**Euro-ISDN**

**TaRgET Project - Ref 96/45503**

**TITLE:**

# Detailed Installation and Operational Plans

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Information concerning the TaRgET Project can also be found on the project web page address: http://www.elis.interbusiness.it/target.

We would like to take this opportunity to thank all partners for their co-operation during the compilation of this deliverable.

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## 1. Introduction

### 1.1 Objectives of Deliverable 4 - Detailed Installation and Operational Plans

The Detailed Installation and Operational Plans (Deliverable 4) has been conducted during Phase 2 of the TaRgET project entitled Planning and Preparatory Actions.

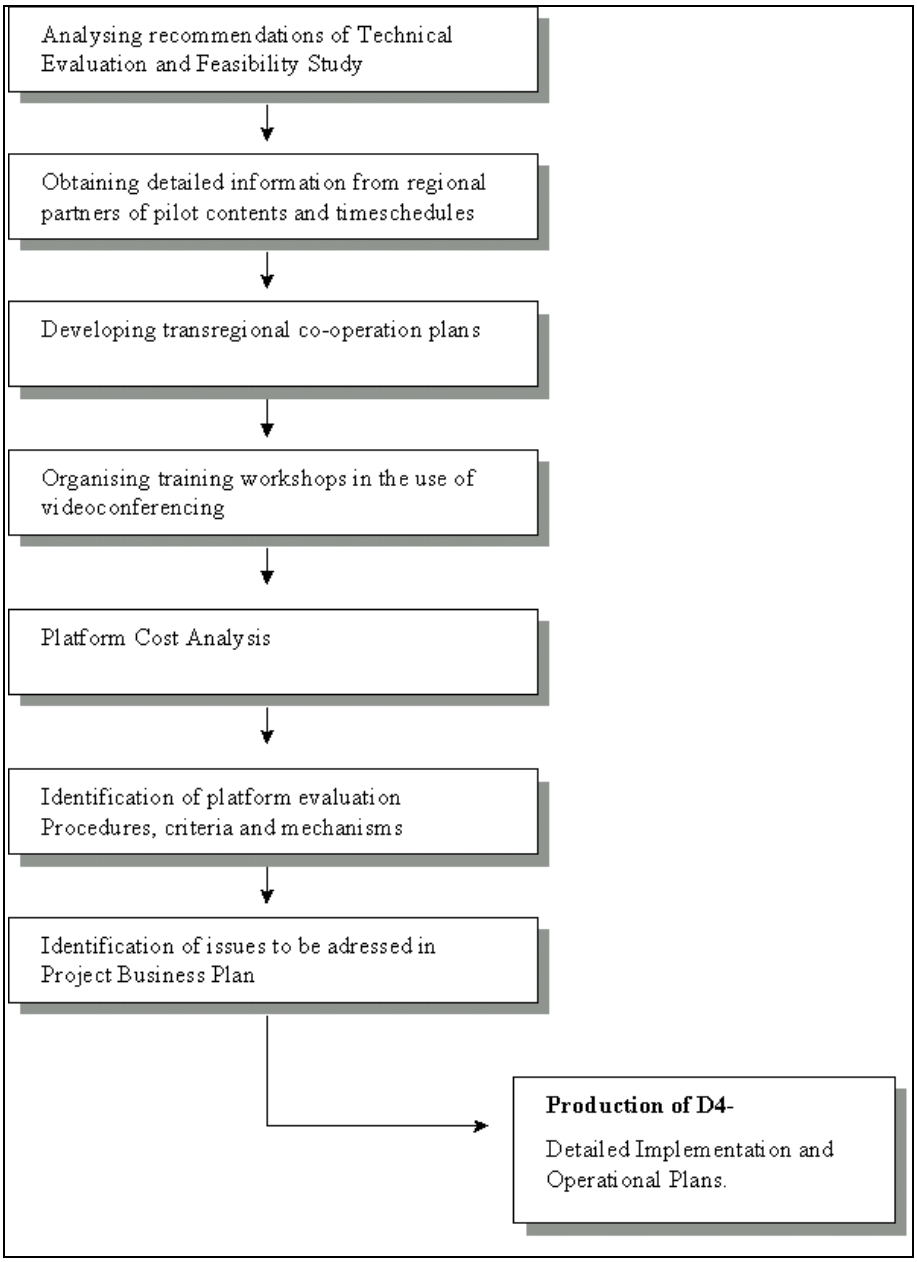
The principal objective of Deliverable 4 is to provide detailed technical implementation and operational plans for the pilot platform based on the results of the First Phase Report and Feasibility Study (Deliverable 3).

Linked to this main objective, more specific objectives of the deliverable were to:

- outline the technical arrangements to take place up to day one live test of the system;
- provide a technical timetable for procurement, delivery, installation and technical training;
- provide detailed information concerning regional pilot organisation;
- provide detailed information concerning transregional operational plans;
- outline plans for training in the use of videoconferencing;
- provide a detailed costing of the network on a regional basis;
- identify platform evaluation procedures and mechanisms;
- outline the areas to be addressed in the Business plan to be completed at the end of the project.

## 1.2 Study Plan and Methods

The activities which took place during workpackage 5 are outlined below.



## 2. IMPLEMENTATION OF LEARNING PLATFORM - TECHNICAL PLANS

### 2.1 Review - Technical Evaluation (Deliverable 2) Recommendations

As outlined in the recommendations of the Technical Evaluation, the following factors concerning the distance learning platform to be created were outlined:
The base PC systems should have a minimum of:
Pentium P-133 processor, 16 Mbytes RAM, 1 Gbyte hard disk
2 Mbyte graphics card
quad speed CD ROM drive
16 bit soundcard and speakers
15" monitor

A multimedia capability was recommended as it adds little cost to the base PC and is required by some partners.
Videoconferencing systems must be compliant with all currently ratified standards, capable of multipoint conferencing (as it will be required by the TaRgET partners to take part in conferences later in the project), easy to use, with software which incorporates all the features defined in the Technical evaluation report and easily expanded to accommodate individual needs, such as extra cameras or microphones

It was also recommended that all partners should receive the same base level of equipment.

The chosen equipment must have agreed Technical support in all partner countries.

All partners and SMEs should receive the same level of training in the use of PC technology and conferencing techniques.

Also, based on the findings of the technical evaluation the following observations were made:
- Four partners require file transfer
- Four other partners, require application sharing facilities.
- Five partners require SMEs to have multi media facilities.
- File transfer (euro-file transfer ETS 300075/79) must be available to four partners in phase 1.

### 2.2 Review - Technology Evaluation

Taking into account all of these findings, the technical management, Western Connect Ltd conducted a thorough investigation of six PC based videoconferencing products from five manufacturers and one portable. The Teles vision P2 was investigated but not bench tested. All of the systems are H.320 compatible.

They were:
Intel Proshare 20
Nokia Mediastation 447k
BT VC8999 with Olivetti software
Picturetel Live 100
Picturetel Live 200p
Tandberg Compact Vision

Teles Vision P2
VCON Armada Cruiser 100

As detailed in D2, the evaluation addressed the following factors: availability; supplier presence; functionality and ease of use; standards compliance; hardware and software requirements; peripherals and costs.

