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COMETT PROGRAMME

REPORT OF 1993 ACTIVITIES

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EXECUTIVE SUMMARY

COMETT I, the Community Action Programme for Education and Training for Technology, was adopted by the Council Decision 86/365/EEC of 24 July 1986. Following a preparatory year in 1986, the operational phase of the COMETT I programme was for three years (1987-1989).

The second stage of the programme - COMETT II - for the period 1990-1994, was adopted by the Council in December 1988 (Decision 89/27/EEC) and came into operation on 1 January 1990. COMETT II aims at reinforcing training in technology (particularly advanced technology), the development of highly skilled human resources and the competitiveness of European industry. COMETT II is not simply an extension of COMETT I but a development, a deepening and broadening of the scheme. The Decision re-emphasises COMETT's role as a Community Programme for advanced training for technology and its applications but places increased stress on changing skill requirements and regional needs.

With the beginning of this second phase and in accordance with the Council Decision of 22 May 1989, universities and enterprises of the Member States of EFTA (European Free Trade Association) can take part in the COMETT Programme.

The estimated amount for COMETT II for the period 1990-1994 is 200 MECU; in addition, there is the contribution of the EFTA countries for this period amounting to 30 MECU.

Of the projects submitted in 1993, 597 were selected for funding. The 177 accepted projects for student exchanges financed more than 7,700 student placements; 228 transnational secondments of university and industry personnel were organised in this year. As far as short training courses are concerned, 188 training projects were accepted and 487 training courses and 733 course sessions were organised with COMETT funding. In addition, there were the training courses in operation since 1992, that is, a further 762 training courses and 1,286 course sessions were financed by COMETT. In the period 1990-1993 over 40,000 persons received training with COMETT Strand Ca courses. More than 3,000 training materials were developed in this period.

In total, the 1993 COMETT projects involve 6,200 enterprises, 1,900 universities and 2,400 other organisations.

In 1993 an independent evaluation of the COMETT programme was completed. Launched in 1992, this external evaluation was carried out at the request of the Commission and its purpose was to obtain an objective assessment of the COMETT programme and its achievements to date. The originality of this third evaluation was that it was based on a "three-pronged" approach. Following the Tender launched by the Commission in May 1992, an independent consultancy firm, *GMV Conseil S.A.*, France, was appointed to conduct the external evaluation of COMETT. At the same time, a panel of seven experts, appointed by the Commission, conducted a separate assessment of the programme. In addition, an extensive programme of National Evaluations was conducted to assess the impact of COMETT II at national and regional level. While the report of *GMV Conseil* states that 'COMETT has greatly contributed to the remodelling, enlargement and internationalisation of the cooperation network of project contractors', the panel of experts put forward concrete recommendations about future Community policy in the field of training and cooperation between universities and industry. Together, the three independent evaluations stress that COMETT with its multi-faceted character has been actively and successfully engaged in preparing the citizens of the Community for the challenges of advanced technology and tomorrow's Europe.

In the year under review, COMETT participated in a number of important conferences. Entitled *Cooperation between higher education and industry - the experience of COMETT* and hosted by the Danish Ministry of Education a conference took place in Aalborg, Denmark, on 13-15 June 1993. - For the second year running, COMETT took a stand at the Hannover Fair (21-28 April, 1993). The COMETT presentation focused on training activities which illustrate how technological challenges in key areas

of European industry can best be met by joint R&D and training efforts involving universities and enterprises. - One full day of the 8th World Conference on cooperative education, Dublin/Ireland (30.8-3.9.1993), was devoted to COMETT student placements. The conference provided a good opportunity to present COMETT, particularly Strand Ba, as a showcase for European programmes. - Supported by the Task Force Human Resources, Education, Training and Youth, and entitled *Human resource development - catalyst for regional growth and employment*, a conference was held in Letterkenny, Co Donegal/Ireland (9-11 September 1993). In addition to the case studies which were presented in plenary sessions, six parallel workshops were run by COMETT promoters on R&D, Human Resources, Multimedia, Rural Development, Entrepreneurial Skills, and Technology Transfer. - COMETT made a major contribution to the conference entitled *Research, training and agriculture in Europe : new challenges*. Held in Brussels (3-4 November 1993), the conference was organised by DG XII (Science, Research and Development) and DG VI (Agriculture and Rural Development) with the assistance of the Task Force. - Finally, Antwerp hosted a conference (9-10 December 1993) on the quality of continuing education resulting from university-industry cooperation. The conference was organised by the COMETT Information Centres of the Flemish and French Communities in Belgium. Based on the accumulated experience of the COMETT Pilot Projects, the Antwerp conference developed guidelines to ensure quality in continuing education.

Towards the end of 1993 the European Commission put forward proposals for a new generation of programmes, **LEONARDO DA VINCI** and **SOCRATES**, which will replace the current programmes - including COMETT - which are due to end on 31 December 1994. It is the first of these programmes, **LEONARDO DA VINCI**, which has been designed to provide a follow-up to the Community programmes COMETT, PETRA, (initial training), FORCE (continuing training) and EUROTECNET (innovation). While consolidating the achievements of these programmes, **LEONARDO DA VINCI** will also introduce innovatory aspects to respond to new challenges facing the Community.

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I. BACKGROUND : THE ORIGINS AND OBJECTIVES OF THE COMETT PROGRAMME

The COMETT programme is unique in the Community as the only transnational programme in training for technology through university-industry cooperation. In order to strengthen the relation between higher education and economic life, COMETT supports a broad range of activities, all of which are related to technological change and development. These different activities of cooperation are deeply complementary, constituting a common pattern of institutional cooperation for technological development. COMETT's main objective is the development of networks and partnerships allowing the transfer and exchange of experience, knowledge and know-how and in the context of university-enterprise cooperation.

COMETT stands for COMMunity programme for Education and Training in Technology. The programme was designed to develop university-industry cooperation in the area of technology training (both initial and continuing training).

The first phase of the programme was established by the Council Decision 86/365/EEC of 24 July 1986. Following a preparatory year, COMETT I ran for three operational years, from 1987-89. The second stage of COMETT, for the period 1990-94, was adopted by the Council in December 1988 (Decision 89/27/EEC). COMETT II came into operation on 1 January 1990.

With the beginning of this second phase and in accordance with the Council Decision of 22 May 1989, universities and enterprises of the Member States of EFTA (European Free Trade Association of Austria, Finland, Iceland, Norway, Sweden, Switzerland and Liechtenstein) were entitled to take part in the programme.

The COMETT programme will finish at the end of 1994. In the year under review COMETT II moved firmly into the second half of its duration and most projects had reached a stage where they registered good results.

COMETT in 1993

- In 1993 more than 7,700 transnational student placements were supported by the COMETT programme and more than 200 personnel exchanges from universities to industry were funded.
- Approximately 500 joint training courses were funded by COMETT.
- In total, the 1993 COMETT projects involve 10,800 European organisations, i.e., 6,200 enterprises, 1,900 universities and 2,400 other organisations.
- Thanks to COMETT-supported training courses, more than 43,000 persons have benefitted. More than 75,000 teaching hours have been delivered and some 1,000 different training materials have been produced during this period.

1.1 The objectives of COMETT

The programme aims to reinforce training in technology (particularly advanced technology), the development of highly skilled human resources and the competitiveness of European industry. As such, COMETT represents an important part of the Commission's overall programme in the education and training field. By supporting the development of university-enterprise links on a transnational basis, COMETT assists in the development of systems and mechanisms to identify and provide solutions for the high skill needs of industry in the field of technology. In doing so, COMETT also contributes to the development of social and economic cohesion across the Community. This aim is reinforced by COMETT's contribution in the transfer of technology to the less developed regions.

The specific objectives of COMETT II laid down by Article 3 of the Council Decision of 16 December 1988 are :

- ▶ **The contribution of technology training to economic and social development**
'to improve the contribution of, in particular, advanced technology training at the various levels concerned and thus the contribution of training to the economic and social development of the Community';
- ▶ **Joint university-industry efforts**
'to foster the joint development of training programmes and the exchange of experience, and also the optimum use of training resources at Community level, notably through the creation of transnational sectoral and regional networks of, in particular, advanced technology training projects';
- ▶ **The training needs of small and medium-sized firms**
'to respond to the specific skill requirements of small and medium sized businesses having regard to specific priority measures';
- ▶ **Equal training opportunities for men and women**
'to promote equal opportunities for men and women in initial and continuing training in, in particular, advanced technology';
- ▶ **Promoting the European dimension**
'to give a European dimension to cooperation between universities and industry in initial and continuing training relating to technologies and their applications and transfer'.

II. THE COMETT PROGRAMME - CHARACTERISTICS, DEVELOPMENT AND RESULTS IN 1993

2.1 The operational components

The primary objective of the COMETT programme is to develop university-industry cooperation in the area of technology training. To achieve this, the programme focuses on four main areas of activities, each of which constitutes a *Strand* within the programme as a whole.

The COMETT programme centres on the following areas of activity:

- European network of university-enterprise training partnerships (Strand A)
- Transnational student placements and personnel exchanges (Strand B)
- Short training courses and training materials (Strand C)
- Complementary measures (Strand D).

