



IST 6th Framework Programme - a New Challenge for Baltic States

RIGA LATVIA

2003

2-3 April

IST 6th Framework Programme - a New Challenge for the Baltic States

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Printed in Latvia

Acknowledgements

The workshop "IST 6th Framework Programme - a New Challenge for the Baltic States" was held within the framework of the TELEBALT project with the support of the European Commission.

The project team is grateful to all who have taken part in this event and expresses special acknowledgment:

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Dr. Jacques BABOT

Head of the E-Work sector at the European Commission

Dr. Giangaleazzo CAIROLI

The policy of Regional development in EU

Andris BĒRZIŅŠ

Former Prime Minister of Latvia

Dzintars ZARIŅŠ

Head of the Informatics Department, Ministry of Transportation

Foreword

The workshop "IST 6th Framework Programme - a New Challenge for the Baltic States" 2003 was a great success! The workshop was attended by approximately 200 IT specialists from Latvia and different European Union and Candidate states.

As in 2002, this year's proceedings again provides an opportunity to take stock of the changes in working environments and tourism applications as Europe moves closer towards a knowledge economy.

We welcomed in 2002 and 2003 the emergence of the euro, the single European currency, as a stronger reality, and enlargement in the near future will further strengthen the Union. The Lisbon Strategy to put Europe at the top in international competitiveness has still to be vigorously pursued, and the eEurope 2005 action plan is a step in this direction.

In contrast to the recession in parts of the EU, a strong productivity growth in the US has continued for a longer period. The US is reaping the benefits of past investments, in particular in Information and Communication Technologies and business innovation. These technologies are transforming business and working life, and at this critical time in European development, the momentum of innovation must be sustained.

Why is this ICT technological revolution so important? The short answer is that it plays a critical role in productivity growth. Productivity growth depends on increasing the value of goods and services we produce and the efficiency with which we use our skills and resources. Both now depend on effective use of ICT.

Despite the inevitable disappointment of unrealistic expectations for revolutionary change in the late 90s, we do need to make the transition to a "new economy" based on knowledge to sustain our prosperity in an increasingly competitive world. This will require the transformation of traditional business models into ones based on networks of collaboration, effective knowledge management, and continuous innovation - all three characteristics dependent on the wide use of ICT.

These technologies lie at the center of new business models and working practices. However, we are still at the beginning of this transformation of business and working life. We still need to



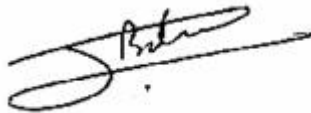
Dr. Jacques Babot
Head of the E-Work sector at the
European Commission

ensure the cost-effective deployment of new infrastructure across the EU and the renewal of our administrative and legislative frameworks to facilitate innovation, productivity and employment growth.

Several targets have largely been met: at the European level, the new European regulatory framework for electronic communications services is in place; the European Social and Regional development funds have been re-oriented to support re-skilling and information society developments at the regional level; Internet use has also grown fast, Internet use in EU households has increased from about 18% in March 2000 to 28% in October 2000, 34% in June 2002, and in October 2002 it stood at 40%; in some countries, the Internet is used in more than 60% of households - a higher proportion than in the USA.

We would like to thank and congratulate all those who participated in the workshop and contributed their presentations to the proceedings. Thanks to everybody who assisted to make this event successful and we look forward to further co-operation and success in the future within the 6th Framework IST Programme activities.

Jacques Babot

A handwritten signature in black ink, appearing to read 'J. Babot', with a long horizontal flourish extending to the right.

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Workshop PROGRAMME
**"IST 6th Framework Programme - a New
 Challenge for the Baltic States"**

Wednesday, 2 April

10.00 - 11.00	<p>TELEBALT PLENARY WELCOME SPEECH</p> <ul style="list-style-type: none"> ● Minister of Economics of Latvia Juris LUJANS (10) ● Former Prime Minister of Latvia Andris BERZINS (10) ● Ambassador of the European Union in Latvia Andrew RASBASH (10)
	<p>6th Framework for all Chairman: Dzintars ZARINS, Executive director at the association of computer technologies in Latvia</p> <ul style="list-style-type: none"> ● Research and development program of the European Union. The FWP 6 a new opportunity for Baltic States. Dr. Jacques BABOT Head of sector E-Work sector at the European Commission, Brussels (20) ● The TELEBALT Project and its present results (IST) Prof. Jean BONNIN, President of EDNES, Prof. Alexei GVISHIANI, Vice-president of EDNES, France (15) ● Organisation of the workshop Dinnija MUDURE Project manager at Open Latvia, Latvia (10)
11.00 - 11.30	Coffee break
11.30 - 13.00	<p>Chairman: Prof. Jean BONNIN, President of EDNES, France</p> <ul style="list-style-type: none"> ● The policy of Regional development in EU Dr. Giangaleazzo CAIROLI Head of Unit IS Regional aspects at the European Commission, Brussels (15) ● The Policy of Regional development in Baltic states Dr. Maris PUKIS Senior advisor at union of local and regional governments of Latvia (15)

	<ul style="list-style-type: none"> ● Development projects of regional economy in Latvia Baiba PURE Project manager at project development Institute (10) ● eWork environment in Europe Nicole TURBE-SUETENS Director of Distance expert Ltd., France (20) ● IT Development in Latvia 2003 Vilis ZVIDRINS Head of Informatics Department, Ministry of Transportation Dzintars ZARINS Executive director at the association of computer technologies in Latvia, Latvia (20) ● European IST prize, Georges GRUNBERG European IST Prize evaluation group, Brussels (10)
13.00 - 14.00	Lunch
14.00 - 16.00	<p>Parallel sessions A/1: New working environment Chairman: Dr. Atis KAPENIEKS, Director of distance education centre, Technical University of Riga</p> <ul style="list-style-type: none"> ● TELEBALT on the web and in the context of FP6, Dr. Alexander BERIOZKO, Project manager at EDNES, Russia Dr.Zigmas BIGELIS, Project consultant at INFOBALT, Lithuania (15) ● Knowledge Board - a European Network for Knowledge Management Anne JUBERT (15) Ecole Centrale de Paris, France ● eBusiness needs usability Dr. Nigel BEVAN Research Manager Serco Usability Services, UK (15) ● eProfessions, e-workers role (example of IST projects) Nicole TURBE-SUETENS Director of Distance Expert Ltd., France (20) ● E3Work project (IST) E3WORK results in Lithuania by Eligijus KAJIETA E3WORK results in Hungary by Miklos ILLESSY E3WORK results in Latvia by Iveta BIEZA (40) ● Flexwork project (IST) Adam TUROWIEC Director of Institute Communications and IT, Poland (15)

14.00 - 16.00	<p>PARALLEL SESSIONS B/1: PROGRESSIVE EFFECT OF IT IN THE CONTEXT OF REGIONAL DEVELOPMENT Chairman: Dr. Giangaleazzo CAIROLI, Head of Unit IS Regional aspects at the European Commission</p> <ul style="list-style-type: none"> ● PROJECT PROTELEUSE (IST) Jesus DE LA MAZA General manager at CARSA, Spain (15) ● SME'S DEVELOPMENT IN THE CONTEXT OF IST Uffe Jorgensen BUNDGAARD CEO of Gate 2Growth, Denmark (15) ● E-LIVANI PROJECT, Irina KULITANE Project coordinator, Latvia (15) ● E-LEARN E-WORK, Jean Claude MAROT Head of JC Consultants, French Polynesia (15) ● SOCIAL INCLUSION (SOCRATES PROJECT), Dzintars TOMSONS Technical University, Latvia (15) ● IT ADJUSTMENTS FOR SUCCESSFUL DEVELOPMENT WITHIN REGIONS OF BALTIC STATES Diana ALBINA PHARE project manager, Open Latvia, Latvia (15) ● PARTICIPATION OF KOHTLA-JARVE TOWN GOVERNMENT IN INTERNATIONAL PROGRAMS AND PROJECTS Ph.D. Aleksandr DUSMAN Projects manager of Kohtla-Jarve, Town Government, Estonia (15)
16.00 - 16.30	Coffee break
16.30 - 17.30	<p>Parallel sessions A/2: e-learning (e-working context) in Europe and Latvia Chairman: Dr. Yuri MERKURYEV, Riga Technical University</p> <ul style="list-style-type: none"> ● "Knowledge to People and People to Knowledge" - A Life long learning experience Dr. Hari BALI Principal Lecturer, Kingston University, UK (15) ● E-learning in Latvia Dr. Atis KAPENIEKS Director of Distance Education centre, Technical University of Riga, Latvia (15) ● E-learning as a mean of formation of students creative experience Dr. Sarma CAKULA Head of IT department University of Valmiera, Latvia (15)

17.30 - 18.00	WORKING GROUPS
16.30 - 17.30	<p>Parallel sessions B/2: Tourism as an important aspect of regional development Chairperson: Aira ANDRIKSONE, Head of the Division of Tourism Development, Ministry of Economics, Latvia</p> <ul style="list-style-type: none"> ● Tourism development policy and regional development Aira ANDRIKSONE Head of the Division of Tourism Development, Ministry of Economics, Latvia (15) ● Open Latvia Tourism Portal Zane MATISONE General manager at Open Latvia, Latvia (10) ● Castles and Manors in the internet Laima LUPIKE Association of castles and manors, director, Latvia (10) ● Importance of IT marketing in development of tourism in Baltic Region Igors KLEPENKOVS Managing Director, Inspiration Riga, Latvia (10) ● VMART project (IST) Asnate ZIEMELE president Latvian Country Holiday Association "Lauku celotajs", Latvia (15)
17.30 - 18.00	WORKING GROUPS
Thursday, April 3	
10.00 - 11.00	<p>Parallel sessions A/3: Sustainable development and corporate social responsibility Chairman: Dr. Jacques BABOT, Head of sector E-Work at the European Commission</p> <ul style="list-style-type: none"> ● Sustainability in the knowledge society: Why is it increasingly important? Dr. Marc LUYCKX Director of "Vision 2002", Brussels (20) ● Sustainability a new concept for Baltic states Andrejs LUSIS LETERA Electronical engineering and electronics industry Latvia (20)

10.00 - 11.00	<p>Parallel sessions B/3: Telecommunication as cornerstone of regional development and IT Chairman: Peteris SMIDRE, President of Telecommunication Association of Latvia</p> <ul style="list-style-type: none"> ● Digital TV in Latvia Guntars SPUNDE General Director of the Digital Latvian Radio & Television Centre J-SC, Latvia (15) ● Latvenergo telecommunications & IT strategy Janis KENINS Manager of Latvenergo Technical Centre, Latvia (15) ● Telecommunications in the Railway of Latvia Ainars ZANDERSONS Head of Telecommunications Marketing Department at Public J-SC "Latvijas Dzelzceļš", Latvia (15) ● Lattelekom's role in regional and competitive environment development Valdis VANCOVICS Director, Carrier Business, Lattelekom, Latvia (15)
11.00 - 11.30	Coffee break
11.30 - 12:30	<p>Parallel sessions A/4: European year of disability and the role of IT in life of people with disability Chairperson: Aija JUHNA, Project manager at organisation of people with disabilities and their friends APEIRONS</p> <ul style="list-style-type: none"> ● Sustainable integration through telework, THINK Baltic extension (IST) Henrique RELOGIO, Project operational co-ordinator, Portugal Inga BAKANE, Project manager, Open Latvia, Latvia Tomas SINEVICIUS, Project assistant, Rehabilitation centre of VU, Lithuania Kalle KASK, Project manager, TTU, Estonia (30) ● ADIS project, Integration of Adults into Labour Market through Open Distance Learning Prof. Ilmars SLAIDINS Riga Technical University, Latvia (15) ● Psychological aspects of telework Andrzej NAJMIEC, Bozena KURKUS - ROZOWSKA, Monika DRY-GALA - PUTO Central Institute for Labour Protection, Poland (15) ● Disability in Latvia Ivars BALODIS Director at organisation of people with disabilities and their friends APEIRONS, Latvia (10)
12.30 - 13.00	Working groups

11.30 - 12.30	<p>Parallel sessions B/4: E-Work and IT-solutions in logistics Chairman: Nurbek RAYEV, Project manager at Schlumberger Sema, Spain</p> <ul style="list-style-type: none"> ● The BALTPORTS-IT project: state-of the-art (IST) Dr. Eberhard BLUEMEL Fraunhofer Institute IFF/FhG, Germany (15) ● Baltic Regional Competence centre in the field of logistics, IT-solutions and Simulation with maritime applications Dr. Leonid NOVITSKY, IDC Information technologies, Latvia Prof. Egils GINTERS, Latvian Intelligent Systems Dr. Yuri MERKURYEV, Riga Technical University, Latvia (15) ● "European Platform for Transport Research as New Opportunity for e-Work and e-Network in Logistics" Dr. Igor KABASHKIN Transport and Telecommunication Institute, Latvia ● LOGIS project - Training in Logistics Information Systems Prof. Egils GINTERS Latvian Intelligent Systems (15)
12.30 - 13.00	Working groups
13.00 - 14.00	Lunch
14.00 - 16.00	<p>TELEBALT Plenary Chairman: Dzintars ZARINS, Executive director at the association of computer technologies in Latvia</p> <ul style="list-style-type: none"> ● The 6 FWP IST How to prepare proposal? Jacques BABOT Head of sector E-Work sector at the European Commission, Brussels (30) ● Workflow and ASP for managing EU projects Mr. Nurbek RAYEV Project manager at Schlumberger Sema, Spain (10) ● How to Prepare a Eureka Project and Compete for Public Funding Dr. Ilze BEVERTE Project manager, Bureau for Consulting and Information, Latvia (10) ● Reports of Parallel sessions (Reporter and working groups) (15) ● Round table (40) Moderator Dr. Marc LUYCKX Former Prime Minister

14.00 - 16.00

Participation of Baltic's in the EU IST programme during the last 3 years, lessons learned and perspectives of the 6 Frame Work programme: ISTC members of Baltic States

LITHUANIA

Vytautas CYRAS, Member of ISTC

ESTONIA

Tarmo PIHL, NCP for IST and eContent of Estonia AND expert of ISTC

LATVIA

Dr. Arnolds UBELIS, Head of the Latvian NCP,
Dr. Atis KAPENIEKS, Expert of ISTC

EUROPEAN UNION

Dr. Luis Rodriguez-ROSELLÓ
Director, Information Society Technologies Programme

- **Conclusions**

European Commission:

Dr. Luis Rodriguez-ROSELLÓ Director, Information Society
Technologies Programme

Latvia:

Andris BERZINS
Former Prime Minister

Welcome Address

Andris Bērziņš

Former Prime Minister of Latvia

Dear participants and organisers of the conference!

Already for the fifth year in one or another capacity I've been taking part in various events in the Baltic States that are dedicated to Information technologies and the development of the Information Society. I think now it is a good chance to notice the opportunities opening up by entering the European Union. This conference is going to be another issue to be thought over by those who look at it sceptically.

I am honoured to be able to open the event that is going to demonstrate challenges set by the new 6th Framework Programme, especially because the decision of joining it has been taken by my government. I would like to admit that the decision to join the EU Programme "E-content" was made in difficult budget circumstances, but it was a choice for Latvian growth that should not be regretted. Before I speak about the future, it would be useful to take a look back at the results of the 5th Framework Programme. Here, I have to say, for instance, that our science is already in Europe! If out of 700 projects 210 have been supported, then the result is better than in Europe on average! It is just a pity that such summarised information I could not find on the Internet.

The new 6th Framework Programme with the approved budget of 17.5 billion Euro and conditions that have come into force since January 1, 2003, is really a great challenge for the Latvian economy. Only 7 thematic priorities have received 11.2 billion Euro, setting the amount of 3.625 billion Euro to the development of information technologies.

That is what concerns money, however, our current problem is to be able to prove that we have enough power and intellectual potential to participate in this Programme properly.

There are things we may be proud of - Science Excellency Centres, growing IT companies that yearly increase GDP. The contribution of IT industry which employs approximately 1% of the whole working people, accounts for about 4.6% of total GDP. That is the result of the purposeful support strategy of the IT industry in the previous years. We have carried out programmes and passed laws and legislation acts that build the current foundation for the Information Society development; the law of electronic signature and electronic document, the ID card law, the Latvian Education Informatization System project are just a few ones to be mentioned. However, we also have to talk about the problems. Scientists grow older, higher educational institutions have few young professors, and educated youth have little motivation for work in the fundamental science field. Also, it was impossible to give adequate funding from the state's budget to science and education. I think the EU Programmes could give an additional impulse to the development of our education, science and the whole economy in general. Although the new government is promising to support IT things, the reality looks different: the recently adopted budget for instance does not provide any money for school informatization at all, and that, on my mind, is very dangerous indeed, minding the digital divide formulation! Also, projects providing Information Society infrastructure development were not supported: the IT sector funding in the State Investment Programme, formerly a growing amount, has now even decreased. We can only hope that all these things are temporal.

However, I don't want to end my speech on a sad note. Seeing the growing interest about the integration into various EU programmes and our people's desire to get educated and work along the European countries I am satisfied with the achievements. I wish you success and productive work within the Forum.

The IST Programme: Perspectives of the 6 FWP and New Working Environment

Dr. Jacques Babot

Head of the eWork Sector, European Commission

Abstract of the Presentation

This presentation highlights the new opportunities for the Baltic States opened up by the 6 Framework Programme of the European Union and deals with results already achieved under the 5 FWP.

Research into Information Society Technologies plays a key role for a long-term strategy. IST is one of the main priorities of the 6th Framework Programme. The importance given to IST research by the Research Council and the European Parliament is also reflected in budgetary terms. The IST budget amounts to 3.8 billion Euro.

Today we are far from taking full advantage of the possibilities that IST can offer. Cost, complexity, unavailability and unreliability are often preventing the further development and broader deployment of the knowledge society.

The next Framework Programme is placing the **user, people at the centre of the development of future IST** and aims at "designing technologies for people, and not making people adapt to technologies".

The EU ICT Programmes (5 FWP) have played a key role in forging partnerships. The next Framework Programme should help us even more in mobilising resources and aggregating the efforts across Europe to address the major challenges. There is a need to build on this opportunity to overcome difficulties and prepare the future.

The presentation outlines the new frameworks of the European Research Area. The emphasis is given on the new working environment.

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TELEBALT Project Overview

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Egils Grikis, Dinnija Mudure (OPEN LATVIA, Latvia),
Konstantin Baranov, Dmitri Smirnov (INFORING AS, Estonia)

"Teleworking as a Tool for Information Society Technologies Programme Promotion to Baltic States (TELEBALT, IST-2001-33041)" project advertises and promotes the IST Programme to the three Baltic countries (Latvia, Lithuania and Estonia) by fast and efficient dissemination and awareness actions targeted on the Baltic countries as states newly associated to the European Union. This objective will be fulfilled using new methods of team work, such as teleworking, virtual laboratories, etc. EU's and Baltic states interested parties will be encouraged to work together for the benefits of joint Europe.

Within a year after the previous TELEBALT Workshop "Information Technology, Tourism and Social Integration" in Riga, Latvia, April 3-6, 2002, the project successfully developed.

According to Annual Project Review 2002 recommendations, an amendment letter to the Technical Annex of the TELEBALT contract to introduce the organization of an additional TELEBALT Workshop entitled "IST Sixth Framework Programme - New Challenge for Baltic States" in Riga, April 2-3, 2003, within the budget frame of the project, was prepared and submitted to the EC.

The TELEBALT Newsletter Vol. 2 was published in English in hard copies by OPEN LATVIA and was made available in electronic form. It was widely disseminated among the participants and interested bodies at the TELEBALT Conference "Teleworking for Business, Education, Research and e-Commerce" in Vilnius, Lithuania, on October 21-22, 2002, in hardcopies and via TELEBALT websites set up by EDNES, France (<http://www.ednes.org/telebalt>), INFOBALT, Lithuania (<http://www.infobalt.lt/telebalt>), OPEN LATVIA, Latvia (<http://www.telebalt.lv>), and INFORING AS, Estonia (<http://www.telebalt.ee> and <http://www.telebalt.infopress.ee>).

TELEBALT Information Dissemination Centers (IDCs) were further developed at INFOBALT (28/17-16 Vokieciu LT-2001 Vilnius, Lithuania) entitled "Teleworking for Business and Partnership Promotion", at OPEN LATVIA (Zakusalas krastmala 3, Riga LV-1509, Latvia) entitled "Telematics for Tourism and Social Integration", and at INFORING AS (10506 Tallinn P.B. 3457, Estonia) entitled "Telematics Challenge to Employment Opportunities".

The main TELEBALT website has been developed and updated by INFOBALT. Additional information has been added, e.g., the detailed report on the TELEBALT Conference, information about the forthcoming TELEBALT Workshop in Riga.

The TELEBALT websites have been developed and updated by EDNES, OPEN LATVIA and INFORING AS. The website of EDNES has been installed on a new high-speed Internet connection (1 GBps) server. INFORING AS updates the site with news and information about workshops and meetings including the forthcoming TELEBALT Workshops "IST 6th Framework Programme - New Challenge for Baltic States", Riga, Latvia, April 2-3, 2003, and "Telematics and Unemployment Problems", Tallinn, Estonia, June 19-21, 2003. The second part of the project "Register-searching system: registration of persons, interested in job searching, registration of companies looking for labour (CV-Online)" in the Baltic States has been prepared for installation on the Internet (<http://www.cv.ee>, <http://www.cv.lv>, <http://www.cvonline.lt>).

The proceedings of the TELEBALT Workshop "Information Technology, Tourism and Social Integration", Riga, Latvia, April 3-6, 2002, has been published by OPEN LATVIA and is made avail-

able in electronic form, and was widely disseminated at the TELEBALT Conference in Vilnius in hard-copies and via the TELEBALT websites.

The TELEBALT Conference "Teleworking for Business, Education, Research and e-Commerce" was successfully organized and run in Vilnius, Lithuania, on October 21-22, 2002. The following projects of Information Society Technologies (IST) and Telematic Applications (TAP) Programmes were presented at the workshop:

- CAPERS;
- doc@HOME;
- Eastern Europe E-work (E3Work, IST);
- eDRUL;
- European Knowledge Platform (EKP, TAP)
- Demonstrating and promoting the take-up of new ways of FLEXIBLE WORKING among out-lying regions and SMEs (FlexWork, IST);
- Intelligent CONTENT management System (ICONS, IST);
- IDEAL-IST;
- Smart-IS;
- Technology Exploitation and Adaptable Methodologies (TEAM) offering new Organisational Models and Practices for e-Working Teams (TEAMwork, IST);
- TelemediCare;
- Telematic solutions for promotion of EU cooperation in business and research with the Commonwealth of Independent States (TELESOL, IST);
- Towards Handicap Integration Negotiating Knowledge -Baltic Extension (THINK-EXT, IST);
- Virtual Presence System (VPS) (SHOPEAWARE and WISTCIS, IST);
- New methods of working for Information Society Technologies Programme promotion to the Commonwealth of Independent States (WISTCIS, IST);
- Web-enabled Information Services for Engineering (WISE, IST).

A training course on EU and Sixth Framework Programmes was presented by EU telematics expert J-C. Marot, JCM CONSULTANTS, France.

Preparations for the TELEBALT Workshop "Telematics and Unemployment Problems" which will be held in Tallinn, Estonia, on June 19-21, 2003, have begun.

Collaborative browsing toolkit (CoBrow) (CoBrow (RE 1003), CoBrow/D (RE 4003) TAP projects), Virtual Presence System (VPS, SHOPEAWARE and WISTCIS IST projects) developed by consortium led by University of Ulm, Germany, IST project TEAMwork technology, and European Knowledge Platform (EKP) developed by German Research Institute (GRI) were demonstrated at the TELEBALT Conference in Vilnius.

The work on adaptation of Pl@za groupware developed by Teamware Group Oy, Finland, on the main TELEBALT website of INFOBALT is at the final stage.

The VPS demonstration website was developed by EDNES's telematic specialists and is available on the high-speed Internet connection server at EDNES (<http://hera.wdcb.ru/vpsDemo>), and was successfully used for numerous virtual meetings of the TELEBALT project participants. The deliverable "Adaptation of Collaborative Browsing (CoBrow) toolkit and Virtual Presence System (VPS) for EU-Baltic States team work" was completed and submitted to the EC.

The TELEBALT training course on the EU Fifth and Sixth Framework Programmes (FP5 and FP6) has been completed by telematics experts of EDNES headed by J-C. Marot, JCM CONSULTANTS, France, and was presented at the TELEBALT Conference in Vilnius. The course consists of the following modules.

- "Introduction",
- "European Union",
- "Enlarging the European Union",
- "Fifth and Sixth Framework Programmes",
- "Participating in Sixth Framework Programme: opportunities for pre-accession states".

The training course on the Information Society Technologies (IST) Priority of FP6 has been completed, and it has the following modules:

- "What is FP6",
- "IST Overview",
- "IST Activities",
- "Participate in IST".

The training courses have been installed on the TELEBALT website of EDNES.

The Annual Project Review of TELEBALT was successfully held on 11 November 2002 in Brussels. The project was reviewed by S. Aguilar (France), J-P. Dorier (France), N. Rayev (Spain). The project team was represented by A. Beriozko, J. Bonnin, A. Gvishiani (EDNES, France), D. Juknys, V. Vitkauskas (INFOBALT, Lithuania), D. Mudure (OPEN LATVIA, Latvia). The EC was represented by J. Babot and B. Jamet. The project was positively evaluated by the reviewers.

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EU Regional Development Policy and Information Society

Giangaleazzo Cairoli

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1. Introduction

Ladies and Gentlemen,

First of all, I would like to thank you for inviting me to participate in this conference, giving the Commission in this way an opportunity to describe how our policy for the development of the Information Society fits in the greater context of regional development within the EU.

But before doing so, let me express my congratulations for the successful conclusion of the negotiations for the accession of the Baltic States, which allows me to anticipate now my warm "Welcome on Board", Welcome to the European Union.

I will start with a short description of the Community policy regarding the development of the Information Society, which I am sure all of you are well aware of.

2. eEurope 2005

The response of the European Commission to the development of the Information Society throughout the EU is the eEurope initiative. The main priorities of the eEurope initiative are to accelerate Europe's entry into the digital age, and to ensure greater coherence between Member States' IS policies. eEurope is part of the Lisbon Strategy "to make the EU the most competitive and dynamic knowledge-based economy with improved employment and social cohesion by 2010".

eEurope has seen the development of two action plans, the 2002 and 2005. To some extent, eEurope 2005 is a continuation of eEurope 2002. The ultimate goal remains unchanged. Namely:

- to provide a favourable environment for private investment and for the creation of new jobs;
- to boost productivity;
- to modernise public services; and finally,
- to give everyone the opportunity to participate in the global information society, especially those living in remote areas.

In other words, to tap the Internet's potential for improved business and government productivity, greater economic growth, employment and social cohesion.

Yet, different conditions require a new approach. Whereas eEurope 2002 defined a very broad strategy covering 11 areas with a total of 64 targets, the new action plan is much more focussed.

Let me explain that in more detail.

eEurope 2005 is based on three layers of actions by both Member States and the Commission. The first layer concerns services, applications and contents and is made of four vertical components: eGovernment, eLearning, eHealth and eBusiness.

The other two layers concern, on the one hand, the need for a secure broadband infrastructure, and on the other hand, the need to ensure access for all Europeans. These are horizontal priorities that cut across the previous four vertical components.

By 2005, Europe should have modern online public services and a dynamic e-business environment based on the widespread availability of broadband access at competitive prices and a secure information infrastructure. eEurope 2005 aims therefore to stimulate secure services, applications and content based on a widely available broadband infrastructure.

To demonstrate their commitment to the objectives set by the EU-15 in Lisbon, the Candidate Countries also agreed and developed, on their own initiative - and I underline own initiative because it is really praiseworthy - the eEurope+ Action Plan. The eEurope+ is in full concert with the priorities of the eEurope initiative.