## 2.3 Nature of the Pilot Platform - Options

At the TaRgET project meeting held in Sitges on 30 September 1996, the Technical Manager presented 3 options concerning the nature of the platform to be established in order to carry out the project activities. The main elements of these 3 areas are described below:

**Option 1**
All partners and SMEs would receive the same base PC systems and videoconferencing systems

**Option 2**
All partners receive the same base PC system. All partners would receive the same videoconferencing and collaborative systems. The majority of SMEs would receive the same videoconferencing systems. However, in order to meet the regional pilot requirements certain SMEs (Sweden and Belgium) will receive either a portable compact or a different PC system.

**Option 3**
All partners and SMEs would receive the same base system but (based on the 3 co-operation groups identified during WP 3), different videoconferencing and collaborative working systems would be installed to allow comparison of platforms.

The Technical Management recommended at the meeting that Option 2 should be adopted and, after discussion, all partners agreed to implement this recommendation.

## 2.4 Agreed Actions

After analysis of the results of the equipment evaluation and feasibility report, discussion with the regional co-ordinators and the results of a call for tender issued to all of the previously mentioned manufacturers, the purchase of the Nokia Mediastation equipment for all partners and the majority of SMEs has been decided upon.

The majority of partners will receive two Nokia Mediastations by the first week of December 1996. One of these systems will be installed in the training organisation and the other in the SME to be involved in the project. Two partners, Sweden and Belgium will receive a Nokia Mediastation to be installed in their organisation. The Swedish partner will receive a portable unit to carry out the project activities in the SMEs. The Belgian partner will receive a PictureTel unit.

**Technical Timetable - procurement, installation and training**

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| Mid November | Procurement and ordering of equipment |
| End November | Delivery of equipment to regional partners and SMEs |
| Early December | Installation of equipment<br>VCON regional representative to visit partners and install equipment |
| Early - mid December | Technical training **** |

**** The Technical Training will be provided on receipt of the Nokia Mediastation. A regional representative from VCON will contact co-ordinators and arrange for a visit to install the card and to provide technical training on use of the equipment. Partners will also receive supporting written documentation and will have access to an ongoing technical support hotline.

The regional co-ordinators will be responsible for providing initial technical training to the SMEs.

## 2.5 Training in the use of videoconferencing plans

As highlighted in the feasibility report, a particular condition to ensure the success of the training activities to be conducted during the TaRgET project is the strong recommendation that participants (mentors, trainers and trainees) should be trained in the use of videoconferencing prior to the operational phase of the project.

This training should address the following issues:

- how to prepare for a videoconferencing session;
- how to organise and chair a videoconferencing session (etiquette; presentation skills; interactivity; explanation of whiteboarding and application sharing facilities and production of learning materials)
- how to handle basic technical/communication problems

As agreed at the Sitges meeting, it has been arranged for all regional partners and SME representatives to receive a two hour workshop (via a videoconference) on the use of videoconferencing. The identified orgainsation to deliver this training is the Audio Visual Department of the Katholieke Universiteit, Leuven, Belgium.

The Audiovisuele Dienst has a 20 year long record in the production of educational TV programmes for the Katholieke Universiteit Leuven as well as for other institutions, companies and EC supported projects such as those under the Delta programme. It has built up extensive experience in the use of ISDN videoconferencing for educational as well as administrative purposes in different applications.

The director-producer was one of the key people in the introduction and direction of the Multimedia Teleschool programmes for the Delta programme as well as of the EOUN and EuroPace 200 programmes and other similar projects.

All of the regional partners will receive the workshop during the first week of March 1997.

It is advised to have a maximum of 4 persons attending the workshop sessions.

This group should include:

- the regional trainer;
- the training representative from the SME;
- a technician from the training organisation/SME.

The training of the trainees in the use of videoconferencing should be undertaken by the regional trainer and training representative from the SME who will transfer the knowledge acquired during the workshop session.

## 3. REGIONAL OPERATIONAL PILOT PROJECT PLANS

In parallel to the implementation plans, a set of operational plans for the pilot have been established. These plans address operational issues including:

- confirmation of the training to be delivered and developed in each region and between regions (detailed description of the training programmes, breakdown of modules);
- to whom training will be delivered;
- the training delivery and training programmes;
- the time phase for each pilot;
- the timeschedule for videoconferencing training sessions.

**TaRgET Euro-ISDN: OVERVIEW REGIONAL PILOT PROJECTS**

| **Partner** | **SME** | **Nature of Training** | **Applications / Requirements** | **Size of Gr.** |
|---|---|---|---|---|
| Swedish War College<br>Bengt Kroon | NNP, which has 15 stores in Midnorrland Sågverk | 1) Basic management training to 15 NNP store supervisors<br>2) Business English to sales personnel in timber companies. Training delivered in the Swedish language. | Videoconferencing E-mail | 1x15<br>1x 9 |
| Hertford Regional College Anna | Office Equipment | C & G<br>BTEC | Videoconferencing CD-Rom | 10 and 3 |

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| Malchow - Perryman | | Training delivered in the English language. | | |
| Associazione Centro Ellis Michele Crudele | Libero Instituto Universitario Campus Bio-Medico, University in Rome | Techniques on fire prevention safety, health and hygiene.<br><br>Training delivered in the Italian language. | Videoconferencing<br>Application sharing<br>File transfer<br>Extra cameras required | 5-10 |
| RTC Tallaght, Dublin<br>Pat Coman | MDS telephone systems | Electrical and mechanical skills development<br>Training delivered in the English language. | Videoconferencing<br>File transfer<br>Multimedia | 15-20 |
| VIA, Belgium Luk Indesteege | Borealis, plastics production plant, Beringen, Diepenbeek | Safety and responsibility care<br>Total Productive Management.<br>Training delivered in the Dutch language. | Videoconferencing<br>Multimedia<br>Cdi for self-study | 20 |
| NWIFHE<br>Derry<br>Robbie Hegarty | Total Engineering Design and install control systems in the chemical industry. | Amplifier design and digital techniques.<br><br>Training delivered in the English language. | Videoconferencing<br>File transfer<br>Application sharing | 1 |
| Camara Oviedo Barcelona<br>Brendan Doyle | Ingenieria y Suministros Asturias<br>Antonio Lopez | Language audit and training.<br><br>Training delivered in the Spanish & English languages. | Videoconferencing<br>Audioconferencing | up to 6 |
| Technology Centre Limburg<br>Belinda Tanner | Textron Automotive Polymer products production | To train production operators to become mechanical operators.<br>Training delivered in the Dutch language. | Videoconferencing<br>Application sharing<br>Multimedia<br>CD-i, E-mail | 1x3 |
| Greek Productivity Centre<br>Dimitris Passouris | Hellenic Arms Industry S.A.<br>Arms Industry | Application Training<br>Windows, Word, Excel.<br><br>Training delivered in the Greek language. | Videoconferencing<br>File transfer<br>Application sharing<br>Interactive multimedia | 2x5 |
| North Trafford College | Process Industry | Theoretical basic training.<br><br>Training delivered in the English language. | Tutor-Trainer<br>Videoconferencing links<br>Application sharing<br>CD-Roms CBT, including Hypertext | 5 |

**PARTNER: Swedish War College, Sweden**

**SME (15): NNP** **Sector: Food industry** **Products:** e.g. Swedish whey butter
**SME (9): Sågverk** **Sector: Timber**

**Target group:** 15 regional supervisors from an agricultural co-operative and representatives from 9 timber companies, who act as the so-called front-line for export.