2.2 European network of University-Enterprise Training Partnerships (Strand A)

University-Enterprise Training Partnerships (UETPs) are the backbone of the COMETT programme. Acting as 'interfaces' between the academic world and industry, UETPs analyse the training needs of a given region or technology sector. Working in close cooperation with each other, UETPs provide specialised information services and organise student placements. They can identify the best available skills in Europe in a particular subject area and organise training projects tailored to specific needs. By bringing together universities, enterprises, research organisations, institutions and end users, COMETT UETPs provide an ideal platform for closer cooperation. Since the beginning of COMETT II, in 1990, they have organised over 20,000 student placements in industry, and approximately 500 personnel exchanges. More than 100,000 people have benefitted from COMETT-supported training.

By 1993 COMETT had set up 205 UETPs in 19 countries throughout Europe operating on a local, regional, national and European level. UETPs may be *regional* or *sectoral* in nature.

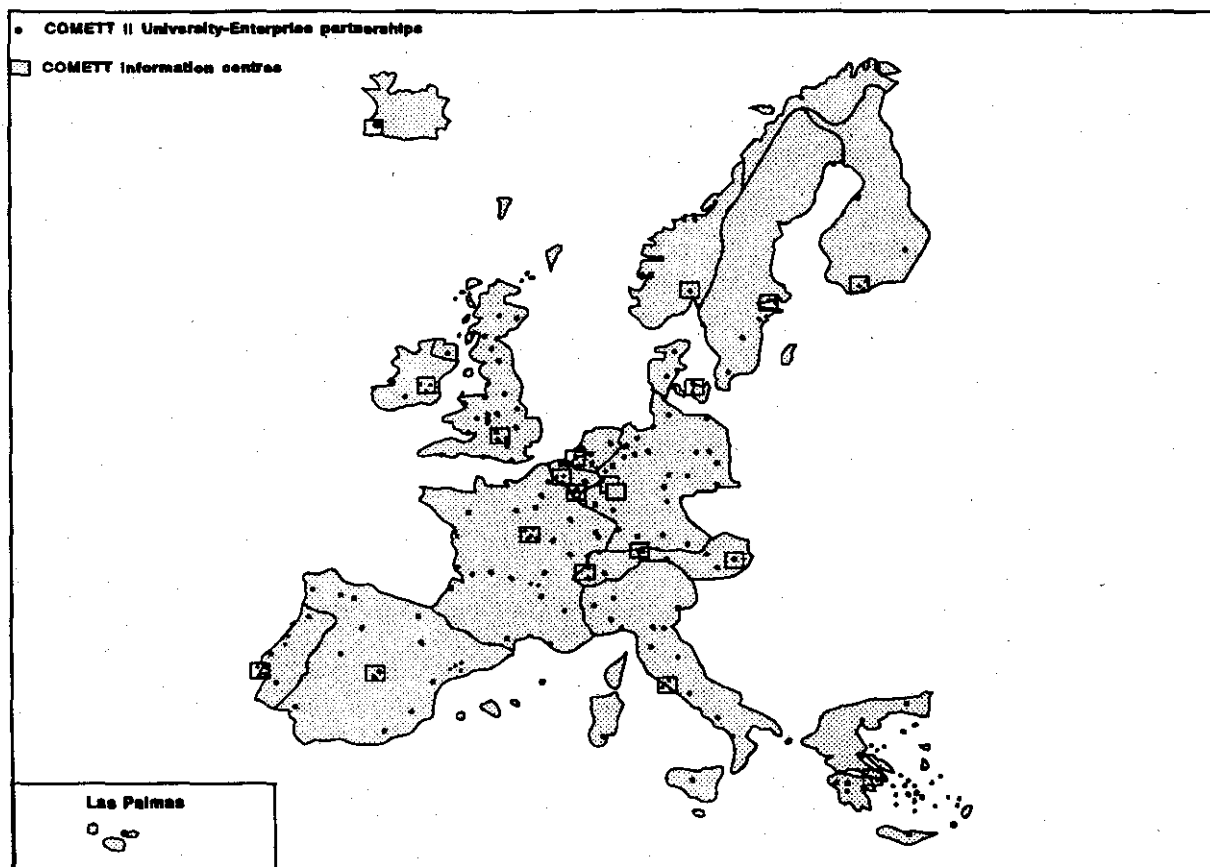
Regional UETPs bring together groups of universities and enterprises in joint training projects within a specific geographic area under the auspices of public or private authorities. Regional UETPs can have a significant impact on training in their regions and cover the greater part of the Community and EFTA countries. More than two thirds of Europe's regions have a regional UETP under COMETT II.

Sectoral UETPs bring together universities, enterprises and other associations, on a transnational basis, within a specific industry or technology sector to improve training in that field. The sectoral UETPs accepted under COMETT II span a broad range of technology sectors.

► *Developments and results 1993*

2.2.1 The 1993 Call for Applications was restricted to UETPs and no fewer than 613 applications were submitted, that is, UETPs applied for 32,000 student placements, 420 personnel exchanges and 2,300 short courses. In all, 85% of the proposals were submitted by EC Member States and 15% by EFTA countries.

2.2.2 Of the projects submitted by UETPs in 1993, 597 were selected for COMETT funding covering 487 short training courses and 733 course sessions. In addition, there were the training courses in operation since 1992 covering 762 training courses and 1286 course sessions.



The geographic coverage of COMETT UETPs in 1993

2.2.3 Strategic initiatives for UETPs

The 1993 Call for Applications saw the introduction of two new strategic initiatives: the **Strategic Development Plan** and the specific measures to support the UETPs strategic development. Both initiatives are intended to consolidate UETP activities and ensure their future development and viability once COMETT funding ceases. As far as the Strategic Development Plan is concerned, all UETPs responding to the 1993 Call were required to complete this plan. Its purpose is to enable the Commission to assess the situation of each UETP in terms of its internal organisation (staff and management) and external activities (within the region or sector in which it operates).

► *Results of the 1993 strategic initiatives*

The results of the strategic initiatives relate to three main areas:

- added value for the COMETT programme
- UETP behaviour models
- future activities, which are not necessarily immediately related to the objectives of the COMETT programme.

The 1993 COMETT Application Package gave university-industry consortia the opportunity to develop the subject matter and strategic objectives. In conclusion, it can now be reported that mature UETPs have not only developed future strategies but that there is a strong and positive correlation between the specific strategies for the future of cooperation as proposed

in January 1993 by the UETPs from their grass-roots perspective and the overall strategy for the future of the European cooperation as proposed by the Commission in the preparatory Guidelines and discussion documents which were circulated for public debate from May 1993 onwards.

2.2.4 Review of the UETPs

According to the Council Decision of 16 December 1988 the 1990 UETPs were approaching the end of their period of core funding. In view of this, the Commission launched in 1993 review procedures for these UETPs. The objective of this review was to analyse the UETPs' capacity to continue their activities without direct Community support.

Analysis of the past performance of the 158 UETPs concerned, identified 17 'critically' weak structures. A review team, comprising officers from the Task Force, members of the COMETT Experts Group and staff from the COMETT Technical Assistance Office, undertook the assessment of these UETPs. Representatives of 10 of the UETPs were invited for review meetings, while the remaining 7 UETPs were discussed by the review team. The team of 5 COMETT Experts taking part in the review procedures, carried out written analyses of the 17 identified weak UETPs.

As a result of these review procedures and in consultation with the COMETT Committee, the Commission was able to take the necessary decisions on the discontinuation of certain UETPs, and on reducing the level of allocation available under the 1993 Call for Applications for a number of UETPs.

2.3 Transnational exchanges (Strand B)

The grants for transnational exchanges fall into two categories:

- ▶ **Student placements:** COMETT provides grants to students and recent graduates to complement their coursework with high-quality work experience relevant to their field of study. Participants carry out an industrial placement in a company in another Member State or EFTA country and the training period lasts from between 3 and 12 months (Strand Ba).
- ▶ **Exchange of personnel:** These grants provide fellowships (2-12 months) for personnel seconded from universities to industry or vice versa in another Member State or EFTA country to bring their skills to the host organisation (Strand Bc).

Transnational exchanges of students and personnel are a major activity developed by the UETPs. Over the years the interest in this Strand has steadily increased. As the results clearly show, it is not only the students who benefit from these exchanges. As far as students are concerned, the benefits include a travel grant, living expenses, language training plus the chance to match academic interests with real company needs leading to improved job opportunities. The host company gains an extra staff member with specific technical skills, access to innovation as well as links to a network of European partners for R&D cooperation.

▶ *Developments and results 1993*

2.3.1 In the year under review, COMETT accepted 177 projects. These projects provided grants for 7,700 student placements (compared to 6,900 placements in 1992).

2.3.2 Of the 420 applications submitted for personnel exchanges, COMETT selected 86 projects with which 228 exchanges of staff were organised.

- 2.3.3 1989 saw already the beginning of the 'Pool' system. Under this scheme, COMETT university-enterprise training partnerships receive from the Commission a 'pool' of student placement grants which can be allocated flexibly over the ensuing academic year to students undertaking a placement in industry in another Member State. Initially designed for student exchanges only, the pools were extended in 1991 to include the organisation of training courses.

Through the pool procedure, UETPs can demonstrate their potential for identifying qualification gaps or industrial training needs. The UETP can advise its partners on the transfer of expertise and knowledge. The great success of the 'Pool' procedure is reflected in the fact that the majority of COMETT UETPs are participating actively in this scheme.