Moreover eEurope 2005 has built-in flexibility and provides for a mid-term review of actions so as

to ensure a smooth phasing in of the new member states in the action plan.

To meet the targets of eEurope 2005, the European Commission, and in particular DG INFSO, contributes with three types of activities:

- 1) Development of an efficient and homogenous regulatory framework to facilitate the opening of the telecom markets, and therefore a price reduction, in defining the rules for e-commerce, security, data protection etc.;
- 2) Support to Research, with the IST Programme in the 6th FP, which has a budget of EURO 3.6 billion;
- 3) Promotion and co-ordination with the other Community policies, in particular the Structural Funds, in order to support the inclusion of information society aspects in the national and regional Operational Programmes and allow in this way financing of IS implementation strategies.

Let me now focus my presentation on the third type of activity, which we consider of uppermost importance for the development of EU regions.

3. Information Society and Structural Funds

Community action through the Structural Funds has among its main objectives to promote the development and structural adjustment of regions which are lagging behind, the so-called Objective 1 regions, or the economic and social restructuring of the regions that are classified as Objective 2 regions under the Structural Funds Regulation. In other words, the aim of the Structural Funds is to foster regional development, employment and structural change in the EU.

Community aid under the Structural Funds is channelled through multi-annual operational programmes which are drawn up in a partnership associating regions, Member States and the European Commission. Together with the Cohesion Fund, the total for the period 2000-2006 for all structural instruments amounts to EURO 213 billion for the EU of 15 members. Two thirds of the interventions are concentrated in Objective 1 regions where the gross domestic product is below 75% of the Community average.

In its guidelines for the programmes for the period 2000-2006, the Commission has identified the Information Society as a key priority under Structural Funds interventions, with a strong emphasis on demand for services and applications.

Indeed, the importance of the Information Society and the changes that come along is recognised and well reflected in the national and regional operational programmes adopted by the Member States for the period 2000-2006.

A recent study of the European Commission on the impact of the Structural Funds on the Information Society shows that the Structural Funds can be expected to co-finance a total of just under EURO 16 billion of information society investment in the EU-15 in the period 2000-2006. This amount, which includes both Community and national funds, represents an estimated 7.36% of total Structural Funds investment allocated to information society investment and suggests that national and regional decision makers are increasingly committed to information society development.

The overall priorities of this investment include:

- enhancement of infrastructure;
- access and participation for all to diminish the digital divide;
- the acceleration of, and support for, e-commerce (especially for SMEs); and
- the development of skills for work in the knowledge-based economy.

These priorities are consistent with the priorities of eEurope.

In this context, I must also say that we, in the Commission, are happy to see that the development of the Information Society figures among the priorities in the Single Programming Documents of the Baltic States for the period 2004-2006.

4. Digital Divide

eEurope 2002 with the joint effort of all stakeholders has delivered major changes and increased the

number of citizens and businesses connected to the Internet. It has reshaped the regulatory environment for communications networks and services and for e-commerce and opened the door to new generations of mobile and multimedia services. It is providing opportunities for people to participate in society and helping the workforce to acquire the skills needed in a knowledge-driven economy. It is bringing computers and the Internet into schools across the Union, bringing governments on-line and focusing attention on the need to ensure a safer on-line world.

Let me give you some prominent examples:

- Internet connectivity of households increased to 43% in November 2002.
- Internet connectivity in businesses is far higher than the household rate. Almost all large enterprises (with more than 250 employees) and over 80% of all companies with more than 10 employees are using the Internet.
- Internet connectivity of schools reached 93% in February 2002 and most Member States had either achieved or were on track to reach the target of having all schools connected by the end of last year.

The eEurope+ Action Plan also is delivering positive and encouraging results. The First Progress Report, which was presented at the Ministerial Conference in Ljubljana on 3-4 June of last year, indicated that the Information Society is clearly very present in the EU Accession Countries.

In this context, we welcome the efforts of the Accession and remaining Candidate Countries with the eEurope+ initiative as well as the vision to proceed with its implementation and extend even further - as is the case of the Baltic States with the Information Society Action Plan in Estonia, the Concept and Strategic Plan for the Development of Information Society 2001-2004 in Lithuania, and the e-Latvia Concept.

Despite the insofar positive results however, there still remain wide disparities between Member States indicating that the danger of digital divide is still present.

The main reason behind the disparities is that the different pace of economic growth and the policy of national governments in the Information Society field have introduced large differences in Internet penetration and the availability of advanced services to the general public and businesses.

In addition, the digital divide problem becomes much more complex in the Accession and Candidate Countries in the sense that in these countries not only there is the traditional divide between urban and rural, rich and poor, old and young, but there is also a divide between small and large cities and between enterprises.

eEurope with the aid of the Structural Funds are intended exactly to provide the big policy push that is required to address the multiple dimensions of the digital divide.

We firmly believe that the danger of digital divide can be avoided, and everybody can participate fully in the Information Society and grasp the benefits derived from it, if it is tackled from the perspective of regional development:

- Regions should invest substantially in IS strategy development within a single, coherent and integrated context, and building regional capacity, especially in the assessment of regional needs;
- Regional information society priorities should be driven by regional demand and supply-side measures, and should offer a balance in terms of the development of telecommunications infrastructure with emphasis on broadband networks, access, applications and services, digital content and skills;
- Specific indicators and data should be developed, especially at regional level, in order to monitor progress in terms of bridging the "digital divide" within and between regions.

Let me now elaborate the issue of broadband where the Commission lays a great deal of importance.

5. Broadband

Governments world-wide are increasingly realising that broadband access will be central to the economic as well as social development of their countries. Wide availability of broadband communica-

tion would have a significant impact on the economy, and several EU Member States have started reviewing broadband development on their territory. Their common objective is to accelerate its deployment.

The importance of "widespread availability and use of broadband networks throughout the Union by 2005" was recognised by the Barcelona European Council. The actions proposed in eEurope 2005 correspond to this priority.

Although investment in broadband should mainly come from the private sector, the needs of and unfavourable conditions in less developed regions should not be overlooked. The risk of a digital divide has led governments to explore new solutions to encourage the deployment of broadband infrastructure in less favoured areas, notably in Ireland, Sweden and France.

The action plan explicitly states that "Member States, in co-operation with the Commission should support, where necessary, broadband deployment in less favoured areas, and where possible may use structural funds and/or financial incentives (without prejudice to competition rules). Particular attention should be paid to outermost regions."

An analysis of the regional operational programmes for the period 2000-2006 shows that the more sparsely populated and more peripheral regions of the Union propose to commit more per capita on information society development than the other regions.

In terms of telecommunications infrastructure, a broadly estimated 20% of the total Structural Funds investment in Information Society development will be committed to telecommunications infrastructure. This concerns mainly rural, less-populated and peripheral territories that have failed to attract private investment and the case for public intervention is much stronger. The centres of population concentration tend to be well developed by market forces.

In less favoured regions, geographical isolation and low density of population can make the cost of upgrading the existing infrastructure to broadband capability unsustainable. In particular, the investment cost to meet present and future requirements for the development of the Information Society is often difficult to justify on purely commercial grounds. There is clearly a risk that, because the investment is potentially unprofitable in the short term, the realisation of the goals of e-Europe, i.e. "an information society for all" may be put into question in the long term.

Investments therefore through Structural Funds need to go beyond commercial considerations and must take into account wider issues of public policy. Their role is to enable less favoured areas to come to the forefront of information society development. This is also particularly important with regard to possible future funding of communication infrastructure and services for the new Member States, such as the Baltic States, within their own development plans and programmes.

I can assure you that the Commission services follow closely the national and regional operational programmes of the Member and Accession States in order to ensure that the development of broadband receives full and appropriate consideration, as we are certain that its deployment will facilitate both inclusion and cohesion in the EU. We lay emphasis on region-specific needs and priorities.

Realising the potential of broadband requires that everyone is given the ability and opportunity to enjoy its richness and benefits (in terms of healthcare, education and business for example). This means that the goal of the eEurope 2002 action plan of achieving "an information society for all" remains valid for eEurope 2005.

By supporting the emergence of alternative access platforms, such as digital television, fibre optic, fixed wireless access (FWA), 3G mobile systems or satellite communication systems, the new action plan will further facilitate e-inclusion, also for people with special needs and people living in remote areas.

Broadband enabled communication, in combination with convergence, will bring social as well as economic benefits. It will contribute to e-inclusion, cohesion and cultural diversity. It offers the potential to improve and simplify the life of all Europeans, independently of which region or area they live in, and to change the way people interact, not just at work, but also with friends, family, community and institutions, and the way companies operate.

In other words, the development of broadband networks and services, as emphasised in the eEurope 2005 Action Plan is expected to become an increasing factor in achieving regional competitiveness

and in diminishing the digital divide, especially with sparsely populated and peripheral regions. For these reasons, we invite all Accession Countries, including the Baltic States, to pay particular attention to the issue of broadband when elaborating their national and regional development programmes.

6. Concluding remarks

In the conclusion I would like to underline the following:

The information society presents a real opportunity for regional development, helping even the remotest regions to network with the rest of the Union and beyond. It represents a particular challenge to the cohesion policies of the Union where it is important to take steps to overcome the "digital divide" that, in Europe, often goes hand-in-hand with the existence of important gaps between rich and poor. For this reason, the Commission seeks to ensure that every regional development programme supported by the Community has an information society dimension in one form or another.

The challenge for all of us is to make eEurope a success. It is time for action and action is up to each one of us in Europe, individually and collectively. If we make progress in the areas identified in the eEurope action plan, the roll-out of the Information Society across Europe and its contribution to regional development will be off to a promising start in the 21st century.

At long last, the resources are there to meet our best hopes and ideals in the digital age. We must not let this opportunity slip by. But we need for that a strong commitment from everybody, at political and personal level, and a strong public/private sector partnership.

I thank you for your attention.

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eWork Environment in Europe

Nicole Turbe-Suetens

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One cannot yet speak of "eWork environment in Europe" just because the influence of the cultural factors is so strong that the evolution in the implementation of new methods of work doesn't really compare from one place of Europe to another. Progress is slow, but happens anyway as a normal factor in the evolution of the society where ICT usage becomes a basic element of daily life in more and more activities. This means that behaviour is evolving and that jobs are changing. On the other hand the stress factor which is becoming a heavy burden in many working lives acts as an incentive to try to better organise the work-life balance. Mobility is developing very fast and will most probably be the real change factor that will finally succeed in influencing the evolution of the workspace. The number of jobs to be considered as jobs of the knowledge economy increases every day as a result of the work processes in the information society. This again is influencing the way more and more workers consider their working environment and expect to have better adapted working conditions in a less rigid managerial system.

And the loop is closed as the management systems in place are still reflecting strong cultural beliefs which still have to evolve in many European countries.

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IT Development in Latvia 2003

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After Latvia regained its independence more than 300 enterprises working in the IT sector have developed. The development of the IT industry can be divided into three periods each of which has distinctive features.

From 1990 - 1994 a large profit was generated by the sale of hardware products. The "black" market was thriving. There was a small share of licensed software; there were not any of the biggest wholesalers and there was a great deal of OEM computers. The companies were working directly with the USA, Taiwan and China. The amount of international business leadership and accounting software was very small; however, there was much local accounting software. The first achievements in software development within international projects were made by the joint-stock company SWH Riga.

During the period from 1994 - 1998 several wholesalers entered the market.

During the third period of IT development (1998 - 2000) the leading IT companies, after active effort input received ISO 9000 and ISO 9001 quality certificates. The enterprises were restructured and their specification grew. Illegal software distribution decreased. Investors' involvement begun. A lot of companies consolidated and many were re-sold to foreign companies.

Within the recent period (2000 - 2003) the investors' interest in Latvian IT companies have continued to be strong and the IT branch export as well as the whole IT branch GDP has increased. The enterprises have been actively taking part in the development of the Information Society and the competition with foreign companies has become more intense in the local market. The IT companies agree on the development of the branch cluster. This fact is also reflected by statistics data.

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TELEBALT on the Web

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The main goal of the project "Teleworking as a Tool for Information Society Technologies Programme promotion to Baltic States" (TELEBALT) is to promote the IST Programme to the three Baltic States. The main website of TELEBALT has been developed by INFOBALT, Lithuania (<http://www.infobalt.lt/telebalt>), and is hosted by the main project server. TELEBALT websites were developed and became operational by EDNES, France (<http://www.ednes.org/telebalt>), OPEN LATVIA, Latvia (<http://www.telebalt.lv>), and INFORING AS, Estonia (<http://www.telebalt.ee> and <http://www.telebalt.infopress.ee>).

The main information on TELEBALT websites is both in English and the Baltic languages. These websites contain concentrated and sufficiently detailed information about the TELEBALT project. Links to other TELEBALT participants' websites are provided.

All three websites in the Baltic States will be focused on a concrete area of application:

- Estonia - unemployment;
- Latvia - tourism and social integration;
- Lithuania - telematics for business and partnership promotion.

The Lithuanian TELEBALT website includes:

- Information on the TELEBALT project;
- **Business** information on Lithuania (links);
- **General** information on Lithuania (links);
- Feedback;
- **Subscription** information;
- **Contact** information.

The information on the TELEBALT project includes:

- TELEBALT events:
 - TELEBALT Conference 2002, Vilnius;
- TELEBALT progress reports
- TELEBALT deliverables:
 - Newsletters;
 - Proceedings;
 - Training courses.

The main topic of the TELEBALT Conference held in Vilnius, 2002, was:

- The impact of the development of information technologies, telecommunications and electronics industry on the innovative new working methods in the Information Society:
 - international collaboration possibilities,
 - know-how transfer,
 - the development of cooperation with European partners.

The goals of the Conference were as follows:

- To present key trends of the development in the fields of new information technologies,

telecommunications and electronics, and discuss new working methods in the countries of Central and Eastern Europe(CEE) and CIS in relation with a growing role of EU and the priorities drawn up in the EU information society development policy;

- To answer the question of the digital age about how e-Work, e-Learning, e-Health, e-Business development can facilitate a more active cooperation and involvement of the countries and citizens of the European Union, Central and Eastern Europe and CIS, and how it can stimulate the breakdown of social, political and economic barriers;
- To realize advantages and stimulus provided by the Information Society and knowledge economy, attract partnership to joint projects of the EU countries and the countries of Central and Eastern Europe and CIS and stimulate their partnership;
- To introduce ITTE related IST projects and identify possible fields of common activities for ITTE industries from different European states; to introduce key directions of EU activities in the ITTE field through project presentations; to disseminate key objectives of eEurope and eEurope+ action plans.

During the TELEBALT Conference a few important events have been held:

- The 4th Information Society Conference "Develop an Innovative Trade and Work Area for the Information Society";
- League of Investors;
- The Baltic Sea and CEEC Data Protection and Information Security Workshop;
- INFOBALT - the 9th International Exhibition (Trade Fair) of Information Society Technologies.

One of the major events was the Trade Fair INFOBALT 2002:

- The Trade Fair INFOBALT 2002 was opened on October 23 in the Exhibition Center LITEX-PO in Vilnius;
- It was the biggest IST exhibition in the Baltic States last year;
- It displayed the EU Programme stand which provided information about the EU Framework Programme for RTD that is a major tool to support the creation of the European Research Area (ERA);
- The European Commission stand presented some documents on Key Action II projects, eWork 2002 and other general information on EU activities.

The main priorities of the TELEBALT Conference were:

- European IST Programme and FP6;
- Teleworking and e-Work projects under FP5;
- Teleworking/telecommuting/e-Work history and review;
- Teleworking pros and cons, advantages, benefits and disadvantages, barriers and pitfalls in business area;
- Telework/e-Work/telecommuting ontology, taxonomy, glossary;
- Teleworking social, cultural, psychological, ethic and legal issues;
- Teletrade, telebusiness, telemedicine and much MORE.

The TELEBALT Conference brought together:

- Government officials and decision makers;
- Business executives and directors;
- ICT managers and specialists;
- Senior researchers and representatives of academic sector;
- ICT auditors, consultants and investors;
- Marketing and new service managers.

- Representatives of operators, service and content providers and regulators;
- Representatives of IT&T companies;
- ICT skills, information security and media specialists

The TELEBALT Conference attracted prominent guests:

- H.E. **Valdas Adamkus**, the President of the Republic of Lithuania, and
- H.E. **Ambassador Michael Graham**, the head of European Commission Delegation to Lithuania.
- **Petras Cesna**, the Minister of Economy of the Republic of Lithuania
- Dr. **Jacques Babot**, the head of the eWork Sector, European Commission
- Prof. **Jean Bonnin**, the president of EDNES, France
- **Vytautas Vitkauskas**, the president of the association INFOBALT, Lithuania

During the Conference 12 workshops were held:

1. "Teleworking and IST Programme promotion - Baltic States";
2. "Teleworking for Education" (Live broadcasting on the Internet and interactive communication using videoconference);
3. "Technology for Teleworking: Securing a Telework Infrastructure";
4. "Teleworking and Mobility";
5. "Teleworking for Business";
6. "Technologies for services";
7. "Teleworking and networking";
8. "Telemedicine and e-Health" (Live broadcasting on the Internet and interactive communication using videoconference);
9. "TELEBALT Algorithmical Resource: Artificial Intelligence Algorithms On-line";
10. "Teleworking for Research";
11. "Teleworking technologies";
12. "Teleworking for the Media and Culture".

During the Conference:

- More than 107 speakers shared their experience in different sectors;
- 30 of EU funded projects were presented: E3WORK, WISTCIS, TELESOL, TEAMwork, UsabilityNet, FlexWork, NEUWEB, BIZON, SEWASIE, ICONS, WISE, THINK, FAMS, IMAGE, eDRUL, CAPERS, VMART, Baltports-IT, Beatrice-SME, SmartIS, NASTEC, IPv6, TelemediCare, doc@HOME, LITMED, BITNET, IDEAL-IST, VISUAL ADMIN, MAP, E-FORUM.

The main results (recommendations) of the Conference are:

1. Enhance public concern about the Teleworking development in the Baltic States and the European Union; show the threat of losses and the possibilities we let go;
2. Many models of Teleworking and its achievements in modern states were analyzed;
3. Intensify the understanding of the importance of the Internet in the process of transition to new work methods;
4. Define the immediate priorities in Teleworking;
5. Strengthen relations with the experts of the European Union and draw lessons from their experience;
6. Enhance the role of science in Teleworking;
7. Present our projections as to how Teleworking can change our lives.

Conclusions of the TELEBALT Conference:

- The TELEBALT Conference has offered wide opportunities for Lithuania to pursue and achieve intrinsic ambitious desires:
 - Both business and public institutions and research are interested in telework (eWork) in Lithuania.

- Information Society Development Committee of Lithuanian Parliament approved research on telework and has recommended drawing up new legislation on telework implementation or updating the existing one;
- Discuss an opportunity to develop national telework (eWork) programme;
- Training in telework would be appreciated;
- Develop telework manual in Lithuanian language;
- Develop telework (eWork) ontology both in English and Lithuanian;
- Develop Semantic-based Knowledge System on telework (eWork);
- In project Information Dissemination Centre (IDC) collect a library on telework, organize periodic live consulting (face-to-face);
- Establish national working group on eWork (telework) consisting of Parliament, public institutions, business and research representatives. Such proposal has been approved by Information Society Development Committee of Lithuanian Parliament.

One of the main deliverables of the project is the Information Dissemination Centre (IDC) which was set up in Visoriai IT Park.

- Visoriai Information Technology Park was established in 2002;
- Its founders were:
 - Government institutions: the Ministry of Science and Education, the Ministry of Economy, the Information Society Development Committee; Vilnius Municipality;
 - Research and educational institutions: the Institute of Mathematics and Computer Science, Vilnius University, Vilnius Gediminas Technical University, Vilnius College;
 - Business representatives: the association "Infobalt", JSC "Baltic Amadeus", Joint Lithuanian-Netherlands company JSC "VTEX", law firm "Zabiela, Zabielaite and partners", Joint Lithuanian- Russia-Netherlands JSC "TEV", JSC "Impro";
- The main features of Visoriai IT Park:
 - Visoriai Information Technology Park is based in the building, previously owned by the Institute of Geography, with over 1500 m2 of floor space;
 - A 15 hectare area is also available for the formation of the park;
 - It provides opportunities for integrating advanced technologies into business and research;
 - It helps to realize innovative ideas in education sector;
 - It stimulates co-operation on actual problem solving among business people, students and researchers;
 - It creates new jobs.

Currently IDC

- is situated in Visoriai IT park facilities;
- is a room with equipment, Internet facilities and office furniture;
- participates in Visoriai IT Park activities:
 - provides training in eWork,
 - presents TELEBALT project deliverables,
 - prepares joint proposals with Visoriai IT Park for FP6 (the second half of 2003).

We should like to propose discuss the following:

- One of IDC activities is training that could be performed by eLearning (on the follow-up project);
- Preliminary research on eLearning standards (LOM, IMS, SCORM) for development of eLearning materials;
- Advanced Distributed Learning - US DoD initiative.

The main objectives of TELEBALT are:

- To select telematics tools for EU-Baltic states teleworking and carefully evaluate the selection.

- To adapt, as pilot examples, collaborative browsing toolkit (CoBrow), Virtual Presence System (VPS) and Pl@za groupware for EU-Baltic states team work in relation to research, training, environmental, telemedicine and unemployment problems, business and tourism activities;
- To demonstrate the potential of selected EU telematic products at the project conference and workshops;
- To integrate collaborative browsing toolkit (CoBrow), Virtual Presence System (VPS), TEAMwork technology, European Knowledge Platform (EKP), and Pl@za groupware into the websites of TELEBALT IDC and EDNES Management Centre.

The development of the new software called the Virtual Presence System (VPS) as a replacement for CoBrow was a result of successful collaboration between University of Ulm and the Centre of Geophysical Data Studies and Telematics Applications of the Institute of Physics of the Earth of Russian Academy of Sciences (CGDS IPE RAS).

Presence Awareness lets people realize who else is around. In the Web context Presence Awareness allows people to 'see' each other while they are browsing the same Web page or website. This fundamental property of Presence Awareness enables ad-hoc communication of people and also more substantial communication since people with similar interests meet on the same Web locations.

When installed at IDC it will ease getting in touch with people from EU and CIS working in the areas of research, education and business or with people who are just browsing the Web for fun. This is because Presence Awareness offers encounters similar to those taking place in the real world.

The implementation of a multilingual Collaborative Browsing User Agent (CBUA) allows EU-Baltic states team work in areas such as business, research and education.

Presence awareness service developed by University of Ulm, which is the backbone of CBUA, is currently compiled within the framework of WISTCIS project (IST-1999-14106).

The new multilingual CBUA is based on the Virtual Presence System, or **P**resence **A**wareness **I**nformation **B**roker (PAIB) service developed by University of Ulm, which is a successor to CoBrow system.

PAIB in general delivers presence awareness information of vicinities or in other words it tells which users are within a certain neighbourhood. It thus allows tracking of vicinities. In the context of collaborative browsing a neighbourhood is a group of users who have opened the same web page or related web pages e.g. web pages of a website. As a default means of communication, PAIB provides chat functionality. Chat refers either to all users within a neighbourhood or to a selected user. In addition to CoBrow it allows also tracking of presence information of specified users (or presentities). Furthermore, it provides status information of users like 'user is busy/idle'. So it tells who is around and what people being around are doing.

Since it is completely implemented in Java it can be installed on every operating system that provides a Java virtual machine (every relevant operating system provides a Java virtual machine meanwhile).

The database layer, where properties of users like photos, names, e-mail addressed etc. are stored, has become much more flexible. Now even pre-existing LDAP databases with arbitrary schemes can be imported in PAIB simply by providing a scheme description in XML style to PAIB. Databases, which implement LDAP (**L**ightweight **D**irectory **A**ccess **P**rotocol), store their data in a hierarchical manner.

Teamware Pl@za is a modular software solution for creating interactive Web sites. Pl@za offers func-

tionality for creating Web communities and increasing interaction between people. It provides personalized, interactive Web sites, tailored according to the preferences and access rights of individual users and groups.

Each Pl@za site can be tailored to meet the demands of the look and feel of your site. Other information sources can be integrated into Pl@za so that, if required, other Web functions or data from other data sources can be utilized.

Pl@za is available on Solaris and Windows 2000 platforms.

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KnowledgeBoard - a European Network for Knowledge Management

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The IST Programme of the European Commission supports innovative research projects in the area of knowledge management to develop ICT tools, methodologies and collaborative networks to increase European competitiveness.

As knowledge management has its roots in different scientific disciplines, the research in KM is supported in different areas in the IST research programme.

In the "new working environments unit" the knowledge management is particularly centered on people, their workspace and the way they work and interact within their business environment. So the research topics are: creating adaptive, collaborative networks, collaboration, strategic competence building, communities of practice, intellectual capital creation and the like. A flagship project in this area is KNOWLEDGEBOARD, <http://www.knowledgeboard.com>, a thematic network started under FP5 2 years ago, which has now 5000 members from 104 countries- the fastest growing knowledge management network in the world.

KNOWLEDGEBOARD will be briefly presented in this session, and the plans for the future of this exceptional network discussed.

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e-Business Needs Usability

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1. Why usability matters

There is still a popular belief among developers that usability is an optional gloss on a system - that when resources are tight usability can be ignored. Spool [11] has shown that less than 50% of attempted purchases on American retail sites are successful. Users of ebusiness applications are no longer prepared to tolerate difficult to use systems when easier to use alternatives are only a mouse click away. Usability is thus a key determinant of ebusiness success.

There are many well-established methods for improving usability, but these are still not widely adopted. How can usability be given a higher priority? Trial applications in two EU projects have demonstrated the value of using standards [1] to make usability an objective criterion in development.

The PRUE project [9] demonstrated how a supplier can show that a system is usable by providing a usability test report in the Common Industry Format [5,8]. A purchaser can state usability requirements using the same format.

The TRUMP project [3] demonstrated that suppliers could use the human centred design process described in ISO 13407 to ensure that they meet usability requirements.

The TRUMP project also demonstrated that the Usability Maturity Model defined in ISO TR 18529 can be used to assess the usability capability of a potential supplier.

The EU UsabilityNet project [11] has developed a web site of resources and is promoting the use of these techniques to encourage the development of more usable systems.

2. User centred design process: ISO 13407

ISO 13407 provides guidance on achieving usability by incorporating user centred design activities throughout the life cycle of interactive computer-based systems. It describes user centred design as a multi-disciplinary activity.

The standard describes four user centred design activities that need to start at the earliest stages of a project. These are to:

- understand and specify the context of use
- specify the user and organisational requirements
- produce design solutions
- evaluate designs against requirements.

The iterative nature of these activities is illustrated in Figure 1.

The process involves iterating until the objectives are satisfied. ISO 13407 describes the basic principles, but does not stipulate specific methods. The sequence in which the activities are performed and the level of effort and detail that is appropriate varies depending on the design environment and the stage of the design process.

