a few key shared tenets of the model: trainings developed and delivered by private-sector partners, support for emerging IT businesses, and networking opportunities. However, for an Innovation Center to make a sustainable impact, it must be situated firmly within local needs and the local context. The Georgian ICT Innovation Center should be an independent, not-for-profit institution with the capacity to efficiently fill an unmet market demand in Georgia. Unlike previous Innovation Centers, the Georgian ICT Innovation Center should support sector development without favoring one vendor over another or competing with existing private training companies. This unbiased approach would allow the center to attract leading ICT professionals from across Georgia's public and private sectors to lead trainings, develop innovative new products, stimulate demand for ICT solutions, and contribute to the advancement of knowledge and skills in the workforce. Focusing on results, the center should bring together pragmatic private companies, public institutions, ICT professionals, and academics to facilitate synergies, partnerships, and business opportunities. The Center's activities—including workshops, technical labs, and trainings—would help bridge the gap between ICT workforce demand and supply by providing a hands-on venue for practical training on ICT topics of commercial value. Ultimately, the ICT Innovation Center would fill a critical void in the Georgian market by helping ICT companies train employees, identify qualified technicians, develop business skills, and by fostering entrepreneurship to create new and improved products and services. The Center's stimulus to ICT-sector growth would, in turn, help drive broad-based economic growth across all business sectors in Georgia.

POTENTIAL FUNCTIONS

Following are proposed specific activities of the Georgian ICT Innovation Center; these activities will facilitate the goal of an increasingly competitive and dynamic Georgian ICT sector, capable of fulfilling domestic needs and leveraging technology for Georgian export industries.

    a) Classroom-based training on cutting edge ICT skills

    b) Certification and matchmaking for qualified ICT professionals

    c) Facilitated project development for hands-on training and internships

    d) Application development, testing, and presentation facilities

POTENTIAL SERVICES/PROGRAMS

The emphasis of the Center will be on enabling the ICT sector by reducing barriers to growth and facilitating new, innovative, and competitive products. To do that, ICT companies need a highly-trained and enabled workforce. In Georgia (as in the CIS region), there is also a need for soft-skills and business training.

Innovation Promotion

The Ansoff Matrix is a useful tool to explain Georgia's ICT sector and the role that the ICT Innovation Center plays. Given the nascent
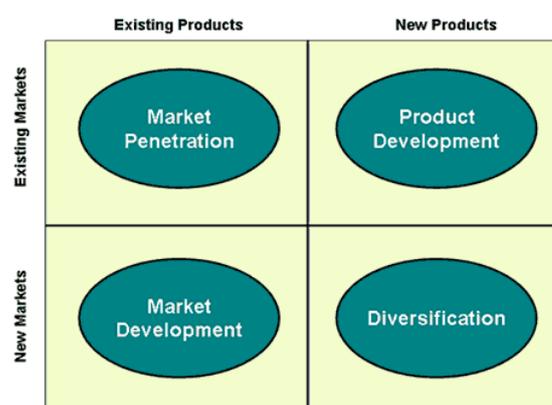
development of Georgia's ICT market, it can be said to be predominately a New Market for New and Existing Products. As a promoter of innovation, the center will help entrepreneurs and firms diversify their products and markets to attract new customers. The center will also help develop the market by hosting events that demonstrate existing products that are new to Georgia.

Business Services

Stakeholder interviews recommended pursuing ICT business-strengthening services and value-added services without the traditional incubation element of collocation. Business services will include:

    a) business start-up services
    b) business support services
    c) business connection services
    d) recruitment services

The Innovation Center will serve as a matchmaker for entrepreneurs, technicians, ICT firms, and customers—connecting appropriate skills, tools, and resources where they are needed most. Technical support for firms and individuals alike will be delivered on a case-by-case basis after careful analysis of the HICD needs. All trained individuals will be entered into a recruitment database accessible by ICT firms on a fee-for-service basis.

Training & Workshop Services

Training Services

The ICT Innovation Center will offer training on a variety of topics, embracing a training methodology and duration appropriate to the topic, audience, and price. The topics covered will include subjects such as ICT technical issues, the usage of various pieces of hardware and software, and business and soft skills as described below. A detailed list of training programs and workshops is included in Appendix D: Additional Information, Section D4. Generally, these training programs will fall into the following topics and sub-topics:

    a) *Technology*: general ICT, vendor-specific trainings (Microsoft, Hewlett-Packard, Cisco, local ICT companies, and others), and trainings related to non-commercialized products;
    b) *Soft skills*: project management, working in teams, problem solving, communication skills, public speaking, negotiations, and others;
    c) *Training for basic users*: using either commercial technologies or products and services developed by local ICT companies (e.g., Microsoft Project training or training for a locally developed Human Resource Management System)

Trainers will initially be brought in from partner firms throughout the world or borrowed from partner Innovation Centers. As the Innovation Center generates more income they will be hired from top training consultancies.

Workshop Services

The ICT Innovation Center's workshops will be similar to its training events, but with a more "hands-on" approach that focuses on a specific problem or project, leading to a tangible, ready-to-use result or outcome. Local and international firms will put forward project/problem ideas, essentially hiring the Innovation Center trainees as outsourced intern teams. The teams will be facilitated and mentored by university faculty, Innovation Center staff, and corporate partners. More specifically, workshops will:

    a) Support new businesses or partner institutions to promote understanding of new technologies
    b) Provide case studies on possible financing schemes
    c) Promote understanding of ICT policy regulation
    d) Support effective information exchange in the following areas:
        a. Business-to-Business, Business-to-Consumer, Business-to-Employee
        b. Government-to-Citizens, Government-to-Business, Government-to-Government

Research Services

As the implementation arm of the ICT Business Council and host to international experts, the Innovation Center will facilitate:

    a) seminars and workshops
    b) publications
    c) benchmarking studies

Consulting & Advisory Services

The ICT Innovation Center will provide linkages to consulting services for clients—whether start-up companies or large non-ICT businesses. The Center will be a resource for information about certain technologies and the benefits of adopting those technologies, connecting clients to external resources as needed.

Surveys & Benchmarking

The ICT Innovation Center will cooperate with the government and NGOs to establish reliable data and analyses of the Georgian economy and society, with an emphasis on how ICT influences businesses, individuals, and the national economy.

IT Association Services

In addition to training, workshop, and research services the Center will assist its clients to understand and adopt technologies and expand businesses by improving efficiencies, building capacity, and forming partnerships. To support networking, the Center's staff will create virtual information exchanges to allow ICT professionals to share knowledge and build relationships. The Center will also facilitate business partnerships and foster the creation of industry clusters that provide economic development opportunities. Some examples of ICT Association services include:

    a) networking events
    b) monthly debates
    c) trade fairs
    d) trade missions
    e) online community-of-practice portal

Social inclusion programs

A number of vendors support programs that promote social inclusion, youth development and social responsibility. The ICT Innovation Center can act as a conduit for such programs.

Information dissemination

The ICT Innovation Center will disseminate information through:

    a) demonstration services (showcases, new technology, new solutions, etc.)

b) proof-of-concept projects
c) scalability and architectural reviews
d) interoperability labs

Proof-of-concept projects (testing and demonstration)

A proof-of-concept is an integral stage of the development of new ICT products. It involves building a prototype and testing the viability of a new idea and, in the process, demonstrating its potential value to buyers and investors. The center will assist entrepreneurs to understand the process and develop proofs of concepts for new products.

Scalability and architectural reviews

After developing proofs-of-concepts, the center will assist ICT companies to assess the scalability of their products, and their compatibility with the appropriate IT architecture. This is also a pivotal stage of the product development process, as inconsistencies or incompatibilities in the project architecture could greatly increase the cost and time needed to bring the product to market.

Interoperability labs

The center will provide lab space for entrepreneurs to test the interoperability of their new products with other systems and products. As with scalability and architectural review, this support will prevent delays and cost overruns. E-ID applications will be the first platform environment introduced.

FOCUS

Recommended focus, based on feasibility study findings

The ICT Innovation Center should focus current energies on domestic consumption particularly in parallel sectors/industries and e-Government projects. The ICT sector in Georgia currently does not have capacity for international expansion (not enough employees; workforce is not prepared/trained). Additionally the cost of labor, international language skills, and non-favorable import regimes in other countries lead to the conclusion that a direct, immediate export strategy is unlikely to succeed. The only exception to the above conclusion could be software development of mobile applications for a rapidly growing world-wide market that is targeting smartphones (Android, iOS, and Windows Phone), but, even in this case, localization strategies are more likely to bear direct fruit.

"Near-shoring" could be another possible exception to this rule. For that, however, Georgian ICT companies will need to implement different IT capability and maturity frameworks (ITIL, COBIT, IT Mark, and CMMI) and provide evidence to potential customers through formal certifications. Under this strategy, the Center can provide the necessary knowledge and certification while lowering costs and shortening time horizons for ICT companies. ICT companies can then provide outsourcing of software development, website design and development, content development, game development (including the gambling industry), graphical design, etc. This strategy, however, holds little potential with the current high cost of labor and low project-management capabilities.

ICT as a cross-cutting industry and parallel sector/industries support

The ICT industry, along with the transport and logistics sector, is considered a part of many value chains and often called a "cross-cutting industry." Other value chains that include ICT,

as identified by EPI in the "Value Chain Assessment" document, are agriculture, tourism, food-processing, manufacturing, and education.

E-Government opportunity

A few government agencies are considering the transfer of the extensive e-governance capabilities to the private sector. This will enable private companies to develop new business models for potential export to other countries developing e-governance solutions. Examples include e-ID services. At its most basic, e-ID includes only identification information, but the same infrastructure can be layered with applications for commerce, finance, and other sectors. The Innovation Center can provide a development, testing, and certification environment for software solutions that will use/implement e-ID.

Other opportunities in providing e-Government solutions include supporting different registries (Public Registry, Civil Registry, Property Registry, etc.), the Revenue Service, different Service Agencies for the Ministry of Finance and the Ministry of Internal Affairs, e-Healthcare, the State Procurement Agency, e-Learning for the Ministry of Education and Science, and others. Services include: software development, web-content development and management, ICT infrastructure solutions, e-Archiving tools/document management systems, IT management, and others.

OWNERSHIP AND MANAGEMENT STRUCTURE

Ownership

The ICT Innovation Center should be an independent, not-for-profit institution with the capacity to efficiently fill an unmet market demand in Georgia. Unlike other models of Innovation Centers globally, the Georgian Innovation Center should support sector development without favoring one vendor over another, or competing with existing private training companies. The ICT Innovation Center should ideally be owned by the founding members including the hosting University, Georgian ICT Business Council, and contributing vendors such as Microsoft, HP and Cisco; and should be hosted within a University or similar institution.