- 2.3.4 Supported by the Task Force Human Resources, Education, Training and Youth, and prepared under the COMETT Positive Actions programme, the COMETT student guide *'Transnational student placements : the COMETT experience'* was published in Spring 1993. The work was contracted to Jan Tunnock Associates (UK) and UETP Picardie (F), and the COMETT Technical Assistance Office edited the text.

The Guide draws heavily on the experience of COMETT in operating transnational placements in Member States and EFTA countries. It is aimed principally at COMETT UETPs operating Strand Ba student placement programmes. Intended as a practical working tool, the Guide will assist the organisation of effective student industrial placements.

However, the Guide has been compiled with a wider audience in mind and anyone organising or wishing to start a European exchange programme should find general guidance on operational aspects as well as useful examples of good practice.

The Guide attempts to address some of the barriers hindering successful higher education-industry student exchanges. These barriers, identified in the Memorandum on Higher Education in the European Community (1991), include admission restrictions, language problems, problems concerning the recognition of qualifications and previous study, practical and administrative problems, financial problems, etc.

2.4 Joint projects for continuing training in technology and for multimedia and/or distance training (Strand C)

- 2.4.1 The 1993 Call for Applications concentrated only on **Short training courses** with a European dimension in technology (particularly advanced technology) designed for the rapid dissemination - by and in universities and by and in industry - of research and development results in the field of new technologies and their applications. Short training courses help to promote the transfer of technological innovation to sectors in which it was not previously applied (Strand Ca).
- 2.4.2 Other types of projects falling under this heading are the **Joint training projects** (Strand Cb) lasting for a period of three years and **Pilot Projects** (Strand Cc) supported by the Community for a period of three to four years.

► *Developments and results 1993*

- 2.4.3 COMETT **Short Training Courses** particularly focus on technology transfer involving SMEs. In the 1993 Call for Applications UETPs submitted applications for 2,300 short courses (an average of 11 courses per UETP). The 188 projects accepted under this Strand enabled 487 training courses to be organised.

- 2.4.4 The COMETT *Course Register* gives UETPs the opportunity to advertise forthcoming training courses supported by the COMETT programme. The *Course Register* is published quarterly and has been in circulation since November 1991.

Following a survey conducted in August/September 1992 which confirmed the overall interest in the *Course Register*, it was decided in Spring 1993 that the production of the document should be computerised. A software was therefore developed with the double aim of allowing UETPs to input their own course data and of enhancing the quality of the document bringing it up to the standard of other COMETT documents. The new software was sent to UETP promoters and participants in Stand Cb and Cc projects in December 1993 with a view to publication of *Course Register* no. 9, in February 1994.

- 2.4.5 Of the 189 joint training projects accepted in 1990, 143 entered their third and final year in 1993 (the remaining 46 projects were either 1-year or 2-year projects). We are currently in the process of analysing the results of these projects.

The 113 joint training projects accepted in 1992 are now in their second year of operation and their results will be assessed after their completion in 1994.

- 2.4.6 At the beginning of COMETT II, 28 Pilot Projects were selected for their exemplary nature and potential impact on technology training in Europe. These large-scale projects have one or more of the following four characteristics: they address skills and qualifications needs in specific technology sectors at European level, they aim to develop close and lasting cooperation between industry and university, they focus on appropriate industrial training programmes for SMEs, finally, they are truly 'transfer projects', in that they focus on the transfer of qualifications, skills, and methodologies. The Pilot Projects are supported by the Community for a period of three to four years to the amount of 500,000 ECU each (at least the same amount is contributed by partners). A list of Pilot Projects is provided in Annex 2.

- 2.4.7 In accordance with the guidelines for Pilot Project development and monitoring for 1993, three major animation programmes were set up:

Programme 1 : Information

The aim of this programme is to establish a more thorough information policy about Pilot Project activities. In accordance with this policy the Pilot Project flyers, first published for the Glasgow conference (September, 1992), were distributed at the conference in Antwerp.

The annual Pilot Project conference on *Quality of Continuing Education in the Future* was held between 8-10 December 1993 in Antwerp. The principal objectives of the conference were:

- to enable Pilot Projects to present and share their experience, plans and findings
- to summarise the experience and findings of Pilot Projects as far as organisation, products and processes are concerned
- to develop a model of best practice which may be used by future projects.

Programme 2 : Training

While this programme concerns all Pilot Projects, it is not restricted solely to this category of project. In 1993 two types of action were organised:

- Two training seminars were held (29 January 1993 and 23 September 1993) on the House Style Guide which had been presented at the Glasgow conference (September 1992).
- A seminar organised by a Pilot Project (COSTEL) was held on 22 October 1993 on aspects of copyright and intellectual property.

Programme 3 : Thematic Working Groups

On the basis of the questionnaire distributed to Pilot Projects at Glasgow, four "Thematic Working Groups" (TWGs) were set up. The TWGs deal with the following four priority themes:

Marketing
Evaluation and Impact
Participation of Industry
Transfer.

The main objectives of the TWGs are to provide all Pilot Projects with practical tools to help them progress in the different areas concerned. Documents produced by the TWG during 1993 include a Project Impact Assessment Matrix, two Evaluation Questionnaires, Checklists of Self-success Criteria, a document on *Marketing COMETT Projects*, and a Matrix on Involvement of Industrial Partners in COMETT Projects.

These results of the TWGs were outlined at the Aalborg conference (see § 4.4.1, below) and copies of the documents have been sent to all projects. In order to evaluate the results of the work carried out and to optimise the creation of new groups, projects were asked to complete a questionnaire on the usefulness of the documents produced.

At the Antwerp conference (see § 4.4.6, below) an analysis of the results of the questionnaires was made and it was decided that a summary document on the results of the four Thematic Working Groups should be produced.

2.5 Complementary measures (Strand D)

This fourth Strand comprises a range of promotion, evaluation and back-up measures. The 1993 programme of complementary measures particularly focused on UETPs set up in 1990, their objective being to support initiatives for future development and self-sufficiency once COMETT funding ceases. All 146 projects submitted in 1993 were accepted for funding.

- 2.5.1 The 1993 Complementary measures had both technical and strategic objectives. The technical objectives were linked to the fact that the 1990 UETPs were approaching the end of their period of core funding (as established in the Council Decision of 16 December 1988) and that it was therefore not possible to continue their direct funding through the COMETT programme. The Complementary measures offered a way of further support.

The strategic objectives were based on considerations ensuring long-term strategies of the UETPs. These strategies will enhance the consortia's potential role in future higher education-enterprise cooperation programmes both on Community level (as outlined in Articles 126 and 127 of the Maastricht Treaty) as well as at national and regional level.

The following summary table illustrates the close link between this strand of activity and the policy intentions announced in the Commission's papers "Guidelines for Community Action in the field of Education and Training".¹

Guidelines	Name of UETP - action planned
Resource Centres	<ul style="list-style-type: none"> * BEMET - survey of European training supply in biotechnology; * Irish Mid West - database of regional training supply; * S. Sweden - database of R&D opportunities; * SINTESI - Inventory of regional training supply
Networks and networking	<ul style="list-style-type: none"> * Eurofortech and EuroIogna - combined UETP conference to improve networking standards; * Ecceamst, Agro UETP, Agrif and Comagro - fusion of services and a common strategy for the sector; * Ceres - E-mail system for UETP communication; * Italian UETP network - Programma Futuro.
Consolidation of partnership arrangements with regional authorities, social partners, enterprises and training agencies	<ul style="list-style-type: none"> * Nord Pas de Calais - study of COMETT contribution to training for social partners; * Ursa Net - TNA for regional authorities; * Janus - development of urban multimedia system for local authorities; * Hibernia - UETP promotion plan to extend network and area of influence.
Analysis of training and qualification needs and the provision of training audits for SMEs	<ul style="list-style-type: none"> * Euroform - creation of an advice centre for SME TNA; * Unefor - development of a do-it-yourself TNA tool for SMEs; * Lorraine - study of SME sensitivity to innovative training methodology * Artiste, TVV, Zuid NL, Sofine - comparative interregional TNA
Transfer of innovation in technology	<ul style="list-style-type: none"> * Fuega - promotion of UETP services to SMEs with a technology gap; * ETMI - conference on technological innovation; * Auvergne - comparative study of transnational technology transfer methodologies; * UPJOF - database of training and technology transfer
Encouragement of geographic mobility	<ul style="list-style-type: none"> * Compass - survey and conference on Bc exchange; * Languedoc-Roussillon - promotion of the "Eurostages" system; * Great - analysis of industrial motivation in exchange programmes; * APHW BEST - database to improve exchange services.
Aid training providers set up transnational training projects	<ul style="list-style-type: none"> * Batech - TNA for UETP staff; * ASH - training course for European project management; * AWL - training courses on project management, CBT, European culture and language; * NEWI - training courses on transnational project management for University/enterprise cooperation projects
Disseminate good practice	<ul style="list-style-type: none"> * WITEC - establishment of a formal information dissemination service for UETPs on equal opportunities; * HYLITE - monitoring of women on Ba-exchanges * Satum - Guide to managing intellectual property rights for UETPs * MIT - development of innovative UETP models concentrating on R&D and high technology sectors in SMEs
Assist in the implementation of complementary EC policies (especially through training provision)	<ul style="list-style-type: none"> * Neptune - R&D workshops for UETPs; * LI.SA - analysis of the potential for UETP exploitation of EC R&D Programmes; * ADERA - study of regional impact of EC Programmes * ADEIT - inventory of EC training programmes to promote participation among SMEs

¹ COM (93) 183 final

► *Developments and Results in 1993*

- 2.5.2 A total of 143 UETPs participated in the Call for Tender and Strand D. Out of 297 submitted sub-projects, 191 were successful and were awarded financial support from the Commission. As a result of the selection procedures, contracts for a total of 3,489,600 ECU were issued to UETPs.