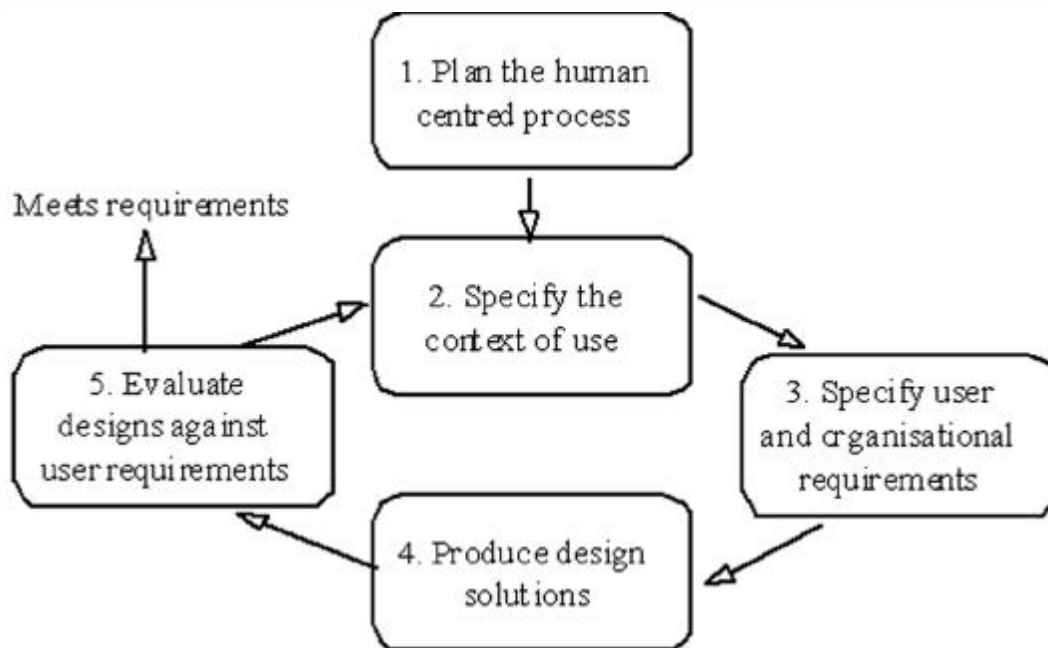


Figure 1 - User centred design activities

3. User centred design and process improvement

The TRUMP project [2,3] demonstrated how simple methods for user centred design based on ISO 13407 could be used to improve the usability capability of the development processes in two organisations: Inland Revenue/EDS (IR/EDS) and Israel Aircraft Industries (IAI). The steps taken over a period of two years were to:

1. Identify needs for usability process improvement by using the usability maturity model in ISO TR 18529 to assess the current capability of each organisation.
2. Make the identified improvements to the software development processes, by introducing simple user-based methods implementing ISO 13407.
3. Reassess the usability capability the organisation to assess the extent of the improvement.
4. Identify the cost-benefits of the improvements, and integrate the methods into the documented processes.

3.1 TRUMP methods

The methods used were selected to be simple to plan and apply, and easy to learn by development teams. From the common experience of these trials, 10 methods were selected as generally applicable across a wide range of development environments. Each of the recommended methods relates to the lifecycle stages and the processes described in ISO 13407.

1. Stakeholder meeting A half-day meeting to identify and agree on the role of usability, broadly identifying the intended context of use and usability goals, and how these relate to the business objectives and success criteria for the system.
2. Context of use A half-day workshop to collect and agree detailed information about the intended users, their tasks, and the technical and environmental constraints.

3. Scenarios of use A half day workshop to document examples of how users are expected carry out key tasks in a specified contexts, to provide an input to design and a basis for subsequent usability testing.
4. Evaluate an existing system Evaluate an earlier version or competitor system to identify usability problems and obtain measures of usability as an input to usability requirements.
5. Usability requirements A half-day workshop to establish usability requirements for the user groups and tasks identified in the context of use analysis and in the scenarios.
6. Paper prototyping Evaluation by users of quick low fidelity prototypes (using paper or other materials) to clarify requirements and enable draft interaction designs and screen designs to be rapidly simulated and tested.
7. Style guide Identify, document and adhere to industry, corporate or project conventions for screen and page design.
8. Evaluation of machine prototypes Informal usability testing with 3-5 representative users carrying out key tasks to provide rapid feedback on the usability of prototypes.
9. Usability testing Formal usability testing with 8 representatives of a user group carrying out key tasks to identify any remaining usability problems and evaluate whether usability objectives have been achieved.
10. Collect feedback from users Collect information from sources such as usability surveys, help lines and support services to identify any problems that should be fixed in future versions.

4. UsabilityNet

One of the objectives of the EU UsabilityNet project (Bevan et al 2002) has been to provide usability professionals with an authoritative website of resources, including recommended methods for user centred design. UsabilityNet partners reviewed a wide range of methods, and based on the partners' experience in EC and commercial projects, 35 methods was selected that had a track record of cost-

Methods table

you can select the most appropriate methods depending on three conditions

- limited time/resources No direct access to users Limited skills/expertise

Planning & Feasibility	Requirements	Design	Implementation	Test & Measure	Post Release
Getting started	User Surveys	Design guidelines	Style guides	Diagnostic evaluation	Post release testing
Stakeholder meeting	Interviews	Paper prototyping	Rapid prototyping	Performance testing	Subjective assessment
Analyse content	Contextual inquiry	Heuristic evaluation		Subjective evaluation	User surveys
ISO 13407	User Observation	Parallel design		Heuristic evaluation	Remote evaluation
Planning	Context	Storyboarding		Critical Incidence Technique	
Competitor Analysis	Focus Groups	Evaluate prototype		Pleasure	
	Brainstorming	Wizard of Oz			
	Evaluating existing systems	Interface design patterns			
	Card Sorting				
	Affinity diagramming				
	Scenarios of use				

effective application in a commercial environment.

Figure 2: UsabilityNet methods

These were categorised into the same stages of the development process as in TRUMP, except that testing and measuring was identified as a separate activity at the end of implementation. To help users select appropriate methods, they are represented on the web site in a table with a column for each stage of the development process (Figure 2).

A description of the method can be obtained by clicking the appropriate cell. The methods can also be filtered based on three criteria: limited time or resources, no direct access to users or limited skills or expertise. Inappropriate methods are greyed out depending on the criteria selected. With all filters applied, eight remaining basic early lifecycle methods are recommended.

5. Conclusions

From the experience gained in TRUMP, Serco has developed a general-purpose methodology that implements the principles of ISO 13407. The methods are generally applicable across a wide range of development environments including web applications. The methods are described on the TRUMP web site.

Given the demonstrated cost-benefits of user centred design, why are usability methods not more widely used? Design and development has traditionally been an activity that focuses on achieving technical excellence rather than meeting user and business needs. But ecommerce services that ignore usability are unlikely to survive, as users become increasingly intolerant of systems that are difficult to use. Development organisations urgently need to find ways to incorporate usability methods into their processes.

Building on the results of TRUMP, the EU UsabilityNet project has established a network to disseminate information on good practice in user centred design to EU projects, managers and usability practitioners. It has produced a web site with specific information on usability for these audiences, including a wide range of cost-effective methods that can be used for user centred design [11]. The web site is being extended with the support of local groups. UsabilityNet has also established a Usability Forum for professional organisations, and supporting plans for the development of an educational curriculum and the accreditation of usability professionals.

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Telework in Latvia - E3WORK Project

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The main activities of NPO Public Foundation OPEN LATVIA are focused on the use of Information Technologies (IT), the development of the Information Society and e-commerce applications. OPEN LATVIA is dedicated to the promotion of IT applications in Latvia particularly in the area of tourism. The company's major goals are to foster the development of Latvian Internet users' community, to promote telematics technologies and to provide user friendly information about Latvia on the Internet with the emphasis on tourism.

Dissemination of telework in Latvia

Teleworking is a new method of work that offers great advantages both for employees and employers. This method increases productivity and job performance and gives flexibility with work arrangements such as work hours and working conditions. The development of home workstations for disabled people and their successful integration into the labour market amply demonstrate the efficiency of this working method. Also, special attention is being paid to explanatory work among other target groups - women, particularly young mothers who also can take advantage of distance work that opens up opportunities to continue working from home and allows to combine professional life with child-care.

All dissemination activities are focused on the popularisation of advantages offered by telework, based on the results of target group analyses and appointed level of education and possession of information on IT applications within work organisation.

Local pilot

In Latvia telework as a working method was piloted by the company BALTIJAS SUVENIRI LTD, and the second team of teleworkers was formed by RIGA TECHNICAL COLLEGE.

The working methodology of local telework pilot team is fully applied and a separate virtual community is made for the pilot team at <http://e3work.openlatvia.lv>.

During the final phase of the pilot project several conclusions concerning work organisation were reached. It was found that in order to adapt new IT solutions for distance working it would be necessary to consider psychological suitability of potential teleworkers, which also can be developed by the previous work experience and self-management abilities, e.g., time planning, accountability, responsibility and potential for balancing work on PC and family life/ personal activities.

Advantages of telework

Telework offers a new type of the organisation of working day, greater flexibility for scheduling tasks, obligations and business trust, the improved balance between working hours and personal life, increased productivity, psychological independence and professional self-motivation, reduced costs of transportation, catering etc.

Most popular professions that are very satisfied with the new working method - telework - are translators and programmers.

OPEN LATVIA wants to continue its work on the development of this kind of working method in the future, disseminate the concept at www.openlatvia.lv and create the labour/employment exchange

place on the Internet.

For more information about the E3WORK project please visit the website <http://www.e3work.com>.

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New ICT Tools and Novel Flexible Business Models as Means of Being Part of E-economy for Small and Medium Enterprises

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Introduction

Economic and social changes we have been witnessing for at least a decade now inevitably lead to the creation of a global knowledge-based economy. The changes are also the main stimulus for companies to become flexible in terms of a profile and type of their activities, customer care and management, co-operation with suppliers, relation with their own employees, marketing and sales, and any other aspect of their everyday business. The ability to transform immediately, to introduce changes in the production process, to adapt to a new environment, as well as the customer-driven planning are essential to survive in the evolving economy. All the mentioned factors are, however, determined by introduction in a company of flexible working.

Flexible working

The term 'flexible working' covers any aspect of work which can be made flexible by using information and communication technologies (ICT). This means it is a broader concept than traditional teleworking, which provides flexibility by means of ICT only in terms of time and location of work. In case of flexible working, the usage of telecommunications and IT is only one of its aspects. Others include increasing competition, structural changes in the economy, society and even demography, globalisation, and cultural patterns. It can be said that teleworking replicates the tools necessary to do existing jobs (thus enabling employees to work at home, on the move or whenever and wherever it suits them), while flexible working goes much further, covering everything that makes it possible to perform tasks which could not be done in a traditional enterprise.

Flexible working might start with teleworking, but it should rapidly move on to providing workers with better tools for doing their jobs that allow distributed teams to overcome the constraints of time, place and organisational boundaries. Flexible working can eventually transform the nature of the jobs themselves, by providing individual team members with immediate access to the information they need to solve complicated problems. In other words, teleworking creates distributed organisations for carrying out existing tasks, whereas flexible working creates smart, dynamic, networked organisations that can rapidly respond to what their customers want.

Flexible working makes it possible for companies to become partners in one or even more virtual, global and dynamic enterprises. As well as helping them to overcome time and distance barriers, it can provide them with rapid access to information on resources, suppliers, and customers. It allows skills to be drawn into a project whenever they are needed and from wherever they are available.

A solution for SMEs

Flexible working seems to be especially important for the SME sector, including those companies which are located in remote and rural regions. There are already some positive examples (also in the CEE countries) of successful deployment of flexible working techniques. They allowed SMEs to overcome problems of isolation and to become 'smart' organisations, which combine the knowledge of all their individual members (usually working away from a 'traditional' office, sometimes even in very

distant locations), and respond dynamically to customers' requests or new business opportunities.

On the other hand, there are still many small businesses which are intimidated by the technology and find it difficult to obtain good (or any) advice on what tools and techniques would suit them best. Theoretically, there are dedicated bodies and non-profit organisations which should assist them in this regard, e.g. regional development authorities, chambers of commerce, etc. However, due to constant evolution of technologies, very often these small business advisors lack skills and necessary resources to be able to advise their target customers on the right ways and models for adoption of flexible working. Thus, business advisors themselves need a structured approach to selecting and implementing a package of flexible working tools and techniques that will progressively improve SME competitiveness and speed of response. This includes monitoring the effectiveness of the package and refining its contents in the light of experience.

To provide such an approach, a dedicated initiative entitled FlexWork has been launched under the aegis of the European Union 5th RTD Framework Programme. In addition to this, the project offers access to an extensive range of back up materials on all aspects of flexible working.

FlexWork initiative

FlexWork has put together a package of resources to help small businesses and their advisors to implement different forms of flexible working. These allow companies to examine the type of business they want to become and select a mix of flexible working tools and techniques that will help them achieve their ambitions.

The FlexWork resources include a 'Handbook of Flexible Working', which starts with a 'guide' to the basics of flexible working, presenting various approaches to flexible working, the technologies available to support them, and the benefits that can be gained from adopting them. The handbook identifies and discusses a number of issues, which should be considered by any company thinking of introducing flexible working techniques like e.g. selection of suitable tasks and people, management of flexible workers, necessary equipment and technology, health and safety or contractual and legal matters. The final section of the handbook presents a structured approach to introducing flexible working within a small business. This guides the user through the process of developing a flexible working implementation plan, analysing the costs and benefits of different approaches, and presents a model for phased introduction of the chosen tools and techniques. It is available in a number of regional versions, from English, to French and German, to Polish and Russian.

The template for the flexible working implementation plan guides a company through examining why it wants to introduce flexible working, comparing the various tools and techniques available, identifying key issues, and deciding how to monitor and evaluate the introduction of the selected tools and techniques. The template is backed up by detailed checklists for analysing critical factors.

Because many of the effects of flexible work are qualitative in nature and achieve payback only in the medium term, traditional approaches to cost-benefit analysis tend to offer a pessimistic view of the potential of flexible work. FlexWork therefore presents a methodology and a software tool for extended economic efficiency analysis. The tool extends cost-benefit analysis to cover criteria relevant to flexible work (e.g. productivity improvement, corporate image, employee satisfaction), which cannot be directly expressed in financial terms.

As well as the handbook, FlexWork has produced a series of 'blueprints for flexible working' showing small and medium-sized organisations (SMEs) how to implement a number of contrasting, but widely used styles of flexible working. These blueprints explain the types of business situation to which the style is best suited, outline the kinds of benefits which can be expected and introduce the tools and techniques available for implementing it. Each blueprint includes templates and checklists

to support 'Do It Yourself' implementation plans, and is accompanied by a set of 'success stories' describing how individual SMEs have already benefited from that particular style of flexible work.

The FlexWork website (<http://www.flexwork.eu.com>) complements the handbook and blueprints with a series of management briefings on important commercial and technical issues associated with flexible working and also provides a comprehensive set of links to other established sources of information about flexible working. These allow SMEs or Business Advisors to dig more deeply into topics of particular concern to them.

A programme of regional workshops is being set up to brief business advisors on the handbook, the other FlexWork resources and services and website to a wider group of regions in EU Member States. These workshop include regional information workshops but also briefing workshops for business advisors.

An overview of the FlexWork resources, tools and country coverage is provided in the following diagram:

RexWork Website: http://www.flexwork.eu.com (Member Area, restricted for registered business advisors and SMEs)		Flexwork Country Coverage: <i>EU:</i> ● Denmark ● France ● Germany ● Greece ● Ireland ● Italy ● Portugal ● United Kingdom <i>Accession Countries</i> ● Bulgaria ● Hungary ● Poland ● Slovenia
Resources	Tools	
<ul style="list-style-type: none"> ● Handbook of flexible working ● Series of Blueprints ● Success stories ● Series of Management briefings 	<ul style="list-style-type: none"> ● Cheklists and templates ● Extended Cost Benefit Analysis Software Tool ● FlexWheel Flezibility Analysis Software Tool 	
Workshops Regional Information Workshops Regional Briefing Workshops for Business Advisors		
Hot-line (telephone, e-mail)		

The FlexWork resources are being promoted to all of Europe's RDAs through EURADA, the European Association of Development Authorities. FlexWork is also working closely with a number of Regional Development Authorities in all partner countries to better understand the requirements of small businesses for information about flexible working and to refine its package of support materials.

The service is free but users are encouraged to register to get early and exclusive access to all FlexWork products, tools and services. FlexWork is also interested in gathering feedback about the usefulness of the material and resources provided and registrants are encouraged to articulate their criticism.

The FlexWork consortium is going to submit another proposal within the FP6, aiming at extending the current coverage of the project - both geographically and in terms of its scope. Thus, presentation at the Riga conference might be a possibility, especially for potential partners from the Baltic States, to join the initiative.

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'Knowledge to People and People to Knowledge' - a Lifelong Learning Experience

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The economies of the European Union are now essentially "knowledge-based" and depend significantly on the general level of education and professional skills of the work force. There is a need for all workers to update and extend their skills and knowledge at regular intervals throughout their careers. Professional workers often need to develop new technical skills, new management skills, and new language skills, especially in the single European market. The term "lifelong learning" has come to represent this concept. Many professionals find it increasingly difficult to take time off from work to go to a training institute or university to study and prefer the flexibility offered by distance learning delivered via the world wide web ("e-learning"). Although e-learning has much to offer and is growing steadily in usage, it has not penetrated the lifelong learning market as much as had been expected.

One of the reasons for this lack of growth in e-learning is that it suffers from a major disadvantage, namely that there is normally no live interaction between student and tutor, especially when large numbers of students are involved. Interaction with a tutor can take place by email or, in some cases, in live "chat rooms". However, even this is not appropriate when very large numbers of students wish to have their own individual questions answered by a live tutor in real time. The purpose of this project is to overcome this problem by developing a system to support live interaction between small numbers of tutors and very large numbers of self-learning students. Such a system will be able to transform the pedagogic quality of future e-learning and lead to an increased growth in the deployment and up-take of e-learning courses with beneficial effects on the European work force and economy.

The economies of the European Union are now essentially "knowledge-based" and depend significantly on the general level of education and professional skills of the work force. There is a need for all workers to update and extend their skills and knowledge at regular intervals throughout their careers. Professional workers often need to develop new technical skills, new management skills, and new language skills, especially in the single European market. The term "lifelong learning" has come to represent this concept. Many professionals find it increasingly difficult to take time off from work to go to a training institute or university to study and prefer the flexibility offered by distance learning delivered via the world wide web ("e-learning"). Although e-learning has much to offer and is growing steadily in usage, it has not penetrated the lifelong learning market as much as had been expected.

One of the reasons for this lack of growth in e-learning is that it suffers from a major disadvantage, namely that there is normally no live interaction between student and tutor, especially when large numbers of students are involved. Interaction with a tutor can take place by email or, in some cases, in live "chat rooms". However, even this is not appropriate when very large numbers of students wish to have their own individual questions answered by a live tutor in real time. The purpose of this project is to overcome this problem by developing a system to support live interaction between small numbers of tutors and very large numbers of self-learning students. Such a system will be able to transform the pedagogic quality of future e learning and lead to an increased growth in the deployment and up-take of e-learning courses with beneficial effects on the European work force and economy.

The overall aim of this proposal is to develop a system, which will facilitate live interaction between very large numbers of e-learners and a small number of tutors (or course presenters) in real time. This is quite unlike any thing that has been tried before. The system will operate in two distinct modes:

- **Mode 1:** Live lectures by experts are presented to large numbers of distance learners by means of web-casts. In order to facilitate direct interaction, the learners will be able to submit text questions to the web-cast presenter in real time. In view of the large number of simultaneous incoming questions, an intelligent multi-agent system will be developed to filter the questions and extract the most common issues ("batched queries") to be answered by the presenter. The most common questions from the self-learners will thus be answered in near real time giving an impression of two-way interaction to the maximum number of students.
- **Mode 2:** Instead of live web-casts, in this mode video lectures and other multimedia information will be made available on-line from an educational archive. Self-learners will be able to access such material asynchronously and pose live questions to a tutor. The intelligent multi-agent system will match incoming questions to appropriate on-line tutors and, in case of heavy demand, operate a query filtering system as in mode 1. The aim of this approach will be to provide direct communication between tutor and learner whenever possible, and to operate a live "batch query" approach when the rate of incoming questions becomes too high.

By implementing the above system, it will be possible to create a **common integrated framework for live interaction in multimedia e-learning**. This framework will support direct one-to-one live communication between a tutor and student whenever possible, and a lower level of interaction based on batched queries, *which still provides an impression of live interaction, when one-to-one interaction is not possible because of demand from very high numbers of students.*

This proposal will implement and test the integrated framework for live interaction between e-learners and tutors. The system will use state of the art multi-agent approaches for creating student query management software system. It will also integrate the use of video cameras in a live operational system. In addition to developing the required software systems, a subsidiary objective will be to investigate and make recommendations on bandwidth and quality of service requirements for real-time web-cast lecture delivery (e.g. using ISDN and ADSL technology).

It is proposed to develop an advanced system for live web-based teaching which will enable large numbers of distributed self-learners to be provided with live answers to their questions and queries which arise as part of their learning process. This will significantly enhance their self-learning experience and motivation. The planned system will cater for two types of situation:

(i) Live web-cast video teaching with automated learner inquiry support (see Figure 1)

In this mode, the LIVE VIDEO LECTURE mode, the proposed system will enable hundreds or thousands of e-learners to submit questions to a teacher or professor during a live video lecture web-cast and receive a response. In such a situation, it would be impossible for the teacher to answer each question individually. However, many learner questions will be similar and an intelligent system can be developed to assimilate and analyse the patterns of incoming questions and to present the "most common" or "frequently asked" questions to the teacher. The teacher would then answer these questions live during his or her presentation, thus giving most learners an enhanced experience of live feedback.

(ii) Archived video stream on demand delivery with live tutor learner inquiry support (see Figure 2)

In this mode, the VIDEO ON-DEMAND mode, the system will cater for self-learners to access archived video and other forms of multimedia study material in an e-learning environment. Instead of getting feedback from a live video presenter, the learners will receive support and answers to their inquiries live from supporting course tutors. The system will again analyze patterns of incoming questions and match questions to the most appropriate tutors.

Overall, the proposed structure will require a layered architecture to support the proposed interactive learning system. The communications layer (WWW with relevant local loop service such as ADSL or ISDN lines) will form the core of the system. Above this, will be the LIQUA system, which will manage learner queries as a form of "middleware". Above this will be the E-Learning System Interface (ELSI) which will provide video web-casts and query dialogue boxes within a web page format. This architecture is illustrated in Figure 3.

The heart of the system will be the system for handling learner questions -the LIQUA system. LIQUA has to perform several different functions. It has to:

- (i) process large numbers of text questions submitted in real time by learners over the web
- (ii) parse such questions to understand their grammatical structure
- (iii) identify common patterns of questions, using pattern clustering methods
- (iv) understand the core meaning of common question patterns using candidate techniques such as fuzzy cognitive maps
- (v) synthesise idealised frequently asked questions which can then be answered live by the video presenter.

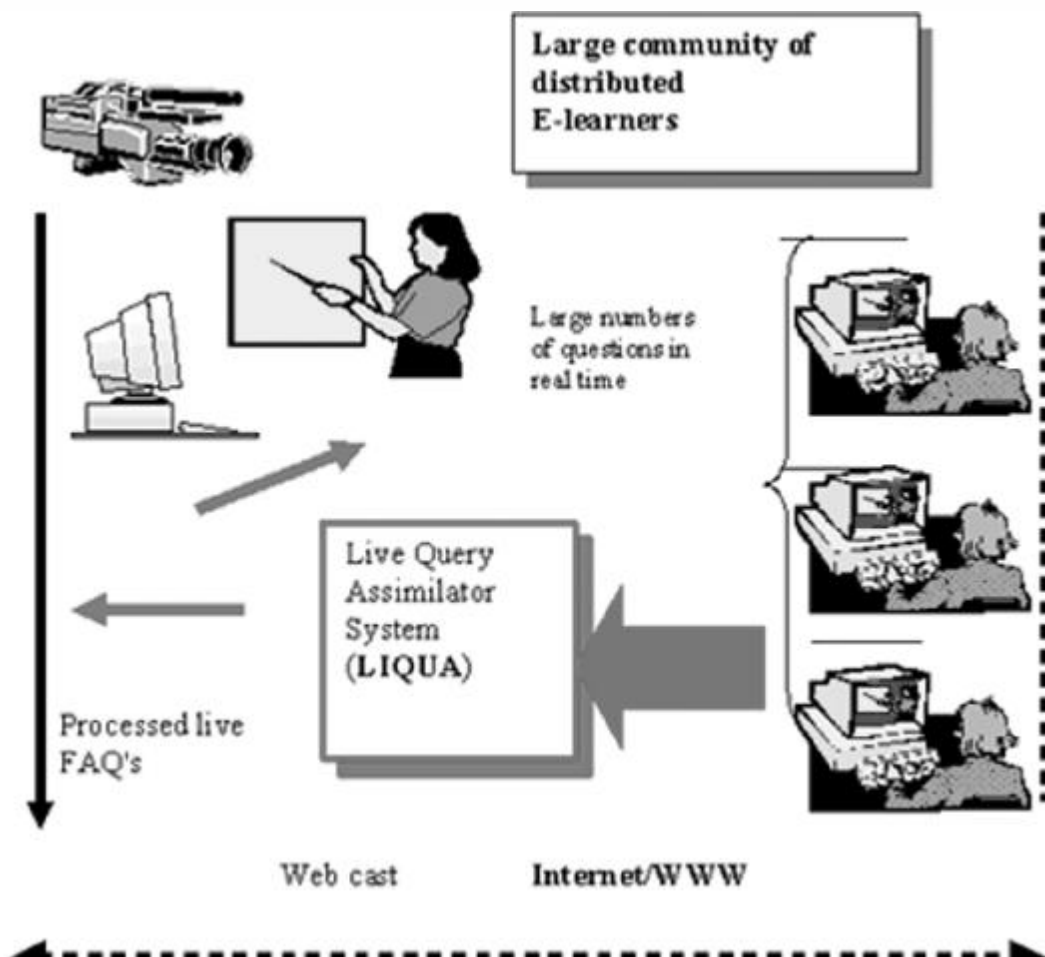


Figure 1. The concept to support live web-cast teaching. The heart of the development will be the LIQUA system to automatically process large numbers of real time student questions and queries and to forward them to the video presenter as processed live frequently asked questions (FAQs). This model will apply to live web-cast teaching to a community of hundreds or thousands of distributed learners who could be scattered across different EU member states.

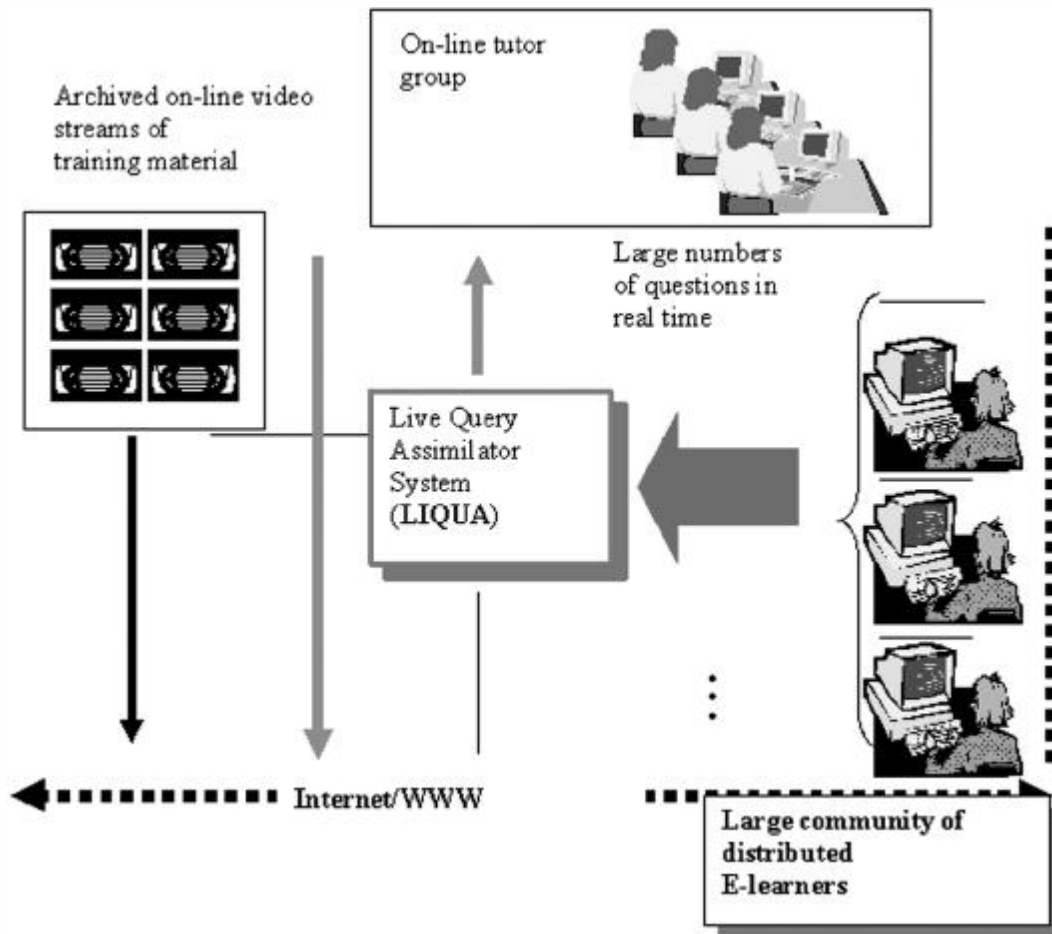


Figure 2. The concept for live tutorial support of recorded video stream training material. Tutors answer incoming queries related to particular training material. The LIQUA system matches tutors to incoming queries depending on expertise. In case of heavy query traffic, LIQUA processes only FAQ's as in Figure 1. LIQUA will be developed as a multi-agent system using an object-oriented approach.