Management Structure

For the center to become operationally sustainable in three years, a cost-effective management and operations plan was designed that embraces best practices from successful Microsoft Innovation Centers in the region. It is designed to support the Center's clients with ICT expertise and resources and create a perfect environment for envisioning, designing, and testing ICT solutions. In this section, we present details about how the Center will be managed to produce high-quality products and services, the management and technical team, the Center's management and oversight structure, and a detailed operations plan.

Management Approach

Although the overall goals and objectives of the Center are development-driven, the management approach is strongly rooted in the commercial principles of sustainability, full cost coverage, and avoiding the creation of market distortions.

Management Team

The Center will be staffed by a lean team consisting of five full-time employees: an Executive Manager, a Program/Office Manager, an Administrative Assistant, Finance Manager and an

IT Expert/Technology Implementer. For years 1 and 2, there will be only four full-time staff; the Administrative Assistant will be hired for the 3rd year once the center becomes financially fully sustainable. This team will be in charge of envisioning, planning, and coordinating the activities of the Center. They will also set up and maintain the Center's equipment, operations, and marketing and report on results to the Center's Steering Committee. In conjunction with the Steering Committee, staff members will be responsible for achieving operational sustainability after three years of operation.

Executive Manager

The *Executive Manager* is the key position in the center. The Executive Manager needs to comprehend the complexity of the ICT Innovation Center's services and its multiple levels of activities, and demonstrate excellent interpersonal communication and networking skills to promote the ICT Innovation Center to different stakeholders. The ideal candidate for this position must be trustworthy, have strong connections with key stakeholders (especially with primary partners), and also possess a deep understanding of the Georgian ICT industry. He or she must have excellent public relations skills to successfully represent the ICT Innovation Center in the media. The Executive Manager's organizational and leadership skills will drive the team, provide vision to its activities, and allow the ICT Innovation Center to meet its objectives. The success or failure of the ICT Innovation Center depends in large measure on the ability of the Executive Manager to envision, plan, and coordinate activities that match the demand of Georgia's ICT professionals while generating sufficient revenue for continued growth in operations.

> ***Management Team Responsibilities***
>
> 1. **Lead and manage start-up of ICT Innovation Center operations and activities**
> 2. **Implement core program activities**
> 3. **Provide logistical support to the Center, including financial management and procurement**
> 4. **Work with stakeholders and partners to develop an annual work plan**
> 5. **Report contributions from implementing partners**
> 6. **Promote ICT Innovation Center activities, programs, and resources**
> 7. **Develop and submit annual reports**
> 8. **Establish and maintain ICT Innovation Center registration**

Program/Office Manager

The *Program/Office Manager's* primary responsibility is to help the Executive Manager develop, implement, and monitor activities in close cooperation with ICT Innovation Center staff and stakeholders. This person will deal with day-to-day activities like recruiting trainers and training participants, coordinating with the Center's stakeholders, and organizing events and logistics, among other things. The Program/Office Manager will also handle the contract requirements under grants, perform accounting, prepare invoices, and maintain project files, e-calendars, contact lists, correspondence files, and other documents.

Part-time Consultants

Part-time Consultants will be periodically employed to support the Executive Manager and the Program/Office Manager. The first consultant will help set up the finance and accounting systems and procedures, as well as operating manuals. This person will also help close the books and generate financial reports and statements for the ICT Innovation Center's Steering Committee. The second consultant will have extensive experience with Microsoft

Innovation Centers or other ICT training centers and will provide support to the Executive Manager and Program/Office Manager in the first year and a half of operation. This will ensure that lessons learned and best practices are infused into the Center's operations and activities, which is critical for sustainability.

Technical Staff

IT Expert/Technology Implementer

The ICT Innovation Center's only full-time technical employee will be the *IT Expert/Technology Implementer* who will ensure that the infrastructure, systems, and networks in the center are aligned with the Center's programs and activities. The Center's technology is vital to its success, and the *IT Expert/Technology Implementer* will play a critical role in ensuring that new technology is working. Consistent functionality will attract and maintain loyalty of clients and partners to the Center. All new technology acquired by the Center will be controlled and managed by this person. He or she will assist in the setup of training rooms and technical labs for the different sessions and also interface with hosting partners who will house some of the ICT Innovation Center's network resources.

Outside experts

The Center will not have on its payroll any other full-time trainers, consultants, or ICT experts. Outside the five full-time management staff, all technical and administrative support will come from external resources. More specifically, the ICT Innovation Center will support individual training events by:

a) Using trainers, consultants, and other experts provided through in-kind contributions from key international and local stakeholders and partners.
b) Contracting local trainers and other experts, either as individuals or from private training companies.
c) Hiring non-local trainers, consultants, and other experts when appropriate.

The ICT Innovation Center will support local experts to attend Train-The-Trainers (TTT) programs and, in return, will ask them to deliver the content at events in the ICT Innovation Center. After delivering the training a specified number of times, the experts will be permitted to deliver the training events independently or through private training companies in the local market. By doing this, the ICT Innovation Center will help not just those participating in training programs, but also Georgian private-sector training companies, thereby increasing the overall Georgian ICT capacity.

Management and Advisory Bodies

The ICT Innovation Center will be a non-profit organization with a governing Steering Committee. The Steering Committee will consist of at least three members, all of whom will perform their duties without compensation. The Steering Committee's main role will be to ensure that the Center functions properly, that its activities support its mission, that it adheres to the proper financial management system, and that it generates sufficient revenue for continued sustainability without sacrificing the quality and integrity of its services. The Steering Committee will also approve annual work plans, provide management oversight, review performance, and take corrective action when needed. The Steering Committee can create advisory or technical committees to lead specific activities, and the Executive Manager will report to the Steering Committee on a regular basis.

At its start, the Center's Steering Committee will consist mainly of its primary partners, such as Microsoft, Cisco, HP, ICT BC, USAID, and local ICT companies (please see financials for greater detail of partner contributions). The Steering Committee's principal role will be to

advise the Center on which activities and services are most valuable, and its members will inform the Center's Executive Manager of new opportunities for collaboration with their respective organizations. The Steering Committee will also review the benefits that the Center's programs are generating for businesses, users, and the ICT sector, and it will communicate its findings to the Center's management to adopt activities that are beneficial for clients and stakeholders.

CURRICULA & TEACHING METHODOLOGIES

Curricula

Curricula that will be delivered in the ICT Innovation Center will be carefully chosen from the existing best practices from USAID/Microsoft/CISCO Innovation Centers Global/Regional Network, or developed locally if needed. The Center will offer advanced trainings and trainings that are not currently available in Georgia. Please refer to the complete list of trainings in Appendix D: Additional Information, Section D4.

Teaching Methodologies

The ICT Innovation Center's approach to delivering trainings will be based on the tenets of adult learning styles including teamwork, project-based work, and HICD strategies. Furthermore, the ICT Innovation Center will offer "blended training programs" that focus on the interoperability of different systems from different vendors. This hands-on training emphasizes real-work scenarios and is not usually delivered in traditional training facilities. Training for company employees will be on a fee-for-service basis and for university students with the signing of an engagement contract. The duration of training programs and workshops will vary, but most will be two to three days long. Longer training programs, called "boot camps," will last approximately five days.

Premises

The Georgian ICT Innovation Center aims to be a hub—a connection point for those seeking the latest and most innovative ideas, products, and services. Similarly, the Center must be strategically located to reach its target users. All major Georgian ICT companies and their customers, as well as major universities and government institutions, are headquartered in Tbilisi. International ICT vendors and visiting experts conduct their work from Tbilisi, and it is easily accessible by both public and private transport from within Georgia. For these reasons, Tbilisi has been selected as the location for the ICT Innovation Center. It is also essential that, while the Innovation Center may be housed in a university or on private premises, it must be independently managed and directed.

A university is the ideal hosting site for the Innovation Center as far as it increases the opportunities for students and faculty to engage easily. During the course of the feasibility study, the team spoke with rectors and senior representatives of all of the major universities in Tbilisi. While every university expressed enthusiasm, Tbilisi State University is recommended given the available information. A table follows below detailing the decision factors and rating criteria.

Facilities

The ICT Innovation Center will need a venue of at least 300 square meters with the following physical setup.

Some of the facilities can be shared, including the Conference Room, Server Room, Kitchen, Reception Area, etc., and others cannot, such as the Office, Technical Classroom, and Labs.

Table 1: List of rooms in the ICT Innovation Center venue and area occupied by each

Room No.	Description of the Room	Floor Space
1.	**Technical Classroom** – 20 seats	min 110 m^2
2.	**Workshop Classroom** – 15 seats	min 45 m^2
3.	**Technical Lab 1** – for testing, 2-3 workplaces with computer equipment	min 15 m^2
4.	**Technical Lab 2** – for testing, 2-3 workplaces with computer equipment	min 15 m^2
5.	**ICT Innovation Center Office** – for 4 persons and 1 mobile worker (trainer, consultant, or other expert)	min 25 m^2
6.	**Server/Communication Room**	min 10 m^2
7.	**Waiting Room/Hall/Exhibition Area** – can be a corridor connecting all the rooms in the venue	min 20 m^2
8.	**Kitchen** – small kitchen for coffee, tea, or a quick snack	min 20 m^2
9.	**Storage Room/Closet** – for storing chairs, tables, and equipment when organizing conferences in Room No. 1	min 10 m^2
10.	**Reception**	min 10 m^2
11.	**Toilet**	min 20 m^2
N/A	**Conference Room(s)** – for occasional usage (not used monthly, but based on demand when the ICT Innovation Center implements larger events that cannot be hosted in its venue)	N/A
TOTAL space needed:		**min 300 m^2**

Room No. 1: Technical Classroom

a) Minimum of 110 m^2 available space

b) Minimum of 20 seats/tables for attendees and 1 for the trainer/speaker

c) Must be equipped with 21 identical state-of-the-art computer workstations, connected to the local area network (LAN) and to the Internet

d) Additional local area network (LAN) sockets for laptops/devices

e) All cables and infrastructure hidden below an elevated floor or installed in the walls, depending on the floor plan[1]

f) Easy access for disabled persons and at least 2 working spaces

g) Ability to fold tables and change the configuration of the classroom, so it can be used for small conferences[2]

Room No. 2: Workshop Classroom

a) Minimum of 45 m^2 available space

b) Minimum of 15 seats

c) Power and local area network (LAN) sockets for laptops/devices

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[1] Example: http://tinyurl.com/mic-flexible-computer-floor
[2] It is recommend to consider specialized web sites like: http://www.smartdesks.com/classroom-design-rr1.asp

d) Ability to change the chair/table setup for different kinds of workshops (e.g., round table, meeting table) and to implement different communication skills workshops

Additional requirements for Rooms No. 1 and No. 2:

a) Small display/LED monitor on the wall near the entry of the classroom to post training/workshop/event schedule

b) 2 projectors/smart-boards or 1 projector/smart-board and one large plasma/LED monitor for video conferencing, easily viewable from all workspace positions

c) A/V equipment (amplifier, mixing table, microphones, speakers, small cameras) that will be used for:

    a. Small conferences/events

    b. Audio recording

    c. Video conferences (one camera for the presenter and one for the audience, microphones that can "catch" audio from the audience)

d) Other equipment:

    a. Whiteboards or mobile flip-charts (not needed if a smart-board will be used)

    b. Phones with access to both internal and external lines (depending on permission from the office manager)

Rooms No. 3 and 4: Technical Rooms/Labs

Technical Rooms/Labs need to have:

a) Minimum of 15 m^2 available space

b) Minimum of 2 seats with workspaces large enough (minimum of 5 m^2) to accommodate people and equipment for a specific project

c) Power and local area network (LAN) sockets for laptops/devices

d) Whiteboards or mobile flip-charts (not needed if a smart-board will be used)

e) Phones with access to both internal and external lines (depending on permission from the office manager)

Room No. 5: ICT Innovation Center Office

a) At least 4 workspaces for permanent employees, and an optional 5th workspace for trainer/consultant preparation

b) If reception will be part of the office space, there must be a clear delimitation of public and non-public space.

