

# COMMISSION OF THE EUROPEAN COMMUNITIES

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## COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

ON THE REVIEW OF THE MULTIANNUAL RESEARCH AND DEVELOPMENT PROGRAMME  
IN THE FIELDS OF BASIC TECHNOLOGICAL RESEARCH AND  
THE APPLICATIONS OF NEW TECHNOLOGIES  
(BRITE) (1985 - 1988)

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COMMUNICATION BY THE COMMISSION TO THE COUNCIL

PREAMBLE

In presenting the Guidelines for the new Community Framework Programme of Research and Technological Development for 1987-1991 (COM (86) 129 final of 17 March 1986), the Commission has stressed the importance which it attaches to the themes of :

- industrial competitiveness and, through it, improvement in the employment situation;
- the quality of life;
- the realisation of a Researchers' Europe.

Numerous initiatives have already been taken by means of Community research and technological development programmes in order to strengthen industrial competitiveness. It seems essential to pursue these efforts without delay; this has resulted in the preparation of three of the following four communications enclosed, which indicate the initiatives that the Commission intends to take with regard to :

- the launching of the second phase of the ESPRIT programme
- the revision of the BRITE programme
- the revision of the Biotechnology programme.

The last one is equally relevant to efforts to improve the quality of life of citizens of the Community.

The fourth communication enclosed gives more details of how the Commission views the revision of the Stimulation programme on exchanges of researchers; in this case it demonstrates the intention to support wholeheartedly the efforts being made to achieve a true Researchers' Europe.

The presentation of these four communications aims at assuring to provide the necessary impetus for the actions already undertaken on these priority themes; these four future programmes provide a good example of the priorities set by the Commission.

It is further self-evident that, in the spirit of the "Single European Act", these four communications prejudice neither the result of the debate going on in the Council and the Parliament on the orientations of the Framework Programme nor the formal corresponding proposal which the Commission will present in July 1986.

Furthermore, these four documents do not prejudice the corresponding draft decisions which will be presented later on to the Council and to the Parliament.

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**BACKGROUND**

1. The Council of Ministers agreed in principle to the BRITE programme on 19 December 1984. The Council Decision was taken on 12 March 1985 (O.J. L 83 of 25 March 1985). The funds estimated necessary were 125 Mio ECU over 4 years. The decision stated that "during the second year the programme shall be reviewed" and that this may lead to the submission of a proposal for a revision of the programme. The Council also undertook to re-examine and, where appropriate, revise the programme, bearing in mind its previous undertaking progressively to increase expenditure on Community R&D activities.
2. In January 1985 an advance call for proposals was published followed by a call for proposals published in the Official Journal of 14 March 1985. The closing date for the submission of proposals was 15 May 1985.
3. A total of 559 proposals, involving 1977 participants or on average 3,5 partners per project, were received by the Commission. Of the total number of participants 58 % were industrial firms, 22 % research institutes, and 20 % universities. The average cost of each project was about 1,6 Mio ECU. The vast majority of projects conformed fully to the eligibility requirements of the programme.

Almost all industrial sectors including the aircraft industry, the construction industry, the machine tool industry, the motor vehicle industry, the textile industry, etc... applied to the BRITE programme. A high percentage of proposals showed intersectoral co-operation, with in many cases, an industrial impact extending beyond the sector of origin.

4. The proposals were evaluated by a panel of 65 independent experts from industry and university. These experts worked under conditions of strict confidentiality within Commission offices during the evaluation period from 3 - 14 June 1985.

Officials from other Community R & D programmes (in particular ESPRIT, Steel Research, Materials and Non-nuclear energy) also examined those proposals that potentially would better fit within their programmes. In a number of cases projects were transferred from BRITE to other programmes and vice-versa.

The total value of proposals received amounted to nearly 900 Mio ECU representing a Community contribution of 450 Mio ECU. This had to be set against the 65 Mio ECU Community contribution available for the first round. In view of these financial constraints, the evaluation teams were instructed to be very selective in their judgement. Many good proposals had to be rejected, not because they were not worthy of support, but because of lack of funds. The evaluation was considered to have been objective by both IRDAC (1) and the CGC "Industrial Technologies".