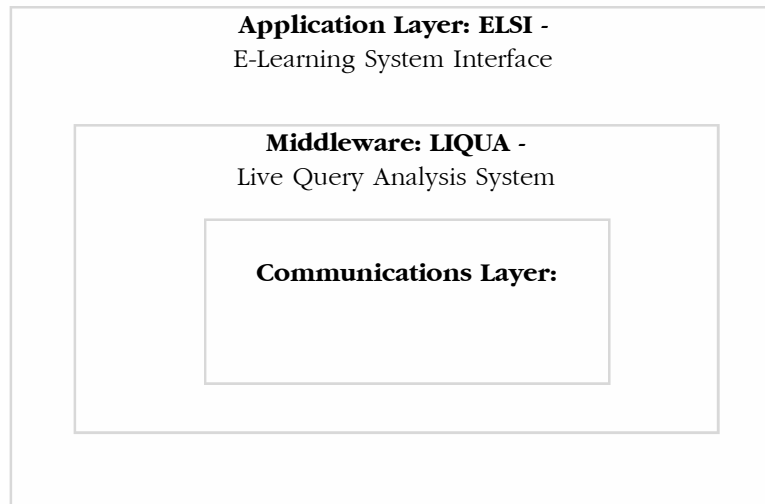


Figure 3. Layered system architecture. The proposed system can be developed and tested using web-based language teaching as the user application. Universities with the relevant technical expertise might undertake technical system design and development. System integration and tests will involve both technical and end-user partners. Live tests of the system may be carried out as part of the project with groups of students in an international context to prove the concept for training at an international level.

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E-learning in Latvia

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The last 5 years have been rich in e-learning development activities. They have been moved by early academic innovators, administrations of some universities, and government concepts. Initially e-learning development benefited from the PHARE Multi-Country-Programme for Distance education. The following trends were strongly supported and influenced by the EU 5th FRAMEWORK, SOCRATES and LEONARDO Programmes.

Currently like in all educational system there are two trends e-learning development stream:

- new student centered approaches with the support of innovative technological solutions
- transfer of traditional renaissance tradition studies to virtual learning environments

The political support is expressed in the Concept of Electronic Commerce and Virtual University Programme that created the environment for e-commerce development. It was adopted by the Latvian Government in December 2001.

The most visible results are:

- running of virtual learning environments in Riga Technical University, University of Latvia and Business College "Turība".
- development of interactive multimedia CD-ROM study materials for a number of courses. 4500 interactive CD-ROMs have been presented to all 1247 Latvian schools with support of "Latvijas Mobilais Telefons".
- participation in regional development projects with human resources development component.
- development and international application of new virtual course development forum. This approach was awarded with Microsoft Prize in the World Conference "Education without Borders" Abu Dhabi 2003.
- development of Course Quality Assessment Forum. This project was strongly supported by the Ministry of Education and Science, and issued as Quality Handbook in 2002.
- knowledge managements solutions for e-learning development and delivery in line with 5th and 6th Framework programmes activities.

This paper will report on the listed results and will try to identify the e-learning development line in common university development landscape.

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E-learning as a Means of Formation of Students' Creative Experience

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Introduction

Independent learning and teaching of students and teachers nowadays require the possibility of research free from limits of law, rules of institutions and political influence, orientated towards harmonious personality development. Training of a highly qualified specialist is only possible in a teaching and education process increasing the potential skills, talents, intellectual development, enlarging the cognitive outlook and directing the student towards lifelong learning:

- 1) to prepare the pupil and student for a successful and fast acquirement of new information,
- 2) to form skills of orientation in different information structures,
- 3) to develop habits of rational use of information available,
- 4) to develop skills of evaluating and selecting information from various sources.

At different times prior to the twentieth century universities could be characterized as Universities of Teaching or Universities of Research. Today's university could be styled as the University of Teaching and Research.

Study process at modern schools of higher education includes the use of information technologies (IT), although the possibilities offered by the use of computers in forming interactive links in cooperative work with an anticipated study process result model have not been thoroughly researched.

E-learning is recognised as one of the most effective tools for accelerating the transition process to the Information Society and it corresponds directly with the national and regional development priorities. (Vidzeme Development Programme - 1st priority: the building of the competitiveness of the region, 4th priority: stopping of the brain-drain from the region, 5th priority: improvement of education and adoption to the labour market's demand; National Development Plan - 6th priority: development of the regional infrastructure for the implementation of employment resources development.) In order to better involve society in the e-learning processes, the measures envisaged by the project aim to increase the use of ICT services in university colleges, implementing the knowledge - network in the Baltic Rim and magnify the role of ICT in the cross- border cooperation.

E-learning as a modern way to reach high quality knowledge

The main aspects determining the urgency of the research of pedagogical basis of IT studies in Latvia are:

- In the process of social development the role of IT is increasing more and more definitely in various aspects of human activity.
- The increasing demands of young people concerning the improvement quality of training and education demands for a kind of education concurrent in the local as well as international labour market.
- State investment project "development of Latvian education informatization system" (LIIS) involves the educational system on a macro level (administration of education), on a mezzo level, informatization of schools and in-service training in IT), and on a micro level (active work on development teaching materials for various subjects).

The theoretical background of research first of all comprises the theories of learning. The theory of learning as a cognitive approach has been used as a basis for the research, closely connected with the importance of the essence and content of information, a logical structure of the content of the

studies - theory constructivism (Brunner J., Piaget J.), and the use of the theory in higher school of education (Wadsworth B.).

The most important thing about institutional forms of learning, such as studying at university, is that they are supposed to prepare students for handling situations in the future, situations which are often very much unlike the situations in which students are being prepared (Bowden, Marton, 1998). It is essential in modern study process to observe the principles of constructivity, interactivity, externalization and instrumentation according to Brunner's theory. The perspectives of education are hardly imaginable within a single organization or an individual country, and determine necessity for a wider and wider exchange of information, which can be technically provided by IT, provided it served the needs of the society. In the study process it is important to develop basic academic skills and highly organized thinking and problem solving skills. Learning should no longer be concentrated on individual work. With the change of the life style paradigm in the process of education and teaching the student develops a skill to gather information in a negative way. A study process where the main role of the teacher is to present finished knowledge while the students task is to perceive, understand, remember, reproduce the knowledge facilitates formation of a reproductive cognition, not effectively enough facilitating development of creative thinking. It is a pedagogical problem to make more optimal the proportion in the cognition process between the ready made knowledge and knowledge achieved by the student him/herself. In connection with the problem based study process the problem based learning, where the student learns while looking for a solution of a problem, has to be singled out. He/She is responsible for what he/she is going to learn as well as for an active research activity. Only an action aimed at realizing a goal serves the development. While working in a group, the student's increase their motivation to be involved in the study process, the amount of information, which comes to one's mind after a longer period, increases several times. In addition, a process of socialization takes place. It is necessary for a higher school of education student to cooperate in the process of studies in order to form a deeper understanding of the theme and sources, it is important for the student to join the course content in analysis of theoretical sources, to form a personal ideological meaning for cooperation with others as positive as possible, to increase self-respect concerning the academic practices in the process of common work in this process. It is important to diminish isolation of a single student and develop a successful cooperation as well as bring down isolation of individual schools of higher education, which is done in the form of different exchange seminars, projects and through IT. Hence it is important for students to provide the possibility to become aware of and make use of IT, one of the main information collection and data processing means nowadays, ensuring exchange of information on a much larger scale.

As e-learning is of fundamental importance in the acceleration of the transition process to the Information Society, the project faces the main challenges of the Baltic States, namely, thinking inertia, low involvement in new, ICT based activities, and the lack of "know-how" initiatives and experience exchanges. Life-long education of all members of the society is of a primary importance in the process of implementation of information technologies in the state in order to avoid formation of strata of society rich and poor in information. There are still two major constraints in the target countries, which will have a negative impact on these countries in their transition to the Information Society, videlicet: lack of funding for purchase of computer hardware and lack of skilled information technology teachers. Also, the lack of appropriate software within the education system leads to ineffective use of existing infrastructure. The envisaged project brings together and fills the gap between the identified needs and constraints by starting new knowledge based long-term initiatives.

E-learning is also considered to be of particularly high priority in scarcely populated and remote regions such as the Baltic Rim, where increased application of e-learning solutions based on distance-spanning technologies would greatly facilitate the development of the region's economic potential and great natural resources as well as contribute to the maintenance and improvement of the provision of social and other services to the population. Creative experience of studies is the knowledge and skills gained and assessed by a student in the process of theoretical and practical cognition

which have become a personally important and can be applied in various life situations (Cakula, 2001). Creative experience comprises apart from purposeful learning, also the assessment of knowledge and skills and ability to use them in new situations. A special attention is paid to IT as a means of cooperative learning, the possibilities of IT in supporting the research activities. Ways of using computers for the needs of students' research activities have been worked out.

Cross-border e-learning project

A special emphasis is put on the development of e-learning study materials and teacher training. As a part of the project a licence is purchased in all the participating institutions to realize and spread the know-how of the trainers. This in turn supports efficient use of the purchased software and invested financial resources. The modernization of education process guarantees the teachers and trainers the latest know-how in their field of expertise and consequently improves their situation in the labour market.

As the goal of the project is to establish e-learning knowledge based mutual cooperation network in the Baltic Sea Region, which will promote the idea of the Information Society and life-long learning, it fully corresponds with the overall aim of the CBC program i.e. 'to promote the creation and development of the co-operational networks on either side of the border and the establishment of the links and wider Community networks.'

One of the ideas of the project is to create a well-functioning cross-border e-learning network, where the physical location of the institution or a single student is irrelevant. This will guarantee all the students' accession to similar resources in all the participating institutions. This is an improvement to present situation in all the participating countries. At present too often the quality of tuition is bound to the geographical location of the institution.

To be successful in knowledge-based economy, transition economies need latest technologies and people to use them. This means the ability to use ICT in a new creative way. With regard to capabilities and skills, network education and training are of utmost importance. The project directly corresponds with the components of *eLearning*- and *eEurope*-initiative by training teachers and students to use the latest applications digital learning environment.

We have Finnish, Estonian, Lithuanian partners in this PHARE project, but we also are open for new partners at that time.

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Why is Sustainability so Important in the Knowledge Society?

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1. Knowledge society is a post capitalist society

Our presentation is based on a new vision of the knowledge society as a post capitalist and post industrial society, where capital becomes less important than knowledge and human capital.

Definitions: Data is the raw material coming in your letterbox. Data is becoming information when you are able to sort it: ex/ sort the advertisements, (spam) the newspapers, and the letters. This information becomes knowledge when you read the news and the letters and decide what is important for you. It could also, seldom, become *wisdom*.

Shift of power

The power of the new entrepreneur is increasingly linked to the transformation of data and information into knowledge. Contrary to some intellectuals who think that, one day, machines could be able to create knowledge, I am of the opinion that this *knowledge creation has to be done by the human creative mind*. If this hypothesis is true the entrepreneur has to really care for the personnel around him, otherwise their creativity will decline. He has to respect them, allow errors to be made, foster their cultural diversity, and their family lives, and care for their work environment, otherwise they will go to the next firm *with their human capital!* And the entrepreneur will lose his capital. He will be unable to produce. He will be obliged to begin again to invest in new personnel and human capital. It is a big loss.

Management is thus shifting from machine-centred towards human-centred. It is a 180° shift. A very important one.

Quality over quantity

Quality of knowledge is more important than quantity. There is indeed too much of information and not enough quality of knowledge and wisdom! And so we are in silence switching toward a new type of progress: the qualitative progress.

Trade is also shifting. Indeed if I buy meat, I lose my money and you lose your meat. But with knowledge this works in a different way. I do not lose the knowledge I am sharing with you. I must *share knowledge in order to increase it*. We are shifting from a logic of scarcity and exclusion towards a new logic of inclusion and sharing. It is the same logic as love, with all the possible perversions also! Trade is thus a concept that could become progressively marginal in this new society.

NB In annex 1: I have included one small part of my forthcoming book.

2. Business and society: a new relation?

Those changes of the very basic mechanisms of our work environment and of our tool of production, induces very important changes in the links between the enterprises and society. Because human capital is every day more important the companies are now more and more publishing

¹ See Peter DRUCKER: "*Post Capitalist society*" Harper Business, New York 1993.

besides a financial accounts book, also an account on their human and natural (environment) capitals. Or to put it in another way the "intangible" (non quantifiable) part of a company's value is becoming more and more important. Intangibles are for example

- a. the know how of a company. An Airbus is flying because there is a lot of know how to put all pieces together and make a secure plane.
- b. The reputation of company. Its brand ex: Coca Cola is 90% brand and 10% brown water !
- c. Trust: why are the people trusting "Mercedes" as a very reliable car?
- d. Link with personnel: if they are well treated the energy of the company is different
- e. Link with stakeholders becomes increasingly very important.
- f. Link with neighbourhood and territory becomes also more important

All those new dimension of a company are becoming important because we are in the knowledge society. Knowledge becoming central it is understandable that qualitative aspects and meanings become central. We will thus be obliged to rely more and more on intangibles, thus on qualitative dimensions, not only in business relations but also in political life.

3. Sustainability is the main intangible

In observing what happens in the business since September 11, I see that there is a tremendous pressure on the business to improve their image worldwide. Avant-garde groups like the "World Business Academy" www.worldbusiness.org and "Spirit in Business" www.spiritinbusiness.org are really advocating a new paradigm of business where profit is *consequence of the way the enterprise treats its personnel, its stakeholders, its stakeholders, society and the environment.*

Simultaneously we see that in the knowledge society intangible assets of a company, its reputation and the vision it propagates is increasingly more and more important. Some specialists say that 60% of the EU economy is already intangible. Example: Coca Cola is 10 % product (brown water) and 90% brand: a vision of freedom, dynamism, tolerance, justice and a positive future for humanity, etc.

What appears is that sustainability is increasingly becoming an important intangible of a company. The movement is so rapidly growing that we could very rapidly see a situation where sustainability could become the main intangible for the companies of the future.

4. Why is sustainability so important?

Because humanity is for the first time confronted with a danger of self-extinction. If we continue the actual logic of development and extend it to the whole world, we will not survive. We know this but we prefer not to know.... And we continue like before in the same logic.

Any person working for sustainability in a serious way is immediately perceived as working for life and not towards our collective death. This is the main reason for the immediate and increasing success of any serious move of the companies towards a sustainable world.

ANNEX 1 : IS THE KNOWLEDGE SOCIETY POST CAPITALIST?

Yes, the knowledge society is post capitalist. It will probably remain a market system, but probably is a different shape. And this is not a value judgment against or in favour of industrial capitalism. In front of our eyes, a rapid and deep shift is going on, in the key core values of the capitalistic society. They are simply become obsolete. In writing these lines I am personally surprised with the importance of this shift.

The classical economists are more and more speaking of "intangibles" when they speak of the knowledge society. It seems that one important part - if not the major part- of the actual economic system in US and in EU, has become intangible. This means that the classical economic tools are not efficient anymore for measuring and managing this important part of our economies. Classical tools are becoming rapidly obsolete.

If this assertion is true, the situation is really frightening, because it means that no one is anymore in state of running and managing the global system, and that anything could happen. It is thus urgent to write new chapters in our economic books. But there is not so much creative literature, at least that I know.

One of my main sources of inspiration has been Harlan Cleveland, former Assistant Secretary of State of John Kennedy, US ambassador to the NATO, twice academic dean and once a university President. As a president of the World Academy of Art and Science, he has been studying and writing on knowledge management since 1985². I consider him as one of the forerunners of the reflection on the knowledge management world-wide.

1. Producing and selling many cheap material goods.	Knowledge and human creativity = immaterial assets.
2. Trade: butter or the money	Exchange and sharing of knowledge are the new must.
3. Scarcity and exclusion	Abundance of info and inclusion in order to create knowledge
4. Secrecy in defense and business	Disappearance of secrecy. Information always "leaks". Or soft fascist rules world-wide.
5. Capitalistic debate = Who owns the means of production ?	Individual propriety of the means of production = brain. Or efforts to own the human brains
6. Human capital is not an asset it is a social problem	Human capital becomes central in management and accounting. Or human manipulation become central
7. Progress = quantitative growth	Progress = qualitative growth, Or...
8. The sold objects have no ethical value.	Knowledge has always an ethical value, Or manipulation of ethics...
9. The overall strategy is mastering and domination	General strategy is reconnection and sustainability or the opposite...

Figure 1: From one logic to another

² Harlan CLEVELAND, *Leadership and the Information Revolution*, editor : World Academy of Art and Science, 1997.

Harlan CLEVELAND, *The knowledge Executive : Leadership in an Information Society*, editor Truman Talley Books, E. P. Dutton, New York, 1985. Orders kvargo@hhh.umn.edu

Naturally all those new values coming up in the knowledge society are not guaranteed to be always positive. They can be reversed in their opposite. This figure does not at all forgo any negative scenario, because in all cases the values being turned positively or negatively, are the same.

5. TOWARDS AN IMMATERIAL SOCIETY

Industrial society is aiming at producing and selling a maximum of material goods. And our industrial economic approach is limited to a materialistic approach. Economic discipline is built to reducing everything to numbers, or even equations. The very challenge for economists is indeed in finding new ways or new approaches in order to put human behaviour in equations. And the only possible measurement in our capitalist society is a quantitative and material one.

Now, there is a real problem, because knowledge is immaterial. Some economists are doing great efforts in order to express and measure knowledge into quantitative terms. Their efforts are not seeming to convince the majority of the economic community. Indeed another important part of the economists behaviour openly that an increasing part of the economy is "intangible".

Here is the **definition** given by Baruch Lev in a recent book³ on intangibles: *"An intangible asset is a claim to future benefit that does not have a physical or financial embodiment. A patent, a brand, and a unique organizational structure...I use the terms intangibles, knowledge assets, and intellectual capital interchangeably."*

And, the author observes that: *"Intangibles are frequently embedded in physical assets (for example the technology and knowledge contained in an airplane) and in labour (the tacit knowledge of employees), leading to considerable interactions between tangible and intangible assets in the creation of value. These interactions pose serious challenges to the measurement and **valuation of intangibles. When such interactions are intense, the valuation of intangibles on a stand-alone basis becomes impossible.**"* The classical capitalist quantitative (material) measurement methods are not working. We are already in another values system. And the difficulty is that shifting to a immaterial qualitative approach will suppose a real paradigm shift in economic methods, and basic axioms. Economics will perhaps have to become a transdisciplinary discipline, involving philosophers, sociologists, anthropologists, psychologists, politicians, and even theologians...men and women.

The main obstacle to this rethinking of economics could be the "clerical" behavior of the corps of world-class economist. They do not seem very inclined to accept new ideas and paradigm shifts. We have seen that in the modern paradigm there is a new dominating class functioning like the medieval clergy. The economists are a good example of this modern functioning. They behave a bit like the theologians at the end of the middle Ages. When one of them begins to think out of the box, he is ostracized and reduced to silence. These kinds of practices are not really tolerant. But they are structural. They are like embedded in the modern paradigm. The paradigm analysis leads us to tolerance for human behavior. One should thus not accuse X, Y, Z. It would be unfair.

But there is another obstacle, which is in each of us. We have all become imbedded in this diffuse materialistic approach of life. Materialism has become our second nature. It is in the program of our internal computer. It is in our (modern) paradigm, so that we do often not see or perceive non material information. We just do not see it. We will all have to open up again to another set of values.

³ Baruch LEV : *"Intangibles: Management, measurement, and reporting"*. Brooking Institution Press, Washington D.C. 2001. Pp. 150. Quote is from pages 6 - 7.

6. BEYOND TRADE TOWARDS SHARING?

Trade as we know it is a rather recent notion. It is a transaction where one exchanges a good for money. And this is all. Once this exchange have taken place, the transaction is considered as completed. No follow-up is foreseen. This concept of trade seems to us eternal, because we have never known anything else. However...

In the Middle Ages, in Europe, the concept of *commercium* was very different. It was much richer and holistic. It was mainly based on exchange and gift. Let us take an example. A farmer needs seeds and his neighbor has a plenty. This neighbor will give the needed seeds in exchange of something or of money or for free. And our farmer eventually accepts to remain in debt of honor. Which means that in case of necessity, it is agreed as evident that he will come and help his debtor, or that he will give his neighbor a present for the next good occasion.

If the farmer does go to the market, in town, and buys his seeds, he will have to pay, but he will also use his trip to the town to gather information on agricultural methods, political information etc. He could also perhaps look for a good husband for his daughter. The exchanges on *city market* were much larger than monetary transactions; they included exchange of knowledge, of human relations, marriages, etc.

It is only during the industrial period, in the 19th century, that the concept of trade has become so narrow. Society has shifted from *commercium* to trade. What has been eliminated completely is the community-building notion of reciprocal debt. This notion of debt has been considered very negatively by industrial capitalism, perhaps under the influence of Puritanism. Popular wisdom today put the pride in having no debts. There has been a complete reversal of values.

Now in the knowledge society, if one exchanges knowledge, he does not loose it, and the receiver is linked by a kind of debt. The advantage of the donor is not necessarily money. More important for him is the return of knowledge, which comes back enriched by the receiver's creativity. This is the reason why the new entrepreneurs are insisting so much on the compelling necessity of sharing any information received by their employees. In some firms of the Silicon Valley, if an employee is holding knowledge more than 24 hours he is automatically fired. This new rule means that in most of our national and regional administrations, the majority of the personnel...could be fired immediately.

There is thus a **radical change in the very basic concept of modern industrial trade**, in which it is impossible to "have the butter and the money of the butter". In a certain sense, in the knowledge society it is possible to have the "knowledge and the money of the knowledge". We are like shifting to a new logic of exchange and sharing.

This means also that money is losing its central position in the knowledge transaction, because a knowledge transaction is possible without money. Money is also quickly dematerializing and disconnecting from the (post)industrial production. It becomes more and more speculative and abstract. Thus it loses its societal usefulness. We are assisting to the end of the industrial concept of money. What is the future⁵ ?

⁴ An excellent example of this ostracism is given by Herman DALY former research chief in the World Bank. "For the Common Good, redirecting the economy towards community the environment and a sustainable future". Beacon Press Boston 1989...He witnesses in his book, that since he has published his first critical article he has never again been invited in any world Congress of economists.

⁵ See Bernard LIETAER: "*The future of money, creating wealth, work and a wiser world*" Century edi-

Naturally when one looks at "Microsoft", there is a lot of money involved. But the way Gates has made his money seems new. He had knowledge (understanding the importance of the user friendly approach of Apple, and selling it to the IBM system), but he had little capital and no infrastructure. It has been enough to make a fortune.

Comparing Microsoft with "Linux" which is completely free and able to be improved by the users. I have the impression that Microsoft is still half industrial. Will Linux not win in the long range? Is Linux not much more knowledge logic?

7. BEYOND SCARCITY AND EXCLUSION

Capitalism and its money system (see Lietaer) are based and build on the values of scarcity and exclusion. The whole of the market functioning is also based on those same values. This company has this new product and the other has not. The whole of the concurrence and pricing system is also based on this scarcity. If a good is not scarce, it is not possible to get a high price for it. And the consequence of this scarcity is the exclusion of those actors on the market who have not the same patent or product available.

We are now entering in a very different values landscape. In the knowledge society information is overabundant. The very challenge is to transform this information into knowledge, which is less abundant. This can be done only by the human brain, or better, more human brains. And so it is a question of survival to circulate the information to a maximum of human brains. The very fabric of knowledge is build on inclusion. The more you are inclusive the better and quicker your information will be transformed into knowledge. Now if you behave like in the industrial capitalist society, trying to cultivate the scarcity of the information, it will rapidly dry up and become obsolete! One is thus obliged to shift values system.

In other words, here is a new proverb: *"Knowledge is like love the more you give the more you receive"*! Is this not shocking our capitalistic ears? Let us admit that it is really difficult for the majority of us, because we have so well behaved the scarcity and exclusion as guiding values. They are imbedded in our program.

This new logic, which is quickly invading our society, could have a very positive impact in geopolitics. Why not to apply this inclusive approach to Africa? Why not to share with the poorer continents our information and our knowledge? We would have a tremendous return, because this could unleash a gigantic hope of a new start for them. This would naturally presuppose also that there should be also a new redistribution of income...Humans cannot be creative if they are hungry and anxious for the very survival of their children. The eventual return of knowledge could be unexpectedly high.

Is it a utopia? Perhaps not. Because those countries could be able to switch quicker to the knowledge age, precisely because the industrial values are not so deeply imbedded in their minds and in their structures. And there so called "traditional" or "under-developed" societies are still based on a strong sense of sharing, giving, and including. Those values are exactly the right ones allowing the jump in the knowledge society. Let us wait some years.

8. BEYOND SECRECY AND PATENTING

Here we are hurting another core value of the capitalistic system: secrecy on which the whole patent-

ing logic is based.

This point is very much debated. Many thinkers are still defending the patenting system and there is this huge negotiation on the intellectual propriety rights in the WTO. The West is fighting to defend its propriety rights. And it seems a very legitimate fight.

However, I inclined to follow here Harlan Cleveland⁶ who is a real forerunner. Since 1985, he is indeed already announcing: *"information always leaks". This means that secrecy will become less and less possible: "Information is porous, transparent. It leaks: it has an inherent tendency to leak. The more it leaks, the more we have, and the more we of us have it. The straitjackets of government "classification", trade secrecy, intellectual propriety rights, and confidentiality of all kinds fir very loosely on this restless resource."*

Indeed, information leaks. And there will be more and more leaks...for example on the web. One can even learn through the web, how to build a nuclear bomb!

It becomes increasingly difficult to stock secretly information. And this difficulty will probably increase, precisely because of the ultra rapid development of information technologies.

Now as we have seen, knowledge is the central asset of the new society. If secrecy is not anymore possible, what type of structures will we have? Once again, we are so imbedded in the old system, considering it so evidently eternal, that we have trouble conceiving something else. Would it not be wise to rediscover the notion of collective propriety and cooperative management, which old Indian tribes, and other "primitives" have been using for millennia?

An excellent example of this is the recent legislation on the oceanic bottoms which after years of fight⁷, have finally been decided in the United Nations' Convention on the Law of the Sea, in 1982 and the subsequent a-agreements and programs following the Rio Earth Summit in 1992. Perhaps time has come for Humanity to rediscover old truth and create new concepts leading to a more sustainable world.