Room No. 6: Server/Communication Room

a) Physically secured

b) Temperature-, humidity-, and dust-controlled environment

c) Smart non-stop on-line power supply (UPS/aggregator)

d) Large enough to accommodate the server closet/rack and the operational/supporting staff to manage it

e) End-points for LAN and WAN

Room No. 7: Waiting Room/Hall/Exhibition Area

a) Large enough to accommodate at least 40 people

Room No. 8: Kitchen

Room No. 9: Storage Room/Closet

a) Used to store 20 chairs, foldable tables and equipment from technology classroom when organizing conferences/events

Room No. 10: Reception

a) Needs to be accessible from the public area of the ICT Innovation Center

Room No. 11: Toilet

a) The venue requires at least two toilets.

Requirements for the whole venue

a) Air-conditioned space (heating/cooling) with the option to adjust the temperature in each room
b) Ability to limit, enable, and track access to the ICT Innovation Center during non-working hours, preferably with RFID cards
c) Easy access for disabled persons
d) Protected and public wireless access to Internet
e) Emergency/redundant power supply and lighting

Conference Room

a) Based on a particular need, an appropriate conference room will be requested.

Venue Security

Security should be implemented based on the "Security Policies" document drafted at the founding of the ICT Innovation Center. Following is the list of basic recommendations:

a) During working and non-working hours, security guard(s) should be provided by the owner of the venue hosting the ICT Innovation Center.
b) Access to the ICT Innovation Center outside "normal" working hours will be allowed to authorized persons using special key-cards. These cards will allow tracking of visits to the Center.
c) The ICT Innovation Center should have video-surveillance equipment to ensure that no misuse of the Center and its equipment occurs. The presence of video-surveillance should be clearly communicated to people accessing the Center with appropriate signs. This is necessary to comply with privacy policy standards and to prevent unwanted activities.
d) Responses to breaches in security should be designated in the "Security Policies" document.
e) Layout of the space should be set up approximately as laid out below (not to exact scale).
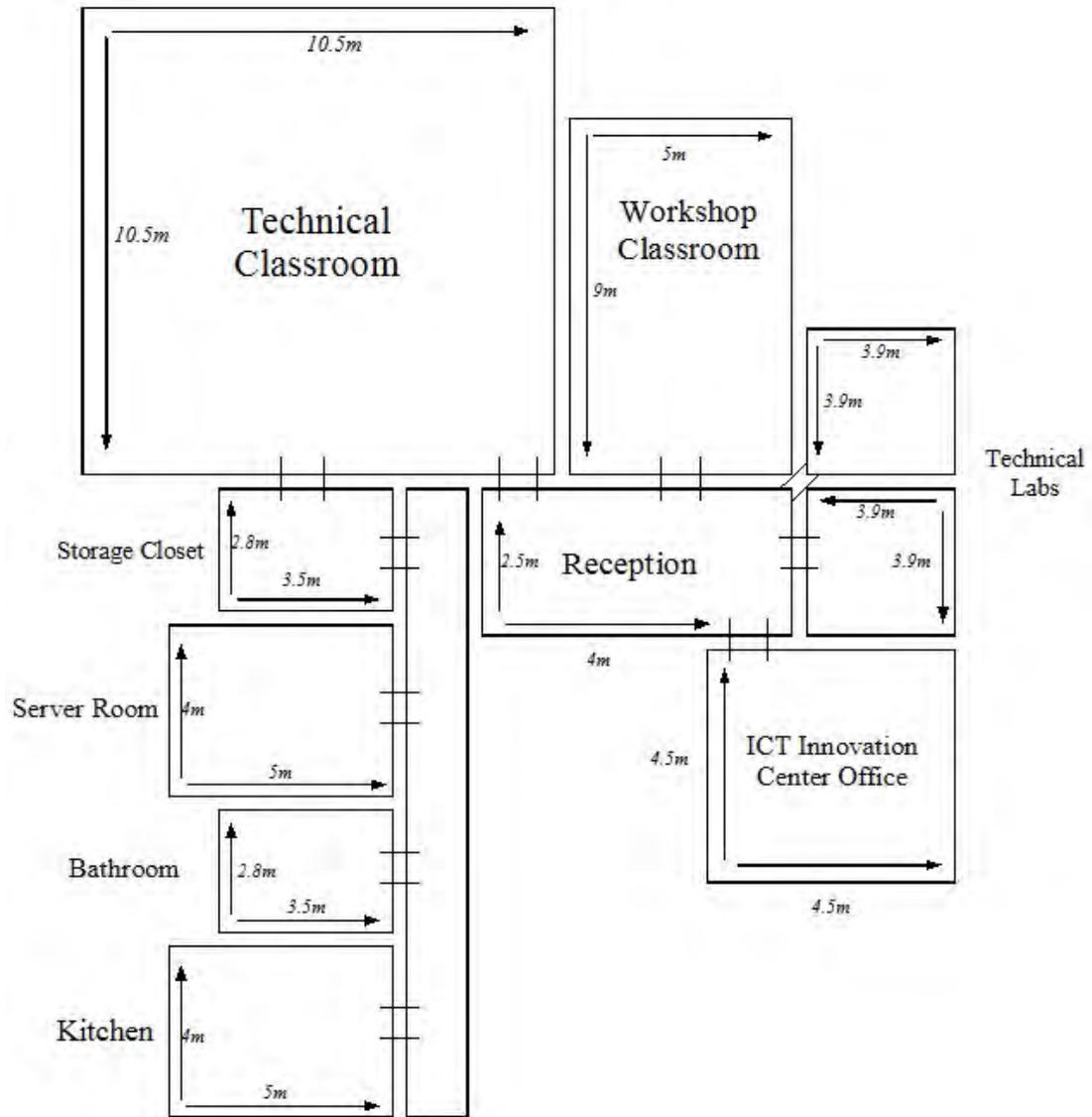
List and description of furniture needed for the ICT Innovation Center

The following furniture is needed to completely equip the venue:

Table 2: List and description of furniture needed for the ICT Innovation Center

Room No.	Description of Furniture	Number of Pieces
1.	Ergonomic office chairs[3]	22
	Foldable mobile desks (for 2 people)[4]	11
	Flip chart/marker board	1
	Basic lectern[5]	1
	Stackable chairs for small conferences[6]	50
	Cabinet for books and materials	4
2.	Ergonomic office chairs	15
	Foldable mobile desks – smaller (for 2 people each)	8
	Flip chart/marker board	1
	Cabinets for books and materials	2
3.	Ergonomic office chairs	4
	Office desks (for 2 people)	2
	Flip chart/marker board – smaller	1
4.	Ergonomic office chairs	4
	Office desks	2
	Flip chart/marker board – smaller	1
5.	Ergonomic office chairs	5
	Office desks	4
	Flip chart/marker board – smaller	1
	Paper/DVD shredder	1
	Cabinet for books and materials	2
6.	N/A	
7.	Three-seat sofa	2
	Poster frames	6
	Water cooler/heater	1
8.	Water cooler/heater	1
	Microwave oven	1
	Sink	1
	Small dishwasher	1
	Cupboard for glasses/mugs	1
	Sideboard for plates/cutlery	1
	Small refrigerator	1
	Table (high and narrow)	1
	Chairs	8
9.	Storage cabinet or shelves for materials	1
	Water Bottle Racks	4
10.	Reception table	1
	Ergonomic office chair	1

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[3]Example: http://tinyurl.com/mic-chair1
[4]Examples: http://tinyurl.com/mic-flip-top-table0, http://tinyurl.com/mic-flip-top-table1
[5]Example:http://tinyurl.com/mic-lecterns2
[6]Example:http://tinyurl.com/mic-stackable-chairs1

Room No.	Description of Furniture	Number of Pieces
11.	N/A	

CONSIDERATIONS

Viability – End Clients

The purpose of this feasibility study was to identify:

   a) The potential end clients – primarily private (but also public) ICT companies, universities, government institutions and agencies, and other industry sectors (ICT being a cross-cutting/supporting industry)
   b) The needs of end clients

Based on the findings, there is strong demand in the market for the type of services/products that the ICT Innovation Center will offer and end clients would be willing to buy these services. Nevertheless, regular re-evaluation of the ICT Innovation Center program and activities is recommended because ICT is a fast-changing industry, and because the social, business, and political environments in Georgia have a history of fairly frequent changes.

Marketing Strategy

The ICT Innovation Center's success depends on successful marketing and a sound pricing strategy—one that attracts a diverse group of ICT leaders while generating sufficient revenue for operational sustainability. This section presents the ICT Innovation Center's pricing strategy and its marketing, public relations, and communications strategy.

Pricing Strategy

The ICT Innovation Center will follow the pricing policy and utilization plan outlined in the table below. ICT Innovation Center activities under the education and training pillar will have a cost–based pricing methodology, where prices will be slightly higher than the input costs required to market and deliver each training, program, or certification. In all cases, the ICT Innovation Center will seek to achieve no less than break-even for the total of its activities.

Table 3: Prices for ICT Innovation Center Training Products and Services

Description of product or service	Utilization Yr 1	Utilization Yr 2 DAYS	Utilization Yr 3	Year 1	Year 2 Price in USD per day[7]	Year 3
1. Level 1 Training (per day, per attendee) Average 18 attendees	(See Utilization)	(See Utilization)	(See Utilization)	25	45	50
2. Level 2 Training (per day, per attendee) Average 18 attendees	(See Utilization)	(See Utilization)	(See Utilization)	30	50	55
3. Competitions and Events	20	30	30	0	200	300
4. Business Development Services	10	40	50	0	70	70
5. Consulting and Proof-of-concept projects	10	20	30	125	250	250

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[7] Except for trainings, which are priced per attendee, per day

6. Rental – Venue & Equipment	30	75	100	100	250	250

* Utilization varies per month per year. See Annex 4 in Appendix D: Additional Information or complete financial model for detailed information.