**Training Title:**
`Management' (NNP) and `Business English Language Training' (Timber companies)

**Regional pilot description:**
1) Linking 15 regional supervisors from NNP from the Lower Norrland region of Sweden for a management course.
2) To train representatives from 9 timber companies from Jämtland in Business English.

**Aims of both pilots:** to test a new method and pedagogy for learning where the responsibility for learning is focused on the participant rather than on the teacher; as far as possible, to adapt the learning and content to `just in time' **and** to the needs of the company; to encourage the course participants to use IT as a natural aid in daily activities; to create an infrastructure for continued learning supported by IT; to create the necessary conditi-ons for learning to the same quality but to a lower cost compared with classroom teaching.

**Training content:**
**The course for NNP supervisors** is a management course compromising of the following modules: My picture of reality; The customer in focus; The roles of the manager; Working with goals; Climate, communication; Competence development; How to meet the future.

**The course for representatives from 9 timber companies** is a`Business English' course containing the following elements: vocabulary; writing reports, letters, contracts; presentations; telephone; negotiation; behavior; small talk and IT.

**Technologies and Training materials used:** Videoconferencing meetings using PictureTel, Nokia and Tandberg equipment; the computer conferencing system FirstClass is also being used in a supporting role as well as Email; telephone conferencing and links with room systems.

**Regional/Transregional Interaction:** between different companies in Sweden and also between companies and trainees in Spain. Also an exchange visit of Spanish trainers to Sweden to receive training in the use of videoconferencing is planned. Should there be other interest from participants for national or international experts, extra personnel resources may be invited to participate via video or teleconferencing in specific lectures with regard to business economy in different countries, EU agricultural matters, management etc.

**Time frame:** October 1996 until April 1997

**Scheduled videoconference sessions: 1996 - 1997**
**NNP**: 17/10; 07/11; 28/11; 16/01; 06/02; 27/02 from 19.00 - 21.00 hrs.
**Sågverk**: 05/11; 21/11; 30/01; 11/02; 11/03; 08/04 from 18.00 - 20.00 hrs.

**Remarks:** Colonel Kroon from the Swedish War College visited the Mid Sweden University to inform students at the Personnel Administration Department about the TaRgET project. They were interested and they decided to evaluate both of the pilot projects. An evaluation procedure and mechanism including a time table has been established. The activities started in week 42 and will run until week 16, 1997. A final evaluation report will be produced by the students of Mid Sweden University which will be incorporated into the overall evaluation.

**Costing of the network on a regional basis:** The costs to install ISDN 2 and the international communication costs are low in Sweden, after Greece they are the cheapest. The Swedish War College can use this advantage, because in the pilot they offer two different courses. 4-5 hours are required to participate in the project training working group, videoconferencing in the pilots - 18 hours NNP:(6 meetings of 2 hours at 6 connection points (multipoint session) and Sågverk: 6 meetings of 2 hours duration 2 connection points (i.e point to point) and some extra hours to contact with trainers and trainees abroad. Total videoconference communication - approximately 110 hours.

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| **PARTNER:** | **Camara Oviedo, Spain** |
| **SME:**<br>**Sector:** | **Ingenieria y Suministros Asturias S. A.** |
| **Target group:** Technical and commercial staff (5 trainees) | |
| **Training Title:** Business Language Training Programme | |
| **Regional pilot description:** The teaching programme targets employees who need specialist skills in connection with their professional activities in order to measure up the demands in international communication. The group chosen will be homogeneous both in their language level as well as their commercial and technical duties. | |
| **Aims:** To develop a distance language training programme for business personnel with commercial and technical duties, based on the results of a language audit, carried out in the participating SME. | |
| **Training content:** Introductions; Directions and Instructions; Work; Meetings; Presentations; Phoning and reservations; Travelling; Negotiating; Business letters; Social situations; Reports; Miscellaneous.<br>*** More information about the content of each module can be found under Appendix 5**. | |
| **Technologies and Training materials used:** DL, using videconferencing in all the sessions plus personal tutorial support. Also each trainee will have a workbook with exercises to complete on their own which will be reviewed during the tutorial sessions. In addition, each trainee will receive video and audio cassettes to support the material in the coursebook, written assignments and specific study guides. A study guide which will include all organisational details will also be developed. | |
| **Interaction:** an extensive interaction with Sweden at various levels is planned. | |
| **Time frame:** Classes are tentatively set to begin on 13 January 1997 and will run for thirteen weeks (envisaged ending date is therefore 13 April 1997). Classes will be held on Mondays, Wednesday and Fridays. Personal tutorials will be held every third Thursday, meetings for specific material. | |
| **Scheduled videoconference sessions:** The same as the time frame, as videoconferencing will be used in all sessions. | |
| **Remarks:** none | |
| **Costing of the network on a regional basis:** The communication costs in Spain are relatively low. 3 hours videoconferencing communication required to participate in the project training working group, 25 hours (13 weeks, three times a week about 0,5 until 1 hour) for videoconferencing in the training and some extra hours to contact with trainers and trainees abroad. Total approximately 30 hours. | |

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| **PARTNER:** | **VIA, Belgium** |
| **SME:** | **Borealis Sector:** Plastics production plant |
| **Target group:** 20 Operators, divided into two groups of 10 persons.<br>10 persons DL and 10 conventional as control group. | |
| **Training Title:** Process Operations for Production Operators | |
| **Regional pilot description:** Older operators might not have the theoretical background which has no direct influence on their capability to perform the job correctly, but which might affect their possibilities to profit from opportunities such as promotion or job rotation. Additionally, it is the aim of the company to reduce the differences between production operators and maintenance operators. | |
| **Aims:** the aim of the training will be to give the operators a theoretical background, not the practice. These courses will provide the production operators with the necessary background to learn the actual maintenance skills and know what to do when a problem occurs. | |
| **Training content:** Maintenance strategy; TPM (Total Productive Management); Flanges; Gaskets; Lubrication; Bearings; Bolts; Seals; Pumps and compressors; Coolers; Corrosion: Electricity and instrumentation; Pipe specifications and valves. The training will consist of approximately 80 hours per trainee - 40 hours of self-study and 40 hours of practical training in the training centre. Each trainee will make a selection out of a range of 36 modules (240 hours of material). | |
| **Technologies and Training materials used:** CD-i's and CD-ROM's and videoconferencing to support teaching. Written material, as little as possible (only for reference purposes). | |
| **Interaction:** Exchange of training materials, especially CD's between The Netherlands, Belgium, Ireland and the U.K. | |
| **Time frame:** March - 30 June 1997 | |
| **Scheduled videoconference sessions:** Approximately 200 minutes per student x 20 = 4000 minutes(= 67 hours of videoconferencing). | |
| **Remarks:** Monitoring of the effectiveness of using this technology for training will additionally take place through control group observations. The assessment of the added value of using of the new technologies will be a very important outcome. | |
| **Costing of the network on a regional basis:** A total of 67 hours of videoconferencing for training which is considerably more than the amount available in the budget - however the training centre and SME have agreed to support these costs.<br>3 hours of videoconferencing required to participate in the project training working group. Within the services budget approximately 15 hours are available for videoconferencing to conduct the training (calculated on an international base. Local or national communication costs will be cheaper, so in the regional pilots partners can spend more hours for the same budget. Approximately a total of 18 videoconferencing hours available. | |