Anyhow we must prepare ourselves also and be warned against the worst scenario, which could be pushing the West to enforce soft fascist rules of protection of intellectual propriety world-wide.

⁶ Harlan CLEVELAND : *"Leadership and the information revolution"* editor : World Academy of Art and Science, 1997, p.16.

⁷ Elisabeth MANN BORGHESE : *"The Oceanic circle : Governing the Seas as a global resource"*. A report to the Club of Rome. Editor : United Nations University Press, 1998. Here is the definition of "Cooperative management or co-management" given by Mrs Mann Borghese, in her book p 138, and quoted form the "National Round Table on the Environment and the economy" "Sustainable strategy for the oceans: A Co-management Guide", Ottawa, 1998. : "Cooperative management, joint management, and collaborative management are all terms synonymous with co-management.. These terms are used to define:

- An institutional arrangement in which responsibility for resource management, conservation and/or economic development is shared between governments and user groups;
- Management systems in which users and other interests take an active part in designing, implementing, and enforcing management regulations;
- A sharing of decision-making between government agencies and community based stakeholders, and their participation.
- Management decisions (policy) based on shared information, on consultation with stakeholders, and on their participation;
- The integration of local-level and state-level systems; and/or

9. INDIVIDUAL OWNERSHIP OF THE MEANS OF PRODUCTION.

This is the most destabilizing new characteristic of the knowledge society. Because it means the end of capitalism and of Marxism, and of the right left debate. Here lies the theoretical basis and explanation why the left is so much in crisis in Europe and in the whole world.

Indeed the whole strategy of Marxism and of the left was the fight for the ownership of the means of production by the workers, meanwhile the right was fighting for the ownership by the entrepreneur or by the owner of the capital.

Now this is all over. Because the means of production in the knowledge society are the individual brains of the employees. This means that every evening they are going home with the means of production. Every evening, the entrepreneur remains alone with his capital, his factory, but without the main means of production. Yes there is still capital, but it is from far not the central asset. We are definitely not anymore in the capitalistic society.

The new challenge is becoming for the knowledge entrepreneur to make sure that the means of production are coming back the morning after. This explains also why management is shifting towards human centered management. It is a question of survival for the enterprises, if they do not want to loose their best tools of production. There is thus like a re-humanization of the management. This brings us to the next item.

10. WHEN HUMAN CAPITAL BECOMES CENTRAL

Human capital is becoming central. Many entrepreneurs have learned this, by the facts, when they have lost the best brains of their enterprise, and thus, one important part of the knowledge creation. They have been forced to completely change their management style. This is the optimistic scenario. And happily it happens often.

However, one should not forget what Suzan Mehrtens was saying in one of the former chapters: another part of the business has been forced by the market pressures to abandon the "new" management practices, and to go back to the old vertical, short term profit centered management. She is asserting that those practices are not the future. I hope she is right.

However there is another scenario already going on, and to be taken seriously. It consist in modifying the very human species (through life engineering) in order to conform it to fit the technological system. Here is a quote from Andrew Kimbrell⁸, founder of the "International Center for technology Assessment", in Washington D.C.: *"Corporations, Academics, and researchers came to realize, albeit slowly, that current technology is not compatible with life... To deal with this historic dilemma, the techno-utopians and their corporate sponsors outlines a breathtaking initiative. This initiative was not to change technology so that it better fits the needs of the living things, as we were so eagerly advocating. No, they had and have, a very different and stunningly self-serving approach. **They decided to engineer life, indeed reality itself, so that it better fit the technological system.** It is in this chilling context that the enormous significance of the current revolutions in technology can be fully appreciated. Here we have the key to the otherwise bewildering high-tech headlines and to much of our social malaise."*

- Institutional arrangements in governments and other parties, such as Aboriginal entities, local community groups, or industry sectors enter into formal agreements specifying their respective rights, powers and obligations with reference to, for example, environmental conservation and resource development.

This shift of values as we see does not imply necessarily a rosy future. Every value can be used for the best or the worse. This depends on the free choice of humans. And the evil forces in us and in society should not be underestimated.

11. TOWARDS QUALITATIVE PROGRESS AND SUSTAINABILITY

Another basic value of our industrial capitalistic society is an unshakable faith in progress. Indeed in the premodern agrarian society, the dominant time value was "stability", and change was seen as rather negative. Copernic and Galilee have experienced it. In modern and industrial society progress has superseded stability, almost ridiculing it. And capitalism has added a turbo to this concept of progress in introducing the new undisputed value of unlimited quantitative growth.

Now the problem is that in a finite world, infinite growth is mathematically impossible. Everybody knows this evidence, but people prefer not to mention it, as we all continue reaffirming the benefits of growth.

The good news is that in the knowledge society, knowledge is good, excellent or poor **quality**. This means that knowledge, like human creativity are measured in qualitative terms, and very poorly in quantitative terms, precisely because the very productivity of knowledge is linked much more to the quality of knowledge than to its quantity.

Here is what Peter Drucker said already in 1993: *"Above all, the amount of knowledge, that is, its **quantitative** aspect, is not nearly as important as the productivity of knowledge⁹, that is, its qualitative impact. And this applies to old knowledge and its application, as well as to new knowledge"*. This little quotation is very important. It is the signal that we are really entering in a new logic, based on quality. This is a new landscape, in which we do not yet now the economic rules, as we said earlier.

But this means also that from now on we will have to reframe the basic concept of progress. From now on we will have to accustom to a qualitative definition of progress.

This is another watershed for the global society. This new definition of progress is changing the way we will envisage society in the coming years. This means that we are shifting from a society aiming at producing the maximum quantity of goods, and finding a market for them, towards another society aiming at increasing the quality of knowledge. Does it mean that more globally, the aims of our world society will be of increasing the quality of life for everybody? It is one possible option, which by the way is probably the only way to prepare a really sustainable future.

Indeed, one of the main problems today, is that we feel compelled by what we call the "market logic", to produce everyday more objects, and so doing to continue the exhaustion of nature and environment. In a framework of purely quantitative progress, sustainability is impossible, because we should stop the system, and this is not acceptable. How to conceive this limit? There must be a halt somewhere, somehow.

Qualitative progress could be this stop signal, this new red light, but in a way which is acceptable and accepted by the key actors of the system: the enlightened business people. If society is not anymore focused on quantity but on quality, a really sustainable society in the future is possible. *This shift towards qualitative progress is thus giving humanity the new indispensable concept for imagin-*

⁸ Andrew KIMBRELL: *"Technotopia"* In *"YES, a journal of positive futures"* N°19, Fall 2001, p.14. Mr Kimbrell is President of ICTA : "International Centre for Technology Assessment", 666, Pennsylvania

ing a sustainable future.

In philosophical terms, this means also that we could be leaving the materialistic framework, in which modernity has raised us all, and that we could be going towards a post materialistic society¹⁰ all together. What would then be the new aims of society, if they are not anymore linked to material progress? Society could make the choice of focusing on human qualitative development. This seems strange to us today, but it could become self evident in 10 years time...Nobody knows the future, but it is important to prepare for it.

12. ETHICS, MEANING, and TRANSPARENCY.

In an industrial logic, objects have no ethical connotation. Let us take a block of steel. It can be produced in a German factory, where all workers are protected by strict social laws, are very well treated, and earn a very good living. Or it can be produced in an Indian sweatshop. One is incapable to see any difference: it is the same block of steel.

Now in the knowledge society, objects are more and more linked to information, to knowledge and to meaning. One is interested to get information on the web on how the "Nike" shoes are produced, by whom and in what circumstances. Same think for the chicken. We want now to know how the chickens have been raised.

If we dig deeper in the knowledge society, a "Microsoft" program is not the same as "Linux" program. The first, despite its qualities, is sending an information (subliminal message) of closeness and exclusivity. This program cannot be rearranged creatively - and eventually enriched - by the customer. It is expensive and compels you to buy the new versions, which are not compatible with your hardware material, which is rendered obsolete...etc.

Instead the Linux programs are free, they are adaptable and open to the creative modifications by the customers. They are much more human friendly, and thus more in tune with a positive future.

This example is showing how much meaning is invading our business life and public debate, in general.

Here is another excellent example, explained to me by a young consultant . Coca-Cola has been confronted in 1999, to some minor crisis. One of them happened in Belgium. Some children became slightly ill after having drunk coke at school. The Coca-Cola management at the Belgian, European and world levels, has managed this crisis as a problem with a product, an object. They have treated Coca-Cola cans like pure objects with a defect. They have withdrawn millions of cans from the European market, and have sold them to Africa, where they do not seem to have produced any harm. This "object led" management was a good and cheap way out of the problem.

But when the public has been informed of this behaviour by the media, it has reacted in such a negative way, that the stock of Coca-Cola lost in a very short time, 50% of its value!

What has happened is that, in the eyes of the consumers, a can of Coke, is 10% of brown liquid, and 90% of brand, thus immaterial value. Indeed this carefully constructed brand is about equality and integration between the races, a world of harmony and justice, hope for a better world, for the young

⁹ Peter DRUCKER; *"Post Capitalistic Society"* Harper Business, New York, 1993. p. 186.

¹⁰ Ron INGELHART: *"Modernization and postmodernization, Cultural, Economic and political change in 43 Societies."* Princeton University Press. July 1997. 440 Pages (paperback).

● I thank Peter UTTERBACK, working in EPPA, "European Public Policy Advisors", in Brussels

generation, etc. Those are ethical values. One cannot manage such a brand like a material object. The management must reflect the values of the brand itself. This is what the upper management has not understood. They simply have not taken the immaterial dimension into consideration. And this has broken the general manager's career. He was forced to resign.

This example shows how deeply we are already in this new paradigm, in this new logic. It is around us, but we all like the Coca-Cola General Manager. We are still and desperately trying to solve the new problems with the old tools.

13. FROM COMMAND AND CONTROL TO RECONNEXION AND CARING?

In the industrial and capitalistic society command and control were part and parcel of the picture. They were so evident that one was not even discussing those methods. And the tools of production, capital and industrial technology, *bad* to be commanded and controlled in order to be efficient. As we have seen, in that machine-centered society, humans were invited or forced to adapt to the machine. Machines were commanding them their rhythm.

Now in the knowledge society this modern, rational and patriarchal type of management is rapidly becoming obsolete. Why? Because suddenly we realize that it is not possible to control knowledge and certainly not human creativity at least if we accept not to transform human nature.

This is another huge transformation. Because it is not only a shift in values, but it is the deepest transformation of the way power is exerted since five thousand years. This brings us back to the origins of the patriarchal society, 5000 years ago. Since that period power has been exerted in a vertical, command and control way.

And now suddenly, this way of exerting power becomes obsolete, because it is not able to foster human creativity. Strange situation. Because events seem to go faster than our conscious understanding. We are thus obliged to reinvent power. And it is normal that in this period of transition, women are so good in human resources management. Because they have not completely forgotten the way power was exerted in the pre-patriarchal society, the matrilineal one. Men instead are more identified with the patriarchal power structures. Their shift is more important and difficult.

In a certain sense, the knowledge society is *like a turbo*, like an accelerator of this shift from a patriarchal society towards a new kind of women-men partnership society.

And what is the new landscape of power? Here are some key elements: power will become more enabling, life and creativity enhancing. This is for us, men a new world, or at least for our yang dimension.

And there is another very important element. Patriarchal power because of its command, was considering itself as above nature. It was thus cut off from nature, from feelings, from life itself. It was like exerting power in a void¹², over nature, not inside nature. This power position has permeated the whole of the modern paradigm, which is a paradigm of domination. And now in order to exert power in a life enhancing way, one must *reconnect* with nature, with feelings. This is a completely different way to relate to reality. Once again it is understandable that women are before men in this transformation.

Once again also, the good news is that, if this shift is going on further, it is paving the way to a new vision of the world which leads much more to sustainability. This new structure of power is leading us easier towards a positive and sustainable future.

However the case is not at all over. The more this shift is occurring in the shadow, the more the power structures in place will feel threatened. They will really have the feeling that their fundamentals are crumbling. And we must thus be ready for desperate, violent, even extremely violent counter reactions, aiming at keeping this mastership, this control. We must be ready to live in the coming years in a contrasted landscape, with very hot currents of change and very cold even freezing currents countering this same transformation. Better swim in the hot currents!

Anyhow the transformation is "en route". I have personally not the impression that it could be stopped. However nobody knows the future. This brings us to the last part of this chapter.

17. THE NEGATIVE SCENARIO?

We have tried to show that the transformation of values is clearly happening underneath. I hope the reader is convinced that something serious and deep is happening.

However a value is like an axis. The main axes of society are moving, in this knowledge society. But on each axis, one is able to travel towards plus or towards minus. Every value can be lived and applied in a positive or in a negative sense.

It is thus evident that the negative scenario is not impossible. It is even probable that humanity will try first the negative scenario. Because it is the direction where the "business as usual" policy is leading. And it is also more similar to our everyday landscape, which is not rosy. It is indeed very probable that the actual powers will do everything they can to maintain command and control over the political and economic situation of the world. As I showed before, never in history, can we find examples of a dominating class giving the power spontaneously to a dominated class. This soft scenario is highly improbable.

This book is thus not intending to present an idyllic paradise, as a probable scenario. No, what I am intending to show, is that in the actual situation, a refusal of the change could indeed lead to more harm than the understanding and progressive acceptance of the transformation.

What is important in such a period is to prepare us for tomorrow's debate. What are the new questions? What are the new dangers?

How to envisage a post-capitalistic society? How will it function? How to rethink economy, power, inclusivity, trade, secrecy, scarcity, human capital, qualitative progress, ethics in business and public management, reconnection, etc. How to avoid the evident danger of subtle manipulation of the highest values, and even of human nature? How to prepare for those new dangers?

Those are the questions I consider important for civil society to be explicitly aware of. Public opinion has probably already a passive knowledge of those changes, sometimes more than politicians. People feel the changes in their bellies. It is urgent to foster an interesting debate on our collective and individual futures.

The aim of this book is to help the public to think openly what they already implicitly know. And speaking openly what it feels inside, civil society will be able to participate in a constructive debate on the society of tomorrow, its dangers and tremendous opportunities.

¹² See the book of Nobel Prize Gabriel GARCIA MARQUEZ: "One Hundred Years of Solitude", Harper Perennial Library 1998. It is one of the best descriptions of this void and solitude of the patriarchal man.

CONCLUSION

In concluding this chapter, I am afraid of what I have discovered. Almost all values of the modern rational capitalistic system are in rapid transformation, in silence. Usually authors underline one or two aspect which are slowly in transformation, but here the more I am reflecting, the more I am amazed to discover that all key values are gone or are disappearing. All the stepping stones of industrial capitalism are staggering in the dark, under water, meanwhile at the surface "business as usual" prevails.

Am I wrong? Have I completely misunderstood what happens? Am I exaggerating? Why is there such a silence, and such an absence of reflection and of action? Anyhow, I feel compelled to reveal to the public what I have discovered.

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Sustainable Integration through Telework - THINK BALTIC EXTENSION (IST)

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THINK is an application of an organisational model developed in Portugal by TELEMANuten??o S.A. (hereafter referred as TELEMAN), to four other countries: Spain, Italy, Scotland and Greece. The project was conceived, coordinated and run by TELEMAN in partnership with companies such as Microsoft, Hewlett Packard among other 25 major organisations that contributed with their specific products/services and know-how.

THINK innovated basically in two ways: by creating an organizational model that facilitates the sustainable economic and social integration of disabled persons; and by mobilising private companies to create new opportunities for a part of the (regional or national) population that still is not being used to its full potential.

The main objective of the THINK project was to create and develop a sustainable model for the integration of disabled people via teleworking in partnership with several large organisations - suppliers of products or services required by THINK - needed to render the project viable.

From September 2000 till June 2002, we recruited more than 1650 candidates, training 272 people in 9 different professions and creating 69 new job opportunities in 5 countries. This was done due to the involvement of 25 companies (8 of them were multi-nationals collaborating with us in several countries) who contributed with products and services to the value of over 650.000. We generated promotion and publicity through TV, newspapers, magazines, the Internet and public events to the value of over 1.150.000 Euros. And we conquered 21 long-term clients to buy the services produced by the THINK teleworkers, who gained ratings of 97% customer satisfaction.

We demonstrated that with due localisation the model initiated in Portugal is viable in other countries regardless of their diversities. Now the project is being developed in the 3 Baltic countries. THINK wasn't and isn't a technological project. Its major breakthroughs come from two organisational and marketing aspects and can be synthesized by the following:

1. The concept of a "consortia for sustainable business citizenship". THINK developed a Win-Win approach to business organisations where it demonstrated the potential behind the disabled population market - from two points of view: as a source of high quality talents; as a new consumer for the IT market. The main criteria we used in selecting the potential partners were their position in the market - the way they see and are seen by the market as a "citizen" company; and the complementarity of the products and services offered. This complementarity reinforced a co-operation spirit, crucial to the success of the project. Our major concern, from the beginning, was to present the project as a new business opportunity instead of "just charity". This concept was reinforced when we started to have quality results that demonstrated that we were in reality promoting and making viable the creation of a network of high quality workers.
2. A view that disabled population is an asset rather than a liability that could be turned on and create wealth. Again the major innovation was in the way we communicated the project both to the candidates and to the media in general. Media plays a crucial role in the success of THINK. Without the full involvement of the media from the very beginning, it would be an almost impossible mission to achieve what we have achieved. The media enabled all consortia partners to get visibility - very important institutional marketing - and it introduced THINK to the disabled population.

So in reality the THINK concept implied a co-operation between several companies towards a common good with both: the business and the "citizenship" perspectives.

At operational level THINK developed a very simple and light virtual coordination structure that facilitated the work of all teams and project managers. This virtual structure is associated with the distributing and monitoring process that ensures the quality of all the services produced. Both these processes rely on short-term feedback and intensive communication support to guaranty the performance levels demonstrated by the teleworkers.

Because we are preparing to exploit the THINK model in other countries, we would like to address an invitation to all institutions present at the TELEBALT Workshop to find out more about THINK model and consider implementing it in their country.

For further information please visit the website [http:// www.aboutthink.com](http://www.aboutthink.com)

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Sustainable Integration through Telework THINK BALTIC EXTENSION (IST)

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The THINK Baltic Extension project is based on the initial THINK project, implemented in Portugal and other European countries before.

The main goal of the THINK Baltic project in Latvia is the integration of 20 people with mobility impairment in the labour market using new working methods. This model is based on telework.

Professional integration implies transfer of skills in different areas so that people become productive, lucrative and self - sufficient using information and communication technologies for telework.

The THINK Baltic Extension project is a technological, organizational and social model recognized in Europe as an innovative solution for disabled people.

The project has 5 main stages:

1. Selection of teleworkers
2. Interview process
3. Training process
4. Apprenticeship phase
5. Teleworker launching into the labour market

At first we created a special on-line application form where people with handicap could apply for this project. In a short period and due to the effective project promotion, we received more than 170 application forms which were registered in the data base of potential teleworkers.

The second stage, the selection of teleworkers, was very important for this project to assure quality services. We reviewed the submitted application forms, CVs and motivation letters and each applicant was called for an interview.

The interview with each candidate had a duration of approximately 1 hour and had 4 main parts:

- Conversation with a potential teleworker
- Examination of the applicant's computer skills
- Psychological testing
- Examination of the applicant's language skills

From the interviews we selected 33 potential teleworkers and provided training to them.

Training process had 3 parts:

- Behavioural training (40hours)
- Computer training (6hours)
- Teleworker coordination training (TCT) (6hours)

Part of potential teleworkers who successfully finished training started apprenticeship. At this stage their own contribution and attitude towards work was very important to determine the employer approval or not.

As it was mentioned in the beginning, the main goal of the project is to integrate 20 people with

handicap into the labour market. The career of 15 teleworkers launched has successfully started but from now on much depends on the employer involvement, social economic situation in the country, global market development and etc.

During the execution of the project the main problem encountered was the image of disability related projects because they were generally seen as "acts of charity". THINK definitely is not one of this sort. Even so, it is very difficult to establish this conception as long as the social security system is inefficient and proper laws in this sector have not been enacted.

Another problem encountered was a low level of education and language skills of people with disabilities. As the project has a connection with the new information technologies certain knowledge in this field is required.

The THINK Baltic Extension is a chance to prove to the society, the government and to disabled people in Latvia that people with disabilities can work like everybody else.

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Sustainable Integration through Telework THINK BALTIC EXTENSION (IST)

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The rehabilitation system, established in Lithuania during the last 10 years allowed implementing a *complex* rehabilitation. *Medical* and *psychological* rehabilitation has improved greatly while the social rehabilitation system has not been developed well enough. Therefore, when TELEMAN from Portugal and OPEN LATVIA invited us to take part in the THINK Baltic project we saw it as a good opportunity to start the development of a new model for the inclusion of handicapped persons into the labour market.

The main goal of the project in Lithuania is 20 disabled people working as teleworkers for different customers and providing high quality services. The THINK Baltic Extension project takes into account many difficulties faced by the physically handicapped in accomplishing full professional integration.

One of the main objectives of the project is the selection of teleworkers. In Lithuania we required candidates to send in CV applications that provided the following information about applicants:

- Personal information
- Education level
- Work experience
- Disability
- Skills and interests

The second step was applicant testing. The candidates were tested for their:

- Self-sufficiency (*Barthel test*)
- Computer Skills: (*Word, Excel, Outlook Express, Internet Explorer, Windows, JAWS*)
- Language proficiency (*English reading, speaking*)

After the analysis of CV applications candidates were selected for an interview and employment preferences were defined.

● **Training:**

All subjects related to information technologies followed the same basic training structure:

- Introductory level
- Intermediate level
- Advanced level

All training was provided by internal project resources and only specific subjects were introduced by outsource lecturers.

At this initial stage certification is not carried out. However, in the future we are considering possibility of giving certificates after courses are finished and outsourcing all the training thereby making it more advanced.

● **Training Model**

All courses were taught in the training rooms. After each lecture every participant got homework.

During lectures consultations were carried out using Internet based telecommunication tools.

In the future the course will be designed to have as many online modules as possible. Despite all the advantages of online training, we will not abandon traditional in room training, because it gives a great opportunity for face-to-face communication with other project participants and possible co-workers. It is necessary in order to build a highly motivated team seeking to compete with other market actors.

- **Apprenticeship of the selected teleworkers**

The main goal to be achieved during the trial period is that teleworker's personal and professional competence has to be checked and special technical conditions needed for his/her future workplace to be determined. It is also important to determine whether the teleworker will be able to perform the tasks foreseen for him/her, as well as to provide the teleworker with knowledge needed for that particular task.

Methodology used for organizing the trial period is not the same in all three Baltic States. It may vary, since it has been actually developed separately, while considering specifics of each state, special needs of potential employers in each state and the type of skills required.

Our future tasks are:

- To ensure project continuity after the end of the THINK project
- To create safe and long-term telework workplaces for people with the disability
- To promote teleworking in the Lithuania job market
- To make more effective THINK project management

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The ADIS Training Course in Computer Basics for Disabled Persons

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Introduction

For a long time society looked upon the disabled as helpless people, deserving sympathy. It was considered that only in exceptional cases disabled persons could adjust to the real life environment. In the 1970th the idea of social integration emerged and a new perception of a disabled person was established. People with disabilities undoubtedly face a wide range of obstacles that prevent them from achieving full economic and social integration. The concept of integration is based on the inclusion of the disabled into society. According to this concept disabled persons must be treated as equal to healthy people, only being seriously ill or experiencing the consequences after serious and hard illness or trauma.

The society must provide additional opportunities for disabled people to promote their integration into society. The environment must be created which would encourage and stimulate the disadvantaged people for personal, professional and social self-realisation. Proper functioning rehabilitation system should include preparation of legal acts, medical and professional rehabilitation, education, technique of rehabilitation, adaptation of environment, culture, sports, leisure time, information, transport system service, social care and other social services, training of specialists, medical social expertise.

The ADIS project - the Integration of Disabled Adults into the Labour Market through Open and Distance Learning - is directed to the implementation of the social integration concept using distance learning methodology and technology. The presentation of this project is made here on behalf of the project Consortium and special acknowledgements are expressed to all partners.

Employment of Disabled persons in Latvia

Due to structural changes in the state economy and labour market of Latvia after 1991 the employment of disabled people was decreasing rapidly. For disabled people it is more difficult to get adjusted to the needs of the labour market than for other job searchers. This is a reason why the problem of unemployment is very serious among the disabled people of working age.

There are about 100 000 disabled people in Latvia, of these 40 043 are in the age group from 16 to 55 years and only 14,8% are employed. Every year 1412 of the disabled have to change their profession and start re-qualification based upon the decision of The Commission of Doctors of Latvia.

Employment is one of the main factors that determine a person's income and prestige in society, and it can even affect a person's choice in respect to various other areas of life. That is why it is very important not to allow mistakes in the professional training of the disabled. The mistakes would cause discrepancies in the person himself and in the society. This conclusion is at the basis of the vocational training process and has led to the usage of most progressive system of training methods. By arranging and equipping the workplace of the disabled person correctly and changing the work regime during the day in accordance with physical and psychological criteria it is possible to provide

optimal state of working ability that correspondingly would result in better work productivity. Only those disabled people who have undergone training and are able to present high level of knowledge and skills in up - to - date professions, are able to compete in the labour market.

Expected results - the activity of disabled people increases, the integration of disabled people in society is being promoted as well as their self confidence and independence grows. The number of working disabled people grows and entrepreneurship is being promoted, the economic situation of disabled people improves and it is possible to stop the payment of pensions and social allowances. Due to this the stability of home policy, as well as social security and the harmony between different social strata increases. The integration of disabled people into society and the labour market should be perceived as an integral part of the gradual integration of Baltic States into the European Community.

ADIS project

The ADIS project was launched on September 1, 1999 and will be finished in 2003. The project has been carried out with the support of the Commission of the European Communities under the SOCRATES programme. The aim of the project is the integration of disabled people into the labour market by combining motivation by adapted physical activities and distance training. The project is being executed by 14 organisations from 7 countries. The project co-ordinator is Kaunas Regional Distance Education Centre at the Kaunas University of Technology.

One can easily distinguish two main strands in the project - motivation and training. These two strands are melted into one common goal and project methodology is directed to achieve it. The integration into the labour market directly depends also on one's professional knowledge and skills. Therefore, vocational training is to be considered an important precondition for the social integration of the disabled.

Another important issue is motivation of disabled people for integration. It is recognised that physical activities could be used for this purpose. Research has been carried out on "Socialisation of disabled people by motivating them for adapted physical activity". Based on foreign experience and review of special literature study has been made on "Specifics of Open and Distance Learning for the disabled people".

The study "Behaviour model for the disabled" has been carried out and translated into partners' languages. The course will be an integral part of the virtual community network. The information on the ODL course is being disseminated among organizations of the disabled and the authorities responsible for the training. The videotape called "Opening up Opportunity with ODL" has been developed in English with partners' language subtitles. It presents ODL advantages for people with disabilities who want to study but have no opportunity to attend regular classes. The videotape will be distributed to the public authorities responsible for the social integration of disabled people.

Project materials are translated, printed and will be disseminated inside the partner countries, through the national and international communication networks.

ADIS course

One of the main outputs of the project is the ODL course "Basics of computer literacy for disabled people". It consists of interactive multimedia CD-ROM with self-assessment and printed Student and Tutor Guides. The ADIS course "Basics of computer literacy for the disabled" as well as course Guides were translated in Latvian, Polish, and Spanish and disseminated among partner organisations.

The ADIS course consists of 4 modules: Windows, Word, Excel and Internet. Just the basics of all

these topics are covered and therefore the course is very useful for beginners. Text in CD-ROM is written in simple and clear language and all terms have links to Glossary where students can find explanations. Description of actions is complemented with illustrations to ensure better understanding. Self assessment questions and practical tasks are used to activate studies. At the end of each module student can do a test based on multiply choice answers and receive feedback.