For other activities, such as surveys and benchmarking, incubation activities, joint projects, and other creative services, prices will be established per each business case. The pricing strategy will be based on market research and will offer partners and customers new services and a state-of-the-art technical environment at affordable prices. Surveys will be periodically conducted to ensure the ICT Innovation Center's prices are reasonable and competitive with offers from hotels and event organizing companies. Additional market surveys will be conducted with regard to similar products and services.

Also, the ICT Innovation Center will offer two memberships for VIP customers:

a) Gold Membership – $10,000/year, which includes priority access to the resources of the Center and a discount of 50% on trainings, events, and recruitment services.
b) Silver Membership – $5,000/year, which includes priority access to the resources of the Center and a discount of 25% on trainings, events, and recruitment services.

Marketing and Public Relations (PR) Communications Strategy

The Center's marketing and public relations will be bolstered from day one by the strong reputations of its founding partners, including USAID, the Government of Georgia, Microsoft, Cisco, HP, and others. The Center's "marketing mix", defined by four P's (Product, Price, Place, and Promotion), is outlined below.

Product (Service)

The Center's products consist of the core products and services and some supplementary services listed previously. All ICT Innovation Center products falling under the Center's four pillars, *education, promotion, networking,* and *information management* comprise the overall value offering for customers. The core products and services include trainings, workshops, and certification programs supported by ICT experts and resources and bolstered by the Center's state-of-the-art technology.

Price

As described above, the center will set prices that will, over time and at an equilibrium utilization rate, allow full operational cost recovery. Other activities that rent or lease the center will be priced at comparable market rates, which should provide a competitive advantage to the center due to its cutting edge, pre-installed computer, software, and audio-visual equipment.

Place

In addition to its physical location, the center will have a strong presence on the Internet, using virtual meetings, virtual incubators, virtual teams, a community-of-practice portal, and an interactive website to support and publicize activities.

Promotion

A mix of promotional tools for public relations and sales promotion will be used to effectively communicate to target audiences. The Center will not rely on advertising its services and products using traditional methods. Instead, it will focus on viral marketing, targeted emails, online social networks, and strong relations with the Georgian media, especially those that reach the target audience. The Center will continuously communicate with the media to

publicize the innovative programs, products, and initiatives created with ICT Innovation Center support. The Center's staff will issue press releases for events, innovative programs, and products. The center will also use events on ICT-related subjects to generate interest. EPI will assist in crafting this strategy. More specifically, PR activities will include:

a) Press conferences and press releases
b) Industry-focused social media (Twitter, Facebook, YouTube and LinkedIn)
c) Participation in related conferences and fairs (both technology-specific and business-oriented)
d) Publication of ICT Innovation Center results, case studies and success stories in electronic media, including social media and web portals
e) Promotional materials, leaflets, and banners
f) Emails and periodic newsletters to announce ICT Innovation Center events and training
g) Phone and SMS messaging
h) Microsoft, Hewlett-Packard, and Cisco partner sales promotion programs
i) Tours through the Center organized with universities, schools, companies, and government bodies

Potential Partners

The ICT Innovation Center will be realized as a result of the collaboration and contributions of its founding partners. The partners will provide the initial investment of cash and in-kind support to open the Center and cover shortfalls in operating revenues over the first three years. The founding partners will support the Center's management team with technical assistance related to information management, training, logistics, communications, and marketing, among other things. They and other key stakeholders will sit on a technical advisory committee to help management meet its technical goals and objectives.

> **ICT Innovation Center Collaborating Partners**
>
> Group 1 – Primary or founding partners
>
> Group 2 – Contributors such as universities and training/ICT companies
>
> Group 3 – Development and donor organizations
>
> Group 4 – Potential ICT Innovation Center customers and beneficiaries

For the Center to achieve its goals, it must also collaborate with a variety of organizations, including governmental institutions, universities, local training providers, and Georgian ICT companies. These partners will fuel the ICT Innovation Center's operations by spreading information, stimulating demand for services, and demonstrating the Center's value. The Center's success depends on bringing technology and people together and, therefore, the creation and maintenance of healthy relationships with these partners is crucial.

This section will look in more detail into the founding partners and the Center's other key partners. For clarity, the partners have been divided into four groups.

Group 1 – Primary or Founding Partners

The ICT Innovation Center founding partners include USAID, Government of Georgia, the hosting university, Microsoft, ICT Business Council, HP, and Cisco. Georgian telecommunication companies will also help launch the center. These partners will support the Center's start up and operations for its initial three years. Details about each primary partner's contribution can be found in Table 9. The section below includes a detailed explanation of each primary partner, as well as their contribution and what they are expecting to achieve by contributing to the creation of the ICT Innovation Center.

The United States Agency for International Development (USAID)[8]

USAID has provided economic and humanitarian assistance worldwide for more than 40 years. In Georgia, USAID has provided more than $1 billion in humanitarian and development aid since assistance began in 1992. USAID objectives in Georgia are focused on building democracy, promoting regional stability, and fostering economic growth and health services.

USAID Economic Prosperity Initiative

EPI aims to enhance Georgia's competitiveness, and increase FDI, exports, employment and productivity. EPI's design envisions private initiative as a key driver in defining and realizing a bright economic future. Local and foreign investors have already begun to exploit Georgia's platform for growth, and despite the trauma of invasion, occupation, and a global financial crisis, the country has made giant strides since 2008. EPI is designed to be a catalyst to transform these foundations into vibrant platforms for export expansion, for, while internal markets can develop further, Georgia must ultimately look outward to accelerate growth. USAID and EPI's implementing partners have extensive experience supporting the development of the ICT sector in countries in which it operates. Successful examples of their support to ICT in the region can be found in Croatia, Bulgaria, Moldova, Kosovo, Macedonia, and Albania to name a few. In 2011, EPI tasked SSG Advisors, their subcontractor, to create a feasibility study and initiate the establishment of an ICT Innovation Center.

In preliminary discussions, EPI considered contributing a total of $ 274,973 during the first year; details can be found in respective section of this document below. It is proposed to use that funding for the following:

a) Cover the payroll for the Management Team employed in the ICT Business Council (Executive Manager, Program/Office Manager, Financial Manager and the IT Expert/Technology Implementer)
b) Cover a part of the costs of trainings, workshops, consulting and events
c) Supply short-term experts (STTA) as needed to support the establishment of the ICT Innovation Center and other assistance as may be needed

EPI's technical contributions to the center will include:

a) Lead the process to develop and finance the drafting of the ICT Innovation Center business plan
b) Identify and meet all ICT Innovation Center stakeholders and secure commitments from the key founding partners to bring about its creation
c) Play the lead role in securing written agreements from the founding partners on their planned investments in the center and coordinate the timing of their contributions
d) Manage USAID's contribution to the ICT Innovation Center
e) Contract the ICT Innovation Center to host and/or provide technical support to EPI's technical workshops, events, and meetings
f) Facilitate linkages between the ICT Innovation Center and regional ICT activities
g) Facilitate strategic partnerships between the ICT Innovation Center and other donor and development agencies (GIZ, World Bank, EBRD, EU, etc.)

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[8] More information about USAID can be found at http://www.usaid.gov or for USAID Georgia visit http://georgia.usaid.gov

ICT Business Council (ICTBC)

The ICTBC assists in the development and growth of a vibrant ICT sector to promote a free and democratic Georgia as place for investment.

Contribution

The ICTBC has expressed an interest in managing the ICT Innovation Center to fill a specialized market niche that can only be occupied by such a non-profit structure. The ICT Innovation Center will not compete directly with the local ICT companies, but instead will work to increase market demand for ICT services. The Center will also aim to improve the technical competency of the ICT workforce and improve business productivity and efficiency with ICT solutions. By its second year of operation, the ICT Innovation Center is expected to be self-sustainable.

The ICTBC will provide the following start-up assistance:

a) Manage the process of creating the ICT Innovation Center within ICTBC (a not-for-profit organization) by providing a Management Team
b) Oversee and financially support the management and staff of the Center for its first three years
c) Contribute to the running costs of the Center including office supplies, marketing expenses, etc.
d) Utilize the ICT Innovation Center to host routine activities and events

The Government of Georgia

ICT development has been a focus of the Government of Georgia in recent years. In light of this, government officials in the Ministry of Justice, Data Exchange Agency; and the Ministry of Economy and Sustainable Development have expressed strong support for the ICT Innovation Center. The ICT Innovation Center's main government counterpart will be the Data Exchange Agency. The agency currently has the following objectives:

a) Drafting policies, laws, and ICT-related strategies—e.g. the National Strategy on Information Society—as well as the legal and sub-legal acts on information society
b) Coordinating all ICT-related projects and policies within the central government
c) Encouraging investment in the ICT sector
d) Promoting new technologies in the ICT sector
e) Providing technical assistance and encouraging standardization (e.g., defining ICT standards for the public administration or developing an internal ICT network for public administration)

Contribution

The Georgian Government, through its Data Exchange Agency (DEA) under the Ministry of Justice, will contribute to the creation of the ICT Innovation Center by:

a) Allowing access to technologies needed for developing, testing, and certifying ICT solutions based on e-Government services like e-ID
b) Providing Georgian Government ICT experts for technical assistance as necessary
c) Participating in ICT Innovation Center activities related to e-Government ICT solutions

Hosting partner (provider venue/facility) – University

In preliminary interviews with Universities, all of the rectors and deans expressed strong interest in participating as founding/primary partners in the program. The most common problems that all interviewed university representatives emphasized are:

a) Their curricula are outdated and not adequate for the modern ICT profession
b) Students are not able to receive any practical work experience on modern ICT systems
c) Student internships are the exception rather than rule: the small number of Georgian ICT companies do not have the capacity or ability to cater to more than 5,000 ICT students per year
d) Georgian ICT companies expect that students with diplomas from one of the ICT-related faculties are not able to fit in teams of creative workers, holding neither sufficient knowledge of soft skills nor practical knowledge of technical methodologies
e) Because of the small number of companies and the large number of inadequately prepared students seeking work in those companies, most of the 5,000 ICT students can't find a job in their profession
f) While there is the possibility of boosting student employment through self-employment supported by business/technology incubators, the existing incubators lack support and development programs

Based on the opportunities above, all interviewed University representatives expressed an interest in hosting such a Center.