2.6 Added value of COMETT

The COMETT programme has developed a balanced network of cooperation between universities and industry, providing vital links throughout Europe. Many new cooperation axes are now actively contributing to the economic and social well-being of the Community. Numerous exchanges of students and personnel have been organised between countries which had never exchanged students or staff. Without COMETT support and the COMETT UETP network these exchanges would never have taken place. Working towards a better understanding of national concerns in student placements and continuing education, COMETT has contributed towards a deeper integration of the European Community.

In certain countries and regions COMETT has been something of a catalyst in the continuing training market. In others, COMETT has contributed to the enrichment, transparency and quality of advanced technology courses. Without COMETT support, many universities would not have been able to invest in Continuing Education Training (CET) programmes.

COMETT projects provide feedback to local education systems, thereby improving the existing curricula. For many universities, COMETT has been the first experience with a European programme. In addition, COMETT has contributed to reflections and insights on structural and management issues in these institutions.

COMETT has given special attention to regional development through the creation of a very active university-enterprise training partnership network within the Community, and more recently the EFTA countries. The COMETT programme incorporates a significant number of projects specifically designed to transfer knowledge and skills from the more developed areas of the Community to less advantaged regions. While such projects exist in all Strands and sectors, they are particularly important for industries in the less developed regions.

2.7 COMETT Regional Profiles

As a complement to the 1993 COMETT programme evaluation exercise, the Commission has prepared a preliminary series of Regional Profiles to outline the development of the regional dimension of COMETT from 1990-1993.

Describing the major features of the COMETT programme in each region during the first four years of the programme, the profiles seek to identify the impact which the programme has had on these regions of Europe. A total of 121 COMETT Regional Profiles have been prepared for all 19 countries which participate in the COMETT programme. The Profiles of the Member States were circulated to the COMETT Committee, the Information Centres and the UETPs in March 1994. The Profiles for the EFTA countries will be ready for circulation in April 1994.

2.8 Budget

According to Article 4 of the Decision of the Council of 16 December 1988, the budget for COMETT II (1990-1994) is 200 MECU; in addition there is the contribution of the EFTA countries

amounting to 30 MECU; these two amounts together will cover all the activities financed under the four Strands of the programme.

It is worth noting that each year, the budget requested by applications is approximately ten times higher than the budget available, clear evidence of industry's interest in training activities.

A total budget of 30.1 MECU has been earmarked for the projects selected in 1993. Funding has been shared out as follows: 18.5 MECU for student placements, 1.7 MECU for personnel exchanges, 5.2 MECU for short courses and 4.7 MECU for complementary measures. Taking into account projects selected in earlier years which are still active (11.7 MECU), the European Community granted a budget of 41.8 MECU to technology training within the framework of the COMETT programme in 1993.

Budget 1993, including EFTA countries (MECU)

	Allocations 1993	Allocations for contracts launched in earlier years
U.E.T.P support (Strand A)		2.5
Student placements (Strand Ba)	18.5	
Personnel exchanges (Strand Bc)	1.7	
Short courses (Strand Ca)	5.2	
Training materials (Strand Cb)		6.5
Pilot Projects (Strand Cc)		2.7
Complementary measures (Strand D)	4.7	
Total	30.1	11.7

III. PROGRAMME MANAGEMENT

3.1 Selection 1993

In 1993 the Call for Applications was restricted to UETPs financed by the COMETT programme. However, the actual selection process was identical to that used in previous years:

- First came the initial assessment of applications by the Commission with the support of the COMETT Technical Assistance Office. All ineligible applications were removed at this early

stage (ineligibility, for example, due to the non-transnational nature of the project or the lack of a university-industry partnership), and the ground was prepared for the later stages of the selection process.

- The criteria used for the selection of projects were in accordance with those listed in the Vademecum and Application Package. In line with the programme's objectives, projects must involve university-industry cooperation concerning post-secondary level training in technology and its application.
- The next concern was that of coherence with the other Community programmes, both those relating to the Framework Programme of Research and Development as well as those directed towards specific sectors, such as the strategic programme in favour of SMEs. The Community programmes with which COMETT has established close links are DELTA², ERASMUS³, FORCE⁴, EUROTECNET⁵, LINGUA⁶, and TEMPUS⁷.
- The projects were then assessed by the COMETT Experts Group, a group of independent experts from universities and industry. The Experts Group met for this purpose on 3 March 1993.
- The proposed draft list of accepted projects was submitted to the COMETT Committee and the COMETT EFTA Joint Committees on 27-28 April 1993. In this process, as provided for in the COMETT Decision, specific arrangements were made to permit discussion by the Committee of projects for which a Community contribution of more than 100,000 ECU was proposed.
- Taking into account the opinions expressed by the COMETT Committee and the COMETT EFTA Joint Committees, the Commission decided upon a final list of projects for Community support.

3.2 COMETT Committee and EC-EFTA Joint Committees

3.2.1 The COMETT programme has developed in close collaboration with the COMETT Committee. The role of the Committee is to assist the Commission in the implementation of the COMETT programme. The Committee consists of two representatives from each Member State on the basis of nominations made by the Member States as well as two representatives of the social partners as observers. The Commission chairs the Committee and provides the secretariat.

² DELTA - Developing European Learning through Technological Advance. Council Decision 88/417/EEC, OJ No. L 206, 30.7.1988, p.20.

³ ERASMUS - European Community Action Scheme for the Mobility of University Students, Council Decision 87/327/EEC, OJ No. L 166, 25.6.1987, p.20-24.

⁴ FORCE - Community Action Programme for the Development of Continuing Vocational Training in the European Community, 90/267/EEC, OJ No. L 156/1, 21.6.1990.

⁵ EUROTECNET - Community wide network of demonstration projects in the field of New Information Technologies and Vocational Training. COM (85) 167 Final.

⁶ LINGUA - Community Action Programme to promote Foreign Language Competence in the European Community. Council Decision 89/489/EEC, OJ No. L239/24, 28 July 1989.

⁷ TEMPUS - Trans-European mobility scheme for university studies. Council Decision 90/233/EEC, OJ No. L 131/21,7, May 1990.

- 3.2.2 The Commission may consult the Committee on any matter concerning the implementation of the COMETT programme. The Committee delivers opinions, particularly on the general guidelines governing the COMETT programme, the general guidelines for financial assistance to be provided by the Community, the project selection procedure, and any measures which require a Community contribution of more than 100,000 ECU.
- 3.2.3 Since the launch of COMETT II, the EFTA countries have participated in the COMETT programme, and Joint Committees were established between the European Community and each EFTA country.
- 3.2.4 The COMETT Committee met formally on two occasions (27-28 April 1993 and 15 July 1993). An informal meeting took place on 9 December 1993 during the Antwerp conference. The EC-EFTA Joint Committees met on 28 April 1993 and 15 July 1993. An informal meeting was held on 9 December 1993 at the Antwerp conference.

A list of the members of the COMETT Committee and the EFTA Joint Committees is given in Annex 4.

3.3 COMETT Information Centres

- 3.3.1 To facilitate and promote the dissemination of information about COMETT, national Information Centres have been established within each Member State and, from the beginning of COMETT II, also in the EFTA countries. The precise organisational location of each Information Centre and detailed work programme vary from country to country according to individual needs and circumstances. The Information Centres' main tasks are to respond to information queries concerning the COMETT programme, especially on projects led by organisations within their country and to produce information material (brochures, newsletters, etc). The Information Centres put particular emphasis on providing information for enterprises. They also organise information days, workshops and press conferences, to assist with the preparation of new applications and to disseminate COMETT project outputs. Finally, in cooperation with the UETPs, Information Centres provide assistance for COMETT project promoters within their country, including assistance with finding partners and disseminating project outputs from other countries.
- 3.3.2 The Commission provides financial support towards the costs of activities undertaken by the Information Centres. In addition, the Commission supplies various forms of documentation, services and promotional material for use by Information Centres. A list of COMETT Information Centres is given in Annex 5.

3.4 COMETT Experts

- 3.4.1 Following the Council Decision, the Commission established the COMETT Experts Group as an additional source of specialist technical advice and expertise. Members of the Group are appointed by the Commission on the basis of their personal knowledge of a particular technical area or sector related to the work of COMETT. The breadth of membership is such that there is at least one Expert from each participating country, ensuring awareness of the level of technology exploitation in all of these countries. A meeting of the Experts was held on 3 March 1993, the main objective of the meeting being to examine project proposals received by the Commission under the 1993 Call for Applications. Their developing role in project monitoring as well as their technical advice helped to ensure that the Commission was able to select the most appropriate range of projects to achieve COMETT objectives.