The course was piloted in Latvia, Lithuania and Poland. The evaluation of piloting was performed and it revealed some differences of results in different countries. General conclusion is that disabled people are satisfied with combined training programme consisting of physical activities and IT training.

Conclusions

The ADIS project - the Integration of Disabled Adults into the Labour Market through Open and Distance Learning - is successfully finalising. The project is being carried out with the support of the Commission of the European Communities under the SOCRATES programme.

The ODL course ADIS in computer basics entitled "Basics of computer literacy for disabled people" was developed, translated in partner languages and successfully tested. Two studies "Socialization of People with Disability by motivating them for Adapted Physical Activity" and "Providing Distance Education for the Disabled People" have been carried out within the framework of the project as well.

Disabled people and tutors are satisfied with computer basics course ADIS and recognise it as a very useful material for independent distance learning.

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Psychosocial Aspects of Telework

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The Central Institute for Labour Protection has started preparing a project proposal on psychosocial, legal and organisational aspects of telework, with special regard to the opportunities for disabled people. The project results shall influence the development and promotion of teleworking.

The main objectives of the project are:

1. Determination of relationships between individual variables, psychosocial working conditions, assessment of software and the effectiveness of work, as well as satisfaction and welfare of workers employed in the telework system:
 - development of telework system workstation typology,
 - questionnaire studies on psychosocial working conditions;
2. Determination of factors affecting medical, social and occupational rehabilitation of people with disabilities employed in the telework system;
3. Analysis of relevant legal regulations and presentation of proposals for changes:
 - analysis of legal regulations as regards telework in EU countries,
 - indication of legal solutions and good practice principles with reference to the legislative possibilities in Poland;
4. Development of training materials supporting the optimisation of management, work organization and selection of workers in the telework system.

The aim of the psychosocial part of the project is examining the relations between personality traits, psychosocial variables, software user's assessment and well-being, job satisfaction, and work effectiveness. The global model of relations between variables is presented in Figure 1.

The first objective of the project is studying the relations between following groups of variable:

- *personality traits*: neuroticism, extraversion, openness, agreeableness, conscientiousness;
- *psychosocial variables*: work demands, control at work, social support
- *software assessment*: computer program properties, difficulties resulting from the program usage, program usage satisfaction
- *job and life satisfaction*
- *well-being*: mental and physical,
- *effectiveness*: subjective superiors and employees opinions on the results of work

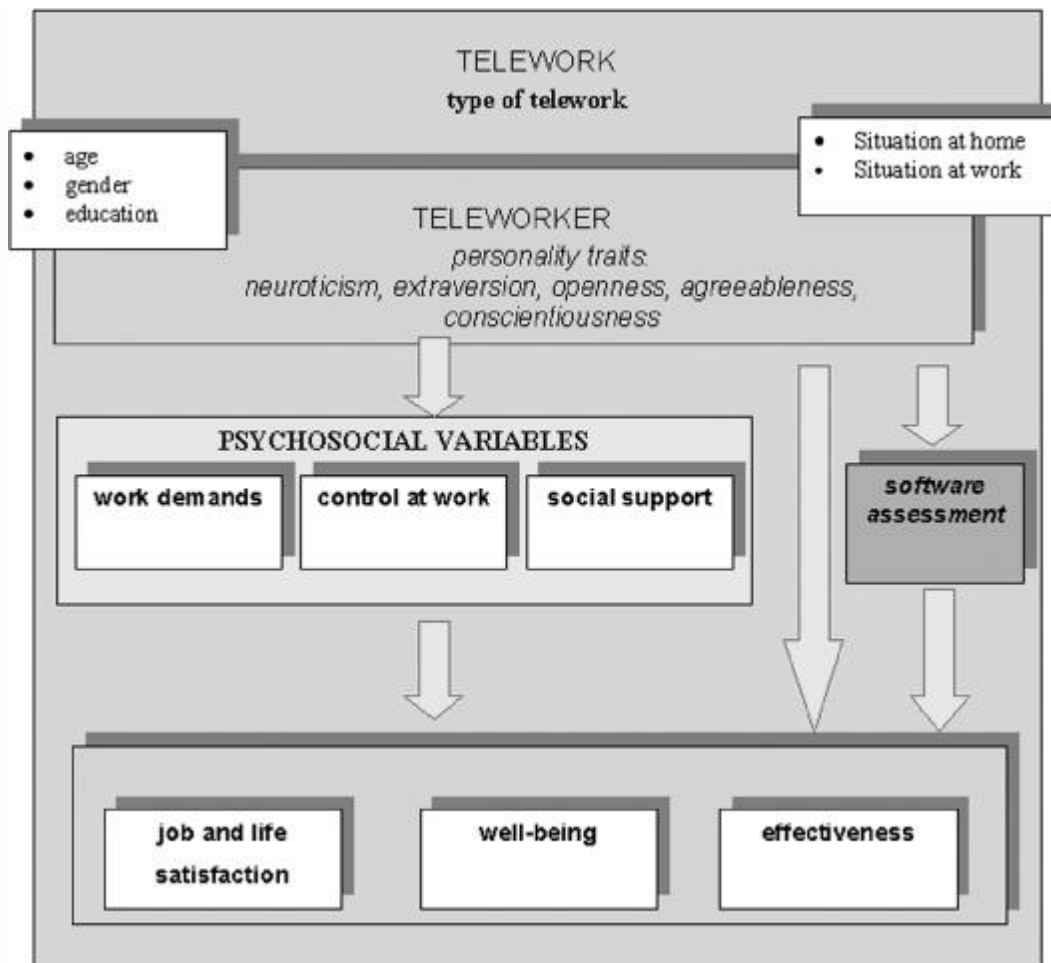


Figure 1. Model of relations among variables.

The three groups of hypotheses have been formulated relating to the particular variables controlled in the research:

1. Hypotheses concerning the relationship between personality features and well-being, job satisfaction and work effectiveness
2. Hypotheses concerning the relationship between psychosocial variables and well-being, job satisfaction, and work effectiveness
3. Hypotheses concerning the relationship between software users' assessment and well-being, job satisfaction, and work effectiveness.

The following variables which could affect the outcome are also included:

- age, gender, education;
- type of telework: days of work at home/ days of work outside home;
- type of employment: occasional, permanent, and self-employment;
- family situation: accommodation conditions, and the number of children to look after.

The following measures are administered:

Personality: *NEO-FFI Five Factor Inventory (Costa, R.R. McCrae)*

Psychosocial variables: *Psychosocial Working Conditions Questionnaire, part I - III and V (Cieslak, Widarszal)*

I. *DEMANDS SCALE - What are the demands posed by your work?*

II. *CONTROL SCALE - To what extent can you influence the activities at your work?*

III. SOCIAL SUPPORT SCALE (Support from superiors, support from co-workers)- To what extent can you count on the support and help?

V. DESIRED CHANGES - Do you expect any changes at work?

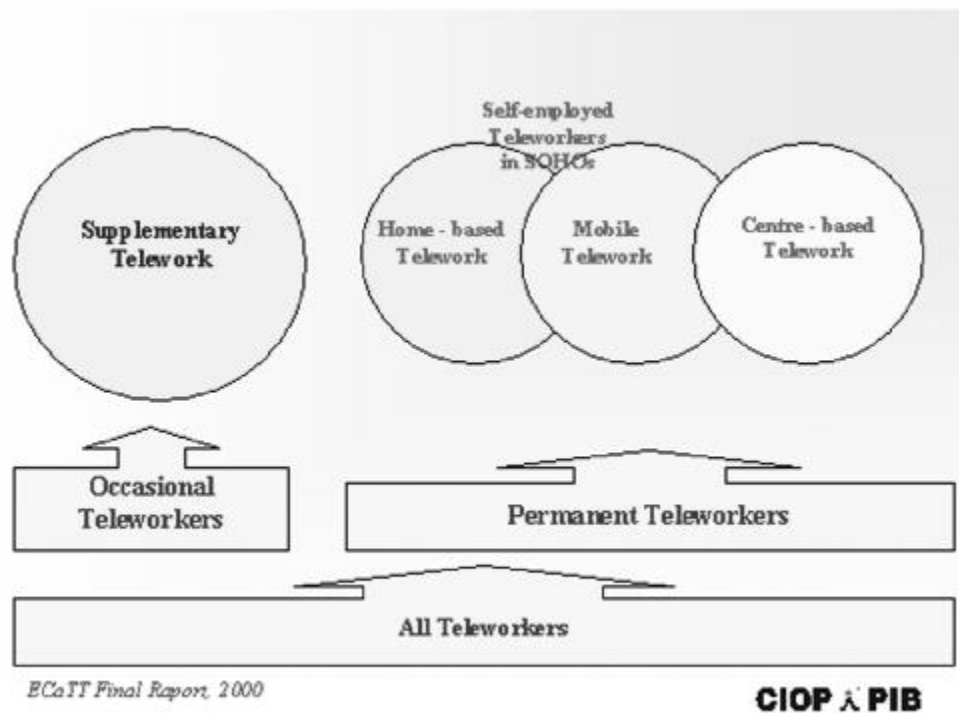
Well-being: Psychosocial Working Conditions Questionnaire, part IV - WELL-BEING - How do you feel? (Cieslak, Widerszal)

Software assessment: QSSA - Questionnaire of Software Subjective Assessment (Najmiec)

Work and life satisfaction: Scale of satisfaction (Clarck and Czapinski)

Effectiveness: Questionnaire: telework (Rozowska, Najmiec)

Figure 2. Type of telework (ECaTT Final Raport, 2000).



The type of telework used in the study had referred to the ECATT project. It would make possible to compare the outcomes of the studies.

The Psychosocial Working Conditions Questionnaire (PWCQ) allows to make an evaluation of work with respect to its three main dimensions: demands, job control and social support - the Karasek's model of stress at work. It also allows to verify the assumptions concerning the assignment of particular type of telework to a level of strain characteristic of it. The assignment resulting from the Karasek's model of work stress is quoted in the ILO's report (Di Martino, 2001). Figure 3 depicts this assignment.

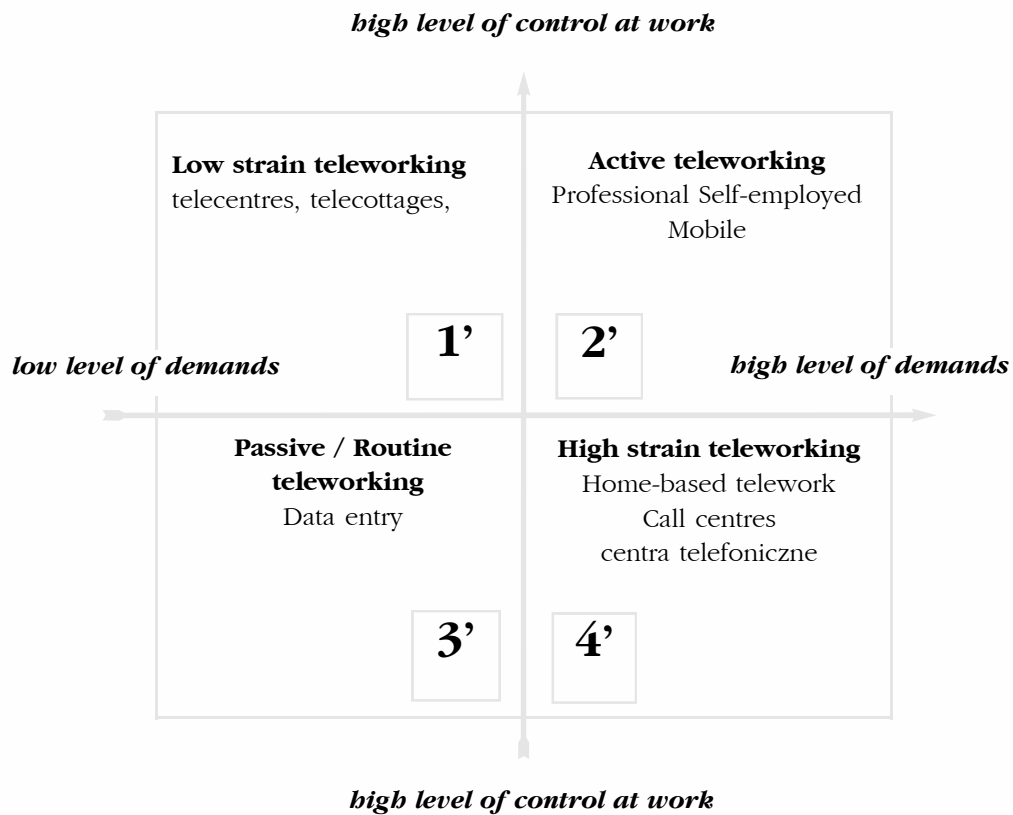


Figure 3. Positions and types of telework in the Karasek's model of stress (source: Di Martino, 2001)

The four kinds of strain are characteristic of various telework positions:

field 1: low level of demands and high level of job control - (telecentres, telecottages) - low strain teleworking;

field 2: high level of demands and high level of job control - professional, self employed, mobile telework - active teleworking;

field 3: low level of demands and low level of job control - data entry - passive/ routine telework;

field 4: high level of demands and low level of job control - home-based telework, call centres - high strain teleworking.

This study enables to compare the results of teleworkers with other occupational groups (non-teleworkers): specialists in banking and insurance, middle medical personnel, constructions workers, shop assistants, officials of government and public administration, computer scientists, public transport drivers and teachers (total number = 3 669).

Summary

There have been no studies on psychosocial conditions of telework as yet in Poland. According to the existing knowledge about telework in Poland:

- 31% of working people would like to work at home,

- 7 % of workforce spend over an hour going to work ,
- the average time of getting to work is 35 minutes (zatrudnieni poza rolnictwem), in the country range it makes 13 mln hours daily,
- 58% of Polish enterprises have no office at all,

The aim of the following stage of the project is executing the survey research and statistical analysis of the data.

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PROTELEUSES - a European eBusiness Showcase

Antonio Collado
CARSA, Spain



PROTELEUSES is a Best Practice project whose major goal is to increase the competitiveness of European small and medium-sized enterprises (SME) in the service sector, as well as to improve the working conditions of their staff members by fostering the introduction of TELEWORKING TOOLS into business activities. The approach aims at promoting and fostering the introduction and use of the newest information technologies, by introducing them into 10 final users' activities. The information technology tools to be promoted are those related to the communication and information exchange, enabling the incorporation of teleworking in the daily activities of firms.

1. COMPANY/ORGANISATION BACKGROUND

CARSA is a Spanish SME providing services both for private companies and public bodies in the field of innovation management. Furthermore, the company is a European reference in the area of flexible work and future work spaces.

2. BUSINESS OBJECTIVES

The adoption of teleworking tools by the 10 showcased firms has helped to overcome in a more efficient way those problems and costs previously tackled in a less effective way.

Some of the business objectives, the SMEs involved in the project wanted to achieve were:

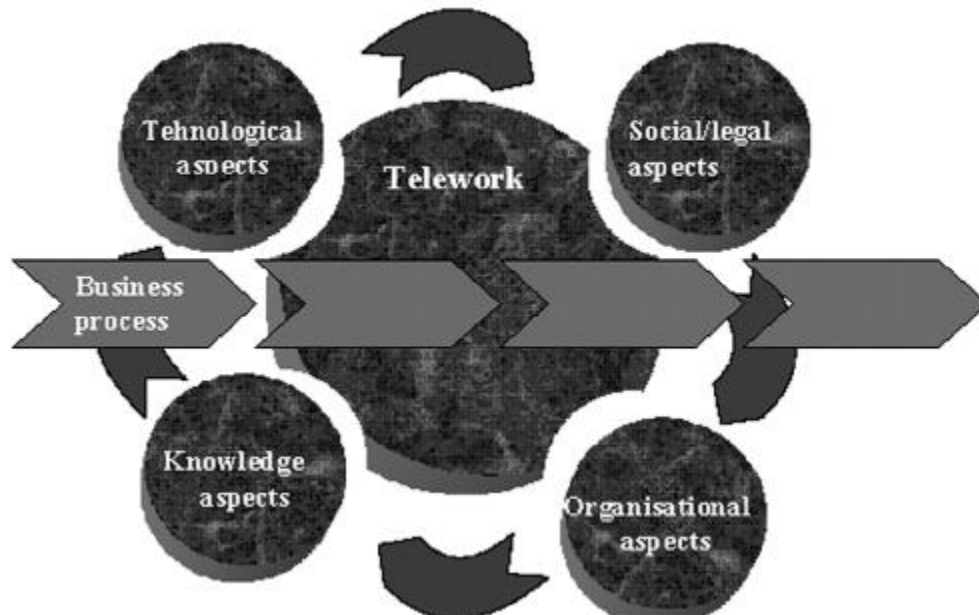
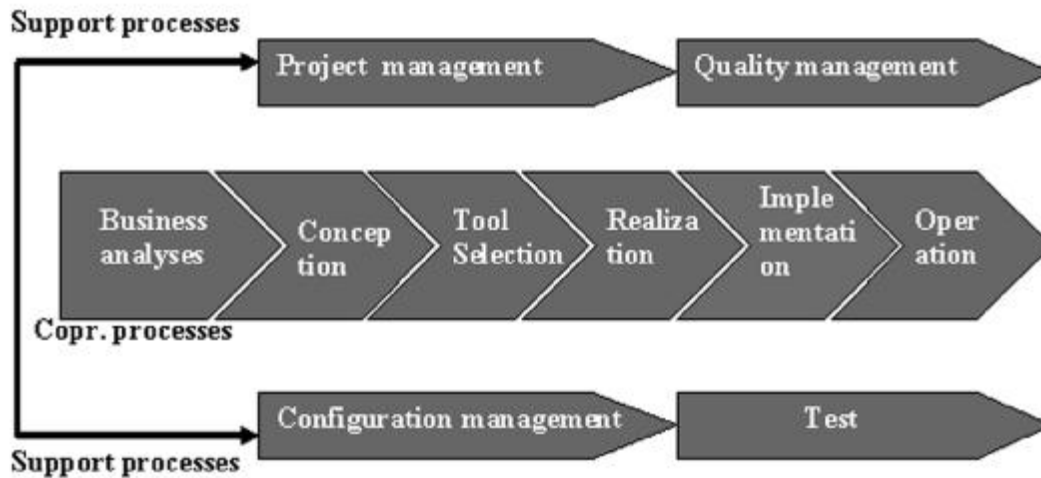
1. To increase the information flow between headquarters and branches, up to 20%.
2. To increase the number and quality of services provided remotely, up to 10%. In case the employee should be required to do his/her job at a customer's place the technology to be implemented would ensure a complete support from co-workers at headquarters.
3. To guarantee information exchange with customers with a reliable security and confidentiality.
4. To reduce overhead costs by contracting teleworkers, up to 10%. Increase the number of tasks to be carried out from remote working sites (home-workers), up to 15%.
5. To reduce costs incurred by intermediaries in information exchange, economic transactions... (10% of costs related to quoted concepts).
6. To improve working conditions and increase comfort of the staff members by allowing them to perform their duties from homes. This will lead to the definition of working sites by workers themselves and reduction or elimination of commutes (15% of the staff). As a result, productivity

will increase and the firm will benefit.

7. To facilitate the hiring of new temporary staff working from remote work sites, adapting this to the working load picks. Once remote work is embraced the firm does not have to adapt its facilities to include punctual staff increases.

3. IMPLEMENTATION

1. The individual business of the company is defined, structured and optimised including business processes and organizational structure.
2. Type and Scope of the support by a teleworking solution is defined in form of a teleworking project portfolio. The analysis includes Technical aspects, Social/legal aspects, Organisational aspects and Knowledge aspects.
3. An individual validation of different teleworking projects (which means rating their importance) is made.
4. A selection of possible teleworking platforms for the company has been made and is part of the company-wide IT strategy.
5. Implementation and Training.
6. Testing the trial.



4. SUCCESS FACTORS

- Good knowledge of Teleworking background.
- New Teleworking implementation methodology for the services of SMEs.
- Mainly organisational and social focus instead of Technology-exclusive approach.
- Personal training.
- Supporting computer-based tools.
- Good post-analysis method measuring very interesting aspects.

Bad Practice: Bad public support in Legal aspects. Needs improvement at administration level.

5. TANGIBLE OUTPUTS

PROTELEUSES defined a methodology to implement teleworking platforms in SMEs. In addition, as yet the project has produced 11 complementary dissemination brochures (1 informing on the PROTELEUSES project and its commonalities with the IWOP project, and 10 flyers detailing the implementation of both projects). We are preparing a new one (Exploitation Flyer) aiming at presenting the methodology and the services to be provided. The website is another dissemination and exploitation tool.

With regard to documents supporting the dissemination of teleworking among SMEs, PROTELEUSES has produced 5 main reports, 4 of them devoted to the analysis of teleworking platforms applied to different segments (media monitoring, software development, insurances and project planning). The fifth report is a Transversal study evaluating and comparing all implementations from the organisational, economic, technological, social&legal and knowledge viewpoints. Such dissemination materials are of interest to all European SMEs belonging to the service sector and interested in implementing teleworking.

6. SOCIOECONOMIC IMPACT ANALYSIS

We want to highlight that all 10 teleworking cases we worked with have achieved a double successful impact in social and economic terms. ROIs depend on the segment and obviously on the specific SME but they vary from 0,55 to 2,9 years (average: 1,9). As for the social impact on the company, we have found that all teleworkers, office workers, managers and the managing director positively assessed the use of teleworking platforms. Such assessment is fundamentally based on the increase in free time, productivity, quality of work and competitiveness, as well as in the decrease of commuting costs and time, absenteeism or staff turnover.

7. FOLLOW UP

The project has already demonstrated that regardless of the different countries, cultures and even branches of "services" the companies come from, each of them was able to use teleworking in order to increase their competitiveness and the quality of work of their employees. Our experience can now help other European SMEs in their way to telework.

8. OPINION OF GENERAL MANAGERS

Jesús de la Maza is the general manager of CARSA (BUSINESS CASE 1): "In our company we have experienced for the first time the sensation of not being dependent of the traditional office. It is great knowing that you can make use of all knowledge generated in CARSA when you are not in the office".

Enrique Fírez is the president of ICC (BUSINESS CASE 2): "Telework has become a critical issue in our company. I want to stress that thanks to telework we can provide new services to our clients

offered from new locations (making use of local teleworkers), or exploit our daily work in new markets. In this respect we have run two new projects that we could not even think about, one and a half years ago. Quality of life in general for all employees has been improved. I am one of the ICC's teleworkers."

Jordi Valls is the General Manager of KRM (BUSINESS CASE 3): "What a couple of years ago was recognized as a dream for us, today is a reality. Market expectations and magnitude of our customers have drastically changed within just one year. All these modifications in our business have to do with the successful implementation of Telework. In addition, and probably the best experiences of all, our teleworkers are delighted with the solutions implemented."

Francesc Palacn is the General Manager of ASURBROK (BUSINESS CASE 4): "On account of our experience in PROTELEUSES, results have even exceeded our expectations, namely: upgrading the working environment, improving our service, reducing costs, increasing productivity,... Now, it is time to extend the project to other business areas in our firm. In addition, we have been contacted to transfer our know-how to other companies in our own environment."

Frank Zimmermann is the General Manager of JOSEF LEISMANN AG & Co. (BUSINESS CASE 5): "The increase in automation helped to reduce standard work processes, which in turn resulted in more time for a qualified support of the brokers, meaning an additional improvement of service. The reduction of costs, which can be attributed to telework will come into effect with an increase in the number of brokers i.e. brokers, who use the system to the full extent."

Jrg Scherer is the General Manager of EURICE (BUSINESS CASE 6): "An entrepreneur going into telework has to trust his employees working from home. Our experience has shown us: The motivation is high, the results are very good. However, communication and information exchange is crucial - teleworkers must be fully integrated into the team."

Klaus Netter is the General Manager of XTRAMIND (BUSINESS CASE 7): "My company is working on the front line of a new economy and the level of technological innovations we are implementing in the company is a key element of success on the market. Teleworking is not only helping us to reduce our expenses, it enables us to provide better services to our customers, to compete efficiently, to extend our markets..."

Roumen Nikolov, UNIVERSITY OF SOFIA (BUSINESS CASE 8): "The teleworking project implemented at DIT lead to the following achievements: Coordination and communication processes were significantly optimised. Working environment at DIT was improved and made more efficiently used. The co-operation between DIT's branches, employees, intercessors, brokers, project partners and customers was improved. Project management and implementation was optimised, leading to about two times higher incomes from projects and other consultancy activities".

Vesselin Spiridonov is the General Manager of VIRTECH (BUSINESS CASE 9): "The results of the implementation of telework in Virtech include: reduced number of offices and office costs; increased productivity of the workers by 20 %; improved positions mentioned as weak points".

Yuri Atanasov is the General Manager of ISIS (BUSINESS CASE 10): "There are two main characteristics of ISIS working process - dispersed participants and multiple iterations. Such two characteristics are the basic reason for company bottlenecks existing before the project implementation. Even very clear for us as IT professionals, the opportunities offered by teleworking led to some unexpected results after the project trial. We succeeded not only to automate the numerous communication sessions as part of our working process, but also to transform some of the processes by sharing our information sources and dividing the responsibility for updating sources among the participants as well as by opening appropriate parts of the sources for tele-use by different participants. In such a

way significant reduction of iterations has been achieved and therefore overall company efficiency and productivity has been increased".

9. QUANTITATIVE DATA:

- (a) Breakeven on the Return of Investment (in months): 14 months
- (b) Expected increased turnover (in percent): 10%
- (c) Increased level of business collaboration:
- Decreased
 - Equal
 - Increase slightly
 - Increase significantly
 - Sky-rocketed
- (d) Did it improve the skills base of the company:
- about equal
 - Improved slightly
 - Improved massively
- (e) Improved Competitive advantage:
- Decreased
 - Equal
 - Increase slightly
 - Increase significantly
 - Sky-rocketed

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IT Support for New Competitive Art and Craft Products Development in Latgale

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Project manager, Foundation BALTA MAJA, Latvia

Theses of presentation

1. Regional development from the viewpoint of regional authorities.
2. Art and craft products development - one of the most perspective areas in Latgale.
3. New approaches - changes in the way of thinking.
4. Information technologies for arts and craft products development - how to use IT?
5. Future prospects of IT in Livani in Latgale.

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E-LEARN E-WORK

Awareness Tool for the Projects of Telework on the TELESOL Website

Jean-Claude Marot

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CONTRIBUTION

My contribution aims at presenting a tool developed within the framework of the TELESOL project. It must be repeated that TELESOL (Telework solutions for promotion of EU cooperation in business and research with the Commonwealth of Independent States) is a European IST project managed by UNIDO and EDNES, the main objectives of which are:

- to promote telework between CIS and European countries
- and to implement pilot projects.

The tool that I'll present here is an interactive on-line help for the implementation process of telework projects. It concerns two kinds of players:

- The various operational players of a telework project
- The public authorities in charge of the regional development

A beta version of this tool is placed on the website of TELESOL.

1.1. Telework: solution or problem to solve?

It is generally considered that telework is a way of local and regional development. In fact, it allows to make activities free of geographical location. For example, the creation of a telecentre in insular or rural zones allows to maintain economic activities in these areas.

It's the same for distance learning. E-learning constitutes a way to provide access to knowledge and training, anywhere anytime. Therefore, e-Learning and e-Work can help to reduce economic and cultural unbalance between various areas.

Nevertheless, having said this, the development of telework does not decree itself. Even when one thinks to have a brilliant idea, from that idea until its materialization, several arising questions have to be solved and as a result the initial idea sometimes considerably changes.