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| **PARTNER:** **TCL, the Netherlands** |
| **SME:** **Textron Automotive**<br>**Sector:** Automotive **Product:** dashbords |
| **Target group:** A group of 24 operators, divided into two groups. 21 persons, studying by Open Learning and 3 persons by **Open and Distance Learning.** |
| **Training Title:** VaPro Open and Distance Learning for Process Operator A and Mechanical Operator A (VaPro certificated) |
| **Regional pilot description:** Trainees will gain experiences in using individual self-study material in the company instead of visiting an open learning centre for three to four hours per week. |
| **Aims:** To train operators from Textron to become certificated mechanical operators. |
| **Training content:** The total training takes 2 - 2.5 years. All trainees are receiving training on the job in their own company. Additionally they visit each week an open training centre (totalling 80 days). VaPro-A is divided into five Study Parts (VaPro-B six Study Parts). Each Study Part contains four Blocks. Each block contains approximately 15 subject lessons and theory which are important for Process Operators. Topics covered include: Environment; Working Conditions and Safety; Process Control; Process Technique; Control Technique; Pneumatic and Hydraulic. The fourth block provides the integration between theory, practice and social training. In the total programme attention is paid to subjects such as safety, maintenance and quality.<br>During the pilot most trainees are working on Study Part III, Block 1 (lesson 1 - 17), Block 2 (lesson 18 - 30), Block 3 (lesson 31 - 51), including 3 CD-i's.<br>*** More information about the content of each module can be found in Appendix 5**. |
| **Technologies and Training materials used:** Videoconferencing to provide real time problem solving and support; Email; Whiteboarding and application sharing; Multimedia in the combination of TV/CD-i and PC/CD-ROM. Also printed individual training material (70%) and CD-i (in total 15 CD-i's = 30% of the training material). |
| **Transregional Interaction:** Exchange of training materials, especially CD's between The Netherlands, Belgium, Ireland and the U.K. and developing together new training materials. |
| **Time frame:** 1997 from week 4 (end of January) until week 26 (end of June) |
| **Scheduled videoconference sessions:** From week 4 until week 26, every week 30 - 45 minutes per trainee to provide support and problem solving. The time of the training time will vary each week as the trainees work on a shift basis. Each week the trainee will make a reservation to meet the mentor by videoconference. Additionally, after the training session in the company trainees will send an email-report to their mentor. |
| **Remarks:** In this pilot TCL is working together with LCB, a training partner of TCL and the SME. TCL will undertake the educational evaluation of the all the regional pilots which will be undertaken by the `Centre for Educational Technology', one of the four TCL-centres. In the Dutch pilot control group assessment will take place. |
| **Costing of the network on a regional basis:**<br>6 hours are required to participate in the project technical and training working groups, 33 hours (22 weeks, 3 persons, each half an hour) for videoconferencing communication within the training and extra hours to realise the international project management. Approximately a total of approximately 45 videoconferencing hours. |

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| **PARTNER:** **RTC TALLAGHT, Ireland** |
| **SME:** **MDS**<br>**Sector:** **Telecommunications** **Product:** Telephone Systems |
| **Target group:** 5 process operators (a mix of test and general operators). |
| **Training Title:** Development of electrical and mechanical skills. |
| **Regional pilot description:** Developing a training programme for Test and General operators to enable them to provide first level fault diagnosis and implement repair, to be delivered via multimedia CBT products customised to the needs of MDS. |
| **Aims:** To develop a training programme for Test operators to enable them to provide first level fault diagnosis and implement repair. Also machine maintenance from an electrical/electronic perspective for general operators to develop the necessary skills to provide first level maintenance and fault/problem definition. |
| **Training content:** There are five distinct modules: DC Fundamentals; AC Fundamentals; Semiconductor Fundamentals; Transistor Amplifier circuits; Digital Logic Fundamentals. *** Breakdowns of each module can be found under Appendix 5**.<br>The objective of these modules is to cover all of the necessary fundamentals, in a descriptive, practically focused, non-mathematical manner. |
| **Technologies and Training materials used:** The course will use a combination of traditional lecture, videoconferenced lecture/tutorial sessions and CBT completed by the participants in their own time. |
| **Interaction:** Exchange of training materials, especially CD's between the Netherlands, Belgium, Ireland and the U.K. |
| **Time frame:** Operational link 6 December 1996; Introductory course session December 16/17 using videoconferencing capability; The formal course commences on 13 January 1997; The course will run for approximately 18 weeks plus a final formal test and evaluation session (week commencing 19/5). |
| **Scheduled videoconference sessions:** Limited videoconferencing for lectures (approx 4 hours over 15 weeks) and tutorials (1-2 hours per week) to provide back up support.<br>**Videoconference sessions:** Dec. 16/17 (intro.); week commencing: 20/1; 27/1; 10/2; 17/2; 24/2; 10/3; 17/3; 31/3; 7/4; 14/4; 28/4; 5/5; 12/5 (2 hrs. per week from 11.30 - 12.30 on Tuesday and Thursdays ).<br>**CBT:** per module: mod.1, 10 hrs.; mod.2, 14 hrs.; mod.3, 8 hrs.; mod.4, 10 hrs.; mod. 5, 14 hrs. |
| **Remarks:** RTC Tallaght will compile a pre and post course test in order to evaluate candidate performance. Successful participants will be awarded a course certificate upon successful completion of the course entitled "Foundation course in Electronics". |
| **Costing of the network on a regional basis:**<br>3 hours required to participate in the project training working group and 25 hours (4 + 14 x 1,5 hours) for videoconferencing to carry out the training plus some extra hours to contact trainers and trainees abroad. Approximately a total of 30 videoconferencing hours available. |

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| **PARTNER:** **North Trafford College, U.K.** |
| **SME:** **Holt Lloyd Ltd., Winsford, Cheshire**<br>**Sector:** automotive **Products:** car after care products, e.g. Paint strays |
| **Target group:** Process operators |
| **Training Title:** A theoretical basic training for process operators |
| **Regional pilot description:** In discussion with the SME establish training needs and make a selection of training areas, useful as a pilot for multimedia material development. |
| **Aims:** To give process operators theoretical background and to train them to the nationally recognised level of competence. The trainees are undertaking a Modern Apprenticeship in Process Plant Operation. This pilot |