The total cost of proposals - all of good, innovative quality - selected by the evaluation teams was approximately 345 Mio ECU, requiring 175 Mio ECU as Community support.

5. After consulting the CGC, the Commission decided at the end of July 1985 to support 100 projects. This clearly represented a very high disappointment rate in relation to the 559 proposals received. Moreover, it was only possible to fund this number of projects by :

- funding a number of proposals only as feasibility studies;
- placing contracts - where practical - initially for only a first phase.

In view of this high disappointment rate, it was later decided in consultation with the CGC to finance a further 9 projects.

103 projects are now being supported in the first round of BRITE : 60 % of the participants are from industry (of which 30 % are SMEs), 21 % from research institutes and 19 % from universities. 5 projects have been withdrawn and 2 projects merged into a single project. The total number of participants is 465 or an average of 4,5 per project.

6. The sum of the contingent liabilities (arising from feasibility studies and contracts placed for only parts of contracts) to be carried forward to the second phase amounts to 20 Mio ECU. This leaves approximately 40 Mio ECU for new projects in the second phase of BRITE.

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(1) Industrial Research and Development Advisory Committee.

## THE REVIEW

### The technical content

7. In the months of November and December 1985 9 panels of independent experts including those who performed the evaluation of the first round undertook a review of the technical content of BRITE. The review confirmed that the nine areas of basic technological research, as defined in the Technical Annex of the Council Decision, were well chosen with regard to their importance for European industry. The panels concluded - in common with IRDAC and the CGC - that, from an industrial, scientific and technical point of view, no changes to the Technical Annex of the Council Decision are desirable.

In the first round of BRITE - within the terms of the Technical Annex of the Council Decision - a list of indicative priority themes were formulated by experts. These priority themes - which are not exclusive - were also reviewed by the nine panels. Some modifications were made to these themes for the following reasons :

- changes in the state-of-the-art required modifications;
- some clarification of the nature of projects was needed to help proposers and to draw clearer lines of demarcation with other Community programmes (such as ESPRIT and EURAM) and to concentrate priorities where they are most required in the view of industry;
- to reduce the possibility that proposals would be introduced on subjects already covered adequately in the first round.

For example, in the area of membrane science and technology, two major projects in the field of gas separation are currently under way. For that reason the corresponding priority theme in the new list now concentrates on innovative industrial applications for membranes for the separation of liquid mixtures and gas streams and priority will now be given to proposals which involve the use of new membrane technologies, e.g. membrane distillation, pervaporation, bipolar membrane and facilitated transport. All these areas were considered a priority by industry. The budget constraints made it impossible to fund proposals in these areas within the projects submitted following the first call for proposals.

All the 125 priority themes now restated with greater clarity and definition, represent distinct and important technical areas of interest to one or more industrial sectors. In some areas of BRITE the priority themes are more narrowly defined than in others but, on average, the number of projects for an adequate technical coverage is in the order of three projects per priority theme. The results of the review and the selection of the themes have been endorsed by IRDAC and by the CGC who have fully supported the conclusions of the review panels.

#### 8. Coordination with other actions.

Through the evaluation panels, the CGC and IRDAC, the coordination with activities at national level will continue to be ensured.

Coordination, in appropriate cases, will also be established with EUREKA projects taking into account the complementarity between the Community R and D programmes and EUREKA. Whilst the Community will continue to develop R&D programmes on the basis of objectives, criteria and priorities which have been defined in conjunction with the governments and industry of the Member States, EUREKA projects will essentially be implemented on the initiative of individual companies seeking to cooperate. These projects will mainly relate to the joint development of advanced technologies close to the market or of infrastructures of transnational interest.