Microsoft

Founded in 1975, Microsoft is a worldwide leader in software, services, and solutions. Microsoft actively supports a variety of programs to help develop ICT economies, encourage innovation, and promote Microsoft products in markets around the world. Microsoft Innovation Centers (MICs), operate in developed and developing countries to promote ICT and build workforce capacity throughout the world. MIC's[9] are state-of-the-art technology facilities for collaboration on innovative research, technology, or software solutions, involving government, academic, and industry participants. Programs such as BizSpark[10], offering ICT startup assistance, or the Technical Trainee Program, an internship program organized by MICs worldwide where students participate in training activities and project execution, contribute resources to the Innovation Center. During the Technical Trainee Program internship, students develop technical skills, learn different job roles, receive certifications, and gain real project experience. MICs also offer startup incubation, virtual incubation, the Students to Businesses (S2B) program, and a job recruitment program executed in cooperation with local universities. When programs cannot be replicated exactly, they will be customized to the Georgian context and Microsoft will coach and train staff to offer such programs. Microsoft is also involved in a number of diversity programs, education programs, and youth programs, all of which can be brought to Georgia through the ICT Innovation Center. Microsoft is one of the international vendors with a full-time presence in Georgia and has been a leading proponent of the ICT Innovation Center. Microsoft has confirmed that it will be one of the Center's founding partners. USAID and Microsoft have successfully

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[9] For more on Microsoft Innovation Center see http://www.microsoft.com/mic/default.aspx
[10] For more on BizSpark look into http://www.bizspark.com/Pages/home.aspx

collaborated in other countries[11] under USAID's Global Development Alliance proving that public-private partnerships can help achieve development goals.

Contribution

Microsoft's contributions to the center will be in-kind, financial, and programmatic:

    a) *In kind.* Microsoft will provide the center with licenses for desktops, laptops, and servers (for operating systems, Office packages, Exchange, SharePoint, etc.) and for software development technologies (SQL server, MSDN, etc.). Microsoft will also furnish upgrades to new technologies (like Microsoft Office 365, as they are developed, to ensure the center has the latest technology to promote and teach. Microsoft will also provide training curricula, materials, books, and software bundles. Another in-kind contribution will be Microsoft-certified professionals and trainers to provide training, training of trainers, hands-on labs and demonstrations through the center.

    b) *Channeling activities through the center.* Microsoft Georgia organizes between two and four promotional and demo events each year. They also organize workshops where they introduce new technology and social programs. They continuously organize training programs for their partners, such as sales skills training, and they are considering building a Microsoft Sales Academy. All these activities could be channeled through the center.

    c) *Cash contributions.* As specified in the detailed budget in the financial section of this plan, Microsoft will also contribute cash to help cover some of the start-up expenses of the center.

Hewlett-Packard (HP)

Hewlett-Packard is a leading technology company operating in more than 170 countries. Incorporated in 1939, Hewlett-Packard provides infrastructure and business offerings that span from handheld devices to some of the world's most powerful supercomputer installations. They offer consumers a wide range of products and services including digital photography, digital entertainment, computers and printers. Hewlett-Packard was named one of the world's 10 most innovative companies in 2009.

Hewlett-Packard is committed to promoting ICT development, Hewlett-Packard products, and social change. For example, HP's GET-IT program provides IT training to unemployed youth between the ages of 16 and 25 and helps potential entrepreneurs acquire IT skills with the aim of enabling them to become better placed to create and run their own businesses. GET-IT courses teach practical, hands-on IT solutions for daily business challenges in areas such as finance, management, marketing, and technology management. The program also provides technology and technical assistance for K-12 education. These programs and others will be offered to the Center.

Contributions

Hewlett-Packard is willing to support the ICT Innovation Center and has identified an HP contact person to move the process along. In addition, Hewlett-Packard has committed to the following contributions:

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[11] Examples of cooperation between Microsoft & USAID:
http://zagreb.usembassy.gov/press_20051028_en.html ,
http://zagreb.usembassy.gov/press_20080514a_en.html ,
http://www.microsoft.com/emea/presscentre/pressreleases/MSCentreVarazdinPR_281005.mspx

a) *In kind.* In-kind contributions will be in the form of equipment, software, training materials, and expertise. Hewlett-Packard may provide software and hardware (computers, laptops, servers, printers, appliances, access to the Hewlett-Packard Private Cloud, etc.) free of charge, or a local authorized HP distributer might be willing to cover the reduced costs from Hewlett-Packard so that the ICT Innovation Center could acquire the equipment at no charge. Another in-kind contribution will be HP-certified professionals and trainers to provide training, training of trainers, hands-on labs and demonstrations through the center.

b) *Channeling activities through the center.* As there is no Hewlett-Packard Learning Partner in Georgia or any local training provider that organizes Hewlett-Packard certified training programs, Hewlett-Packard is willing to bring HP certified training curricula to Georgia through the ICT Innovation Center. There is also the possibility (subject to the further agreement) that Hewlett-Packard's NGO located in Geneva could translate the HP curricula into Georgian if necessary.[12] Also, HP is willing to use the ICT Innovation Center venue for internal meetings and new technology presentations.

Cisco Systems

Cisco Systems Inc. is a worldwide leader in networking. Cisco hardware, software, and service offerings are used to create internet solutions that result in strong networks giving individuals, companies, and countries easy access to information anywhere, at any time. Cisco sells its products and services, both directly through its own sales force as well as through its channel partners to large enterprises, commercial businesses, service providers, and consumers. In addition to its sales "channel," Cisco has an education "channel" highlighted by Cisco Training Academies and Cisco Learning Partners that customize and deliver several Cisco training. The level of learning partner depends on the certification of the staff. The academy programs ultimately aim to support market growth. The ICT Innovation Center will support Cisco to identify strong ICT candidates and support them to get Cisco certifications.

Contribution

Cisco has several partners in Georgia, including Cisco Training Academies such as GRENA. Most partners are based in Tbilisi, but Cisco wants to expand to other cities as well. A representative from Cisco's sales "channel" expressed high interest in the ICT Innovation Center and several areas of collaboration have been identified, but Cisco still needs to identify a contact to manage its relationship with the ICT Innovation Center. Cisco has a number of incentives for partnering with the center, such as:

a) Maximizing the number of attendees at Cisco training programs
b) Raising awareness of Cisco technologies in a venue where people will be able to interact with and install equipment
c) Showcasing media and new technology and marketing events (for examples of such events please read Annex 6 under Appendix D: Additional Information)

As with other vendor partners, Cisco's contribution will be:

a) *In-kind* contributions in the form of equipment, software, and expertise.
b) *Channeling non-commercial activities* through the Center. The ICT Innovation Center may become a venue to host a Cisco Training Academy to be used by education

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[12] The translation of Hewlett Packard curricula could take up to three months from a request, depending on the amount of material.

institutions. The high visibility and popularity of the center will stimulate demand for such training programs. In addition, Cisco can sponsor hands-on labs, introduce its new technologies and products through the Center, or offer Training-of-Trainer events on not-yet-commercialized technologies.

c) *Cash support* is possible but needs to be defined.

Microsoft, HP, and Cisco successfully cooperated to create and operate a Microsoft Innovation Center in Croatia that was founded through a public-private partnership with USAID. Similar partnerships were structured to create Innovation Centers in Moldova and Armenia, the latter involving Intel.

Telecommunication Companies

There are number of telecommunication companies (Magticom, Silknet, Caucasus Digital Network (CDN), Geocell, etc.) in Georgia offering a mix of fixed and mobile network services.

Contribution

Telecommunication companies expected to:

a) Provide in-kind contributions by offering their telecommunication products and services—e.g. internet link and fixed/mobile phone lines—at no/nominal charge.
b) Provide in-kind contributions by providing experts and know-how transfer in the area of connecting software to fixed/mobile communication platforms.
c) Support the development of mobile applications by entrepreneurs that can be sold through their mobile network channels.
d) Offer previews of innovations, new technology, and products that they will bring to the market in the form of, for example, showrooms, workshops, and small conferences.

Sustainability and Profit Structure

The initial financial projections show that sustainability will not be a problem if the management team focuses its resources and aggressively communicates the Center's services, programs, and activities to the customers (ICT companies, students/recent graduates, universities, Georgian Government, and other industries).

The cash flow structure consists of three main sources:

a) Partner contributions
b) ICT Innovation Center revenue from the following services:
    a. Trainings/Workshops (level 1 and level 2 – basic and advanced)
    b. Event organization on behalf of the ICT Business Council
    c. Consulting and mentoring for projects and start-up companies
    d. Proof-of-concept projects and consulting
    e. Promotion/presentation organization in the Center's venue and 3rd-party equipment usage (e.g., Microsoft, HP, Cisco.)
c) ICT Innovation Center revenue from annual memberships (Gold and Silver)

A detailed budget description (at the end of this document) provides further detail.

CRITICAL RISK FACTORS

The first critical risk factor is the fact that execution of the business plan, programs, and activities will be the responsibility of the Executive Manager of the ICT Center and his colleagues from the management team. These staff must be chosen carefully to fill the roles

described in the previous section. Given the extensive staffing shortage of ICT professionals and the high rates paid by donor-funded projects, these positions will be both difficult to staff and difficult to retain. However, the center very much rests on the ability of the staff to respond to the changing needs of industry, effectively shepherd the founding partners' resources, and maintain the contractual requirements of a USAID grant. The Management Team needs to listen to requests from the business, social and political stakeholders and must be able to connect the ICT sector with other industries, especially agriculture and tourism. Essentially, the Innovation Center needs to be capable of tremendous responsiveness and flexibility while still maintaining strong relationships with all partners.

Copyright infringement and intellectual property causes significant tension amongst the key partners, and throughout Georgia—often with lines being drawn between MNCs and local companies. While this issue is beyond the scope of USAID, EPI, and the Innovation Center, we must bear this tension in mind as a dividing line between key Innovation Center stakeholders such as the ICT Business Council and Microsoft.

A final risk worth bearing in mind is that the Innovation Center program is conceived as a partnership. This partnership will depend on the full participation, promised resources, and the word of all of its partners to be successful. In the start-up phase, beginning with delivering equipment (software and hardware) on time and actively participating in the creation of programs and activities in the Center throughout the transition to sustainability, this relationship will require careful management and coordination.

START UP SCHEDULE

To start up the ICT Innovation Center, the following steps need to be executed:

   a) Finalize details about the selection and preparation of the Center's location; July 2012
   b) Sign Memorandum of Understanding (MOU) with all partners, stating resource commitments; August 2012
   c) Form the Steering Committee; August 2012
   d) Appoint the Management Team; August-September 2012
   e) Finalize offerings and business plan; September 2012
   f) Launch; October 1, 2012
   g) Train, build, learn, teach, test, and innovate!
   h) Reevaluate programs, activities, and approach regularly

FINANCIAL PROJECTIONS

This section provides detailed information on the projected start-up and running costs of the ICT Innovation Center for its first three years as well as the anticipated revenues and contributions of founding partners over the same time period.

The revenue and expense data cited in this report is based on information provided by authors of this study, as well as market research of current prices found in Georgia for the goods and services described. All calculations are in US dollars for consistency. The exchange rate used is from the time of writing in July 2012.

