

**COMPETITIVE AND SUSTAINABLE GROWTH  
(GROWTH)  
PROGRAMME**



**Contract for: SUPPORT FOR THE INTEGRATION OF NEWLY ASSOCIATED STATES (NAS) IN THE EUROPEAN RESEARCH  
AREA**

**Accompanying Measures**

**Final Publishable Report**

**CONTRACT N° : GMA1/2002/72093**

**ACRONYM : POLLOCO**

**TITLE : Polish Centre of Logistics Competence**

**PROJECT CO-ORDINATOR: Instytut Logistyki i Magazynowania (Institute of Logistics and Warehousing), PL**

**REPORTING PERIOD: FROM 1/1/2003 TO 31/12/2005**

**PROJECT START DATE : 1<sup>st</sup> of January, 2003**

**DURATION : 36 months**

**Date of issue of this report : 31st of January, 2006**

## 1. Executive summary

The main objective of this three-year project (1.01.2003 - 31.12.2005) was supporting the development of the intermodal transport infrastructure that would allow interoperability and facilitate integration of the Candidate Countries into the Trans-European Transport Network. Performing the project activities, the Institute of Logistics and Warehousing (ILIM) served as a Centre of Competence in Logistics, covering not only Poland but the whole region of Central and Eastern Europe. The project's main outcomes have been various forms of collaboration among companies, RTD units and institutions. The centre have supported the development of logistics initiatives, projects and implementations, and also set new directions for the future.

The centre's activities have been focused on the development of knowledge and competence in the field of design, set-up and functioning of logistics centres, as well as advancement of IT solutions supporting activities of logistics operators, logistics centres and their networks. This general objective has been realised by:

- promotion of the idea of intermodality as a systematic solution to the problem of underdevelopment of transport infrastructure;
- popularisation of the methodology of construction of the most technologically advanced, highly efficient and environmentally friendly logistics centres and terminals;
- support for the development of tools for decision-making;
- development and dissemination of knowledge in logistics, particularly in the field of internet-based tools and platforms providing logistics operators with information and allowing transactions.

As a result of the project, interested individuals and institutions from the research, business and government spheres - both at the local and national level – were offered access to the accumulated logistics knowledge, and the Centre of Competence become a real platform of knowledge dissemination and exchange for Poland and other New Member States.

During three years of the project activity, the informal POLLOCO has been established network. Institutions, organizations, research and academic units and individual experts have been invited not only to tap onto the Centre's resources but also to contribute with their own knowledge and experience. The sources of knowledge for the network were mainly organisations and individuals from the EU-15. The Institute has established numerous new contacts, invited participants to benefit from project resources and events, and organised a successful network meeting in Budapest.

Other activities of the project were mostly devoted to strengthening competence and setting-up platforms of knowledge transfer. In this respect, the team identified best practices, created data bases of RTD projects and units, prepare and offered a number distance learning of courses, organised four workshops, organised a well-attended international conference, organised three working visits aiming at acquaintance with best practices, promoted and disseminated information via webpage, newsletter and multimedia CD, and ensured execution of the project in accord with the contract and EU regulations.

## 2. Objectives of the project

Through realisation of the project, together with some auxiliary activities funded from other sources or by ILIM itself, the Institute has strengthened its position as a centre of competence in logistics and increased its operational range. In particular, the following strategic goals are achieved:

- 1) ILIM has extended its range of contacts, both in the EU15 and the New Member States, in all categories (research, industry, NGO, government) – these contacts are utilised both within and outside POLLOCO project;
- 2) ILIM has broadened and deepened its knowledge of RTD projects in related fields and be prepared to transfer this knowledge further – the centre acts as a reliable source of information;
- 3) ILIM has built an informal network of interested organisations brought together by materials, events and projects – the centre is an excellent contact point for new consortia to be formed or extended eastwards;
- 4) ILIM has developed technical capabilities and train a team able to produce high quality distance learning materials – they are able to transfer related knowledge into this new medium and have started a library of courses in order to commercialise them later;
- 5) ILIM has organised workshops in the fields of logistics, distance learning and decision support – their high quality should further increase the position of the centre;
- 6) ILIM has ensured that its bi-annual logistics conference is the most important sectoral event in Central and Eastern Europe;
- 7) ILIM has organised a series of working visits to logistics infrastructure locations identified as best practice – their participants are able to have a good look into the technicalities but also to speak to people behind them;
- 8) ILIM makes its competence known by the means of publishing an irregular newsletter, updating project website, releasing a promotional CD and showing a stand at relevant trade fairs – all these activities improve the visibility of other tasks and enhance response within the community.

The activities performed within the POLLOCO project did not generate any profit but should lead to long-term benefits in the future both for ILIM and for many members of the informal POLLOCO network.

The activities performed in order to achieve these goals have had a positive impact on the logistics communities of Central and Eastern Europe inasmuch as both RTD units and business entities are provided valuable new knowledge and a platform to interact with one another in order to build exciting new projects together.