The telework is not merely a solution, it is also a problem to solve. Let me give a concrete example. Public authorities in charge of the development of French Polynesia think that the hour gap of 12 hours between Polynesia and Europe could be exploited as an advantage thanks to telework. When it is dark in Paris, it is daylight in Papeete (main town of French Polynesia): one can imagine that, thanks to telework, a task undertaken by a team in Paris could be carried on during the night by a team in Polynesia, and vice-versa.

The hypothesis has been formed, before launching such a programme it is necessary to be able to answer many interrelated questions, such as:

- Strategic questions: for what kind of firm this device can constitute an added value?
- Organizational questions: what kind of activities can be involved by this device, what organizational effects could arise?
- Technical questions: what is the most adequate technical system?
- Individual questions: what skills are necessary?

In brief, above all, the carrier of telework project has to know how to formulate the problem well, before to know how to solve it.

1.2. An interactive tool online

The title of the tool available on the TELESOL website is "Are you ready to introduce telework?" Its purpose is to help users to formulate their problems. It consists of two units:

- an online course allowing to acquire basic knowledge on telework
- a module of aptitude test for teleworking

These two modules are placed in parallel and are inter-linked. The links between the modules allow users to browse easily through the both of them.

1.2.1. Course "introduction to telework"

First of all, I would like to present in brief the online course. Entitled "Introduction to telework", it consists of five chapters:

- 1 The first chapter presents four basic configurations of telework: home-based telework, tele-centre, mobile telework, collaborative telework.
- 2 The second chapter discusses the advantages and disadvantages of telework from different perspectives: from the point of view of social community, enterprises and individual people.
- 3 The third chapter presents statistical evidences of telework dissemination in Europe.
- 4 The fourth chapter describes the main methodological features of the implementation process of a telework project.
- 5 The last chapter provides an example of telework organisation between Russia and Europe.

The course is presented in the form of slides. Some of these slides are illustrated with small animations. If necessary, users can have access to more detailed information: pages of comments are linked with the majority of the slides.

1.2.2. Aptitude test

The second module of this tool is an online aptitude test. It consists of four batteries of quiz aimed at the following target groups:

- Project managers, that is to say employers, managers in charge of a telework project
- Tele-managers, that is to say distance managers of the teleworkers
- Employees, that is to say prospective teleworkers
- Freelancers, that is to say self-employed persons thinking of providing their services on-line

Let me take the aptitude test for project managers as an example. It consists of six quizzes testing aptitudes for telework:

1. the suitability of the workplaces involved,
2. the suitability of the organisation involved,
3. the aptitudes of the employees involved,
4. the relevance of the existing communication tools,
5. the pertinence of the implementation strategy,
6. the requirements for home-based telework.

I will take as example the quiz about the workplaces involved.

The project manager can analyse the suitability of the workplaces involved through five questions concerning:

- the tools associated with the work places,
- the kind of activity involved,
- the geographical location constraints,
- the constraints of work rhythm,
- the autonomy ability of people involved.

For each question a pop-list of typical replies is offered. For each question of the quiz, the user chooses the reply that describes his situation best.

Once selected all the replies of the questions of the quiz, by a click on the button provided, the user can check up in what extent his situation is favorable -or not favorable- to introduce telework. In the box in front of each reply the user can identify the favorable aspects by the letter "Y" (for "Yes") and the unfavorable aspects by the letter "N" (for "Not"). At the end of the quiz, the user can see the global rate of favorable conditions.

1.3. Conclusion

In conclusion, this tool ought to allow one to find out the good answers of the following questioning:

- Does telework mean a real added value for the firm and/or the social community?
- Does telework bring real benefits for the main players involved?
- Are the involved players able to become aware and to make the most of the arising opportunities?
- Is this project feasible from the technical and economical point of views?

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The Open Distance Learning Course "Social Inclusion" (The SOCRATES Project)

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The proposed project is the result of the international EU MINERVA project effort, called "Social Inclusion". It consists of three distance learning courses:

- Social Inclusion: Principles, Morals and Values,
- Social Inclusion from a Community Perspective,
- Promoting Social Inclusion through Play.

The entire project team consisted of six partners (Scotland, Iceland, Ireland, Finland, Norway and Latvia), three of whom were considered as having greater technical expertise and the other three as having more pedagogic expertise. It was decided to sub-divide the partnership into a series of working pairs; each pair consisted of a technical partner and a pedagogic partner.

The distance-learning course "Social Inclusion from a Community Perspective" is a cooperative effort of Riga Technical University (Latvia) and Stavanger University/College (Norway). The course was piloted at Liepaja Academy of Pedagogy, Latvia.

The distance learning course is designed for pre-school teachers, teachers and social workers. It is a net-based course. The goal of the course is to develop an understanding of social inclusion. It is intended for postgraduate students, and has to be completed after 8 weeks of full-time studies.

The course opens with a seminar where the participants have the opportunity to meet each another and are introduced to the tutors. The students were provided with a syllabus that described the course content and assignments and they were familiarized with the technology that would be used. Moreover, for the entire duration of the course they had access to the Social Inclusion Study Forum, a specially prepared Blackboard Internet website (<http://www.vu.lv>) where they could receive advice and participate in discussions. The Study Forum was the main point of contact during the course and enabled close co-operation between the students and the tutors. In addition, face-to-face meetings with the tutors and consultations by telephone, fax and e-mail were also available to the students in case of need (see Fig.1).

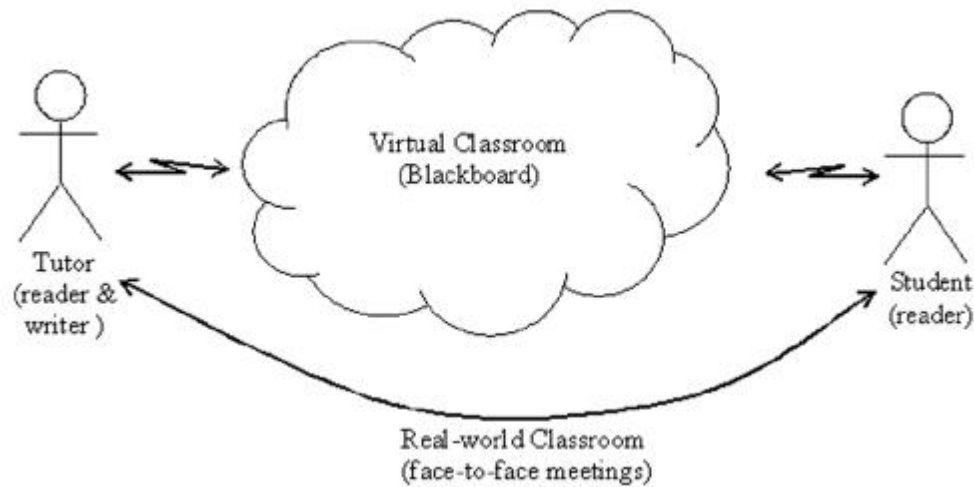


Fig.1. The ways of communication between tutors and students.

The Norwegian partners developed the course content in English. The Latvian team translated it into Latvian. We offered references both in English and in Latvian. We also prepared some translated materials because similar books could not be found in Latvian. Students used only Latvian books and the translated ones. The project team in Latvia organized two groups of students to take the pilot course "Social Inclusion from Community Perspective". The course development trial effort in Latvia was organised by Liepaja Academy of Pedagogy. The Liepaja staff was involved in the project as the pedagogical experts in Latvia.

The first pilot group consisted of educators who were studying for a Master's at Liepaja Academy of Pedagogy. The course run from September 27 till November 15, 2002. None of the individuals who did this course had had experience in online learning. Two students did not even have computer skills. They had many problems during the course, like participating in discussions, attaching files and similar technological activities.

The group was not active in discussions. There were three main discussion forums:

- Introduction "Do students need a mobile phone"
(We used this question for students to try to post a message and to read other students messages)
- Forum for group discussion "Introduction",
- Forum for group discussion "Observations".

The highest activity was observed in the introduction forum because in the first meeting we asked everybody to post a message on this forum with the aim of trying to use the discussion forum. There were 50 messages but of these only 8 were written after September 27 (the first meeting).

Most of the students admitted that they were passive in discussions. The reasons for this are various; not enough time, passivity among group members, fear of communicating in this way.

For the second group we did not choose a particular target group. This group was composed of individuals with different career orientations: social work students, Master's programme students, and individuals with higher education but currently unemployed. The second group did the course from October 23 till December 11, 2002.

One of the students had experience in distance learning (an English language correspondence

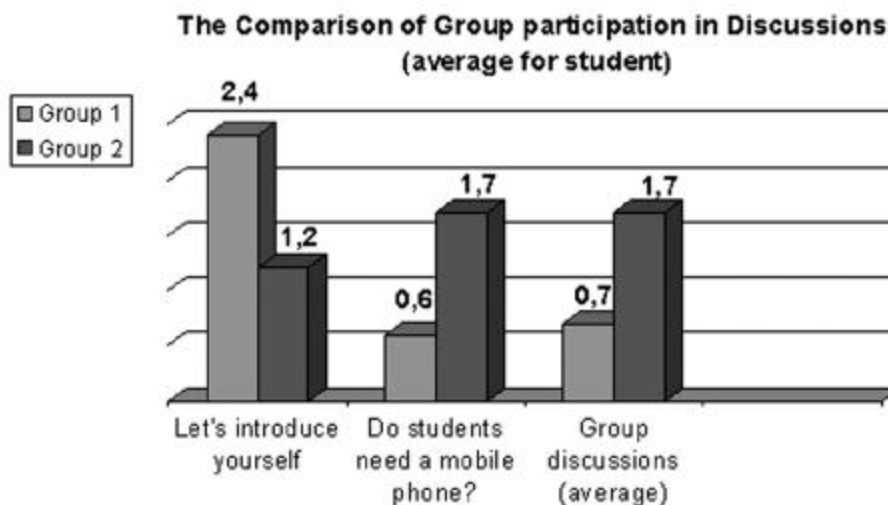
course), but none of them had experienced online learning. All students had computer skills as they were described in course.

After the first trial run we designed a new additional text and picture based tutorial "Introduction to Blackboard Users". This Study Guide contained information about how to login in the course and about navigation buttons. It also included some suggestions on how to behave in discussion forum and information about tutors (in the Study Guide we chose to put info about the tutors from Latvia). It was distributed as hardcopy among the students of the second group. It was an essential help for beginners in virtual learning environments.

The activities of the second group showed that they felt less restraint in the Blackboard platform. They made fewer phone calls on how to access different areas of the course. These students were also more active in discussions than the students in the first group.

Fig.2. Student activities in the virtual discussion forum.

Figure 2 shows that the second group was more active in discussions than the first one. This can be



explained by the use of the Study Guide which gave some tips on participation in discussions. The students were satisfied with the course materials and Blackboard use for it. Almost each of them was ready to continue learning in that way. Although students admitted that they had gained new knowledge of Social Inclusion, they found out that sometimes they had no social inclusion with others because of themselves.

In our experience, we plan to adapt other modules for the Latvian audience, too. These are modules: "Social Inclusion: Principles, Morals" and "Values and Promoting Social Inclusion through Play". The module "Social Inclusion: Principles, Morals and Values" seeks to enable students:

- to have a greater understanding of the philosophical background in relation to social inclusion;
- to recognize different perspectives across countries in relation to social inclusion;
- to identify aspects of social inclusion/exclusion that affect their own environment.

Upon completing the module "Promoting Social Inclusion through Play" the students will be able:

- to recognize play situations where social inclusion / exclusion is to be seen;
- to explore the implications of social inclusion/ exclusion for development through play;
- to develop techniques that promote social inclusion and prevent exclusion in play.

Pedagogy. The Stavanger College team, on the other hand, while they had a well-established tradition of training by this method, also for the first time applied a virtual learning environment for conducting observation sessions. The method that we found that worked best for us was a two-stage observation training approach. The first stage of this approach was the review and selection of relevant situations presented in on-line pictures in VLE. The students were placed in discussion groups where they learned observation skills and were encouraged to exchange their ideas. When complete, they were assessed by a tutor. The second stage was observation in a real environment. The students reported the results in assessment reports.

The newly designed course will be among the examples of good praxis in participating universities. A number of solutions, like the two step observation, the deployment of short video files for the explanation of learning objectives were innovative. The well-designed courseware framework will also offer guidance and inspiration for future course developers.

During the course of the project there were visible changes in the state of art of knowledge management. The e-learning developers started to use more the knowledge management approaches.

The project created a new pedagogical knowledge in on-line learning courses. The interdisciplinary approach between e-learning experts on one hand, and social work experts on the other created the necessary preconditions for a mutually beneficial collaborative effort. The added benefit of the team effort was the successful creation of a knowledge sharing culture, which was recognized by both parties. It created a positive working environment where new knowledge was quickly transmitted and accepted by the members of the teams.

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IT Adjustments for Successful Development Within Region of the Baltic States

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Since the year 2001 Public Foundation OPEN LATVIA has several workings on society information activities within the creation of the Information Society in Latvia and the Baltic countries. There have been undertaken various IT projects related with informative contributions for social integration processes in Latvia, including researches on marginal groups and targeted projects for social risk groups. OPEN LATVIA explores changes of public needs for information within various social groups, including marginal groups of high social risk e.g. people with disabilities. Another branch of activities is related to the elaboration of flexible and user-friendly information systems and support of sustainable information databases. The development of capacious databases and open source software elaborated by OPEN LATVIA is a noteworthy information package that facilitates participation in international projects.

Participation in development of a knowledge-based democratic society is released by various activities including support of a public consultative bureau and dissemination of materials for public use, e.g. information booklets, flyers, targeted mail-lists and Internet publications. OL also conducts research and analyses changes of public opinion within the context of furthering EU integration processes. One part of the activities of Public Foundation OPEN LATVIA is tightly related with participation in the Baltic project "Strengthening of Local Democracy and Fostering the Process of European Integration in Lithuania and Latvia" (EU PHARE Small Project Fund LI0014-01-01-0008). Within this project OPEN LATVIA is releasing the creation of a Latvian society information system and the implementation of a Latvian segment within the FAQ-type system of Lithuanian Citizens Advice Union ideologically supported by The British Know-How Fund. The Project's public background was inconvenienced by the fact that the official statistics were targeted on different segments, ignoring several notable issues that were included in our background research.

The experience gained by the adoption of targeted society information systems has showed us that no user-friendly information environment could be sustainable without preliminary research background and feedback during the project's activities. In most cases these project activities are related to social research, interdisciplinary research, intermediate planning etc. Flexibility of management and deferential attention to the various points of view is the best way to keep public loyalty and keep the quality level high for the information contents. In case of strategic, large-scale changes of activities or field rotation, companies use scientific research institutions. However, when they need just an opening survey of a specific subject, it can be disadvantageous for short-term projects.

The need for new data can be solved by the formation of independent feedback. For more effective forming it must include levels of information accumulation. There can be used a three step system. The first step includes fundamental research - usually inquiry input. There must be pointed a statement or a possibility for the definition or graduation of underline questions for adventitious respondents. The second step - targeted chapter analyses including related or associated questions based on everyday situations using socially active groups. The third is the free form comment or letterform considerations on the subject by independent experts. The proportional section of these three sections depends on the type and ambit of the research. Collection and analyses of the first stage - preliminary information for the PHARE project was released in one week, in our case it was also combined with dissemination activities.

Graded storing and information forwarding mode within the society information systems can be used for the development of new modules for interactive structures that can also incorporate virtual con-

sultancies and have a large scale impact on the formation of modern public concepts. The most important is a concept of free-direction development informative structure that can be modified by the consumer. In case of society information activities such concept opens more operative and mobile ways for the analyses of actual public opinion cross-sections.

Over the last two years OPEN LATVIA has developed information systems in accordance with the needs of target consumers and has carried out research on requirements of society. Our competitors' achievements have helped us to find solutions for public information space. There can be used incorporate segment indication and comparison analyses systems in combination with the common IT solutions for information providing, e.g. content sensitive and associative search systems. A flexible combination of product evolution supports the implementation of this system in various segments of international information systems, e.g. the Lithuanian virtual society advice system. From the manager's point of view the most noteworthy acquisition from the project is a verified completeness of project sustainability that was materialised only by IT adjustments.

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Participation of Kohtla-Jarve Town Government in International Programmes and Projects

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The presentation presents a review of the international projects and programmes in which Kohtla-Jarve Town Government has been participating. Special emphasis is given to the projects which promote the development of SME in the area of IT on the local market.

The main proposals for possible cooperation are as follows:

1. Retraining of the unemployed for the IT segment of the local market.
2. Production of software and hardware products by the local IT companies for foreign customers.

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TOURISM DEVELOPMENT POLICY AND REGIONAL DEVELOPMENT

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Tourism - one of the most powerful socio-economic catalysts - still is a major and continuously growing contributor to jobs, wealth, investment and cultural understanding, but its impacts must be balanced - socially, ecologically and economically. It means we'll have to focus on the longstanding work to encourage sustainable tourism.

Despite the economic ravages of the past year, with the adverse recession and post September 11th business climate, tourism has shown remarkable resilience. The preliminary tourism statistics for 2002¹³ shows that year ended with a 2,5-3% increase.

All the European sub-regions ended 2002 with positive results. However, growth in Western Europe was below average overall, while international arrivals increased by an average of 3.9% in Central and Eastern Europe. Latvia stands out for its growth of 11%¹⁴.

The biggest problem in the current situation of tourism is uncertainty, resulting from the combined effects of the economic downturn, terrorism, global spread of SARS and recently started war in Iraq. "Wars and tourism are completely incompatible, just like fire and water", says Mr. Frangialli, the Secretary-General of WTO.

The tourism industry has to be ready rapidly reacting to the important changes in the sector and in the relationship between supply and demand. Trends of redistribution of tourist traffic include: heightened cost-consciousness; a shift towards trips of short duration; an increase in last-minute booking; growth in internet booking; more active, participatory holiday motivations favouring of special interest products such as eco-tourism, golf, etc.

The enlargement of the EU makes this all the more important. In 2004, as many as ten new countries, among them Latvia, are expected to join the Union, adding some 75 million citizens to existing EU community of 375 million and correspondingly expanding market. Social inclusion is vital to the success of this major enlargement, and a digital inclusion is an important aspect of it.

International integration, EU enlargement, and the new situation in the world - this is the external environment that creates both concern and challenge for the Latvian tourism sector.

We have passed significant internal changes, too. The Cabinet of Ministers and Saeima (Parliament) decided to assign the responsibility for tourism state policy and its implementation to the Ministry of Economics (from the 1st of March). The new minister of economics confirmed that the one of the priorities would be tourism - by fostering of tourism as a major industry of the economy, as well as increase of tourism's share in direct and indirect income of Latvia's economy.

Necessity of the government intervention to help tourism industry is more justified. It is expected to:

- Improve the business environment
- Increase spending on tourism promotion
- Invest in comprehensive information and quality
- Improve public-private partnership
- Built human resource capacity of governmental institutions.

¹³ Data of the IPK INTERNATIONAL - The World Travel Monitor Company.

¹⁴ Data of the Central Statistical Bureau, Latvia

Latvia possesses a favourable geographical position, rich historic and cultural heritage, resort traditions, marvellous nature, hospitable people, cost-effective labour and one of the fastest growing economies in Europe, which are good preconditions for creation of an important tourism destination. The provision of increased funding for creation of an attractive image of Latvia and for advertising Latvia as tourism country, as well as wise and trustful co-operation will be crucial one.

The main hindering factor of the successful tourism development still is shortage of financial resources. This year the state budget for tourism development is about 0,73 million EUR. Several tourism development activities are financed by other sources, for instance, Latvian Environmental Protection Fund and Regional Fund. There are several loans and grants available, too.

Insufficiently developed infrastructure, lack of initial capital and insufficient level of knowledge on entrepreneurship disturb the development of tourism activities in regions. To diminish this in 2002 the EU SAPARD programme and National Non-agriculture Entrepreneurship Development Programme were opened for the rural tourism development.

Now Latvian Draft Single Programming Document 2004 - 2006 designs new support frame for the tourism development under the measure "Sustainable Development and Strengthening of Regional Identity". The significant financial support will be provided under activity "Preservation and renovation of the culture and tourism objects." Latvian tourism entrepreneurs, local governments and NGOs have also become more active in use of bilateral financial assistance and funding from various EU programmes and projects.

Main legislation

Tourism Law was adopted in 1998 (amended in 1999 and 2002) in order to create legal basis for development of tourism and to protect interests of tourists in compliance with the European Council Directive on Package Travel, Package Holidays and Package Tours.

Main regulations of the Cabinet of Ministers in the field of tourism are:

- By-law for Latvian Tourism Development Agency", 2002;
- By-law for Tourism Fund, 2002;
- Procedures for establishing a Database of Undertakings (Companies) offering Tourism Services", 2002;
- Regulations on Package Tourism Services, 2000;
- By-law for Latvian Tourism Advisory Council", 1999.

To provide a state support and to increase a competitiveness of industry Saeima adopted amendments to the Law on Value Added Tax, which determines reduction of VAT for tourist accommodation services to 9% from 2003 instead of the 18%.

The main guidelines of the national tourism policy

- Development of tourism as an economic sector giving significant impact to GDP and stimulating sustainable regional development and sustainable development of other fields of economy.
- Integration of a sustainable tourism development strategy into sector development plans.
- Sustainable use and development of tourism resources by integrating environmental protection and environmental quality improvement initiatives.
- Approximation of Latvian legislation with EU legislation.
- Integration into the Baltic Sea region and the EU tourism system.

Priorities of the tourism development

The main task of the sector is to develop Latvia as an attractive destination for foreign tourists and local inhabitants, where tourism is well organised, economically and socially effective, sustainable, and safe and raises the international prestige of Latvia.

The National Tourism Development Programme for Latvia, Year 2001 - 2010, (Cabinet of Ministers, 2001) sets the following tourism development priorities for the period of year 2001 - 2003:

1. Further elaboration of legal acts in various areas;
2. Strengthening of the institutional system;
3. Development of tourism product and infrastructure:
 - MICE, yachting, cycling and EuroVelo routes;
 - Tourist class hotels, well-equipped camping sites;
 - Roadside services and road signs.
4. Tourism marketing:
 - Elaboration of the Tourism Marketing Strategy for year 2002 - 2006;
 - Publishing of tourism information materials and collaterals;
 - Participation in international tourism fairs;
 - Co-financing of the Baltic Tourist Information Centre in Munster (Germany) and financing of the Latvian Tourist Information Centre in Helsinki (Finland);
 - Opening of Tourist Information Offices in other main tourism markets (e.g. in London, Stockholm, Moscow);
 - Participation in workshops, organisation of visits for journalists and tour operators etc.
5. Development of the international co-operation:
 - Joining to the European Travel Commission (from the 1st July 2002);
 - Joining to the World Tourism Organisation (WTO);
 - Drafting and implementation of intergovernmental agreements on co-operation in the field of tourism with an emphasis on the Baltic Sea region;
 - Close co-operation with international organisations: Baltic 21, BTC, EC Tourism Advisory Council, HELCOM, WTO, OECD, etc.;
 - Partnership in international projects: *Development of Sustainable Tourism Destinations* and *New Hansa Interregions* (EU Interreg III, Phare programmes), UNESCO *Baltic culture tourism policy paper*;
 - Other activities, such as international conferences, co-operation with foreign mass media and representatives from the tourism industry.
6. Development of rural tourism:
 - Assistance to the rural tourism sector within the EU SAPARD programme;
 - Publishing of rural tourism education and training materials;
 - Participation of the Latvian Rural Tourism Association "Lauku Celotajs" in the EU project VMART;
 - The project *"Green Certificate" - quality certificate for rural tourism accommodation establishments - implementation and control in rural areas and small towns in Latvia*;
7. Development of eco-tourism:
 - Implementation of the Strategy of Eco-tourism Development;
 - Activities within the International Year of Eco-tourism.

- Publishing materials on eco-tourism, promotion campaign of eco-tourism in Latvia;
 - Development of infrastructure in protected nature areas (nature trails, watching towers, information and visitors centres etc.)
 - Latvian - Danish project *Establishment of environmental guide network in Latvia*.
8. Implementation of quality management in the tourism sector:
- Drafting the Latvian State Standard for tourist coaches and restaurants;
 - Development of eco-certificates "Blue Flag", "Green Key" and "Green certificate" for rural tourism accommodations;
 - Organisation of training sessions on the quality management.
9. Implementation of the state investment project *Establishment of a Common Network of Tourist Information Centres*, including creation of a common tourism database and state tourism portal available in several languages as well as providing tourist information centres with modern IT&T technologies. The Tourism Offices in London and Berlin will be established in 2003.
10. Tourism statistics:
- Improvement of statistics in compliance with EU directive on collection of statistical information in the field of tourism;
 - Elaboration of methodology for the National Tourism Satellite Accounts.

Tourism development projects with a strong regional emphasis

1. Several tourism development and infrastructure projects had been supported through EU PHARE programme in 2002:
- Project of Rujiena City Council *Hot - Spot of Tourism Development in Latvia - Estonia Boarder Region*; the new tourism coordination system developed and small tourism infrastructure created within the project area;
 - Project of Cesis district council *Sustainable regional development - high quality tourism*; Project aims to develop new innovative tourism products and transnational tourism routes;
 - Project *Travel around Latgale with IT*, carried out by Rezekne district council in cooperation with Rezekne and Daugavpils city councils and Jekabpils district council;
 - Project *Yacht and port development* supported by EU Phare programme *Supportnet II - Latvia*; project aims develop Latvian yacht and port infrastructure and provide informative database in order to increase yachts visits of Latvian ports;
 - Phare CBC project *From city to city*; Projects aim is to develop tourism flow between cities - Klaipeda, Liepaja, Ventpils.
2. Latvia is participating in the EU LIFE programme. Among the environmental projects are also:
- Project of Latvian Rural Tourism Association "Lauku celotajs" - *Green Certificate* (see above), supported by Ministry of Environment and Latvian Environmental Protection Fund;
 - Project *Livonian Green Coastal Region - 21*, carried out by the several project partners - 3 municipalities, Institute for Environmental Science and Management, Slitere National Park, NGO Livonian Union and culture-historical territory Livonian Coast.

ects have already received support under measure "Development and diversification of economic activities providing alternative income".

4. Non-agriculture Entrepreneurship Development Programme - new support instrument for consumer, tourism, recreation and other services.

IT&T as an important tool for development of the tourism sector

IT&T are going through radical changes transforming the tourism sector, and with the emergence of new issues like new distribution channels, advanced mobile technology, etc.

There is an ever-increasing need to provide with up to date information on the impact of future trends in information technologies and E-business.

1. Management information systems (Databases, Statistical Analysts Systems, Geographic Information Systems, Accounting Applications, Decision Support Systems, Knowledge Warehouses, etc.). IT is being more and more used to assist in macro decision-making processes such as land and resource use, impact analysis, assessments of legal acts and policy planning documents (ex-ante, ex-post and mid-term).

2. Marketing and distribution applications (Computer Reservation Systems, Global Distribution Systems /GDS/, Internet, Web Pages, E-Catalogs, Presentation Agents, One to One Marketing). Until recently GDS have dominated in the electronic distribution of travel products through travel agents. Now the Internet is emerging as a major challenger by offering on-line travel information retrieval and booking directly to the consumer. There is no doubt that the Internet will continue to restructure tourism distribution channels.

At the moment, Latvian tourism information is available in Internet in various catalogues, data basis, Web pages (in 2002, there were a lot of web pages for regional and local municipalities, travel companies, tourism sites, tourist accommodation establishments). Only few tourist operators offer on-line reservation services.

Tourism information on the Internet is sometimes not well highlighted and not well co-ordinated and updated frequently enough; IT&T tools for the tourism marketing are not entirely used.

3. Facilitation and enhancement of the tourism (Destination Information Systems, Intelligent Transportation Systems, Mobile Web Access, E-Kiosks, Hand-Held Access Devices).