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| project will be involved with the City and Guilds Course 060 part 4. This course provides introductory background theory and underpinning knowledge required for the apprenticeship. It includes states of matter, atomic theory, compounds, physical processes and chemical and electrical energy. |
| **Training content:** theoretical lessons for process operators |
| **Technologies and Training materials used:** Tutor-Trainer videoconferencing links will be used to give real time problem solving and applications sharing; CD ROMs and CBT materials including hypertext materials. |
| **Interaction:** not yet planned, but they will interact transregionally particularly with co-operation group 2 (process operator group) and perhaps some interaction will be possible on a trainee level e.g. with the Netherlands, also an automotive company or Ireland and Belgium). |
| **Time frame:** The training commenced via conventional means in October 1996. It will be enhanced with CD_ROM/CBT materials and tutor support via Euro-ISDN videoconferencing. |
| **Scheduled videoconference sessions:** March to June (2 hours per week per trainee). |
| **Remarks:** North Trafford College became a full regional co-ordinator at a later stage in the project hence the organisation of the pilot project with the SME is still taking place. |
| **Costing of the network on a regional basis:**<br>3 hours videoconferencing required to participate in the training working group. Hours, needed for videoconferencing for training purposes approximately 2 hours per week (March- June). |

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| **PARTNER:** **Associazione Centro Elis, Italy** |
| **SME:** **LIUCBM (Libero instituto Universitario Campus Bio-Medico)**<br>**Sector: Health Care** **Services:** hospital |
| **Target group:** 150 trainees (all employees) divided into two groups; one group will go to the training centre and the other one will remain in the LIUCBM. Each group will make-up 5, 10, 20 or 40 persons. |
| **Training Title:** Training project on Italian Safety rules and regulations on behalf of LIUCBM - ROMA. |
| **Regional pilot description:** Distance training will be evaluated to check its effectiveness, in order to extend the lessons to more specific matters regarding hospital safety. It is believed that there will be more specifications of the actual Italian laws on safety near future. It is for this reason why it will be useful to establish a form of continuous training, minimizing the time spent by LIUCBM employees. DL can be a solution for this problem due to the fact that the teacher and trainee do not need to move from their working sites. |
| **Aims:** To provide all the employees with a knowledge of the new Italian rules and regulations about safety in the working environment. Further still, the pilot will provide an experimental setting to determine the maximum number of trainees which can be taught these subjects through videoconferencing. |
| **Training content:** A three day course on the following subjects: (day 1) General Italian rules on safety; Hospital risks (total of 2 hrs.); (day 2) Electrical and Biological risks (2 hrs.); day 3) Fire prevention and emergency plans (2 hrs.).<br>Besides the general training, specific lessons will be provided to the volunteer fire brigade (20 people). They will be able to see different environments in order to study the specific solutions for the evacuation of a hospital. Also a fire extinguishing simulation will be organised by videoconferences. |
| **Technologies and Training materials used:** Videoconference used in a supporting role; file transfer; A hypertext on security and safety, already developed by ELIS and modified to the needs of LIUCBM and adapted to DL tools; the production of specific training material on video tapes. The lessons will be recorded on video tape for the participants to view later to reinforce their knowledge. |
| **Interaction:** Point to point videoconferencing via ISDN will be the easiest solution for delivering a view of another hospital with the capability of interaction with the local volunteer fire brigade. The availability of ISDN has been checked in a major paediatric hospital in Rome and plans are established to contact other hospitals in Italy and in the European Union. |
| **Time frame: in 1997; Start:** February 18; **End:** June 14; **Time:** 14.00 - 16.00.<br><br>**Group x 2:** 05 trainees: 18/2, 21/2, 25/2; 10 trainees: 11/3, 14/3, 18/3;<br>20 trainees: 15/4, 18/4, 22/4; 40 trainees: 6/5, 9/5, 13/5.<br>**Volunteer fire brigade:** 22/3, 19/4, 3/5, 24/5, 14/6 (general and specific training) |
| **Scheduled videoconference sessions:** In all sessions videoconferencing is planned. |
| **Remarks:** All training sessions will be recorded on videotape both for evaluation purposes and as a source of information for the trainees.<br>To evaluate the effectiveness of this teaching method, the trained group will be divided into two - one part will remain in the room with the teacher and the other will remain in LIUCBM. After every lesson, a questionnaire will be distributed to check and compare the level of comprehension between the groups. |
| **Costing of the network on a regional basis:**<br>3 hours required to participate in the project technical working group, 18 hours (3 groups x 3 days x 2 hours) for videoconferencing in the training and some extra hours to contact with other hospitals within and outside Italy. A total of approximately 25 videoconferencing hours available. |

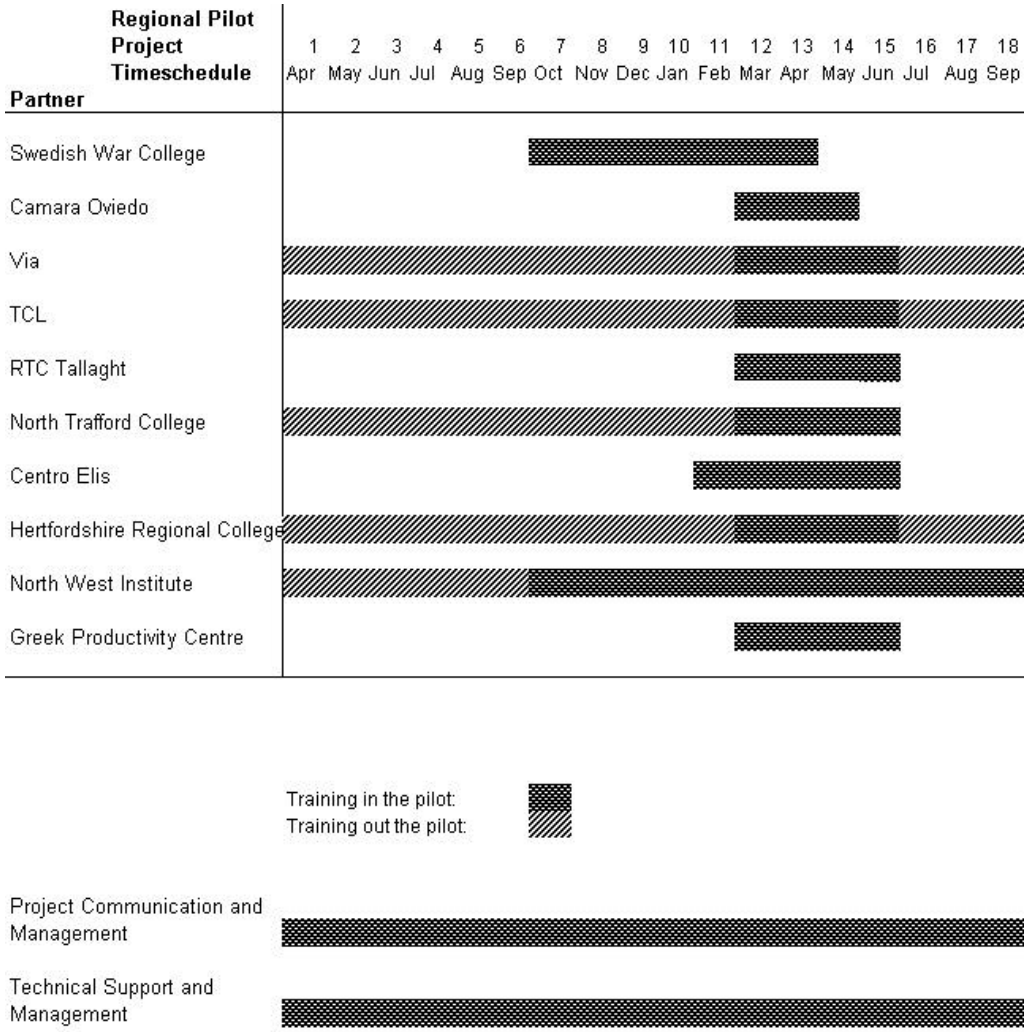
| | |
|---|---|
| **PARTNER:** | **Hertfordshire Regional College, U.K.** |
| **SME:** | **Sector: OFFICE EQUIPMENT** |
| **Target group:** | 10 trainees for C&G Networking Module<br>03 trainees for BTEC Electronics (level NII) |
| **Training Title:** Mathematics, electronics, industry and society. | |
| **Regional pilot description:** In response to the companies current needs the subjects were changed from Autocad to mathematics, electronics, industry and society. | |
| **Aims:** To assess the effectiveness and `Added Value' of the used technologies compared to conventional methods of training. | |
| **Training content:**<br>**C&G:** DTE (Connecting data terminal equipment); PSIN (public switched tel. nw); breakout box use; Installing and using data communication software; LAN; working in a network; Terminology.<br>**BTEC:** Semiconductor diodes; Transistors; Amplifiers; Stabilised power supplies; Combinational logic gates;Networks; Sequential logic systems. | |
| **Technologies and Training materials used:**<br>ISDN-desktop and videoconferencing in addition to written material. | |
| **Interaction:** Perhaps possibilities to exchange information and materials with NorthWest Institute, as in both pilot projects, BTEC modules are offered to the SMEs. | |
| **Time frame:** December 11th until the end of June. | |
| **Scheduled videoconference sessions:** to be determined | |
| **Remarks:** In response to the companies current needs the subjects were changed. | |
| **Costing of the network on a regional basis:**<br>3 hours videoconferencing to participate in the project technical working group. Amount of hours of videoconferencing to take place to conduct the regional training not yet finalised - (it should be noted that UK communication costs are high). | |