### 3. Scientific and technical description of the results

#### 3.1 Summary of the specific project objectives for the whole period of the project execution.

For the whole period of the project execution, the following specific goals were identified:

1. to establish and maintain links with sources of knowledge and identify best practices that may serve as model solutions
2. to identify and maintain contacts with potential users of knowledge and experience in the Candidate Countries
3. to produce content of distance learning courses, make them available online and organise a related technical workshop
4. to organise planned workshops
5. to organise and execute one international conference
6. to organise and execute three working visit aiming at acquaintance with model solutions
7. to promote and disseminate via webpage, newsletter and multimedia CD
8. to ensure execution of the project in accord with the contract and EU regulations

The planned goals were realised on time and within the budget, with a minor exception of the CD, which was released approximately 2 months later than planned due to more complex production process.

#### **WP1 Co-operation with Thematic Networks and Networks of Excellence**

##### **Deliverables:**

##### **D 1.1 - Detailed list of various networks and consortia working in the field of intermodal logistics centres**

##### **D.1.2 - Report on the meeting initialising the networking activities**

##### **Description:**

##### **1. Development of present relations with partners in EU and NAS**

We have developed contacts with the partners from the EU. We started planning and negotiations of cooperation with EUTRALOG Project at the EC and participated in EUTRALOG SC meeting in Brussels. Furthermore, we continued updating the Polloco database and dispatching the materials to subscribers.

We have developed contacts and exchanged information with the following organisations: Technische Fachhochschule Wildau (DE), Technische Universitaet Darmstadt (DE), Otto-von-Guericke Magdeburg (DE), Higher School of Economics in Moscow (RU), Czech Logistics Association (CZ), Centre of Maritime Study – Turku (FI), BVL, TU Darmstadt, TU Duisburg, ELA, ECBL, CEN European Committee for Standardization (work group CEN/TC 320/WG 6 — Transport Services – Logistics), European Commission - Directorate General Enterprise - Unit D4: E-business, ICT Industry and Services (meeting of the Steering Group of the European e-Business Support Network for SMEs (eBSN)).

We have realised common initiatives with the following organisations: TFH Wildau (Polish-German Virtual Broker Logistics System - EUREKA; ECO4LOG, tele-lectures for TFH students); University in Magdeburg (E-coach - tool supporting implementation of ECR); BUCK CONSULTANTS INTERNATIONAL (e-Thematic, SIT, EUTRALOG and new

initiatives: LOGIBEST, EC tenders: FIAP and Intermodal Security); AIM (participation in the conference “Traceability - how it looks today and how it could be tomorrow”); METTLE GROUP (participation of POLLOCO representatives in the Steering Committee Works of EUTRALOG Project, organisation of a common workshop in April 2004 in Warsaw); Logistics Competence Centre KLOK in Kornwestheim (ENLOCC), CELTRANET (developing cooperation within the network and organising kick-off meeting in 2005); ELITE (entering the consortium for a tender of EIB, one of the sessions during LOGISTICS 2006 will be prepared by ELITE); PTV (continuation of subcontract works within BESTUFS II); Centre for Maritime Studies, University of Turku – INLOC.

## **2. Establishing new contacts with research facilities and units implementing practical solutions in the field, as well as with their users**

We participated in the twinning meeting Poland – Hesse and established contacts in order to create connections between logistics centres in Poland and Germany. We prepared a list of foreign units to plan networking activities. We also prepared the English version of ILiM's activity description on base of information from WWW sites and POLLOCO contract. We established new contacts with knowledge suppliers for the POLLOCO project and worked on the offer for networking partners. One of numerous meetings we participated in was the Deutsche GVZ Gesellschaft meeting in Berlin. We also prepared the detailed list of various networks and consortia working in the field of intermodal logistics centres and developed POLLOCO – EUTRALOG co-operation. Within this task we translated the questionnaire for SME, contacted new companies and dispatched the questionnaire. Furthermore, the list of networks and consortia working in the field of intermodal logistics centres for Polloco WWW site publications and the report on it to Brussels was prepared and dispatched. The Polloco presentation was prepared and presented in the BESTUFS conference, as well as during the meeting with the Fraunhofer institutes.

Moreover, we have established contacts with the following organisations and consortia: ELITE & ELUPEG; EUROPEAN INTERMODAL ASSOCIATION (participation in a regular meeting); CENTRAL LOCO (leading a consortium of a project concerning cooperation of competence centres in logistics in CEEC: VUD - SK, CDV - CZ, KTI - HU); REGIONE EMILIA-ROMAGNA (realisation of ENLOCC, start of a new project CORELOG in 2005); Technical University in Turin (CO-DESNET); ISDEFE (proposition of common project for FP6 on air transport); University of Humboldt in Berlin (proposition of project „CITY PARKING in EUROPE” for INTERREG III C); UNDERSTAND consortium (methodology of research of information society); Centre for Maritime Studies, University of Turku (INLOC); TNO Netherlands (common organisation of INTERMODAL ROUNDTABLE in Warsaw in April 2004); Business process Training Centre Netherlands (gaining information on SCOR methodology), FREIGHTWISE FP6 (BMT Transport Solutions - invitation to negotiations); DIFFERENT (Univ. Edinburgh - invitation to negotiations); TRACEBACK (Tecnolimenti - preparations for submission of the project); INTERBALTIC (submission and acceptance of the project); BRIDGE (EPC Global); COMPETE (ISI - participation in a tender); NEDLOG (Leonardo da Vinci project); VETIS (consortium submitting a proposal to the Marco Polo Programme).