3.4.2 Project Advisers

Because of the exemplary nature and large scale of the Pilot Projects (which had been accepted in 1990) Project Advisers were assigned to work with every Pilot Project during the project's life time. In this way, a tripartite relationship is being developed between the project coordinator, the COMETT project officer and the project adviser. The process has proved very beneficial in assuring the good development of the Pilot Projects. The Project Advisers were extensively involved in the conferences in Glasgow (26/27 November 1992) and in Antwerp (9/10th December 1993). In 1993 the Project Advisers met formally in Brussels on 27 January.

3.5 Technical support

- 3.5.1 The Commission is assisted in the operational implementation of the COMETT programme by the COMETT Technical Assistance Office, a non-profit organisation with which appropriate contractual arrangements have been made.

3.6 Collaboration with other Community programmes

- 3.6.1 An important aspect of COMETT is the potential it has for synergy with other Community programmes. COMETT complements the strategic Community approach in R&D and innovation by contributing towards the development of highly qualified manpower necessary for the development, transfer and exploitation of new technologies. Close consultation has been established both in the selection of projects and also the on-going monitoring and development of the COMETT programme. COMETT projects have also established links between organisations active in a number of Commission R&D programmes. There is a close link between COMETT and DELTA in view of the complementary objectives of the two programmes in the field of technology support for education and training.

In 1993, at a practical level, COMETT/DELTA links included:

- Joint COMETT/DELTA presentations at key conferences and DELTA launch meetings.
- Cooperation between the two programmes with regard to COMETT Pilot Projects which have close links with current DELTA projects such as, COSTEL (COMETT) and COSYS (DELTA), DEDICATED (both DELTA and COMETT), MTS (DELTA) with ECOAUDIT (COMETT), OSCAR (DELTA) with AERONAUTICS (COMETT) and JANUS (DELTA) with EMBA (COMETT).
- Cooperation between Unit E of DG XIII, responsible for Information Market Policy ACTION (IMPACT), and the Task Force Human Resources, Education, Training and Youth. On 27-28 September 1993 a meeting was held in Luxembourg where representatives of these two Community programmes met a number of COMETT UETPs. The objective of the meeting was to explore the possibilities of greater synergy between these two Community programmes using training materials developed under IMPACT for courses to be organised in 1994 by 10 COMETT UETPs.

- 3.6.2 COMETT complements the activities of the ERASMUS Programme as far as the mobility of university students is concerned. It also complements FORCE, the programme for the development of continuing vocational training, and the

EUROTECNET programme for basic vocational training for the new information technologies. Links also exist with the LINGUA and the TEMPUS programmes.

- 3.6.3 The ERASMUS programme was adopted by the Council in June 1987 to promote inter-university cooperation and in particular to increase substantially the number of university students carrying out a period of integrated study in another Member State. Although there are a number of important differences between the specific aims, objectives and actions of the two Programmes, both COMETT and ERASMUS share the common aim of encouraging students to spend periods of recognised education and training in other Member States. The TEMPUS scheme, which is designed specifically to promote the development of the higher education systems and transeuropean mobility in the countries of Central/Eastern Europe, was adopted on 7 May 1990 by the Council of Ministers. Close links have been established to ensure coordination of the overall implementation and monitoring of the three programmes.

IV. MONITORING AND EVALUATION

4.1 External evaluations

In 1993 an independent evaluation of the COMETT programme was completed. Launched in 1992, this external evaluation was carried out at the request of the Commission and its purpose was to obtain an objective assessment of the COMETT programme and its achievements to date.

This was, in fact, the third external evaluation of the COMETT programme since it was established in 1987. The two earlier external evaluations resulted in the Coopers & Lybrand Report (1989) and the Ecotec Report (1991). This third external evaluation covering the first three operational years of COMETT II took into account the findings of these earlier evaluations.

The originality of this third evaluation was that it was based on a "three-pronged" approach:

1. Following the Tender launched by the Commission in May 1992, an independent consultancy firm, *GMV Conseil S.A.*, France, was appointed to conduct the third external evaluation of the COMETT Programme. The report conducted by *GMV Conseil* describes COMETT as:

'a politically important programme, offering real added value and possessing a catalytic and multiplicative effect'.

Assessing the impact of the programme, the report states that 'COMETT has greatly contributed to the remodelling, enlargement and internationalisation of the cooperation network of project contractors'.

To reinforce the programme's effectiveness, *GMV Conseil* recommended that its presentation be simplified, 'in particular by a clear separation between "initial training", which is addressed at universities and students, and "continuing education", for which enterprises must assume a steering role'.

2. At the same time, a panel of seven experts, appointed by the Commission, conducted a separate assessment of the programme. The panel of experts produced recommendations about future Community policy in the field of training and cooperation between universities and industry.

The experts' report recommended chiefly that

- *COMETT should be the predominant channel for transnational training actions for technology change where cooperation between university and industry is involved.*
 - *the development of training courses for graduate employees, and the university/industry placement of students and graduates should continue to be an integral part of the COMETT programme. The continuing training dimension must be strengthened.*
 - *SMEs should participate to a far greater extent: given the importance of SMEs in creating employment and in promoting innovation, there is an urgent need to develop greater SME involvement.*
 - *the programme should benefit to a much greater extent than in the past from synergy with the impressive and dynamic activity of the Community's Research programme in which universities and industry play a significant role.*
 - *that the network of UETPs should be strengthened and that the training partnership should fulfil the role of "welcome desk", as many already do, in promoting and facilitating participation in other Community actions especially to SMEs.*
 - *the objectives of the COMETT programme must be a coherent part of EC policies for human resources, economic, technological social and cultural development, and take account of the Maastricht Treaty, its associated Structural Fund regulations and the Framework R&D programme.*
 - *COMETT should be the predominant mechanism for Community actions involving transnational cooperation between universities and industry related top training (initial and continuing) for and because of technological change.*
3. In addition, an extensive programme of National Evaluations was conducted in cooperation with the national authorities in the participating countries. These evaluations examined in particular the impact of the COMETT programme at national and regional level. This collaboration between the Commission and the participating countries produced very useful results which can be further exploited in the final evaluation of COMETT required under Articles 6.2 and 6.3 of the COMETT Decision.

4.2 Internal evaluation

- 4.2.1 Internal monitoring and evaluation are important aspects of the implementation of the COMETT programme. A variety of formal and informal methods are used to collect and analyse information at the following levels: project level, Strand level, sectoral level, and programme level.
- 4.2.2 At project level, the process begins with an analysis of project applications according to specified criteria to ensure selected projects are adequately designed. For approved projects, the formal process consists of interim and annual progress reports. In this way, every project is continuously monitored to ensure its progress is satisfactory and to identify specific issues which may have wider implications. In addition, more informal contact with project promoters occurs through their visits to Brussels, attendance at conferences and other similar activities. At Strand level, a number of Strand-specific analyses and activities have been undertaken. The analyses that were launched serve as a basis for the development of sectoral networks.

- 4.2.3 At programme level, the development of the programme has been carefully monitored with respect to both its internal design and implementation and its wider contribution to Community objectives. The contributions of the COMETT Committee, the COMETT Experts Group and the COMETT Information Centres are of particular importance, especially in providing information about the development of COMETT within each Member State and EFTA country.

4.3 Positive Actions

The *Positive Actions* project launched by the Commission in 1991 had the principal aim of strengthening the development of COMETT in economically less privileged countries and regions of the Community.

Positive Actions fall into the following five main categories:

- National studies and promotion measures
- UETPs (networking and training of UETP managers)
- Student placements
- Actions for the promotion of industrial participation
- Sectoral activities

- 4.3.1 At the COMETT conference in Aalborg (13-15 June, 1993) several sessions were devoted to "Positive actions - improving industry involvement, particularly SMEs". These presentations had one common factor: the need to better understand how and why industry conducts its human resource development and cooperates with higher education. Considering the issues from the outside and within companies, the discussions focused on the development of quality approaches to industry as a customer for training.

4.3.2 Sectoral Studies

Within the framework of Positive Actions a COMETT Sectoral Strategy scheme was launched in 1991. Ten carefully selected COMETT sectoral UETPs were contracted to examine the progress in the following ten sectors: Advanced Manufacturing Technology, Agro-food, Biomedical Engineering and Medical Technology, Biotechnology, Environment, Materials, Mechanical Engineering, Microelectronic Technology, Software Technology and Engineering, Technology and Innovation Management.

These ten studies have been completed and published.

4.4 Conferences

4.4.1 COMETT conference in Aalborg, Denmark, 13-15 June, 1993

Entitled *Cooperation between higher education and industry - the experience of COMETT*, and hosted by the Danish Ministry of Education on behalf of the Task Force Human Resources, Education, Training and Youth, the main themes of the conference were: the evaluation of COMETT II, the results of the 1993 Call for Applications, and future perspectives. Some 420 delegates from 22 countries attended the conference. Antonio Ruberti, Vice President of the Commission, gave the opening address. Referring to Articles 126 and 127 of the Maastricht Treaty, and the line of action currently under consideration in the Commission, Professor Ruberti confirmed that 'the experience

accumulated within the framework of the COMETT programme is being carefully taken into consideration'.