The founding partners' contributions are based on extensive discussions with the organizations. The estimates are based on those discussions and are consistent with the type of support that the parties have provided to ICT centers elsewhere. Following the partners' review of the business plan, a memorandum of understanding will be signed that states the goals and objectives of the ICT Innovation Center and summarizes the contributions expected. Subsequently, talks will take place between EPI and each partner to sign individual agreements that spell out the exact contribution, transfer schedule, and

transfer mechanism. EPI and the ICT Business Council will take the lead on this. Concurrently with these discussions, the ICT Innovation Center will be created as a part of the legal entity of the ICT Business Council, so they will also cosign all agreements.

Projected Expenses and Revenues

The estimated seed capital needed to start the ICT Innovation Center is $ 866,716 [13] and the full amount needed to sustain the project during its first three years of operation is $1,888,259. $ 638,541 is forecasted to come from revenues of the center, with EPI's contribution totaling $ 274,973[14]. The table below provides details of the total projected expenses for the first three years.

Table 4: Total Projected Expenses, Years 1-3

Budget item	USD
Equipment (hardware, software)*	1,042,128
Office Renovation and Furniture	71,987
Competitions and Events, Catering	38,549
Staff Cost/Payrolls**	522,549
Hosting Venue/Utilities	124,920
Telecommunications	23,000
Travel and transportation	38,872
Marketing***	26,252
Total for 3 years:	**1,888,259**

* Includes initial office refurbishment, office equipment costs, partner contributions, and total expenses on office supplies

** Includes taxes

*** Includes one-time website development cost

The total projected expenses in the table above are comprised of two categories of expenses: those relating to operating expenses (OPEX) and those related to capital expenditures (CAPEX). All capital expenses are recorded at their market prices, even though computer hardware and software will be transferred to the center by vendors at either no cost or substantial discount. In order to ensure the ICT equipment is up-to-date, computers will be replaced at the end of their expected life cycle of approximately 18 months.

Details of the operating expenses and capital expenditures for each of the first three years are found in the tables below.

Table 5: Operating Expense Forecast (OPEX)

Budget item	Year 1 / USD	Year 2 / USD	Year 3 / USD	Total / USD
Competitions and Events, Catering	8,019	15,173	15,358	38,549
Staff Cost/Payrolls**	148,092	171,925	202,532	522,549

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[13] Value equivalent to first-year OPEX and CAPEX costs
[14] Total EPI Contribution = EPI Grant ($210,383) + Set-Up Costs ($64,590)

Office Supplies	3,539	4,364	4,495	12,397
Depreciation	1,216	1,459	1,459	4,134
Travel and transportation	7,546	15,432	15,894	38,872
Marketing***	6,067	7,480	7,705	21,252
OPEX Total:	**174,479**	**215,833**	**247,442**	**637,754**

** Includes taxes

*** Does not Includes one-time website development cost for year 1

Competitions, Events and Catering reflect year-to-year increases as the number of activities increases. The cost of staff payrolls, including all taxes and benefits, has been calculated based on market prices and the gross amount is increased by 5% each year. Telecommunications includes the cost of internet, land lines, cell phones, and the necessary telecommunications equipment, including mobile phones. These items are expected to be contributed to the center by local telecom partners. Travel and transportation is for study visits by the ICT Innovation Center Management Team to other ICT innovation centers (Armenia, Croatia, etc.). These visits will serve to give a better understanding on how these centers operate and their impact in the market. This money is also to be used when working on regional projects and promotion of the ICT Innovation Center. It also includes expenses for local travel within the town and country.

For more details on OPEX expenses please refer to budget details in Appendix D: Additional Information.

Table 6: Capital Expense Forecast (CAPEX)

Budget item	Year 1 / USD	Year 2 / USD	Year 3 / USD	Total / USD
Software Licenses	363,657	165,086	115,086	643,829
Hardware and computer equipment	214,150	184,150	-	398,300
Hosting Venue/Utilities/Telecom	49,840	49,040	49,040	147,920
Office Equipment	64,590	-	-	64,590
CAPEX Total:	**692,237**	**398,276**	**164,126**	**1,254,639**

All hardware and software will be contributed by vendor partners. In addition, these partners will also contribute to a portion of the total expenses related to training, workshops and events by providing both trainers and speakers. The ICT Business Council will take the lead to ensure that the management and staff of the Center are performing to a high level. USAID will cover salaries in the first year, but it is predicted that the ICT Innovation Center will become fully sustainable after year 2. USAID will cover the restructuring and refurbishment of the center as well as other necessary expenses. For further details on the equipment used in the center and a valuation of the partners' contributions see Table 9 and other respective tables below.

The combined OPEX and CAPEX expenses forecast for the first three years are found in the table below.

Table 7: OPEX and CAPEX Expense Forecast

Expense Category	Year 1 / USD	Year 2 / USD	Year 3 / USD	Total / USD
OPEX	174,479	215,833	247,442	637,754

CAPEX	692,237	398,276	164,126	1,254,639
Grand Total:	**866,716**	**614,109**	**411,568**	**1,892,393**

The funds to cover the CAPEX and OPEX expenses listed above will be provided from a combination of founding partners and ICT Innovation Center operating revenues. The precise amount and distribution of the anticipated contributions of the partners plus the operating revenue projections of the center over the first three years are listed in the two tables below.

Table 8: Total Operating Revenue Forecast, Years 1-3

Revenue Sources (ICT Innovation Center)	Year 1 / USD	Year 2 / USD	Year 3 / USD	Total / USD
Trainings - Technical Skills	10,238	93,015	149,175	252,428
Trainings - Soft Skills	17,433	94,575	153,368	265,376
Competitions and Events	-	6,000	9,000	15,000
Business Development Services	-	2,800	3,500	6,300
Consulting and Proof of Concept	938	5,000	7,500	13,438
Rental - Venue & Equipment	2,250	18,750	25,000	46,000
Sponsorship Fees - Gold	-	-	10,000	10,000
Sponsorship Fees - Silver	5,000	10,000	15,000	30,000
Operating Revenue Total:	**35,858**	**230,140**	**372,543**	**638,541**

Table 9: Revenue from Contributions and Operations, Years 1-3

Primary partners	Contribution USD
Microsoft (confirmed in principle)	503,828
Hewlett-Packard (confirmed in principle)	228,300
USAID (confirmed in principle)	274,973
Host (University) (confirmed in principle)	124,920
Cisco (confirmed in principle)	310,000
Telecom companies: Magticom, Silknet, Caucasus Digital Network, Geocell (to be confirmed)	23,000
Subtotal:	1,465,021
Revenue from sale of ICT Innovation Center products and services	638,541
Total for 3 years:	**2,103,562**

FINANCIAL STATEMENTS

The ICT Innovation Center's income statement projections can be found below. The forecast period is the first three years of operation.

Income Statement Projections

The income statement shows a progressive increase in operating revenues generated each year. The Innovation Center reaches operational sustainability in its second year and,

with the anticipated contributions of its founding partners, it will meet all of its expenses prior to that point.

From year two and beyond, the center should do increasingly well each year and be operationally sustainable without the cash contributions of USAID to support recurring staff expenses. But it will still rely on its hosting partner (probably a university) to provide the venue and cover running costs (utilities, repairs, etc.). Its international partners such as Microsoft, HP, Cisco and other international and local companies will continue to use the center to promote their products and increase their client base through the center's audience.

As a result it is expected that the initial founding partners will continue to contribute to the ICT Innovation Center in the manner described in this feasibility study. Also, it is expected that the number of local companies that will want to partner with the center will grow and that their collaboration will become increasingly significant. In addition, the Center will proactively look for collaboration with donors on their development projects, as a third party in public projects and through other income-generating activities. The Center may also generate revenue from services and products that have been developed by companies with Center assistance.

Table 10: Income Statement

	Year 1	Year 2	Year 3	Total
Description	US$	US$	US$	US$
Revenues				
Fee revenue	35,858	230,140	372,543	638,541
EPI Grant	174,479	35,904	-	210,383
Total Revenue	**210,337**	**266,044**	**372,543**	**848,923**
VAT	-	(47,888)	(67,058)	(114,946)
Total Net Revenue	**210,337**	**218,156**	**305,485**	**733,978**
Expenses				
Salaries	118,474	137,540	162,025	418,040
Salary Tax	29,618	34,385	40,506	104,510
Marketing	6,067	7,480	7,705	21,252
Competitions and Events	5,000	9,000	9,000	23,000
Office Supplies	3,539	4,364	4,495	12,397
Depreciation	1,216	1,459	1,459	4,134
Catering	3,019	6,173	6,358	15,549
Travel - International	6,037	12,345	12,716	31,098
Travel - Domestic	1,509	3,086	3,179	7,774
Total	**174,479**	**215,833**	**247,442**	**637,754**
EBIT	35,858	2,323	58,042	96,223
Income taxes (15%)	-	-	(8,706)	(8,706)
Net income	**35,858**	**2,323**	**49,336**	**87,517**
Accumulated income	35,858	38,181	87,517	-

CAPITAL REQUIREMENTS & STRATEGY

The ICT Innovation Center can operate with few capital requirements, all of which can be supplied by founding partners.

C. RECOMMENDATIONS

Based on this feasibility study, as well as research and field work, consultants find that the creation of the ICT Innovation Center is feasible, desired, and very much needed.

The Georgian model for the ICT Innovation Center will be very different from the existing Centers in the world, but it will share many of the same ideas and tools that are offered currently on the market.

Consultants recommend that the ICT Innovation Center be managed by the ICT Business Council, and that it be hosted in one of the Georgian Universities.

Further recommendations are:

   a) The ICT Innovation Center should be open to all interested parties: students (from all universities), private companies and government institutions.
   b) To better serve Georgian ICT companies, it is recommended that a Georgian ICT market study be created that will concentrate mostly on the IT component and the added value and comparative advantage of Georgian ICT companies.
   c) Tight cooperation between ICT companies and universities should be established and (together with students) they should reach a consensus on what type of workforce ICT companies will need in the future. Based on that, new programs and projects will be launched.
   d) The ICT Innovation Center should execute frequent re-evaluations of its programs, mission, and vision, and check its alignment with the business, social and political environments.
   e) Because ICT is a young, competitive, and creative industry that is subjected to (almost) daily changes, the ICT Innovation Center should organize events and competitions where ideas are exchanged and exposed to potential investors.
   f) It is crucial for the success of the project to provide access for individuals and companies to financial support and funding in order to help the development of innovative ideas, products and services.

CONCLUSION

The ICT Innovation Center Feasibility Study evaluated the current state of the market and the need for an institution serving as a hub for existing and new initiatives to help Georgian ICT companies grow.

To achieve that, a completely different approach is needed from the models of Innovation Centers that have been created in the past. There is wide consensus and recognition that an ICT Innovation Center is needed and that it will be welcomed by the all interested parties: ICT companies, students/recent graduates, IT professionals, universities and the Georgian Government.