There is a great need for information by visitors about the features of a destination at the right time in the right place. It is expected that these applications will expand rapidly in the future as mobile and wireless access becomes more popular. Further development of the state investment project "Establishment of a Common Network of Tourist Information Centres" will give significant contribution to the tourism development both in national and regional level.

The main problem is IT&T accessibility and costs (Enterprises access to and use of IT&T. Citizen's access to and use of Internet. Internet access costs).

Widespread availability on broadband access at competitive price remains one of the most important barriers of tourism development in regional level. The use of the Internet in Latvia was being hampered mainly by: expensive, insecure and slow access; an insufficient number of digitally literate people on line; the lack of a sufficiently dynamic, entrepreneurial, service-oriented culture; the public sector not doing enough to help develop new applications and services.

By setting new objectives: develop cheaper, faster and secure Internet access; invest in people and

skills; stimulate use of the Internet and by overcoming these current difficulties will help restart growth and create new employment in regional level. It can also accelerate innovation through the deployment of more attractive "next generation" services, notably those for public services, business and work.

No doubt, closer co-operation among the state and local governments' institutions, tourism and IT&T companies will be needed to facilitate the further development of the use of information and communication technologies in the tourism industry by increasing of financial investments, as well as strengthening of education and training programs in the use of IT&T at all levels of tourism operations.

We hope the new opportunities within the IST 6th Framework programme of the European Commission will contribute to it significantly.

We know that we live in a complex world, but the long-term strength of the tourism sector is indisputable as the world shrinks, boundaries disappear and people have the political and economic freedom to travel.

We have to co-operate more efficiently to strengthen the position of the Baltic states' tourism in this dramatically changing and challenging world.

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Castles and Manors on the Internet

Laima Lupiķe

Association of Latvian Palaces, Manors and Castles

THE ASSOCIATION OF LATVIAN PALACES, MANORS AND CASTLES aims at preservation and maintenance of unique cultural and historic ambience of castles, palaces and manors in Latvia as well as the promotion of tourism and the development of the infrastructure of all related branches by encouraging self-organisation and public initiative.

The Association has 72 members throughout Latvia.

The major goals and workings of the ASSOCIATION are:

- o Association of physical entities and legal persons interested in the development of former castles, palaces and manors in Latvia
- o Creation of special-purpose programmes dedicated to the development of castles and manors by involving interested persons and society
- o Participation in various projects and investment competitions also appealing to the interest of intellectual potential and searching for development investors
- o Promotion of optimal tourism infrastructure development in Latvia
- o Summarization and provision of information for inquiries for database on culture and historical sights for State Tourism Information System of Latvia
- o Promotion of optimal tourism infrastructure development in Latvia

The main topics of the presentation are as follows:

- o Ratings of the Association
- o Activities: "Take a Tour of the Castles of Latvia!"
- o Organisation of seminars and exchange of experience about cultural heritage
- o PR and advertising:
 - Popularisation of the Association members and their activities;
 - Flow of information about workings, events in manors and mass media publicity;
 - Information about the Association and castles, manors and palaces at www.openlatvia.lv, www.latviatourism.lv, www.pilis.lv, www.castles.lv
 - Home page for Cesvaine Manor house renovation after the fire in December 2002.
- o Publications:
 - Mini-CD that we can upgrade every month. It is released in English and includes an introduction on history and the development of castles and manors of Latvia. On this CD you can find a complete gallery of the Association members and summarised information about the location of the object, its olden name, short inquiries about its history, style and status. The best thing about this CD is its online function on the Internet.
 - Booklets.

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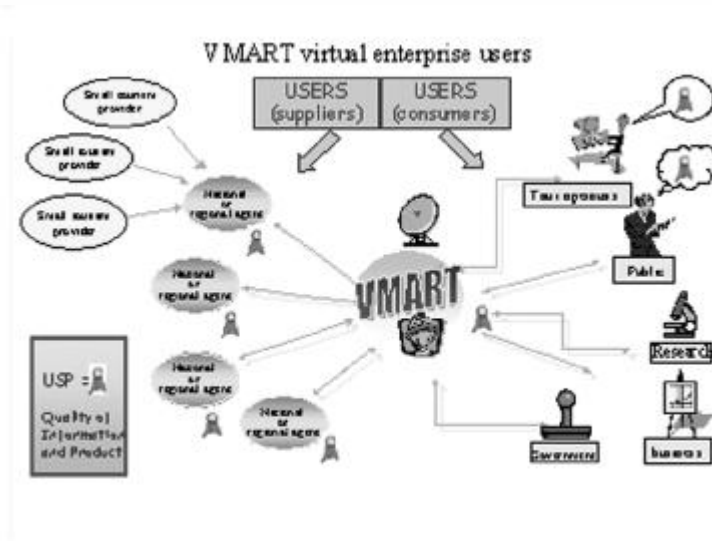
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The VMART Project (IST)

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President of the Latvian Country Holiday Association LAUKU CELOTAJS, Latvia

VMART aimed to create a European knowledge base for rural tourism and to make it commercially sustainable. This is something that did not exist and was needed. So the innovation is in what is being created rather than in technology - but it could not be realized without information technology. The concept was to make a close alliance with RTME (Rural Tourism Micro Enterprise) agencies. These are agencies or associations that specialise in marketing and developing rural tourism. VMART would then glean information from them that could be used for knowledge-based services, in exchange for promotion and some IT tools. The project planned to develop specialized applications like on-line



feasibility and accommodation quality systems and to adapt an existing on-line information and reservation system for the needs of rural tourism agencies. VMART was also to become a market place for IT products and services that could be of use to the RT sector - and gain income from sales of such products, either commission from third party vendors or fees for products owned by VMART.

The obvious vulnerability of this concept is the uncertainty

about participation of the RTME agencies. A core group of such agents were therefore involved in the project, where they had a significant role in implementation. The project also planned to provide these agents with an adapted information and reservation system and to be able to offer such a system at a very low price to other agents that wished to cooperate with VMART. VMART also offered free on-line promotion to agents through its Country Holidays in Europe portal.

VMART has continuously monitored open source development for relevant projects and has paid particular attention to licensing, pricing models and business plans for OSS development.

VMART sees a modular information and reservation system in versions for both the agent and the provider. When the system is extended to the individual provider, the European market is immense. VMART partners have come to the conclusion that the only way towards broad-based uptake of such systems needs the catalyst of open source. When users are happy that the technology works for them and is giving them actual financial gains, they will buy IT services. VMART's exploitation plan includes the OS-IRES development.

The presentation will show how the concept has evolved and the vision for the future.

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Digital Television Services and Technology

Guntars Spunde

General Director of the Digital Latvian Radio and Television Centre J-SC, Latvia

1. Broadcasting networks in Latvia and Digital terrestrial broadcasting.

There is a number of TV signal broadcasting platforms represented in Latvia: Cable, MMDS, Telco, ADSL, Satellite and Terrestrial but Terrestrial one is the most effective way to cover the whole territory of Latvia.

2. Digital television and services.

Up to 24 television programs will be available on air by simply using a TV antenna and digital TV receiver. Return channel is an opportunity to communicate to TV studio, service providers and the Latvian government.

3. Latvian digital television project development.

Digital TV today and Digital TV project plans, benefits for TV viewers and the government.

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LATVENERGO Telecommunications and IT Strategy

Jānis Kēniņš

Manager of LATVENERGO Technical Centre, Latvia

The state joint stock company LATVENERGO is an energy company engaged in the production of electricity and heat, the transmission and distribution of electricity and the sale of electricity to customers. LATVENERGO is one of the largest companies in Latvia and the Baltic states.

One of the LATVENERGO's new public services is the maintenance and development of telecommunications. This function has been assigned to the subdivision "**Technical Centre**".

Based on many years of experience the Technical Centre offers a full range of services covering telephony, data transmission and bandwidth links services for LATVENERGO.

Since year 2003 LATVENERGO has a telecommunications Licence and has been offering telecommunications services - high capacity connection Europe-Russia or Scandinavia-Europe and small to medium access to the Baltic market.

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Telecommunications in the Latvian Railway (LDZ)

Ainārs Zandersons

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Latvijas Dzelzceļš (LDZ) is a public joint-stock company whose core business is the railway transportation, both a domestic and international transit. LDZ is one of the biggest Latvian and Baltic region companies.

Due to the favourable geographic location of the Latvian state, there are historically established links of Latvia with all its neighbouring countries.

The company has obtained a telecommunications operator licence, and may use its telecommunications infrastructure for providing public services additionally to the LDZ technological needs.

Due to the infrastructure modernisation carried out before, the company can provide public services such as radiotelephony (voice), data transmission, broadband channel lease, etc. The main advantage of LDZ is the up-to-date telecommunications infrastructure and the company's broad international connections.

LDZ hopes to find partners for a successful collaboration in the field of telecommunications.

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LATTELEKOM'S Role in Regional and Competitive Environment Development

V. Vancovičs

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The development of the political, social, economic and technological environment in every country is closely linked with the development of telecommunications and IT industry. The more active this industry is, the highest growth rate can be expected in the country's economy.

LATTELEKOM is one of the telecommunications and IT industry leaders in Latvia, accounting roughly for 42% of all telecom's industry market share. As a leader LATTELEKOM bears responsibility for its impact on the development of telecommunications area, and willing or not, LATTELEKOM also has a direct impact on the development of overall regional and competitive environment.

There are many ways to influence the above mentioned areas but the most important ones are the building of industry competence and knowledge, the creation and development of backbone infrastructure needed for offering multiple telecommunication services. By doing this we have to take into consideration business situation, particularly a general situation across telecoms industry in Europe and U.S., the share of shadow economy in the state and major industry players' ownership structure.

In order to support environmental development LATTELEKOM performs a number of actions targeted to ensure the highest level of services provided to customers, helping the Latvian Government and local authorities to develop the Information Society and providing customer care infrastructure. LATTELEKOM has developed a number of new services using recently available technologies (WiFi, DSL, IP and other) and continues to contribute to customer and general public education in the telecoms and IT area. LATTELEKOM's specialists have made a significant contribution to shaping the industry environment through the participation in cross-industry working groups. LATTELEKOM has spent most training hours per employee to rise professionalism of its employees.

The future of Latvia and Baltic telecommunications should be supported by clear and visionary leadership of the largest industry players in strong and fair co-operation with every participant of the telecoms market. There is a power in co-operation and healthy competition.

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BALTPORTS-IT Simulation and IT Solutions: Applications in the Baltic Port Areas of the Newly Associated States

Dr. Eberhard Bluemel

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The BALTPORTS-IT project is aimed at promoting and supporting the dissemination of knowledge gained during the execution of the successfully completed EC funded projects such as AMCAI, DAMAC-HP and SPHERE, as well as its industrial utilisation and transfer of technologies, simulation models and information systems. It focuses on the sub-regional activities within the NAS Free Ports Areas.

The objectives of BALTPORTS-IT include:

- Set-up of the Baltic sub-regional Competence Centre for promoting and supporting the distribution of research knowledge in the field of advanced IT-solutions and simulation with maritime applications, Riga (Latvia).
- Dissemination of research knowledge gained during the execution of the EC projects AMCAI, DAMAC-HP and SPHERE and regional project in the field of IT-solutions and simulation of harbour managing.
- Industrial customisation and exploitation of the project results from AMCAI, DAMAC-HP, ITMK and SPHERE by involving user groups in the Baltic region.
- Development of recommendations for the application of results and thus creating new market opportunities.
- Creating opportunities for the training of specialists in maritime information systems design and port logistics by using web-based technologies and distance learning courses.

The expected results of the project include the industrial customisation of simulation systems in collaboration with user groups from the Baltic region and provide new approaches for:

- the non-monetary evaluation of general characteristics for port operations,
- the optimisation of logistic operations in container terminals,
- the optimisation of logistic processes in oil terminals,
- a methodology of combining port simulation and information systems.

ACKNOWLEDGEMENT

This work is supported by the EU IST Programme
(BALTPORTS-IT, IST 2001-33030)

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Baltic Regional Competence Centre in the Field of Logistics, Advanced IT-Solutions and Simulation with Maritime Applications

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Associate Professor Egils Ginters

Latvian Intelligent Systems, Latvia

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One of the objectives of the BALTPORTS-IT project is setting-up of the Baltic Regional Competence Centre to promote and support the dissemination of research knowledge related to advanced IT-solutions with logistics and maritime applications.

What is the goal?

The Baltic Sub-Regional Competence Centre is aimed at bringing together industrial users, universities and research institutions around the common topic of, e.g. "Logistics, IT-solutions and Simulation with maritime applications".

Who can benefit from the services?

- Specialists in freight transport and freight transport related logistics;
- Port managers and port consultants;
- Specialists in IT-solutions;
- Specialists from companies operating in port areas in e.g. freight forwarding, stevedoring, banks, agents, insurance, customs;
- Students and academic staff.

What are the services offered?

- Consulting in transport, logistics, marine insurance and IT-solutions, e.g. analysis of cargo flows, business process analysis and re-engineering, improvement of IT-solutions and facilitating business partnerships;
- Realization of research projects according to the requirements of user groups;
- Information retrieval and distribution using the INTERMODAL Database etc.
- Education: lectures, seminars and computer-based distance learning and training;
- Distance training courseware in logistics information systems;
- Providing simulation models of harbour processes
 - To achieve more transparency of processes
 - To discover the potential for optimization
 - To evaluate different alternatives

by using advanced technologies, such as:

- "Non-Monetary Evaluation Methodology for Ports",
- HLA- and Web-based techniques,
- Virtual Reality Visualization techniques,

related to, e.g.:

- Container Terminals
- Oil Terminals
- Marine Insurance.

The main tasks of BSRCC:

- to create a network of excellence and a training network aimed at bringing together industrial users, universities and research institutions around a common theme "IT-solutions and simulation for maritime applications". Such a network would be used in future as a kernel for the next RTD projects, including EC activities;
- to improve the systematic exchange of information between different organisations that are interested in virtual collaboration;
- to provide enterprises from the Newly Associated States (NAS) with modern knowledge from Western partners;
- to provide the possibilities of regional specialists training by using Web-based open-distance courses;
- to organise regular technical workshops, where participants from leading Western and Chinese enterprises could meet their colleagues from the NAS;
- to support the organisation of Internet conferences;
- to introduce NAS partners, operating in Freeport areas, to the Western and Chinese experience and to the methodologies of privatisation and ports re-engineering processes based on modelling;
- to provide distant access to simulation models, training materials and knowledge located in specialised servers.

The considerable experience of the co-ordinating organisation Fraunhofer FhG/IFF in creating different regional centres and branch offices is used.

It is planned that besides the central bureau in Riga two branch offices in Tallinn and Kaunas will be established under FP6.

Network of branch offices of BSRCC will serve as the instrument to create and support a networked, virtual organisation aimed at bringing together industrial users, universities and research institutions around the common topic (Figure 1).

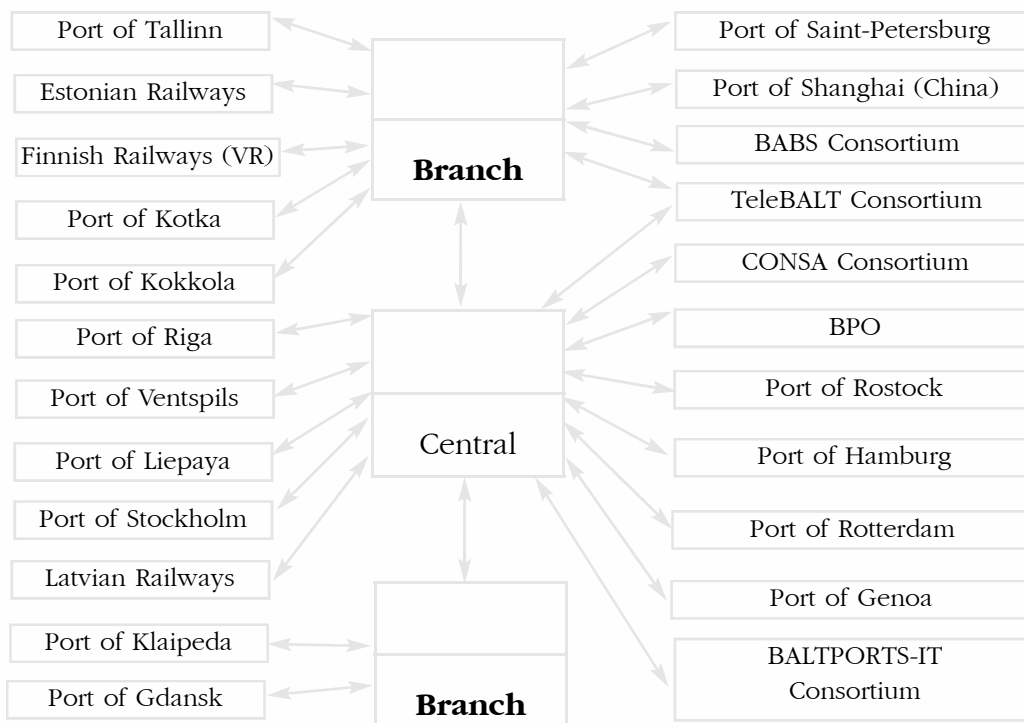


Figure 1: Virtual network of collaboration

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European Platform for Transport Research as New Opportunity for E-Work and e-Network in Logistics

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In 2001 the European Platform for Transport Research (EPTR) was established to improve co-operation and co-ordination between national transport research programmes. Of course, several organisations and networks of co-operation already existed before. The aim of EPTR is not to compete with these, but to identify what measures are needed in order to further improve the research co-operation and hopefully create the options for these actions in the future.

The origin for EPTR was laid by the committee of national representatives to Key Action 2 "Sustainable Mobility and Intermodality" (part of the EC's 5th Framework Programme). The group, however, found that although EU research co-operation is important it should be extended by increased multilateral co-operation of national research. The motivation for this is that:

- 85% of transport research in Europe is still funded by national bodies,
- As transport problems are more or less the same all over Europe there is overlapping and/or complementary research going on.

The aim is to improve research by creating enhanced co-operation for different levels and modes of research. It is, however, regarded important to maintain national control over the national funds.

The work of EPTR is carried out in four clusters:

- Traffic safety,
- Freight transport logistics,
- Monitoring Transport policy in Europe,
- Intelligent transport systems.

EPTR wishes to start the process by initiating concrete activities in order to facilitate and stimulate co-operation. As regards instruments of co-operation, the following could be relevant: the exchange of information, the synthesis of project results, and the joint analysis of results, joint project definition, joint programme implementations and joint programming.

This list indicates that different instruments could be used at different stages of co-operation, but e-network is one of the most effective ones. The main approach and results of this work for logistics cluster are discussed in the paper.

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How to Make a Proposal?

Dr. Jacques Babot

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This presentation aims to explain from the legal standpoint how to make a proposal under the 6 FWP IST Programme.

European research activities are structured around consecutive four-year programmes, or so-called Framework Programmes. The Sixth Framework Programme (FP6) sets out the priorities - including the Information Society Technologies (IST) priority - for the period 2003-2006.

The following preparatory information for making a proposal under FP6 will be presented:

- Call text
- Workprogramme - General parts
- Workprogramme - IST
- Guide for proposers for Networks of Excellence, Integrated Projects, Specific Targeted Research Projects, Coordination Actions and Specific Support Actions
- Evaluation manual
- Guidelines for evaluators

There will be also discussed topics such as documents available, the dead lines of submission, evaluation procedure etc... The presentation will be followed by questions and answers session.

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W-ASP: Workflow +ASP

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The W-ASP project (European Ten-Telecom Project Contract Number C27781) aims at validating the application of workflow and ASP technology to telework.

During the past decade the concept of telework has been changing over time. Instead of working in one workplace away from the main office, it now focuses on distributed and mobile working at various locations during flexible working hours. Internet-based teamwork and mobile telecommunication solutions are, and will be, essential for new ways of working. Teleworking stands high on the European agenda. The European Commission's annual Status Report on European Telework (1999) states: "Teleworking is important to maximise the opportunities for sustainable improvement to European competitiveness and the quality of our working lives." Currently about 6% of the workforce in the EU telework, but this percentage is expected to increase during the next decades.

Workflow is a commonly used term that describes the automation of internal business operations, tasks, and transactions that simplify and streamline current business processes. The history of workflow technology dates back to office automation and batch processing in the late 1970s, with the first use of the term in early 1980s. In recent years, workflow technology has gained popularity due to the trend of business process reengineering and many emerging related technologies such as middleware and object oriented technology, which made the development of realistic workflow management systems possible.

Application Service Provider (ASP) are third-party entities that manage and distribute software-based services and solutions to customers across a wide area network from a central data centre. In essence, ASPs are a way for companies to outsource some or almost all aspects of their information technology needs. This form of providing services started around 1998.

The basis of the W-ASP platform was laid in Spain, where it was developed under the IST programme of the European Commission in the projects:

The time had then come for the market validation phase of the platform on the scale of the European Union. The European Commission, through its TEN-Telecom/eTEN programme decided to co-fund this project, which started in June 2002 and which ends in November 2003. The W-ASP project is a market validation project. At this stage, prior to the initial market deployment, a business plan is elaborated and the market is validated by means of trials and market studies in various EU countries.

W-ASP provides teleworking services through ASP. The central ASP is located in France, providing the service to several other EU countries. The small and medium sized enterprises (SMEs), end-users of the system access the workflow application mostly through the Internet, on a pay-per-use basis, without having to buy the software itself. The workflow application used is Schlumberger Sema's FORO, which is proven workflow solution. The project is largely based on open source technologies (such as Linux), which ensures interoperability, reliability, cost effectiveness and security.

The typical users of W-ASP are SMEs, which are active in the services sector. Within this sector various segments are targeted: human resources, IT and tourism related companies. The companies will make use of W-ASP to manage their teleworking activities from anywhere. The solution de facto allows an improved synergy between what the teleworkers can offer and what the SMEs really need.

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How "Eureka" Can Help to Develop Innovative Solutions in Teleworking?

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"EUREKA!" is a European programme (1985) that was started as a political initiative to encourage and facilitate international co-operation for elaboration and implementation of market oriented research in civil technologies ("know-how!"). There are 33 full member countries in "EUREKA!" today. Latvia is a "Eureka" member since 2000.

The initiative of a project usually comes from small and medium sized companies and researchers (the "bottom-up" principle). There are several ways, how to become a "EUREKA!" project partner:

1. Joining an already active project.
(Search for relevant projects on the Eureka Secretariat home page: www.eureka.be)
2. Initiation of a new project.
 - 2.1 Find a partner among the "EUREKA!" countries.
 - 2.2 Companies and research institutions turn in their new project ideas to the Latvian National Project Coordination Centre (NPC).
 - 2.3 Technology request/offer (in local IRC).

The main fields of a "Eureka" project are the following:

1. Biotechnology and medical technologies,
2. Communication,
3. Energetics,
4. Protection of the environment,
5. Information technologies,
6. Tourism and services,
7. Laser technology,
8. New materials,
9. Automatization of production,
10. Transport and logistics,
11. Preservation of endangered cultural heritage.

A potential project can deal with any non-military branch of economy and social life.

There are several evaluation criteria for a "Eureka" project:

1. At least one more partner from a "Eureka" member country has to participate in the project.
2. The final product of a project has to be market oriented.
3. The project has to ensure technological innovation in products, processes and services in the range of Latvia and Europe as well.

"Eureka!" member countries are the following:

1 Austria,	14 Ireland,	27 Finland,
2 Belgium,	15 Russia,	28 Spain,
3 Czechia,	16 Great Britain,	29 Turkey,
4 Denmark,	17 Latvia,	30 Hungary,
5 F.R.Yugoslavia	18 Lithuania,	31 Switzerland,
6 France,	19 Luxembourg,	32 Germany,7 Greece,
7 Greece,	20 Netherlands,	33 Sweden.
8 Cyprus	21 Norway,	
9 Croatia,	22 Poland,	
10 Estonia,	23 Portugal,	
11 Iceland,	24 Romania,	
12 Italy,	25 Slovakia,	
13 Israel,	26 Slovenia,	

Each partner has to start a "Eureka!" project in its country (get a "Eureka!" status).

There are twelve active "E!" projects in Latvia now:

- 1 E! 1489 EUROTRAC-2 "The Transport and Transformation of Environmentally Relevant Trace Constituents in the Troposphere over Europe"; the 2-nd Phase. Institute of Atom Physics and Spectroscopy LU.
- 2 E! 1841 EUROBOGIE "Advanced Rail Suspension Using Fibre-Reinforced Plastics".Institute of Polymer Mechanics LU.
- 3 E! 2522 EUROENVIRON OPTI-SOILCLEAN "Optimised Complex Technology of Clean Up of Soil, Contaminated by Oil Pollutants". LS Institute of Wood Chemistry.
- 4 E! 2618 RENEWFOAMS "Production of Polyurethane Foams from Renewable Raw Materials". LS Institute of Wood Chemistry, Institute of Polymer Mechanics LU.
- 5 E! 2619 FERM-PUMP "Programmable Peristaltic Dosage Pump for Time-Dependent Dosage in Fermentation". "Biotechnical Centre", JSC.
- 6 E! 2622 FOREST SOIL EROSION "Prevention and Control of Forest Soil Erosion on Coastal Strip of the Baltic Sea using lignin-based Polymers". LS Institute of Wood Chemistry.
- 7 E! 2623 OPTPAPER "Optimisation of Energy Resource Consumption in the Paper Production". Institute of Mathematics LU.
- 8 E! 2858 PLANT FOR PLANT "Development of Plant Origin Growth Regulators and Phyto Pesticides for Use With Cultivated Plants". JSC "Biolat".
- 9 E!2917 COMMENWOOD "Further Commercialisation and Utilization of Energy Wood Production" Forestry research institute "Silava", "Strasa konsultanti" Ltd., "Elements-I" SMSC
- 10 E!2918 ONLINE CATALOGUE "Museum Online Catalog" (Moc). State Authority on Museums in Latvia, "IT Consulting" Ltd.
- 11 E!2597 EUROCARE ECH:TOPICC "Endangered Cultural Heritage: Tools For Preservation, Investigation And Copyright Clearance"; Fr.Trasuns Museum, Video Centre of Rezekne Higher school.

12 E!2981 CTBSTROKE "Automatic Analysis of Human Brain Ischemic Strokes Using Computed Tomography (Ct) Images"; Ventspils University College, clinical "Gailezers".

Latvia is a member of 2 umbrella projects:

- 1) E! 330 EUROENVIRON "Environmental Protection" with R.Bendere (association "LASA") as an expert.
- 2) E! 2713 ELEARN "Eureka Elearning" with A.Kapenieks as an expert.

The procedure for starting a "Eureka!" project consists of two stages:

I International stage - getting a "Eureka" project status. The application form can be downloaded from the website: www.eureka.be

II Latvian stage - a competition for funding. The necessary documents can be found at: www.innovation.lv/top. Project documents have to be turned in to the Ministry of Education and Science.

Project application has to include the following information: 1 Company data, 2 Title of the project, 3 Short description of the project, 4 The expected final results, 5 Material base, 6 Costs of the project, 7 Funds, invested by owners, 8 Financing, requested from the State budget.

Business plan includes: 1. Conception, 2. The main aims, 3. Production planning, 4. Market analysis, 5. Marketing, 6. Production, 7. Organisation and workers, 8. Property relationships. An independent expertise is performed by experts from the Science Council.

What can participation in a "Eureka!" project provide? The main advantages are the following: 1 A grant from the State budget (Market Oriented Research programme), 2 International recognition, 3 Partners in European countries, 4 International contacts, 5 Technological innovation in a relevant field, 6 Potential foreign investments, 7 A chance to prolong the project in case of successful activities.

Information and other many-sided help can be found at "EUREKA!" Latvian NPC centre: "Bureau for Consulting and Information BIK Ltd". Email: eureka@edi.lv

The relevant home pages: <http://www.eureka.be>
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