## **3. Organising a meeting initiating networking activities with the main partners of the Centre, establishing communication channels and ways of co-operation in the main fields of the Centre's interests**

We translated the program of POLLOCO kick-off meeting and the conference “Logistics Centres in Wielkopolska” into English. The list of invited guests and their contact data were collected, press materials and invitations were prepared and distributed. We also organized the work discussed during POLLOCO kick-off meeting and networking activities with partners from Sheffield (ARRC).

## **4. Establishing and maintaining links with consortia realising and/or planning EU projects in the field of logistics centres**

We have maintained collaboration with EUTRALOG consortium and organised joint POLLOCO-EUTRALOG meetings in Warsaw 22-23.04.2004: Steering Committee at the Ministry of Infrastructure and Intermodal Roundtable at the Marriott Hotel. The presentations were prepared and presented. We started networking activities around the LOGISTICS 2004 conference and opportunities offered by ELITE and ELUPEG. We also prepared a presentation for ELITE conference and participated in its general assembly. National Promotion Centre for the Marco Polo programme has been developed by correspondence and visit to the Ministry of Infrastructure and the materials for the

webpage from Brussels (EC Marco Polo Team) and Warsaw (M.o.I.) were reviewed and prepared. We carried out promotion activities of the programme's second and third call. We also developed relations with ELITE, CELTRANET and ENLOCC networks, as well as entered the consortium for an EIB tender with other ELITE members and submitted a proposal (EIB - Logistic needs in Mediterranean Partner Countries – Potential for the development of a Mediterranean logistic platform network). One of the sessions for the conference LOGISTICS'2006 will be performed by ELITE members. CELTRANET network has been launched and the kick-off meeting was organised. Another meeting of the ENLoCC network was organised and the idea of the Open ENLoCC network that is to be launched after the end of ENLoCC was announced. Several international projects within INTERREG and FP6 were realised, namely: INLOC, BASIM, BALTIC TANGENT, E-MENSA and TRIPLE HELIX; furthermore, we joined several international consortia for submitting proposals with positive results, i.e.: CORELOG, DIFFERENT, FREIGHTWISE, BRIDGE, INTERBALTIC and TRACEBACK.

## **WP2 Building a network of competence for NAS**

### **Deliverables:**

#### **D.2.1 - Detailed list of various networks of R&D units and consortia working in the field of logistics centres in NAS**

##### **Description:**

##### **1. Maintenance of relations with present partners in the field**

POLLOCO contacts with partners from Poland and neighbouring countries were developed and maintained and terms and tools for cooperation were prepared.

##### **2. Establishing new contacts in NAS - R&D units, government and non-government bodies operating in the area of logistics, business entities**

We have developed contacts with partners from Poland and neighbouring countries and started working on the plan of the network building. We also prepared the proposal of participation in the POLLOCO network for e-mail purposes. A collective table of R&D projects with translation of the projects' names into Polish, address base of the projects' participants for e-mail purposes (197 members - state: 29/02/2004, 830 members - state: 29/02/2005, 1065 members -state: 31/12/2005) were prepared. We started Research Network CELTRANET involving national research centres and universities dealing with logistics centres and transport and organised the kick-off meeting with 10 partners: University of Economics in Poznan, University of Economics in Katowice, Gdansk University, Szczecin University, Poznan School of Logistics, Warsaw School of Economics, ILIM, Institute of Vehicle Transport, Institute of Rail Vehicles and Maritime Institute in Gdansk.

##### **3. Entering relations with local authorities (departments responsible for infrastructure planning)**

We maintained contacts with authorities – departments responsible for infrastructure development. We prepared and participated in the meetings on POLLOCO Competence Centre commitment in the activities on logistic and transport infrastructure development in the city – the prospects of support of the initiative of logistics centre by the FP6. POLLOCO was presented during the international forum – encouraging to co-operation within the confines of the network. We entered in relations with the following local authorities and other POLLOCO network members and invited them to act within the network through newsletters, e-mails, workshops, working visits and conferences: City Office of Gliwice, Kórnik, Konin, Kraków, Mszczonów, Opole, Poznan; Marshall Office of Śląskie Province, Opolskie Province, Podkarpackie Province, Dolnośląskie Province, Zachodniopomorskie Province, Wielkopolskie Province, Regional Offices of Stare Miasto and Jarocin.