Coordination between projects in Community programmes like BRITE and EUREKA will therefore contribute to the achievement of common objectives - i.e. the competitiveness of European industry in particular - and avoid duplication of effort.

#### 9. Participation of organisations established in non-Member States

The Commission, aware of the strong interest expressed in particular by industry in the EFTA countries for broadening the cooperation in technological research and development, intends to extend the criteria for participation in the second phase of BRITE to accommodate them.

Since it is of overall strategic interest with respect to the competitiveness of European industry as a whole and in the spirit of the Framework Agreements on R&D Cooperation currently being concluded with a number of EFTA countries, it is suggested that industrial firms, universities and research institutes from those countries should be admitted as partners in BRITE projects.

Organisations selected will have to cover all their costs and, in addition, where appropriate, a contribution towards operational expenses.

Projects with participation by above-mentioned organisations from the EFTA countries will of course have to comply with normal BRITE programme criteria, i.e. at least two organisations from two different Member States will also be required to participate and at least 50% of the costs of every project should normally be covered by industry. Normal Community contract conditions, in particular regarding property rights, will also apply. As for access to and exploitation of foreground and background information in the same or related projects, organisations from non-Member States will be treated in the same way as other organisations participating in BRITE.

#### 10 Number of industrial organisations per project.

The conditions for participation (i.e. transfrontier co-operation, 50 % industrial financing, at least one industrial firm per project) have ensured the industrial nature of the programme. 90 % of all successful projects in the first round had at least two industrial partners from two different Member States. In order to reinforce further the industrial nature of the programme, it is therefore intended to propose (without changing the present legal conditions) that a clear preference for projects involving at least two industrial partners from two Member States should be introduced.

## 11 Small and medium-sized enterprises

Of the 60 % of participants in the first round which were industrial firms, 30 % were SMEs. In reality, this percentage is higher as many SMEs participate indirectly through research institutes (21 % all participants). Research institutes which are funded entirely or mainly by industrial organisations are considered as industrial firms.

In the second phase of BRITE, it should be possible to increase the participation of SMEs as the Commission is organizing together with the Member States an intensive information and assistance campaign. In addition there will be almost 9 months available to prepare proposals which should also facilitate the participation of SMEs. Particular efforts will be made to help SMEs to find suitable partners in other member countries. The "expressions of interest" procedure (see 12) will also be useful for this purpose.

With the needs of SMEs particularly in mind, attempts are being made to simplify procedures. As a first step, the application form for the second phase of BRITE has already been simplified.

Special consideration will be given to projects involving SMEs with the aim of substantially increasing their participation compared with the first round but the technical and economic quality of the projects as evaluated by independent experts will remain the overriding consideration. It should, nevertheless, be emphasized that SMEs cannot be expected to put forward proposals unless they see that the budget available provides a reasonable chance of success.

## 12 Preparation for Phase II

It was underlined by IRDAC and the CGC that a number of factors make it likely that in the second round there will be a considerable increase in the number of proposals.

These factors are :

- The greater awareness of BRITE in manufacturing industry based on the success of the first round and reinforced by a more extensive information campaign for the second round.

Despite intensive efforts to provide information on BRITE, many firms did not hear about the programme at all or certainly not in time to prepare for the first round. Although there is now greater awareness of BRITE, information and assistance is still essential.

For the first round an infrastructure to inform and assist potential participants was set up in the various Member States and co-ordinated by the Commission. This system is being improved for the second round. Experience has shown there is a direct relationship between the number of successful proposals and the efforts undertaken at national level.

- More time will be available for the preparation of proposals.

There were many complaints that, for the first round, there was insufficient time to prepare good proposals. For the second phase, it is therefore imperative that early warning should be given to enable sufficient time for the preparation of proposals including the search for partners in other countries. The CGC agreed with the Commission that this early warning should be given even though this could lead to an increased number of proposals.

An information package will accordingly be issued shortly, even though it is planned that the closing date for proposals should be March 1987. The package will make clear the legal status of the programme, its revision, and the minimum funds currently available.