It was on the occasion of the Aalborg conference that Dr Thomas O'Dwyer, since 26 May 1993 Director General of the Task Force Human Resources, Education, Training and Youth, addressed COMETT delegates for the first time. Having spoken on the COMETT experience, Dr O'Dwyer stated: 'My overall conclusion is that COMETT has the experience, the relevance, and the structures to be an exemplary focus for the new style of Community actions in education and training, and indeed to be a flagship for training actions across a wider range'.

4.4.2 Hannover Fair, 21-28 April, 1993

For the second year running, COMETT took a stand at the Hannover Fair, the biggest annual industrial fair in the world. Entitled *R&D and Training for Industry - the European Approach*, the COMETT presentation focused on training activities which illustrate how technological challenges in key areas of European industry can best be met by joint R&D and training efforts involving universities and enterprises.

The Commission of the European Communities, Task Force Human Resources, Education, Training and Youth, funded the COMETT presentation and, as in the previous year, UETP OST was the appointed organiser.

4.4.3 8th World Conference on cooperative education, Dublin (Ireland), 30.8 - 3.9.1993

The biennial conference of the World Association for Cooperation (WACE) took place in Dublin City University, Ireland, from August 30th to September 3rd, 1993. The conference was concerned with promoting integrated working placements in industry for students and one full day of the conference was devoted to COMETT student placements. Some 400 delegates attended the conference, the majority coming from Australia, Canada, the United States and South Africa, with a sizeable European participation (especially from the UK, the Netherlands and Ireland). Since many of the delegates were unfamiliar with EC education and training programmes, the conference provided a good opportunity to present COMETT, particularly Strand Ba, as a showcase for European programmes.

4.4.4 Conference in Letterkenny, Co Donegal, Ireland, 9-11 September 1993

Entitled *Human resource development - catalyst for regional growth and employment*, this conference was supported by the Task Force Human Resources, Education, Training and Youth. The conference explored the role higher education can play in regional economic development.

In addition to the case studies which were presented in plenary sessions, six parallel workshops were run by COMETT promoters on R&D, Human Resources, Multimedia, Rural Development, Entrepreneurial Skills, and Technology Transfer. One of the recurring themes of the conference was the importance of people as vehicles for change, which was discussed in terms of creating a spirit of entrepreneurship in universities and colleges, ensuring that developments are not technology-driven but people-led. Emphasis was put on harnessing the potential of women in the labour market.

4.4.5 Conference in Brussels, 3-4 November 1993

Entitled *Research, training and agriculture in Europe : new challenges* a conference was organised by DG XII (Science, Research and Development) and DG VI (Agriculture

and Rural Development) with the assistance of Task Force. The conference focused on the future of different European programmes and their links with Community policies, that is, mainly CAP (Common Agricultural Policy) and RTD, education and training, and COMETT contributed in a major way to the success of this conference.

The purpose of the conference was to consider ways in which new technologies, research and training could meet the requirements of agriculture in Europe, particularly those connected with the reform of the CAP and with the strengthening of rural development policy.

This aim is all the more important and timely since it runs parallel with the discussions on the future 4th Framework Programme on Research and Development on the new generation of training and education programmes piloted by the Task Force Human Resources, Education, Training and Youth, and on the Structural Funds.

The programme included two round tables on 'Research in agriculture, rural development, agro-industry : perspectives in respect to the CAP and various Community policies (environment, regions, energy etc)' and 'Training in agriculture and in the agro-industry in Europe'. The subjects of the 5 workshops were: 'Extensification -Environment', 'The Production and Non-food Use of Agricultural Products - Diversification', 'Quality of Processed Agricultural Products', 'First Production, Management and Use' and 'Rural Development'.

As is evident, this conference was more than just a conference - it was in fact an interpretation of a concept based on economic and social facts trends, a clear sign of which may be seen by current changes within the Community and the emergence of a new generation of programmes highlighting the importance of synergy.

4.4.6 Conference in Antwerp on *Quality of Continuing Education in the Future*, 9-10.12.1993

Antwerp hosted a conference on the quality of continuing education resulting from university-industry cooperation. The conference was organised on behalf of the Task Force Human Resources, Education, Training and Youth by the COMETT Information Centres of the Flemish and French Communities in Belgium.

Based on the accumulated experience of COMETT Pilot Projects, the Antwerp conference developed guidelines to ensure quality in continuing education. Keynote papers were presented by industrialists who practice Total Quality Management in their company and the Thematic Working Groups (which had been set up at the Glasgow conference in September 1992) presented the results of their work in the specific areas of industry participation, methods of technology transfer, marketing, impact and evaluation.

V. FUTURE PERSPECTIVES

5.1 New programme perspectives : LEONARDO DA VINCI and SOCRATES

Towards the end of 1993 the European Commission put forward proposals for a new generation of programmes, LEONARDO DA VINCI and SOCRATES, which will replace the current

programmes due to end on 31 December 1994. The main objective of SOCRATES⁸, an action programme in the field of education, is to ensure a follow-up of the Community's ERASMUS and LINGUA programmes.

LEONARDO DA VINCI⁹, the Community action programme for the implementation of a European Community vocational training policy, was proposed by the Commission on December 21, 1993. Designed to provide a follow-up to the Community programmes COMETT, PETRA, (initial training), FORCE (continuing training) and EUROTECNET (innovation), the new programme consolidates the achievements of these programmes while introducing innovatory aspects to respond to new challenges facing the Community. In line with Article 127 of the Treaty on European Union, LEONARDO DA VINCI devotes special attention to the promotion of quality and innovation in vocational training. The programme will aim to support and supplement the vocational training activities of the Member States and to strengthen cooperation between such activities.

VI. CONCLUSION

COMETT II is due to end on December 31, 1994. During its penultimate year of operation, the programme has consolidated its extensive network of university-industry cooperation providing vital links throughout Europe. COMETT has continued to contribute to the enrichment, transparency and quality of advanced technology training. As the external evaluation has shown, COMETT is 'a politically important programme, offering real added value and possessing a catalytic and multiplicatory effect'. In the year under review, COMETT has been actively engaged in preparing the citizens of the Community for the challenges of advanced technology and tomorrow's Europe; COMETT will continue to pursue these commitments in 1994.

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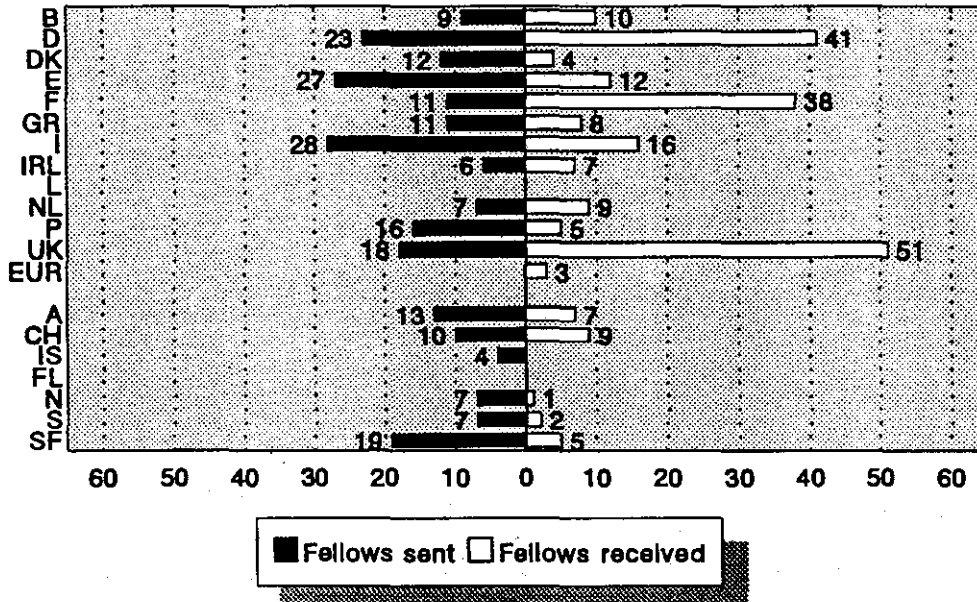
⁸ COM (93) 708 final