##### **4. Organisation of the network's 'kick-off' meeting**

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We developed a database of contacts in Central and Eastern Europe and prepared the concept of the collaboration platform. The invitations to Budapest meeting were sent. The meeting was organised and chaired and afterwards - presentations and minutes were prepared.

### **5. Collaboration with existing and developing logistics centres, large transportation companies, construction companies specialising in such infrastructure, sea ports, river ports and airfields**

The cooperation with logistics centres, big logistics companies and construction companies was deepened. We studied the R&D units list, higher schools and leading consulting companies and their consortia acting in the field of logistics centres in NAS countries, and then gathered data for consortium list. Geographical and thematic range of work (coordination with similar activities in other packages) was established and the database structure and information sources were discussed. We maintained contacts in EU-10 countries, participated in a meeting of related network of competence and a conference in Warsaw (networking logistics centres) and stimulated the informal network with the collaboration concept built around the Budapest meeting. Network building activities were carried out, especially - in CEE. We launched the CENTRAL European Network for Logistics Competence on the 1<sup>st</sup> of June 2005 by organising Kick-off meeting on the 28<sup>th</sup> of June 2005 in Rajecké Teplice, SK. The next event organised within CENTRAL LOCO was the first workshop in Prague (7-8<sup>th</sup> of Nov. 2005).

## **WP3 Launching a web-based system of distance learning and knowledge exchange**

### **Deliverables:**

**D.3.1 - A library of distance learning courses in the field of logistics and quantitative methods of decision support at various levels.**

**D.3.2 - Technical workshop materials**

### **Description:**

#### **1. Building a system for running distance learning courses (Learning Space 5 or equivalent), together with necessary hardware and other IT facilities**

The realization team, arrangements connected with choosing the equipment to AV studio and preparation of tender specification were managed. We participated in the training about methodology of "Learning Space" and in the IBM seminar about constructing the processes of distance learning. We supervised the set-up of the system for distance learning and building a studio for videoconferences, as well as the installation of the equipment. Methodical principles in construction of educational scenarios were established.

#### **2. Installation of an audio-visual studio for distance learning and videoconferencing**

The installation of the equipment was realised. We familiarized ourselves with „student" area in „Learning Space" program and prepared the draft instructions for use of the program. We also prepared draft instructions of a behaviour of a „teacher" to prepare a lecture in "Learning Space".

#### **3. Transferring the relevant knowledge collected in books, papers, conference materials etc into the electronic form.**

Relevant knowledge collected in books, papers, conference materials etc was transferred into the electronic form, e.g. to the portal [www.logistyka.net.pl](http://www.logistyka.net.pl)

#### **4. Preparation of profiled distance learning courses.**

2003: Preparation of the content and materials for the course *Inventory management* - in Polish; *Inventory management* - in English

2004: Preparation of the content and materials for the following courses: Warehousing management, Warehousing infrastructure, Basics of combined transport.

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2005: Preparation of the content and materials for the following courses: Basic stock replenishment systems, Demand analysis, Stock analysis, Logistics centres, Management of logistics operations, part I, Management of logistics operations, part II, Supply chain management  
In total **11 e-learning courses** were prepared.

### **5. Technical workshop for entities interested in adopting the methods of distance learning**

The concept and promotion of the workshop were prepared and the invitations to the speakers and guests were sent. The presentations and equipment for the workshop realisation were prepared. The workshop titled "E-Learning - technologies and methods" was dedicated to the methodology of e-learning was organised in Poznan on 8/11/2004.

Attendance: 47 participants representing different national and foreign organisations. The presentations touched the following issues: LMS Platform (functionalities, applications of IT, experience of WebCT, Oracle Learning, Blackboard, Dokeos), e-learning technologies (servers, softwares, hardware, ISDN/IP), E-Coaching, methodology of preparing e-learning courses.

### **6. Realisation of profiled distance learning courses**

The courses were implemented in the Learning Content Management System. First five courses were made available in 2004 in the internet on LearningSpace platform. 360 participants took part in the courses. The most popular are as followed: Selected issues of combined transport (75 students), Inventory management - in Polish (70 students), Inventory management - in English (65 students).

In 2005 480 participants took part in the courses. In total the number of students is as followed:

- Selected issues of combined transport - over 75 students
- Inventory management - in Polish - over 90 students
- Inventory management - in English - over 150 students
- Warehousing infrastructure - over 70 students
- Warehousing management - over 50 students
- Basic systems of inventory replenishment - over 60 students
- Demand analysis - over 40 students
- Inventory analysis - over 40 students
- Logistics centres - over 30 students
- Management of transport operations, part I - over 100 students
- Management of transport operations, part II - over 70 students
- Supply Chain Management - over 70 students

In total **830 participants** took part in the e-learning courses.