| | |
|---|---|
| **PARTNER:** | **North West Institute of Further and Higher Education, U.K.** |
| **SME:** | **Total Engineering Sector: Process Control** |
| **Target group:** 1 DL trainee, 1 traditional. Both at the same stage of development (completed the first year of a BTEC National Certificate Course, recruited directly from secondary school, with 1 years industrial experience). Approximate age of trainees 18-20. | |
| **Training Title:** BTEC National Certificate (Electronics Module) final year | |
| **Regional pilot description:** The students in the project are in full time employment. Their employers, for various reasons, cannot afford to have them absent for one day each week to undertake a traditional day release course. These students, however, must fulfill the requirements of BTEC to cover the necessary theory and practical work involved in the subject. Both students will be monitored on a regular basis by using phase tests and assignments to assess their progress. | |
| **Aims:** To enable employees and employers to undertake all relevant tests and course work associated with the module, being studied. Students will be credited with this module if successful. | |
| **Training content:** Power Amps; Oscillators; Noise; Combinational Logic Design; Minimisation Techniques; Sequential Logic Design. | |
| **Technologies and Training materials used:**<br>**New technologies:** ISDN-desktop videoconferencing. The system will be set up to allow desktop and video conferencing between student and tutor. The communication will be interactive to provide maximum tutorial support to the student.<br>**DL:** Computer Based Learning consisting of software based lessons, written course, practical exercise equipment and material.<br>**Conventional:** Text books, lesson notes, tutorial materials | |
| **Interaction:** possibilities to exchange information and materials with Hertford Regional College, because both offer BTEC modules to the SME. | |
| **Time frame:** Already started. | |
| **Scheduled videoconference sessions:** not yet determined. | |
| **Remarks:** none | |
| **Costing of the network on a regional basis:** 5 hours of videoconferening to participate in the project technical and training working groups. Time spent on videoconferencing to carry out the training not finalised. The international communication costs are high consequently attention should be paid to remain within the allocated budget. | |

| |
|---|
| **PARTNER:** **Greek Productivity Centre, Greece** |
| **SME:** Hellenic S.A., manufacturers of titles shotguns, mortars and ammunition. Construction of “Artemis 30" antiaircraft system; engineering and manufacturing of aircraft liquid fuel storage tanks, external stores and ground support equipment for fighting aircrafts.<br>**Sector:** Arms Industry |
| **Target group:** **10 employees** |
| **Training Title:** Application Training |
| **Regional pilot description:** to be finalised |
| **Aims:** To train people to use windows, word and excel. |
| **Training content:** training in the use of Windows, Word and Excel |
| **Technologies and Training materials used:**<br>Videoconferencing to be used in a supporting role; Application sharing; CD-ROM. |
| **Interaction:** possibilities to exchange knowledge with partners (SME works on-line) |
| **Time frame:** March-June : 20 days Windows; 25 days for Word and 1 month for Excel. |
| **Scheduled videoconference sessions:** Each group of 5 trainees will receive 2 x per week (1-2 hours) of videoconferencing training. |
| **Remarks:** Still experiencing barriers with regards to the telematic infrastructure of the region (installing ISDN lines) - however, the national telecom company is currently solving the problem.<br>If necessary, the regional co-ordinator will be able to visit the offices of the national telecom operator to use videoconfefrencing facilities. |
| **Costing of the network on a regional basis:**<br>3 hours required to participate in the project training working group. But if ISDN 2 is available, the communication cost are the cheapest. |

**Overview Regional Pilot Time Schedules**

The table below illustrates in which months the regional pilot trials will take place.



## 4. TRANSREGIONAL OPERATIONAL PLANS

As outlined in Deliverable 3 - First Phase Report and Feasibility Study, interactions between the regions will occur at various levels.

These interactions range from a basic level where the Euro-ISDN will be used for communication purposes with the project management and other regional partners, to an advanced level where Euro-ISDN will be used exchange experiences; support and guide trainees; deliver a training course/part of a training course and to develop training concepts and training materials.

### 4.1 Basic transregional operational plans

| **Nature of Meeting** | **Frequency** | **Members/ Country** |
|---|---|---|
| Project Management (Project Management Committee meeting) | every 6 weeks | Technology Centre Limburg, NL<br>NorthWest Institute, U.K<br>Western Connect Ltd, U.K |
| Technical Working Group (either one-to-one with Technical Manager or multi-point session) | every 6 weeks | Western Connect Ltd, U.K<br>RTC Tallaght, IRL<br>Associazione Centro Elis, I<br>Technology Centre Limburg, NL<br>Swedish War College, S<br>Hertford Regional College, U.K |
| Training Working Group (either one-to-one with Project Manager or multi-point session) | every 6 weeks | Technology Centre Limburg, NL<br>North West Institute, U.K<br>VIA, B<br>Greek Productivity Centre, G<br>Swedish War College, S<br>North Trafford College, U.K<br>Camara Oviedo, E |

## 4.2 Advanced Transregional Plans

As indicated in Deliverable 3, the project management has identified 3 transregional co-operation groups. These groups are made up of those regional pilots involving training in similar subject areas. Due to a change in the subject content of the regional pilot, Hertfordshire Regional College will be the fourth partner to join the transregional co-operation group 2 (process operator).