The ICT Business Council, a non-profit professional organization with a strong interest in the prosperity of its members (Georgian ICT companies), will manage the ICT Innovation Center. The Executive Manager of the ICT Innovation Center will be appointed jointly by the ICT Business Council and the Steering Committee. The Steering Committee will consist of all primary/founding partners of the ICT Innovation Center and will oversee the programs and activities that will be implemented in the Center.

Tbilisi State University has been selected as the first choice to host the ICT Innovation Center, because of its central location in Tbilisi, its flexibility, and its experience in similar

projects. The rector of Tbilisi State University also expressed a willingness to cooperate with other universities, companies, organizations, and government institutions.

ICT companies' needs:

a) Specialized trainings for ICT professionals, including technology trainings, soft skills (methodology) trainings, and business trainings
b) Help training new employees to shorten the time of their preparation
c) Help preparing for and executing student internships
d) Support in building their capacity for growth, by helping them with technical obstacles and organizational challenges

Students' needs:

a) Career guidance so they can prepare themselves for a future job or self-employment
b) Modern curricula/complimentary trainings and practical (hands-on) exercises
c) Possibility for internships and learning from proven experts, while at the same time acquiring practical knowledge and gaining self-esteem and future references by working on successful projects

To achieve the above goals, the ICT Innovation Center will offer services including:

a) Trainings, workshops, coaching, and networking events
b) Proof-of-concept projects for companies that need solutions to their problems and serving as a test ground for their potential employees (students and recent graduates). These services include training, access to project management, and access to a recruiting database.
c) A logistics infrastructure for ICT SME's working on joint projects.
d) Industry and business surveys and benchmarking.
e) A recruiting/mentorship service by creating a database of trained people, their competencies, specialties, and interests and implementing programs to train specialized ICT professionals that
    a. Know the technology
    b. Know how to work in a team
    c. Have excellent communication skills
    d. Have industry certificates and proven knowledge of working on different successful ICT projects

The ICT Innovation Center will cooperate with the Georgian Government on various e-Government projects, like implementing e-ID for use in identification and authorization in public- and private-sector-driven projects. In collaboration with the Georgian Government, the ICT Innovation Center will establish an e-Government testing and certification lab for the development of e-Government related projects.

There will be several ways to access the Center's services:

a) Students or recent graduates who want to explore the possibility of working in an ICT company will be given an opportunity to join special custom-made "internship" programs, partly funded by the ICT companies in cooperation with universities.
b) Students or recent graduates who do not want to work for a specific employer will be given "student grants" and will be required to pay back (in different ways) the amount that has been invested in the program that they attend.
c) A "pay-for-use" model for commercial trainings will be available to companies and individuals. For example, a company will pay for employees to attend trainings, workshops, etc.
d) A "priority access" model for companies/organizations that pay for a membership. This will increase the pool of committed stakeholders as well as provide cash infusion at the start of each FY. The two memberships comprise:

a. Gold Membership, the annual membership fee will ensure that these companies have priority access to the ICT Innovation Center's activities, and access to the database of trained students/recent graduates. As well as have a substantial, 50% discount on all services
a. Silver Membership, like the Gold Membership, but with a smaller, 25% discount and lower priority, behind those companies and individuals with Gold Memberships.

In the first year of the Center's operation, there will be no detailed schedule, but the Center will create programs based on the needs of the private sector/students. Based on feedback, the Center will develop its capacity, programs and schedule.

The ICT Innovation Center will not compete with existing commercially available training organizations. On the contrary, it will cooperate with such organizations by means of outsourcing parts of its educational/training services.

The ICT Innovation Center will provide Train-the-Trainer activities at a discounted rate or free of charge, asking in return that those trainers deliver trainings for the Center's customers.

Also, the Center will give referrals to existing IT training centers, so that those centers will be beneficiaries rather than competitors.

Another of the Center's goals will be to provide grant-writing support for grants from organizations including USAID, the European Union, and other donors.

D. ADDITIONAL INFORMATION

SECTION D1: SELECTED REFERENCES AND BACKGROUND WEB LINKS AND DOCUMENTS

The following documents were provided by EPI:

a) **EPI Value Chain Assessment**, final version, April 1, 2011, Deloitte Consulting LLP, USAID
b) **EPI ICT Company Data Survey**, draft version, January 31, 2012, Deloitte Consulting LLP, USAID
c) **EPI Georgian ICT Education Providers Survey**, draft version, February 02, 2012, Deloitte Consulting LLP, USAID

Other documents/web links:

a) ICT Sector Study, PricewaterhouseCoopers (PwC) & National Investment Agency – Invest in Georgia: http://www.investingeorgia.org/upload/file/ICT_Sector_Study.pdf
b) Georgia Financial Booklet
c) Microsoft Innovation Centers, http://www.microsoft.com/mic
d) Microsoft Innovation Center in Armenia, http://www.micarmenia.am/
e) E-government portal of GoG, http://www.e-government.ge
f) Georgian National Communications Commission – Annual Report 2009, http://www.gncc.ge/files/3100_3389_682251_Annual_Report_2009-eng.pdf
g) World Bank, ICT At-a-Glance, http://devdata.worldbank.org/ict/geo_ict.pdf
h) World Bank, Doing Business ranking, **http://www.doingbusiness.org/EconomyRankings**
i) World Bank, World Databank, http://databank.worldbank.org/data/home.aspx

SECTION D2: INTERVIEW TEMPLATE

1. **Name:**   **Problems & Challenges:**

    URL: **Suggestions:**

    Founded: **Possible Action Items:**

                                           -

    Ownership:

    Contact:

    History:

    Business Focus:

    Financial Data:

    Core Technology:

    Products & Services:

    Customers & Projects

    Number of Employees:

    Gender Balance:

    Main Education:

    Market:

    Competitors:

    Main Weakness:

    Expansion Capacity:

SECTION D3: TEMPLATES FOR ON-LINE SURVEY

SURVEY FOR THE ICT COMPANIES

Name		
Address:		
Contact person:		
Phone:		
E-mail:		
Web:		
1.	Year when the company was founded:	
2.	Core business focus of the company:	
3.	Number of employees:	a) 1-3 b) 3-9 c) 9-19 d) 20-50 e) 51-100 f) 100-250 g) More than 250
4.	Market for products/services:	a) Domestic (Georgia) b) Regional (Caucuses) c) CIS d) Europe e) USA f) All above
5	How do you access new customers?	g) They come to me with their plans and expectation already formed h) They get in touch and know they want IT but don't know what they want i) I approach them with an idea
6.	Desired skills and experience for new employees:	j) Young, without experience k) Young, with small experience l) Experienced, with technical background m) Experienced, with business background n) All above
7.	Previous company experience with employing new workers:	o) Bad, company needed to provide significant number of additional trainings p) Good, but they need to pass some additional trainings q) Excellent, they started to work immediately at full capacity, after short adjustment to the work environment
8	Do you have an internship program in place	r) Yes, we work with {scale}___ number of students per year s) No; If no—why not?
9.	Did you provide education for your employees in previous year?	t) Yes u) No
10.	How many new people you plan to employ in near future?	v) 1-3 w) 4-6 x) 6-10 y) Enter the number:
11.	Requested profile of new employees:	IT knowledge and skills
		Note: This should be ranked from 1 to 21

	Networking	☐
	Security	☐
	Oracle DB Administration	☐
	Oracle SQL Programming	☐
	Java/JavaScript/JSP	☐
	AIX/HPUX/Solaris	☐
	Linux	☐
	Microsoft Windows Server	☐
	SQL Server	☐
	ASP.NET	☐

		VB.NET	☐
		SharePoint	☐
		Android	☐
		iOS	☐
		HTML	☐
		CSS	☐
		JQUERY	☐
		PHP/MySQL	☐
		Ruby on Rails	☐
		Ajax	☐
		C/C++/C#	☐
		Other (write in a free form):	
		Business Knowledge and Skills: Note: This should be ranked from 1 to 4	
		Project Management	☐
		Quality Management (ISO, CMMI)	☐
		Financial Management	☐
		Presentation Skills	☐
		Other (write in a free form):	
12.	Is your company interested in hiring IT professionals trained outside of your firm?	z) Yes aa) No bb) Maybe if they_____	
13.	Do the following other services interest you? Would you be willing to pay for them?	cc) Hearing about New technologies dd) Learning about Patent laws ee) Trade fairs etc. ff) Networking w/ gg) Other innovation centers hh) Other IT companies in Georgia ii) Other business sectors jj) Accessing a Project management hub for large projects kk) Access to information about venture capital and other loans ll) Testing and quality assurance for new products mm) Business counseling and advisory services nn) Access to relevant market information oo) Trade missions and trade fairs	
14.	Are you interested in any of the following certifications?	pp) Microsoft qq) HP rr) CISCO ss) ISO tt) App development	

SURVEY FOR THE (NON-ICT) COMPANIES THAT USE ICT AS A TOOL

Name:			
Address:			
Contact person:			
Phone:			
e-mail:			
Web:			
1.	Year when the company was founded:		
2.	Core business focus of the company:		
3.	Number of employees:	uu) 1-3 vv) 3-9 ww) 9-19 xx) 20-50 yy) 51-100 zz) 100-250	

		aaa) More than 250
4.	Market for products/services:	bbb) Domestic (Georgia) ccc) Regional (Caucuses) ddd) CIS eee) Europe fff) USA ggg) All above
5.	Desired skills and experience for new employees:	hhh) Young, without experience iii) Young, with small experience jjj) Experienced, with technical background kkk) Experienced, with business background lll) All above
6.	Previous company experience with employing new workers:	mmm) Bad, company needed to provide significant number of additional trainings nnn) Good, but they need to pass some additional trainings ooo) Excellent, they started to work immediately at full capacity, after short adjustment to the work environment
7.	Do you have an internship program in place	ppp) Yes, we work with {scale}___ number of students per year qqq) No; If no—why not?
8.	Did you provide education for your employees in previous year?	rrr) Yes sss) No
9.	How many new people you plan to employ in near future?	ttt) 1-3 uuu) 4-6 vvv) 6-10 www) Enter the number:

10.	IT Systems/Technology used as tool within the company

	We are currently using Vendor/product (please write the name)		We are planning to implement Vendor/product (please write the name)	
E-mail	☐		☐	
GroupWare Tool (Exchange Server, Lotus Notes, GroupWise, other)	☐		☐	
Office Productivity Tools (MS Office, Open Office, other)	☐		☐	
Collaboration Tool / Unified Communication (SharePoint, WebEx, Google Docs, other)	☐		☐	
Databases (Oracle, DB2, MS SQL Server, MySQL)	☐		☐	
Web portal (Custom, SharePoint, CMS)	☐		☐	
Manufacturing (SAP, BaaN, other)	☐		☐	
Supply Chain Management (SAP, BaaN, other)	☐		☐	
Accounting	☐		☐	
Enterprise Resource Planning (ERP)	☐		☐	
Customer Relationship Management (CRM)	☐		☐	
Business Intelligence & Data Mining (BI)	☐		☐	
Document Management (EMC, SharePoint, other)	☐		☐	
Project Management (Panorama, MS Project, other)	☐		☐	
Antivirus & Data protection	☐		☐	
IT infrastructure monitoring	☐		☐	
Other, please fill in:				