### **7. Use of the methodology and technical facilities in support of other Work Packages.**

A few e-lectures were realised: Prof. Włodzimierz Rydzkowski - on "Logistics Challenges for the new EU Candidates" - 10th September 2003; Frank Knoors (Sequoyah Consulting) - on "Collaborative web-based multimodal logistics management: Strategies, processes & systems" - 15.04.2004; Video lectures for German students at TFH Wildau - 25.11.2004 & 9.12.2004



## **WP4.1 Realisation the first of 2 practical workshops on logistics centres**

### **Deliverables:**

#### **D.4.1 - Materials for participants of 2 workshops**

#### **Description:**

##### **1. Preparatory activities:**

- Decisions (together with the centre's Advisory Board) regarding particular goals, topics and coaches, as well as targeting prospective participants,
- Publication of a set of informative materials,
- Preparation of the workshop's programme, materials and necessary resources
- Contacts with workshop moderator, mailing materials.

##### **2. Organisation and realisation of the actual workshop**

We carried out activities on workshop organisation: building the database of potential participants, mailing invitations, catering, interpreting, technical assistance and reception during the workshop and its moderation.

The workshop titled „Planning and formation of intermodal logistics centres in Central and Eastern Europe” was organised on 13-14/11/2003 in Poznan. Its main goal was finding common solutions for development of logistics centres in Poland and other CEEC's. The main issues presented and discussed during workshop are as followed:

- planning localisation of the centres
- estimating their size and area
- defining functionalities
- financing models
- evaluating financial effectiveness of logistics centres.

Attendance: 52 participants, including representatives of: companies - operators and users of logistics centres, central / regional / local authorities, R&D institutes and units designing technical-organisational and IT for logistics centres, institutions supporting planning, creating and developing of logistics centres.

The workshop was improved by group works focusing on searching for solutions barriers in the process of creating logistics centres. Group works verified economic effectiveness of investments and identified factors economically influencing such initiatives

##### **3. Preparation and distribution of post-workshop materials**

The materials were prepared in 2 languages. Some workshop follow-up activities were prepared and materials were made available on [www.polloco.pl](http://www.polloco.pl)

## **WP4.2 Realisation of the second of the 2 practical workshops on logistics centres**

### **Deliverables:**

#### **D.4.2 - Materials for participants of the workshop**

**Description:**

**1. Preparatory activities:**

After discussion with the AB on particular goals, topics and coaches we decided on joining two 1,5-day workshops (WP4.2 and WP5.2) into one 3-day event on 23-25<sup>th</sup> of November 2005 on: 1. Dispersed infrastructural resources - perspectives of their integration into virtual logistic centres, 2. Application of meta-heuristic methods in transport, logistics processes and systems.

Preliminary programme, as well as presenters and invitation for participants were prepared.

**2. Organisation and realisation of the actual workshop**

Both practical workshops (WP4.2 and WP5.2) were organised at the same event on 23-25<sup>th</sup> of November 2005.

Within the main topic of the workshop (Perspectives of integrating dispersed / virtual logistics centres) the following presentations were presented:

- Virtual Logistics Centre in Lubeck (DE) - H.Pahl, Technology Centre Lubeck/GVZ Lubeck
- Chances and problems in development of dispersed logistics centre - A. Wagner – GVZ Glauchau
- Working in groups - are virtual (dispersed) logistics centres possible in Poland?
- Duty-free zones in Poland and other countries - R. Andrzejewski, Poznański Urząd Celny

Attendance: 25 participants representing logistics operators, customs offices, logistics centres, universities, R&D units.

**3. Preparation and distribution of post-workshop materials.**

The post-workshop materials were prepared and published on the polloco website in December 2005.

**WP5.1 Realisation of the first of the 2 practical workshops on practical use of quantitative methods and tools for decision support**

**Deliverables:**

**D.5.1 - Materials for participants of 2 workshops**

**Description:**

**1. Preparatory activities:**

- Decisions (together with the centre's Advisory Board) regarding particular goals, topics and coaches, as well as targeting prospective participants,
- Publication of a set of informative materials,
- Preparation of the workshop's programme, materials and necessary resources
- Contacts with workshop moderator, mailing materials.

**2. Organisation and realisation of the actual workshop**

The first international workshop focused on practical use of quantitative methods and tools for decision support was organised on 1-2/04/2004 in Poznan. The workshop titled "Advanced decision support tools for transportation and logistics" reviewed the following existing methods and IT tools supporting decisions:

- Single - Objective Optimization Methods
- Heuristic Algorithms

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- Simulation Techniques
  - Traffic Control Methods
  - Multiple Criteria Decision Aid Methods
  - ILOG Solver and ILOG Dispatcher, the software for vehicle routing problem
  - AIMSUN - an advanced micro - simulation package for evaluation of different transportation solutions
  - STRATOVISION - a Decision Support System for logistics strategy planning
  - TCM - selected traffic control tolls and methods
  - ELECTRE - multiple criteria decision aid method for transportation / logistics projects and solutions evaluation;
- Speakers: Olgierd Dziamski (ILiM), Prof. Paulo Guedes, Portugal, Prof. Jaime Barcelo, Spain, Prof. Marcos Papageorgiou, Greece, dr Jacek Żak (Poznan University of Technology).
- Attendance: 30 participants representing logistics operators, universities, R&D units and logistics centres.