After discussion at the project meeting in Sitges, all partners agreed with the proposed outline for the co-operation groups. During the meeting, participants divided into the co-operation groups to clarify and plan the transregional activities to take place during the project.

As a result, the following transregional activities were decided upon:

**CO-OPERATION GROUP 1**

**Members:** Swedish War College, Sweden
Camara Oviedo, Spain

**Operational plans:**

**TRAINING AREA 1 - Language Training**

1. **15 October** - First video/tele-conference session to link regions. The aim of this link will be to introduce the teachers and students to each other and define the contents of each course and discuss the transregional dimension;
2. Exchange of Spanish trainer to Sweden to receive information concerning the Swedish project and also to receive training in the use of videoconferencing;
3. Plan a videoconference to deliver common training session on Swedish and Spanish business cultures;
4. Plan videoconference sessions to provide the opportunity for the trainees to exchange experiences of using the technologies provided by Euro-ISDN and to assess the `added value`;
5. Jointly develop project evaluation guidelines.

**TRAINING AREA 2 - NNP Pilot Project**

1. Link regional experts/managers of local diary industries to compare their experiences of EU agricultural policies;
2. Possible linking of english speaking farmers via e-mail to discuss their experiences of EU agricultural policy;
   It emerged during discussions that both regions have strong dairy industries.

**CO-OPERATION GROUP 2 - Operator Training**

**Members:** VIA, Belgium
TCL, the Netherlands
RTC Tallaght, Ireland
North Trafford College, U.K.
Hertfordshire Regional College, U.K.

**Operational Plans:**

November 1996: Initial training and familiarisation - distribution of detailed information concerning the training to be delivered during each regional pilot (module breakdowns). Also distribution of details concerning new subject areas currently being developed within organisations as well as the names of the trainers and developers involved in this process.

December 1996: Bi-lateral videoconference to discuss needs of companies. Agree elements of course of study which can benefit from transnational activity. Link via e-mail or videoconference the trainers and developers of programmes to discuss development of training activities using available resources (such as laser technology, PLC and Fuzzy Logic).

January 1996: Agree schedule for trainers/developers co-operation.
Study visit of RTC Tallaght partner to TCL and VIA to investigate further the use of existing common training materials.

**CO-OPERATION GROUP 3 - Assessment of `Added Value' of ISDN Based Technology**

Members: Associazione Centro Elis, Italy
Hertfordshire Regional College, U.K.
Greek Productivity Centre, Greece
NorthWest Institute, U.K

Oct-Nov 1996: Initial training and familiarisation
Dec-Jan 1996/7: Agree elements of courses which can benefit from transnational activity
Feb 1997: Agree schedule for Student/SME participation.

## 5. EVALUATION PROCEDURES AND MECHANISM

A set of evaluation criteria based on the Feasibility study have been defined both from a technical and pedagogical perspective.

The mechanisms and procedures for the project evaluation from both the trainer and the trainee perspective have been defined as described in sections 5.1 and 5.2.

As outlined in the details concerning the Swedish pilot projects, additional evaluation of the two Swedish pilots is being undertaken by students from the Personnel Administration Department of the Mid Sweden University. This evaluation will particularly focus upon the learner experiences and will evaluate the use of the computer conferencing system, FirstClass, as well as videoconferening.

The additional evaluation reports from the Swedish pilots will be incorporated into the final TaRgET project report.

Additionally, in order to monitor the effectiveness of using this technology for training, certain regional pilots (VIA, Centro Elis, TCL, North West Institute) have established control groups (made up of conventional students and distance learning students receiving training via videoconferencing, e-mail) to compare the level of comprehension between the groups.

The Italian training sessions will also be recorded on video tape both as an evaluation tool and to provide a source of information for the trainees.

### 5.1 Trainer Evaluation

In order to ensure that the trainer experiences of the platform are fed back into the functioning of the systems and operational procedures, a structured continuous evaluation mechanism has been established.

### 5.1.1 Technical Evaluation

| Nature of Questionnaire | Purpose | Frequency |
|---|---|---|
| Technical Performance Check | To log the technical experiences of each video-conference link | To be completed after each videoconference session |
| Ongoing performance monitoring | to evaluate:<br>- operational performance<br>- userfriendliness<br>- user reaction<br>- user competence<br>- support<br>- documentation | To be completed on a monthly basis and submit-ted to Technical Manager |

The format of these questionnaires will be incorporated into D5 and distributed to all partners during December 1996 by the Technical Management.

The purpose of these questionnaires will be to evaluate the ongoing performance of the Nokia Mediastations.

### 5.1.2 Tutor/Trainer Educational Evaluation

The Technology Centre Limburg will be responsible for the ongoing educational evaluation of the regional pilot projects.

Trainers will be requested to complete evaluation forms as outlined overleaf which will be submitted to the Technology Centre.

| Type of Questionnaire | Purpose | Frequency |
|---|---|---|
| Tutor/Trainer Ongoing Educational Evaluation **(Appendix 1)** | To assess educational experiences of each videoconference session/e-mail support facility | To be completed after each session |
| Tutor/Trainer Final Educational Evaluation **Appendix 2)** | To evaluate overall experiences of pilot | To be completed at the end of the pilot |

### 5.2 Trainee Evaluation

Trainees taking part in the pilots will be requested to complete an interim evaluation one month after the commencement date of the pilot and a final evaluation report after the last videoconference session. If required, it will be the responsibility of the regional co-ordinators to translate the questionnaires into the native language.

| Type of questionnaire | Purpose | Frequency |
|---|---|---|
| Trainee Interim Evaluation **(Appendix 3)** | to assess initial trainee reaction and experiences | To be completed one month after the commencement of the pilot |
| Trainee Final Evaluation **(Appendix 4)** | to establish final experiences | To be completed after the last videoconference session of the pilot |

The trainee questionnaires will be distributed and collected by the regional co-ordinators who will in turn submit them to the project management, Technology Centre Limburg on completion (i.e to be submitted after the first month of the pilot and after the last videoconference session).

This procedure will ensure that the project management can effectively monitor the performance of the platform and, if necessary, rectify any problems.

## 6. REGIONAL PLATFORM COSTS ANALYSIS

Where required by partner organisations and participating SMEs, the TaRgET project communication costs budget will pay for the installation of one Basic Rate Access ISDN connection, monthly rental and for the costs to obtain an email address.

The allocated budget will also pay for the communication costs associated with the videoconferencing activities within the project.

The following tables provide an indication of the installation and communication costs partners can expect in this project.

The first table below outlines the average costs to call abroad (at noon without any discount or special offer).