⁹ COM (93) 686 final

ANNEX 1
Statistical Overview

Transnational flows of fellows

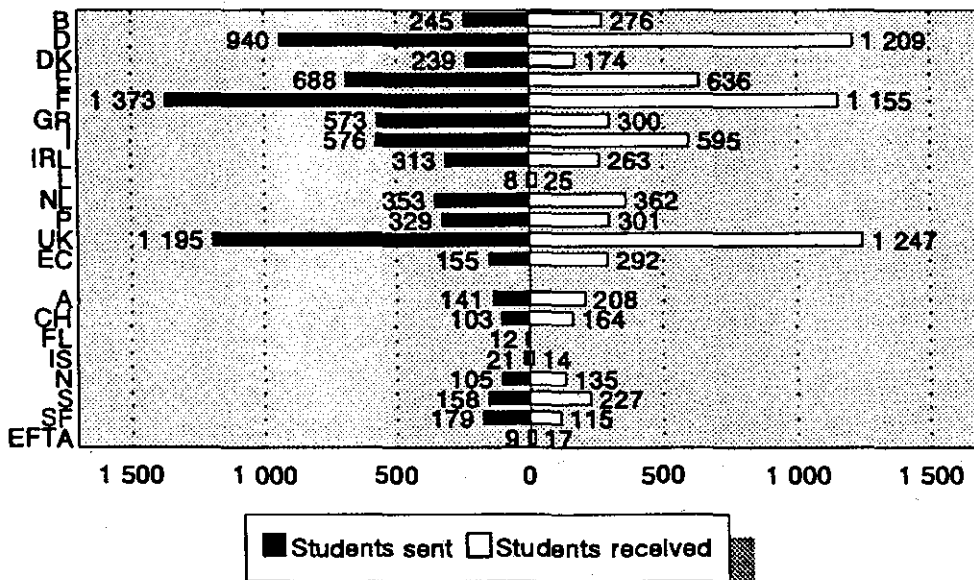
Projects accepted in 1993



COMETT Office - March 1993 - bcfca93

Transnational flows of students

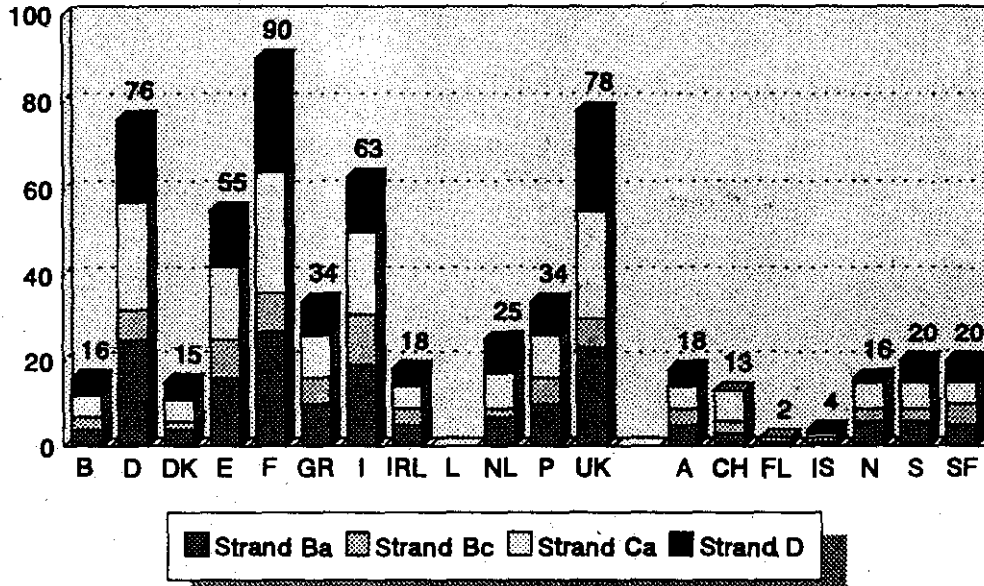
Projects accepted in 1993



COMETT Office - April 1993 - bafca93

Number of projects accepted in 1993

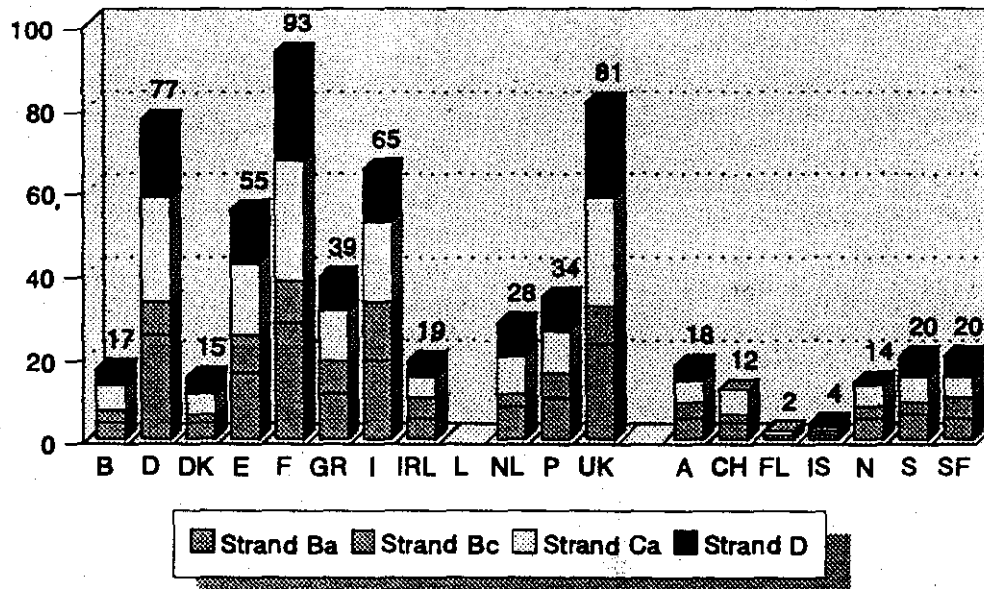
Distribution by contracting country



COMETT Office - June 1993 - procf93

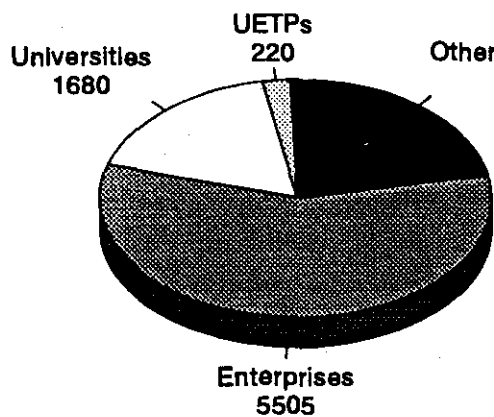
Number of projects submitted in 1993

Distribution by contracting country

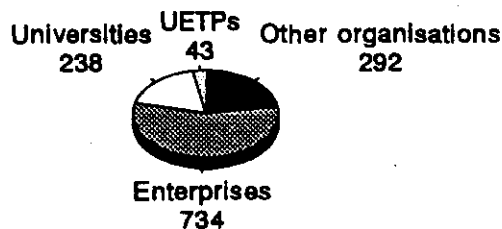


COMETT Office - February 1993 - procf93

Number of participating organisations breakdown by type of organisation projects accepted in 1993



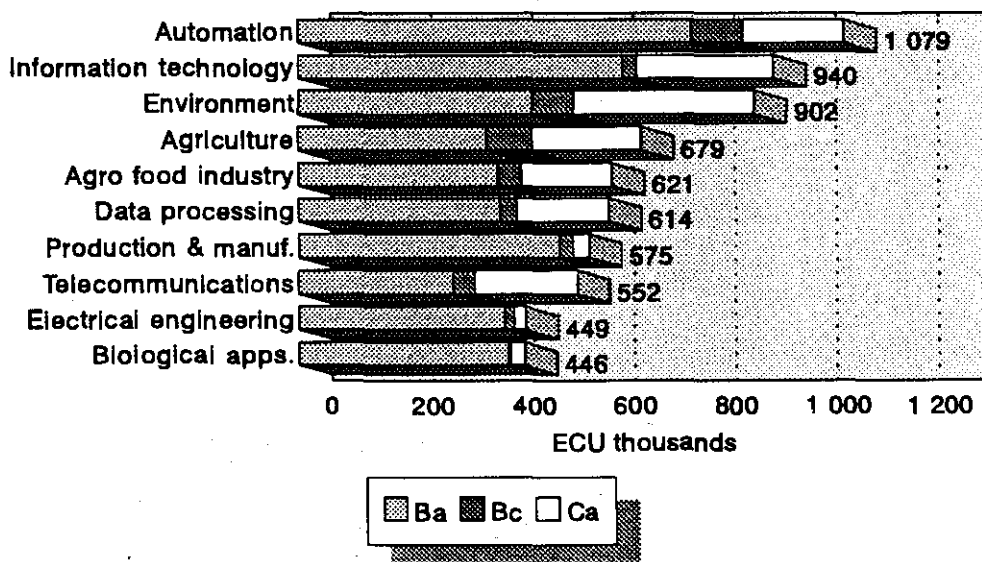
EC countries



EFTA countries

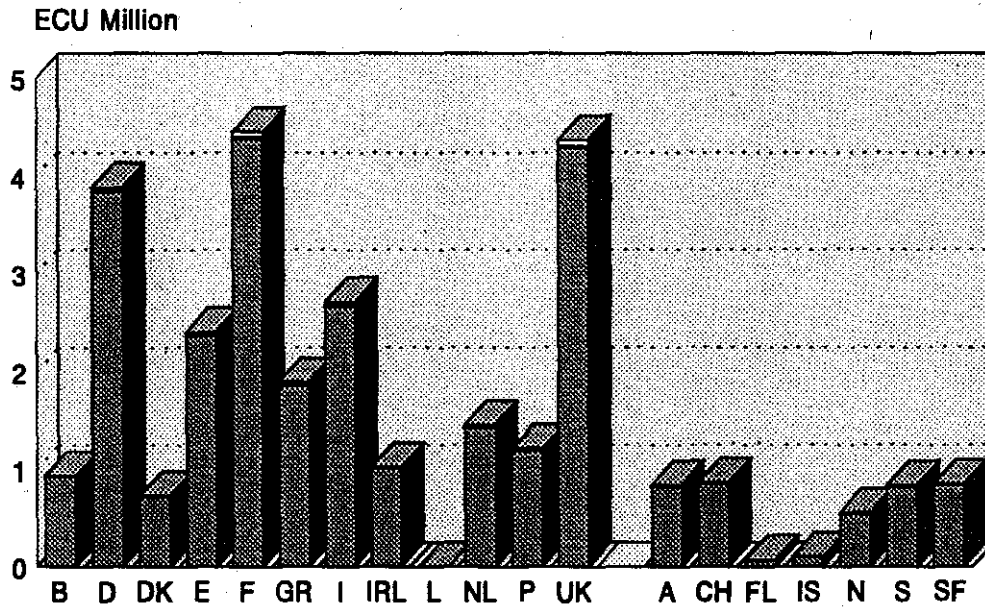
COMETT Office - April 1993 - poucfa93

Breakdown of technology sectors according to budget allocated in 1993



COMETT Office - April 1993 - teccaa93

Breakdown of budget allocated to projects accepted in 1993 by contracting country



ANNEX 2

COMETT Pilot Projects

COMETT Pilot Projects

EUROFORM - Centre européen de didactique du secteur microélectronique et des technologies associées. (F)

The purpose of this project is to create a European centre for education in microelectronics and related technologies, consisting of a resource centre, an education centre for training and a data bank on courses available throughout Europe.