### **3. Preparation and distribution of post-workshop materials.**

The post-workshop materials were prepared and published on www.

## **WP5.2 Realisation of second of the 2 practical workshops on practical use of quantitative methods and tools for decision support**

### **Deliverables:**

#### **D.5.2 - Materials for participants of the workshop**

#### **Description:**

##### **1. Preparatory activities:**

After discussion with the AB on particular goals, topics and coaches we decided on joining two 1,5-day workshops (WP4.2 and WP5.2) into one 3-day event on 23-25<sup>th</sup> of November 2005 on: 1. Dispersed infrastructural resources - perspectives of their integration into virtual logistic centres, 2. Application of meta-heuristic methods in transport, logistics processes and systems. Preliminary programme, as well as presenters and invitation for participants were prepared.

##### **2. Organisation and realisation of the actual workshop**

Both practical workshops (WP4.2 and WP5.2) were organised at the same event on 23-25<sup>th</sup> of November 2005.

The workshop titled "Application of the meta-heuristics methods in transportation and logistics processes and systems" was focused on practical use of advanced tools called meta-heuristics - algorithms generating optimal solutions of difficult decision problems on transport and logistics. The other part of the workshop focused on the concept of the Electronic Logistics Platform and its possible applications in e-commerce and supply chains. The following presentations were presented:

- Introduction to metaheuristics. Characteristics of metaheuristic procedures: Local Search, Simulated Annealing, Tabu Search, Genetic Algorithms. Application in Transportation and Logistics. Single and multi-objective metaheuristics - Prof. Andrzej Jaskiewicz, Poznan University of Technology, Poland
- Metaheuristic software applications. Computational experiments with selected software tools - Prof. Andrzej Jaskiewicz, Poznan University of Technology, Poland

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- Heuristics for the urban road network design: lane layout and signal settings. Efficiency of the heuristic procedures in the real -time complex operational problems - Prof. Antonio Vitetta, University of Reggio Calabria, Italy.
  - Taboo Search in road transportation and distribution systems. Application to the optimization of the delivery schedules in the distribution network. Furniture industry case study - Olgierd Dziamski, ILIM
  - Presentation of a concept of the Electronic Logistic Platform (ELP) and its utilization for electronic commerce in logistic chains. Possible applications of metaheuristics to different categories of electronic – commerce problems - dr Jacek Żak, ILIM
  - Presentation of Transport Chain Management System (TCMS) as a potential component of the ELP. Practical presentation of the functionality of the system. Computer exercises - Frank Knoors, Sequoyah International Restructuring N.V
- Attendance: 25 participants representing logistics operators, universities and R&D units.

### **3. Preparation and distribution of post-workshop materials.**

The post-workshop materials were prepared and published on the polloco website.

## **WP6 Conference on "Integration of logistics networks based on intermodal logistics centres in view of the enlargement of the European Union".**

### **Deliverables:**

#### **D.6.1 - Conference proceedings**

#### **D.6.2 - Post-Conference report**

### **Description:**

#### **1. Preparatory activities:**

- Decisions (together with the centre's Advisory Board) regarding particular goals, topics and conference's programme,
- Creation of the Programme Board and organisation of its "meetings" via the Internet
- Publication of a set of pre-conference materials,
- Selecting a team of speakers

We supervised the whole process of preparations, i.e.: contracts with partners (MTP, ORBIS, ODITK), suppliers (catering, transport, interpreters, audio-video, etc) and media, preparing text of the invitation and copies of advertisements, signing contracts and publishing ads. Press releases, information for www and registration forms were developed.

Polish Logistics Congress LOGISTICS 2004 was the 7th conference organised every two years since 1992 by ILIM. Over 600 participants representing research, business, local authorities from Poland, as well as from abroad, mainly from new member states took part in this event. Participants were presented with 30 presentations focusing on the following issues: logistics networks, directions of their development, using of transport and transshipment infrastructure, IT systems, communication systems, security issues, risks and costs in supply chains.

#### **2. Maintaining contacts with the speakers**

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Contracts with speakers Contacting speakers.

### **3. Preparation of conference materials**

Conference materials and a CD were prepared.

### **4. Organisation and realisation of the actual conference**

All activities on conference realisation were carried out: inviting honorary guests, dealing with registration of participants, answering queries, reception, supervision of suppliers and closing activities.

### **5. Preparation and distribution of post-conference report**

Post-conference materials were collected and edited.