The information package will provide details on the "expressions of interest" procedure, where a short description of the project in preparation may be sent to the Commission. In this way, prospective applicants can get advice in advance on whether their projects fall within the limits of the BRITE programme. This will avoid unnecessary effort being put into preparing a full proposal.

More than 3000 expressions of interest were received in the first round. The expressions of interest exercise in the first round has shown that it is a very helpful procedure for applicants in the search for partners from other countries.

- A number of good proposals not funded in the first round will be re-introduced.

It will be recalled that a large number of good innovative proposals had to be rejected in the first round because of lack of funds.

- The adhesion of Spain and Portugal will increase the number of potential participants.

Special effort will be made to provide information and give assistance to Spanish and Portuguese organisations and national authorities.

The second phase must therefore show that the Community is serious in wanting to provide the kind of impetus to European co-operation in industrial research which is at the centre of the BRITE concept by :

- presenting the possibility of adequate coverage of technological themes considered as a priority by industry and by
- providing reasonable chance of success for good innovative proposals.



In the view of the CGC this analysis leads to the need for either a substantial increase in the amount considered necessary for the second round or for other measures such as a reduction in the number of technical areas covered.

IRDAC and industry in general consider that all the nine technical areas of BRITE need to be retained and that adequate coverage of all the technical areas is of high priority.

IRDAC also felt that the penetration of BRITE in industrial sectors is still inadequate. A growing number of industrial participants and greater international inter-penetration within a branch of industry should be foreseen. Also with regard to the high costs of preparing a proposal an acceptance rate of at least 50 % of the projects judged worthwhile by experts should be achieved which should mean an increase from 60 MECU to at least 300 MECU for the second phase to effectively support European firms for projects considered industrially sound (opinion attached).

UNICE also pointed out in an opinion on the BRITE programme that the high number of projects rejected is discouraging and suggest an overall amount of 250 MECU for the second phase.

### 13 ACHIEVEMENTS SO FAR

The BRITE programme was decided in March 1985. The projects were selected by the end of July 1985. The first contracts were negotiated and ready for signature before the end of December 1985. Despite this speed in obtaining proposals, evaluating them and negotiating contracts, it is clear that the earliest date on which work started on any BRITE project was 1st January 1986. It is therefore much too early to consider achievement at the technical level.

What can, nevertheless, be stated with certainty is that BRITE has already achieved a degree of co-operation in R&D with industrial objectives across the frontiers of the Community never previously achieved except in ESPRIT and in very many sectors of industry and across sectors of industry. Many projects involve co-operation between companies which traditionally are competitors. Others involve co-operation between suppliers and users of technology and of processes and of products across the frontiers helping in a remarkable way to break down the long-established traditions in Community countries of tight relationships within a country. Thus the most important achievement of BRITE to-date is the contribution it is already making to the development of the Community as a single market.

This can be illustrated by projects like those involving MAN in Germany with Babcock Power in the UK, Alfa Romeo in Italy with Renault and Aérospatiale in France and British Leyland in the UK, the Odense Steel Shipyard in Denmark with Carl Cloos Schweistechnik in Germany, Krupp in Germany with FN in Belgium, the Hellenic Aerospace Industry in Greece with SSG Industrial Systems in the UK, Xycarb in The Netherlands with Ansaldo in Italy. Moreover, this co-operation involves small firms like Metravib in France together with Stewart Hughes in the UK and industries which have never before been involved in Community R&D programmes like the furniture industry where Scandia Randers, Kokkener and Denka Mobler in Denmark are co-operating with the TNO in The Netherlands and the Furniture Industry Research Association in the UK or the clothing industry where Arts Ltd. and the Apparel Industries Federation in Ireland are co-operating with TNO in The Netherlands and XETAL Systems Ltd. in the UK.

The publicity given to these projects, in many cases by the firms and research institutes themselves, has resulted in an enormous upswing of interest in BRITE and the Commission services have received very many letters from companies which show an interest in joining, at this stage, projects already under way as well as in receiving information about the second call for proposals.