AMADIS - Development of advanced training activities and educational software in computational engineering. (E)

The objective of this project is to improve the level of instruction and training of European engineers, students and academic staff, in the theory and application of computational mechanics for the solution of engineering problems.

ATLANTICA. (F)

The principal aim of this project is the development of training methodologies for the European Atlantic regions, on the basis of transnational cooperation in adapted technology training, productivity and diffusion mechanisms.

BIT - Biotechnology in Training. (UK)

This project aims at developing and harmonising education and training in the field of biotechnology, through laboratory-based short courses and complementary multi-media distance learning.

IN#TEL#EC - INtegrated TELecomunications training for the European Community. (P)

The goal of this project is to meet skill and training deficits for telecommunication technicians through multimedia training modules, and devise and publish a European syllabus for the establishment of common standards for training.

APECE - Advanced production Engineering Continued Education. (N)

The objective is to develop and disseminate a continuing education programme for distance learning in production engineering for the mechanical and electrotechnical industry, using modular courses.

ESDEP - European Steel Design Education Programme. (UK)

This project will result in a complete, flexible and cost effective programme of educational material for the training of students and retraining of existing engineers in steel design and construction.

QAMT - Qualitätssicherung Medizintechnik. (D)

To meet the demands in the quality assurance in the field of medical technology, this project will elaborate education and qualification courses and materials. It hopes to establish a large network of university-industry cooperation.

ESAVS - European school for postgraduate veterinary training and continuing education. (D)

The main objective of this project is to create postgraduate courses, including distance learning systems, leading to Europe-wide accredited diplomas in all fields of advanced veterinary science.

EMBA - Management of technology in a European environment. (NL)

The goal of this project is to establish a European network for the production, distribution and delivery of distance learning course modules dealing with the management of technology in a European environment.

BIOMERIT - Increased innovation and industrial development in the European agro-food sector through biotechnology exploitation. (IRL)

This project will provide training in agro-food biotechnology in the areas of Biomolecular Engineering and Bioprocessing. It develops methods for the identification of spoilage pathogenic microorganisms in food systems.

EUROPIC (NL)

The project deals with the European development of postsecondary training of students and trainers in Integrated Circuit fabrication techniques. The developed material will be exploited by the training institutes and the IC-industry.

EUROHOT - Design, development, evaluation and dissemination of an open, flexible, distance learning scheme of advanced technical training for the European highway construction and maintenance industry.(IRL)

The objective of this project is to economically deliver, through self-extension, an open, flexible multimedia scheme of advanced technical training for the European highway construction and maintenance industry.

TRITON (GR)

This project develops training material and courses on the technology for environmental protection in water resources management.

EMOT - European masters programme in management of technology. (UK)

This project is concerned with the development, marketing and dissemination of post-graduate distance learning modules in technology. The modules are part of a masters degree for students, managers and qualified trainers.

AMES - Advanced Microelectronics Educational Service. (B)

This project will create a structure using courses, software and satellite broadcast, for the training of designers of digital microelectronic circuits and systems for particular specialised applications (ASIC).

AGRO-BIOTECH - Applications of biotechnology in agriculture and agro-food industrie. (GR)

The goal of this project is to create a training infrastructure to help managers, technicians and university graduates to develop a working knowledge of the applications of biotechnology in agriculture and the agro-food industries.

JESSI - JTTT-JESSI Transnational Technology Training. (D)

The main target of this project is to extend the range of operation of the JESSI-SMI support project to other countries and to maintain European competitiveness in microelectronics.

TALAT - Training for Aluminium Application Technologies. (D)

This project aims at devising, developing and testing training material in the field of advanced aluminium application technologies, and at giving the qualifications for European aluminium application experts.

COSTEL - Course System for TELEcommunicationed training and innovation management. (DK)

The aim of this project is to develop and market a course system for training of trainers and computer supported cooperative work with on-line support, concerning the use of computer and telecommunication based solutions for training.

E.T. - Education in the transport sector E.T. project. (DK)

The project aims at improving qualifications in the transport sector, by developing and distributing educational courses concerning informatics and telematics relevant for staff in the transport sector.

EUROMOTOR - Training modules - Innovation in motor vehicle design and manufacture. (UK)

To improve the knowledge base of the European motor industry, this project will develop high level collaborative training programmes, using modules and multimedia techniques, in motor vehicle design and manufacture.

TQC - Total Quality Control in production industry. (S)

The purpose of this project is to produce and distribute course modules in total quality control with direct application in management and production for enterprises (especially SMEs).

EUROCHEMOMETRICS - Chemometrics and qualimetrics for the chemical, pharmaceutical and agroalimentary industry. (B)

This project concerns industry-oriented training and transfer of knowledge of chemometrics and qualimetrics techniques, using introduction and integration courses and distance learning and multimedia techniques.

ECATA - European Consortium in Advanced Training for Aeronautics. (F)

This project is concerned with the creation of a structure for advanced education for engineers, to improve cooperation and training abilities and formation skills in management and technical integration in aerospace programmes.

PALIO - European standard qualification in the design, delivery, marketing and evaluation of multimedia open learning. (I)

By using open learning techniques, the PALIO project will implement training actions for professionals involved in the design, management and evaluation of open and distance learning schemes and support systems.

TOPICE - CEEC advanced courses cycle 1991-1995. (NL)

By designing and implementing advanced courses for the development and transfer of technical and managerial skills of civil engineers, this projects increases the efficiency of civil engineering and construction enterprises.

ANNEX 3

COMETT Publications 1993

COMETT Publications 1993

- ▶ **COMETT II Project Compendium 1991 (English and French)**

- ▶ **COMETT II Project Compendium 1992 (English and French)**

The Compendium gives basic information on all COMETT projects. Projects are listed with the project title, a short indication of the nature of the project and the contact person and address.

- ▶ **COMETT Report of Activities 1992 - July 1993 (9 languages)**

This document represents the Annual Report referred to by the terms of Article 5 of the Decision of the Council establishing the COMETT programme. The purpose is to formally record an account on the progress made in the implementation of the COMETT programme in 1992.

- ▶ **COMETT Bulletin (English and French)**

No 16 May 1993
No 17 August 1993
No 18 December 1993

The COMETT Bulletin appears three times a year and contains a range of articles relevant to COMETT. It gives important information on COMETT projects and is directed towards all organisations interested in the programme. Bulletin No. 18 was the last issue, making way for a new magazine to be produced by the Task Force.

- ▶ **Application Package 1993/4 (Autumn 1993; English, French and German)**

The Application Package is addressed to those intending to make an application for support under the COMETT programme. It concentrates on detailed guidelines for submitting applications and includes the application forms to be used for submitting projects under the current Call for Applications.

- ▶ **COMETT Course Register (Nos 5 - 8)**

Arranged under technology sectors, this document gives details on current courses supported by COMETT in the Member States and EFTA countries.

- ▶ **"Transnational student placements : the COMETT experience" (English and French)**

Published in Spring 1993, the COMETT student guide draws heavily on the experience of COMETT in operating transnational placements in Member States and EFTA countries. Intended as a practical working tool, the Guide will assist the organisation of effective student industrial placements.

- ▶ **COMETT Leaflets (English, French and German)**

During 1993 COMETT published the following 14 leaflets highlighting different aspects of the programme:

COMETT - facts and figures
COMETT - User Guide
Training for European Industry

Linking R&D with training
Women in technology
COMETT and higher education
COMETT and microelectronics
COMETT and the automobile industry
COMETT and biotechnology
Technology management
University-enterprise training partnerships
COMETT and SMEs
Industrial student placements
COMETT and agriculture

► **COMETT Sectoral Surveys**

In the framework of the COMETT Positive Actions exercise, the following ten sectoral surveys were published:

Biomedical Engineering and Medical Technology in COMETT
Advanced Manufacturing Technology in COMETT
Technology and Innovation Management in COMETT
Microelectronics in COMETT (English and French)
Software Technology and Engineering in COMETT
Materials in COMETT (English and French)
Environment in COMETT
Biotechnology in COMETT
Mechanical Engineering in COMETT
Agro-food in COMETT

ANNEX 4

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COMETT EFTA Joint Committees Members

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