## **WP7 Working visits**

### **Deliverables:**

#### **D.7.1 - Presentation packages about visited establishments for dissemination and educational purposes**

### **Description:**

#### **1. Starting co-operation with leading EU/NAS businesses that will provide insight into well-functioning advanced logistics systems.**

All relevant activities were supervised: selection of potential locations to be visited during the trips (countries, directions, partners, timing etc.), consultation with the Advisory Board, preparation of the programme of the first visit and its announcement.

Establishing relations with the following logistics centres:

- Port and virtual logistics centre in Lubeck
- Logistics Centre in Brema
- Logistics Centre in Duisburg
- Logistics Centre in Frankfurt / Main
- Logistics Centre in Dresden
- Logistics Centre in Lipsk
- Logistics Centre in Graz
- Logistics Centre in Sopron
- Logistics Centre BILK in Budapest
- Port in Koper
- Logistics Centre in w Padova
- Logistics Centre in Verona
- Logistics Centre in Bologna

## **2. Developing relations, negotiating terms and setting targets of working visits in line with the profile of the Centre.**

The costs were calculated and details of trips with foreign partners were negotiated. The other activities, such as: route optimisation, preparation of the information dissemination, promotion and enrollment of participants for all working visits were carried out.

## **3. Organisation of two 4-day visits to partners in EU, within aforementioned guidelines.**

**1st working visit:** 28th March - 02nd April 2004. The following German centres were visited: Port and virtual logistics centre in Lubeck, Logistics Centre in Brema, Logistics Centre in Duisburg, Logistics Centre in Frankfurt / Main, Logistics Centre in Dresden, Logistics Centre in Lipsk. Attendance: 25 participants, i.e.: local governments, companies building logistics centres in Poland, logistics operators, carriers and forwarding agents, representatives of academic circles.

**2nd working visit:** 7th-12th June 2004. The following Austrian and Hungarian centres were visited: Logistics Centre in Graz (A), Logistics Centre in Sopron (HU) and Logistics Centre BILK in Budapest (HU). Attendance: 25 participants, i.e.: local authorities, logistics operators, carriers and forwarders, companies constructing logistics centres, representatives of science.

**3rd working visit:** 2nd-6th October 2005 r. The following Italian and Slovenian centres were visited: Port in Koper (SI), Logistics Centre in w Padova (IT), Logistics Centre in Verona (IT), Logistics Centre in Bologna (IT). Attendance: 26 participants representing local authorities, CEOs and employees of companies building logistic centres, representatives of the boards of Polish sea ports, logistic operators, hauliers and forwarders, representatives of science.

## **4. Creation of presentation packages about visited establishments for dissemination and educational purposes.**

Post-visit materials were prepared and published on the websites.

## **WP8 Promotion**

### **Deliverables:**

#### **D.8.1 - Promotional CD**

### **Description:**

#### **1. Preparation and release of a promotional CD**

The overall concept of the CD – target group, message, structure, and graphic design was prepared. Potential subcontractors were selected and the contract with the suppliers were negotiated. All content materials (texts, scripts, presentations, interviews and video footage) were prepared.

#### **2. Dissemination of current information about the ongoing activities in a form of a newsletter by e-mail**

Preparatory works related to development of the website were carried out: building a page for subscription with links to the forms for members, implementation of the feedback form, and repeated dispatch of the e-newsletters. In total 31 issues of the newsletter were sent to polloco subscribers. At the end of 2005 newsletters were sent to over 1400 receivers. The process of emailing will be continued after the end of the project.

#### **3. Creation and maintenance of a webpage with description of centre's activities and current information for participants and potential beneficiaries**

Graphic Project of POLLOCO website [www.polloco.pl](http://www.polloco.pl) was created and the materials were implemented for the page in html language. Presentations from events were published in PDF format. Some parts of the www service have been secured by a password requirement. A mechanism for subscription was built and implemented. The English version of [www.polloco.pl](http://www.polloco.pl) has been developed. The concept of a new title page with possibility to choose the language was developed and the content of the webpage

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was updated. A subpage devoted to MARCO POLO Programme was built. Furthermore, the survey about future vision of the Competence Centre and its website was carried out.

#### **4. Distribution of promotional materials during selected Poznań International Fairs events**

The trade fair stand during TAROPAK 2003 and 2005, as well as presentations at two seminars during these events were prepared. We also prepared the trade fair stand during LTS TRANSPORTA 2005 and developed presentations for three seminars during the Conference Innovations-Technologies-Machines (ITM) Poland 2005 - promoting POLLOCO and inviting to its events.

### **WP9 Co-ordination of activities of the centre**

#### **Deliverables:**

**D.9.3.1 - Minutes of the meeting of the Advisory Board**

**D.9.3.2 - Minutes of the meeting of the Advisory Board**

**D.9.3.3 - Minutes of the meeting of the Advisory Board**

**D.9.3.4 - Minutes of the meeting of the Advisory Board**

**D.9.3.5 - Minutes of the meeting of the Advisory Board**

**D.9.3.6 - Minutes of the meeting of the Advisory Board**

**plus all the contractually required reports: management, progress, mid-term, financial and final reports – technical and publishable.**

#### **Description:**

##### **1. Administration of the project – day-to-day management of the project activities**

Following activities were carried out in order to administer the project: planning, preparation to a working meeting with the officer from EC, coordination of the activities in different work packages and alignment with the objectives of the Institute, seeking synergies with other projects, preparing deliverables of the project and reports. Apart from this, we have been using free internet communicator for day-to-day contact and administration and organising meetings. The results of the survey carried out on future of the Competence Centre and its website show a great interest in knowledge disseminated by the Centre.