**Comparative costs in Ecus of EuroISDN per minute at data standard rate**

| | *Destination Country* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Source Country*** | *Belgium* | *Greece* | *Ireland* | *Italy* | *Netherlands* | *Spain* | *Sweden* | *UK (BT)* | ***Totals*** |
| Belgium | | 0,55 | 0,51 | 0,51 | 0,43 | 0,55 | 0,65 | 0,43 | 0,52 |
| Greece | 0,46 | | 0,46 | 0,38 | 0,46 | 0,46 | 0,46 | 0,46 | 0,46 |
| Ireland | 0,61 | 1,28 | | 0,90 | 0,61 | 0,90 | 0,90 | 0,51 | 0,90 |
| Italy | 0,60 | | 0,60 | | 0,60 | 0,60 | 0,60 | 0,60 | 0,60 |
| Netherlands | 0,41 | 0,59 | 0,57 | 0,57 | | 0,57 | 0,39 | 0,41 | 0,57 |
| Spain | 0,51 | 0,51 | 0,51 | 0,51 | 0,51 | | 0,51 | 0,51 | 0,51 |
| Sweden | 0,48 | 0,78 | 0,48 | 0,27 | 0,48 | 0,57 | | 0,48 | 0,48 |
| UK (BT) | 0,78 | 0,78 | 0,67 | 0,78 | 0,78 | 0,78 | 0,78 | | 0,78 |
| | | | | | | | | | |
| **Totals:** | 0,55 | 0,64 | 0,54 | 0,56 | 0,55 | 0,63 | 0,61 | 0,49 | |

The table overleaf, provides a detailed estimated costing overview of the platform per region. All figures are in ECU.

## Estimated platform cost overview per region

| Country | 1. Installation fee (Partner and SME) | 2. Rental costs - 12 month (Partner and SME) | 3. E-mail address costs | Communication costs per partner= 2455 ECU Minus costs of sum of columns 1-3 = remaining budget for communication costs | Average Regional VC Communication Costs per hour (for international connection) | Hours of VC, available based on international communication costs | Average hours of VC needed for pilot |
|---|---|---|---|---|---|---|---|
| **Belgium** | 227 ecu x 2 = 454 | 30 ecu x 2 x 12 = 720 | 120 | - 1294 = 1161 | 0,52 x 2 x 60 min. = 62 ecu | 1161 : 62 = VC approx. 19 hours | 70 |
| **Greece** | 170 ecu x 2 = 340 | 34 ecu x 2 x 12 = 816 | 120 | - 1276 = 1179 | 0,46 x 2 x 60 min. = 55 ecu | 1179 : 55 = VC approx. 21 hours | 39 |
| **Ireland** | 550 ecu x 2 = 1100 | 46 ecu x 2 x 12 = 1104 | 120 | - 2324 = 131 | 0,82 x 2 x 60 min. = 98 ecu | 131 : 98 = VC approx. 1 hour | 30 |
| **Italy** | 213 ecu x 2 = 426 | 27 ecu x 2 x 12 = 648 | 120 | - 1194 = 1261 | 0,60 x 2 x 60 = 72 ecu | 1261 : 72 = VC approx. 17,5 hours | 25 |
| **NL** | 218 ecu x 2 = 436 | 25 ecu x 2 x 12 = 600 | 120 | - 1156 = 1299 | 0,57 x 2 x 60 min. = 69 ecu | 1299 : 69 = VC approx 19 hours | 45 |
| **Spain** | 245 ecu x 2 = 490 | 41 ecu x 2 x 12 = 984 | 120 | - 1594 = 861 | 0,51 x 2 x 60 min. = 61 ecu | 861 : 61 = VC approx 14 hours | 30 |
| **Sweden** | 352 ecu x 0 = 0 | 36 ecu x 2 x 12 = 0 | First class (BBS) 0 | - 0 = 2455 | 0,48 x 2 x 60 min. = 58 ecu | 2455 : 58 = VC approx 42 hours | 110 |
| **UK** | 492 ecu x 2 = 984 | 35 ecu x 2 x 12 = 840 | 120 | - 1944 = 511 | 0,76 x 2 x 60 min. = 91 | 511 : 91 = VC approx 5,5 hours | HRC 30<br>NTC 30<br>NWI 50 |
| **Western Connect Techn. Man.** | Already available<br>0 | 0 | 0 | - 0 =2455 | 0,76 x 2 x 60 min. = 91 | 2455 : 91 = VC approx 27 hours | 27<br>27 |

Conclusions - regional cost analysis

Regional co-ordinators must try to minimalise the communication costs, especially Ireland and the UK. International costs using ISDN are still very expensive due to the fact that 2 lines will be used at one time.

Nevertheless, the advantage is that travel costs and travel time will be reduced as trainers and project partners will use videoconferening in place of face-to face meetings.

Given that not all partners and SMEs will need to invest in ISDN installation, rental costs or to receive an email address (as they will utilise existing facilities) and considering that they may receive reduced communication prices or can use local communication cost prices the total estimated costs (which have been calculated using the highest current estimations) may well be reduced.

Additionally, it should be noted that the calculation has been based on international communication costs.

Local communication costs are a lot cheaper (for instance TCL/NL international Av. 69 Ecu per hour. Local 25 Ecu per hour during the day).

## 7. BUSINESS PLAN OUTLINE

The economic implications and operation of the TaRgET project will be analysed through the production of a Business Plan to be completed during WP 9 - Analysis and Final Report.

The framework for the Business Plan will be based upon the check list (overleaf) which has been provided as guidelines by DGXIII.

The plan will address issues stemming from each phase of the project from the feasibility study to the planning and preparation through to deployment and operation. The plan will provide all necessary information to ensure that a potential investor can evaluate the economics of the project and ascertain its commercial viability as well as any drawbacks or risks that may be associated with it.

## 8. CONCLUSIONS

Based on the results and recommendations from Deliverables 1-3, the activities which have taken place during workpackage 5 have lead to the establishment of a strategy for the overall design and operation of the platform.

The activities described in Deliverable 4 will take place during both phase 2 of the project activities (Implementation and Planning) and Phase 3 (Operation and Evaluation).

As outlined in Chapter 2, after technology evaluation and the results of a call for tender, the Nokia Mediastation equipment has been decided upon to carry out the project activities and will soon be installed in all regional co-ordinator organisations and the majority of participating SMEs.

Both technical training and training in the use of videoconferencing has been identified and orgainsed for all partners who will in turn transfer the knowledge gained to SME trainees.

Detailed regional pilot project plans both in terms of training content to be delivered and timeschedules for videoconference sessions have been established in 90% of pilots. The remaining pilot details will be clarified during December.

Interactions between the regions have also been identified and agreed upon.

The established evaluation mechanisms will ensure that relevant information is fed back into the functioning of the systems and operational procedures. Additionally, the continuous evaluation will produce effective results to be included in the Final report. This thorough evaluation will further be aided by the outcomes of additional evaluation activities to be conducted in certain regions.

The estimated costing of the network on both a regional and transregional basis will be used to define the overall economic evaluation of the system.

The framework for the Business Plan will ensure that all participants are aware of economical and other issues to be addressed in the final report.

From January 1997 onwards the TaRgET project will enter the third Phase of activities which will involve the operation and evaluation of the trans-regional network.