10.	Plan for employee education:	-	

Business Knowledge & Soft Skills	Employees		IT Knowledge and Skills	Employees	
	New	Existing		New	Existing
Note: There should be possibility to ranked this rows by the user from 1 to 16			Note: There should be possibility to ranked this rows by the user from 1 to 21		

Marketing and Sales	☐	☐	Networking	☐	☐
Innovation and Technology	☐	☐	Security	☐	☐
Leadership	☐	☐	Oracle DB Administration	☐	☐
Production Management	☐	☐	Oracle SQL Programming	☐	☐
Quality Management System	☐	☐	Java/JavaScript/JSP	☐	☐
Export Promotion	☐	☐	AIX/HPUX/Solaris	☐	☐
Tax/ Laws	☐	☐	Linux	☐	☐
Finance and Control	☐	☐	Microsoft Windows Server	☐	☐
Personnel and Organization	☐	☐	SQL Server	☐	☐
Problem-Solving Skills	☐	☐	ASP.NET	☐	☐
Time Management	☐	☐	VB.NET	☐	☐
Computing & Internet	☐	☐	SharePoint	☐	☐
Decision-Making Skills	☐	☐	Android	☐	☐
Receiving Feedback/ Criticism	☐	☐	iOS	☐	☐
Being Effective in Meetings	☐	☐	HTML	☐	☐
Giving Feedback to Others	☐	☐	CSS	☐	☐
			JQUERY	☐	☐
			PHP/MySQL	☐	☐
			Ruby on Rails	☐	☐
			Ajax	☐	☐
			C/C++/C#	☐	☐
Other (please write in a free form):			Other (please write in a free form):		
11. Is your company interested in hiring IT professionals trained in the Innovation Center:			**a) Yes** **b) No**		

SECTION D4: INNOVATION CENTER UTILIZATION PLAN

UTILIZATION PLAN FOR ROOM NO.1 - TECHNICAL CLASSROOM

Room No. 1 - Technical classroom should have foldable tables that can be removed from the classroom and replaced by chairs in a theater arrangement to allow for conferences or events up to 50 people

Technical room No.1 is expected to have an average utilization as depicted below. The calculation of room utilization is based on the following assumptions:

a) In the 3rd year, each month will have 3 weeks reserved for training delivery and 1 week for other activities
b) Based on the other Innovation Center's experience, in 1 year there is at most 10 "usable/working" months. 260 business days per year are used here as a baseline.

Table 11: Technical Room #1 Utilization Plan

Type of Activity	Attendees Per Class	Price per day ($)	Utilization (%)											
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
YEAR 1														
Trainings & Workshops	18	25	0%	0%	0%	0%	0%	0%	5%	10%	15%	20%	25%	30%
YEAR 2														
Trainings & Workshops	18	45	25%	25%	30%	40%	43%	45%	48%	50%	53%	55%	58%	60%
YEAR 3														
Trainings & Workshops	18	50	40%	45%	50%	65%	66%	68%	69%	70%	71%	73%	74%	75%

WORKSHOP CLASSROOM NO.2 UTILIZATION PLAN

The workshop classroom will be multifunctional to allow for soft-training sessions or roundtable meetings for approximately 15 - 20 persons; the room will not have computers but will be cabled for laptop work and video projections.

The workshop classroom is projected to have an average utilization as depicted below, including leasing/renting. Assumptions are the same as those of room number one listed above.

Table 12: Workshop Classroom #2 Utilization Plan

Type of Activity	Attendees Per Class	Price per day ($)	Utilization (%)											
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
YEAR 1														
Trainings & Workshops	18	30	0%	0%	0%	5%	7%	10%	13%	16%	20%	23%	25%	30%
YEAR 2														
Trainings & Workshops	18	50	25%	25%	30%	35%	38%	40%	43%	45%	48%	50%	53%	55%

YEAR 3													
Trainings & Workshops	18	55	35%	45%	50%	60%	61%	63%	64%	65%	66%	68%	69%	70%

TECHNICAL LABS NO. 3 AND NO. 4 UTILIZATION PLAN

The ICT IC's Technical Research Center (TRC) will have two technical labs (rooms 3 and 4) that will be used, on average, 240 room days per year for activities such as: proof-of-concept projects, consulting, mentoring, coaching, networking, new product creation, and a variety of business incubation services. In addition, an average of 160 room-days per year will be available for other activities.

Based on the usage pattern of the other Innovation Centers, it is estimated that the ICT Innovation Center will utilize the two rooms as described in the table below, which lists activities taking place over a typical month.

Table 13: Technical Labs Monthly Activity Schedule (Rooms No. 3 and No. 4)

Classroom Type	Week 1	Week 2	Week 3	Week 4
Room No. 3: *Technical lab 1*	Proof-of-Concept	Consulting	Mentoring / Coaching	Networking
Room No. 4: *Technical lab 2*	Working in group on joint project	Leasing/ Renting to 3rd parties	Networking	Mentoring / Coaching

While the estimation of usage for these labs is important, it must be noted that some of the abovementioned activities can be undertaken without entering the ICT Innovation Center venue. This is because the Center will provide virtual infrastructure (servers/cloud computing/hosting) to its users through either partnership with Microsoft/Hewlett-Packard or through the local telecom partner.

SECTION D5: DESCRIPTION OF TRAININGS

The ICT Innovation Center (alias: ICT-IC) is intended to be an effective approach to building core competencies in the development of innovative ICT solutions among a growing number of SMEs, as well as business excellence for creation of sustainable and successful organizations.

The ICT Innovation Center will provide infrastructure (ICT equipment, facility with classrooms, meeting rooms and laboratories) necessary for accomplishing knowledge transfer of technology, soft skills and business through:

a) **Trainings in area of**

    a. Information Communication Technologies (ICT)

    b. Soft Skills

b) **Workshops**

    a. Policy regulation in ICT

    b. Supporting effective information exchange in following areas:

        i. Business-to-Business (B2B), Business to Consumer (B2C), Business-to-Employee (B2E)

        ii. Government-to-Citizens (G2C), Government-to-Business (G2B), Government-to-Government (G2G)

Other activities like:

a) **Coaching**

    a. Hands on, real life project implementation through education and participation in all phases of the project

    b. Business managers coaching

b) **Networking**

    a. Creating virtual information exchange networks and research

    b. Foster creation of local industry clusters to help develop specific initiatives to provide economic development opportunities

c) **Proof of concept projects (testing/demo)**

    a. Encourage accelerated development and deployment of best practice business;

d) **Providing logistics infrastructure for ICT SME's working on joint projects**

    a. Conference facilities

    b. ICT Innovation Center should help and support business incubators like Technology Parks/Business Centers to foster and develop new ideas and value added business solutions

    c. Library

    d. Lab's

    e. Access to professional grade equipment - the latest technologies from the leading industry vendors

e) Surveys and benchmarking

    a. ICT Innovation Center should cooperate with Government and NGO in establishing reliable and trustworthy picture of the local economy and society, how ICT is influencing/helping them as well how ICT should help them

SECTION D6: SAMPLE LIST OF TRAINING/WORKSHOP CURRICULUM SUBJECTS

BUSINESS TRAININGS AND WORKSHOPS

- Introduction to Software Business Management
- Advanced Software Business Management
- Junior Business Analyst
- Introduction to modern HR Management in ICT
- Human Resources for Managers
- Business Value of CRM in ICT Business
- How to finance your company?
- What are Venture Capital Funds? Venture Capital — financing the development of SME's
- Training for EU Funds FP7 - Introduction to FP7 EU program for development and research
- Training for EU Funds FP7 - Info Day – FP7 Calls for projects in ICT sector
- Training for EU IPA Funds
- World Bank & Europe Aid Business Opportunity Workshop

METHODOLOGY AND QUALITY ASSURANCE

- Operations Risk Management
- Introduction to Project Management
- Enterprise Project Management Academy
- Functional Requirement Management
- Optimized Quality Management
- Application Certification to obtain the ISV Microsoft Partner Competence
- Cisco Entrepreneurship Academy
- Hewlett-Packard Global Method Workshop
- Impact of Implementing Service Oriented Architecture on Business and Management

SOFT SKILLS

- Advanced Sales Skills in Personal/Direct Sales
- Practical Leadership Skills
- Innovation Accelerator
- Business Negotiation Skills and Methods
- Sales Communication Foundations for Sales Staff
- Sales Communication Foundations in Direct Sales

- Efficient time management
- Communication Skills for Trainers
- Rhetorical and presentational skills

ACADEMIC/EDUCATION TOPICS

- Learning Gateway
- Using Microsoft Producer to create e-Learning content Workshop
- Innovative Teachers Forum
- How to use ICT for the Education of Children with Special Needs

TECHNICAL TRAININGS AND WORKSHOPS

- Developers BootCamp
- Mobility BootCamp
- BizTalk BootCamp
- Data Security BootCamp
- SQL Server BootCamp
- Microsoft Application Lifecycle Management 101
- Service-Oriented Architecture - Web Services
- Advanced Object Oriented Programing using C#/VB
- Windows SharePoint Services
- Microsoft Silverlight and Expression Tools
- Advanced Transact-SQL Querying, Programming and Tuning for SQL Server
- SQL Server Analysis Services
- SQL Server High Availability Systems
- Relational Database Administrator Workshop
- SQL Server Database Administration for non-DBA
- Exchange Server High Availability Systems
- Development of Unified Communications Applications
- Microsoft Unified Communications Product and Infrastructure
- Visual Studio Team System Workshop
- Visual Studio and .NET Framework Enhancements Workshop
- Visual Studio Tools for Office
- Smart Card – Using smart cards in .NET applications
- Smart Client Applications Development
- Digital Rights Management Server
- Integration of Business Applications with BizTalk Server

- Exchange Server Disaster Recovery Procedure
- Advanced Microsoft Exchange Server Workshop
- Advanced Microsoft Forefront Server Workshop
- Advanced Microsoft Forefront Identity Management Server Workshop
- Advanced System Center Essentials Workshop
- Windows Server: What's new for administrators and engineers?
- Windows Server: Network Access Protection
- Windows Server: Security
- Windows Server: Terminal Services & Virtualization
- Windows Server – Active Directory Certificate Services (PKI)
- Windows Server – Active Directory Rights Management Services (RMS)
- Identity Lifecycle Manager Technical Training
- Microsoft Desktop Optimization Pack - Train the Trainer
- Integrated Systems in Call Centers – Microsoft CRM & Cisco Call Manager
- Microsoft Software + Services Workshop for ISV

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ANNEX   8:   STORYBOARD