#### 14 CONCLUSIONS

All this leads the Commission to conclude that the industrial view, as expressed by IRDAC and UNICE and summarized above, is substantially correct and that the second round of BRITE must further encourage the growing trend of European firms to work together and with universities across the frontiers and help create for manufacturing industry a European cross-frontier co-operation infrastructure which can respond better to international competition and which is needed to sustain the recovery that has just started. The Commission is accordingly of the view that :

- the second call for proposals will result in many more proposals than the first call ; at least double the number can be anticipated and four times the number cannot be ruled out ;
- the encouragement we shall give to SME participation will involve even greater publicity and, consequently, even more proposals ;
- because of extra time for preparation and more information, the quality of proposals will be even higher than before ;
- the confidence of industry in the Community will be at stake unless we can support a reasonable proportion of the good proposals - one in three or one in four at least ;

- the technical areas and the detailed themes within them were well chosen and continue to be of great interest to industry particularly to the major wealth-earning industries which employ 75 % of the labour in manufacturing industry in the Community ;
- therefore deletion of any of the technical areas will cause grave problems, in particular considerable resentment in the sectors of industry which will see themselves as disadvantaged by such deletions ;
- an early decision on the funds available for the second phase is necessary to avoid uncertainties about the possible chances of success for potential applicants.

In the light of the debates in the Council and the Parliament on the general guidelines of the Framework Programme of Technological Research and Development (1987 - 1991) and the terms of the formal Framework Programme proposal which it will have put forward, the Commission will establish and submit a draft Council decision relative to the revision of the BRITE programme.

51-12

COMMISSION  
OF THE  
EUROPEAN COMMUNITIES

DIRECTORATE-GENERAL  
FOR SCIENCE, RESEARCH  
AND DEVELOPMENT  
JOINT RESEARCH CENTRE

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I R D A C

Industrial Research and  
Development Advisory Committee

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The Secretariat

IRDAC Opinion

on the BRITE Programme

established at the Plenary Meeting of 21 February 1986

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1. The BRITE Programme and its implementation over the past twelve months can be regarded as satisfactory to European Industry as a whole and to the firms taking part in particular.
2. Many participants, however, after months of hard and costly work, were disappointed by the exceptionally high rejection rate of the projects (80% for the first round of BRITE in 1985).
3. It is not feasible to consider reducing the rate of Community support (currently 50%) and so increase the number of projects that can be approved within the same budget. On the contrary, IRDAC considers that the level of support to projects involving only small and medium-sized firms might be raised above the current 50% level.
4. European Industry has reacted positively and constructively, and the number and scale of the projects proposed has surpassed expectations.

All the current efforts of the Commission and the Industrial Organizations of the countries taking part to make the BRITE Programme better known to firms, especially small and medium-sized firms, will mean a substantial growth in the number of projects proposed and, consequently, a risk of discouragement as a result of the limitations of the budget.

It is felt that the penetration of BRITE in Industrial sectors is still clearly inadequate. A growing number of industrial participants and greater international inter-penetration within a branch of activity should be foreseen in the various sectors.

Efforts to form partnerships and to penetrate industrial sectors will both increase the number of projects proposed.

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5. IRDAC feels that it is therefore necessary to increase considerably the resources available to the Commission to support industrial R&D and to reinforce coordination between the various programmes (BRITE, BIO, EURAM, ESPRIT, etc.).
  
6. As for the BRITE Programme, it should achieve an acceptance rate of at least 50% of the projects judged worthwhile by the experts.

It will therefore be necessary, taking account of the growth of the number of participants per sector and improved international inter-penetration in these sectors in the various countries, to quintuple the current resources of the programme. In practical terms, this means an increase from 60 million ECU to at least 300 million ECU for the second round of BRITE to effectively support European firms for projects considered industrially sound with a promising future.

The coordination between the various Commission Programmes will be the subject of later observations, after further study and once more detailed information has been obtained.