##### **2. Preparation of progress reports/cost claims for the EC**

Within this task corrective reports and requests after EC's evaluation of the cost statement were prepared. All required reports during the project execution, as well as after the end of the project (final technical report and final publishable report) were prepared and delivered to the EC.

##### **3. Control over the centre's expenditure**

The project expenditure were supervised in cooperation with the accounting department.

##### **4. Organisation of the work of the Advisory Board (incl. videoconferences and other cost-efficient methods of distance collaboration)**

We organized and participated in six POLLOCO Advisory Board meetings. Pre-meeting materials and minutes from AB meeting were prepared. For day-to-day contact and administration we have used free internet communicator.

#### 4. Comparison of initially planned activities and work actually accomplished

All activities of the project were performed within the initially planned deadlines. Some minor deviations concerned the production of the promotional CD as the production process turned out to be more complex than anticipated. Minor deviation was officially accepted by the EC services and the Advisory Board and it has had no negative effect on the whole performance of the project. The other minor change concerned the organisation of the workshop - initially two separate workshops were planned, after consultations with the Advisory Board, both workshops were organised as a one big (3-day) international event - it was also officially accepted by the EC services. There were no other deviations calling for interventions since the other activities were realised on time and within the budget.

#### 5. List of deliverables

Deliverable No.	Content of the deliverable	Due month	Issued month	Status
D.1.1.	Detailed list of various networks and consortia working in the field of intermodal logistics centres	6	7	Approved
D.1.2.	Report on the meeting initialising the networking activities	4	6	Approved
D.2.1.	Detailed list of various networks of R&D units and consortia working in the field of logistics centres in NAS	12	12	Approved
D.3.1.	A library of distance learning courses in the field of logistics and quantitative methods of decision support at various levels.	18	19	Approved
D.3.2.	Technical workshop materials	18	24	Approved
D.4.1.	Materials for participants of 2 workshops	35	12	Approved
D.4.2.	Materials for participants of the workshop	35	37	Approved
D.5.1.	Materials for participants of 2 workshops	35	18	Approved
D.5.2.	Materials for participants of the workshop	35	37	Approved
D.6.1.	Conference proceedings	18	20	Approved
D.6.2.	Post-Conference report	20	20	Approved



D.7.1	Presentation packages about visited establishments for dissemination and educational purposes	35	37	Approved
D.8.1.	Promotional CD	12	16	Approved
D.9.3.1	Minutes of the meeting of the Advisory Board	4	6	Approved
D.9.3.2	Minutes of the meeting of the Advisory Board	10	11	Approved
D.9.3.3	Minutes of the meeting of the Advisory Board	16	18	Approved
D.9.3.4	Minutes of the meeting of the Advisory Board	24	24	Approved
D.9.3.5	Minutes of the meeting of the Advisory Board	29	32	Approved
D.9.3.6	Minutes of the meeting of the Advisory Board	35	37	Delivered

## 6. Results and conclusions

Through realisation of the project, together with some auxiliary activities funded from other sources or by ILIM itself, the Institute has strengthened its position as a **centre of competence** in logistics and increased its operational range. In particular, ILIM has extended its range of contacts, both in the EU15 and the New Member States, in all categories (research, industry, NGO, government) – these contacts are utilised both within and outside POLLOCO project and result in launching new initiatives and projects. ILIM has made its competence known by the means of publishing newsletters, updating project website, releasing a promotional CD and showing a stand at relevant trade fairs – all these activities have improved visibility and enhanced a relations within the community. Additionally, **the informal network of interested organisations** brought together by materials, events and projects was developed further as an excellent contact point for new consortia to be formed or extended eastwards. Moreover, ILIM have ensured that its bi-annual logistics conference is the most important sectoral event in Central and Eastern Europe and a series of working visits to logistics infrastructure locations was the best way to have a good look into the technicalities and to speak to people behind them. In general terms, the project has proved its merits and constituted a tremendous added value for the European RTD community. Co-operations, initiatives and projects started during POLLOCO duration and thanks to its events and networking, are positively influencing logistics environments in New Member States. New technologies and solutions are implemented in CEEC's and as a result - bring added value for the whole European logistics community. It is expected that the project results will be long-lasting and will lead to new benefits for all parties involved.

## 7. Co-ordinator

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Name and contact details of the persons who may be contacted concerning the follow-up of the project. The project will be continuing its activities within other initiatives realised in Framework Programmes or other Community Programmes.

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