

# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(92) 91 final

Brussels, 21 April 1992

Proposal for a

COUNCIL DECISION

**establishing a multiannual programme for the  
development of Community statistics on  
Research, Development and Innovation**

(presented by the Commission)

**EXPLANATORY MEMORANDUM**

**Introduction**

For some years now, the Community has operated a policy of promoting innovation and the market for information of telecommunication equipments and services. This policy has been aimed at addressing the issue of the great concern at the Community level about the competitiveness of the EC industries in the world market in general, and with its major trading partners, the United States and Japan, in particular.

Research and technological development, forming a significant part of the innovative process has long been realised to be a key element of that competitiveness.

Yet, many indicators of competitiveness "come too late" as they most often report what has already happened, or at best, what is currently happening in the industrial sector. On the other hand, indicators emanating from research, technological development and innovation statistics are "early warning signs" of what to expect within the industry in future. To policy makers, such indicators are indispensable.

The Commission requires statistical information on RTD for policy purposes, in particular for the completion of the Internal Market and the achievement of a European socio-economic space.

The statistical services of Member States co-ordinated by Eurostat have a significant role to play in meeting the Community's need for these information.

**Background Information**

In 1989, the Scientific and Technological Research Committee drew the Commission's attention to certain weaknesses in Community R&D statistics. A group of experts met at the initiative of the Dutch delegation and came up with a number of suggestions on how to remedy the current shortcomings, with the emphasis on finding better ways of meeting the needs of users.

In response to these suggestions and in an attempt to improve the supply of reliable and comparable information on research, technological development and innovation, Eurostat took action in a number of areas in 1990. Further developments are still needed.

These developments include:

- revision of the nomenclature (NABS) used for the annual survey;
- regionalization of certain sets of statistics of particular interest to the Community;
- information on human resources;
- information on private sector R&D;
- measuring the impact of RTD and technological innovation.

**Aim of the Decision**

The aim is to present the different measures required for the development of an integrated system of information on research, technological development and innovation, and to link these measures to one single implementing procedure which would guarantee their usefulness, consistency and effectiveness.

More specifically, the aims of the programme set out in the Decision are

1. to set up a Community reference framework for statistics on research, technological development and innovation, and,
2. to define the concepts and methods, within the framework provided by the international organisations (such as OECD and UNESCO), to be applied in preparing, monitoring and assessing Community policies and in meeting the demands of national regional and local authorities, international organisations, economic operators, professional associations and other interested parties.

The following work shall be carried out under the programme.

- a) analysis and evaluation of user demand for statistics on research and development and innovation;
- b) developing a methodology for statistics on research and development and innovation;
- c) identification of existing information on research and development and innovation;
- d) setting up the organisational and technical components of a Community statistical information system for research and development and innovation;
- e) carrying out pilot surveys;
- f) developing basic statistical tools.

The programme should promote the convergence of national statistical systems for RTD and innovation and lead to the creation of a Community system of statistical information.

**COUNCIL DECISION**

**establishing a multiannual programme for the  
development of Community statistics on  
Research, Development and Innovation**

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**THE COUNCIL OF THE EUROPEAN COMMUNITIES,**

Having regard to the Treaty establishing the European Economic Community, and in particular Article 213 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament

Having regard to the opinion of the Economic and Social Committee,

Whereas there is the need for the reinforcement of statistics on research and development and innovation in order to compare and analyse national policies;

Whereas the Council Resolution of 19th June 1989 on the implementation of a plan of priority actions in the field of statistical information: Statistical Programme of the European Communities (1989-1992)<sup>1</sup>, highlighted the need for a comprehensive and coherent framework that will satisfy Community statistical information requirements by ensuring the approximation of methods and a common basis for concepts, definitions and standards;

Whereas this development forms part of the Statistical Programme of the European Communities 1993-1997;

Whereas the design of policies trying to encourage progress requires accurate and factual knowledge about trends in science and technology endeavours;

Whereas statistical indicators are devised in order to support the management of science and technology policies in the Member States and the Community as a whole;

Whereas these statistical indicators are complementary and essential to other priority areas and programmes of the EEC e.g. the programme SPRINT<sup>2</sup> concerning innovation and technology transfer and the regional programme STRIDE<sup>3</sup>;

Whereas the specific programmes needed for the implementation of the Framework Programmes for Community Research and Technological Development, and the Framework Programmes themselves need the report of a statistical information system on RTD;

Whereas the amount of existing statistical information varies in each Member State and the data that exist are not always comparable;

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<sup>1</sup> OJ No C 161, 28.06.1989, p. 1

<sup>2</sup> OJ No L 112, 25.04.1989, p. 12

<sup>3</sup> OJ No C 196, 04.08.1990, p. 18

Whereas the implementation of a statistical information system for research and development and innovation necessitates a sequence of interrelated actions starting from the assessment of the needs up to the dissemination of information, and whereas this action should be organized in a coherent framework;

Whereas the timely delivery of suitable comparable data can only be guaranteed by appropriate legal provisions and these provisions have to be prepared together with the relevant Commission services; whereas the provisions can most efficiently be met by Commission measures prepared following consultation with Member States;

Whereas to ensure their usefulness and comparability, the details of data to be provided by the Member States to the Commission should be set by the Commission in conformity with agreed definitions and methods established by OECD, UNESCO, and other international organisations;

Whereas the data collection procedure for the industry and administrations should be simplified as much as possible while still maintaining at the same time the quality of the data, which is made possible by the development of appropriate basic statistical tools;

Whereas it is essential that developments in official research and development and innovation statistics are coordinated to meet essential international, community, national and regional needs at minimum public and private cost;

Whereas this coordination can most conveniently and effectively be done within the established procedures of cooperation between the Commission, the statistical services of international organisations and those of Member States; whereas it is therefore appropriate to adopt a 5 year programme to ensure this coordinated development;

Whereas consultation with Member States on the carrying out of this programme can be made through the Committee on the Statistical Programme of the European Communities set up by Council Decision 89/382/EEC of 19 June 1989<sup>4</sup>, and whereas that Committee can also be called on to give its opinion on the Commission's specific proposals for collection and submission of statistical data by Member States;

Whereas the Scientific and Technological Research Committee (CREST)<sup>5</sup> has given its opinion;

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<sup>4</sup> OJ No L 181, 28.06.1989, p. 47

<sup>5</sup> OJ No C 7, 29.01.1974, p. 2

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**HAS ADOPTED THIS DECISION:**

**Article 1**

The multiannual programme (1993-1997) for the development of Community statistics on research and development and innovation (hereinafter referred to as "the programme") is hereby established.

**Article 2**

The objectives of the programme referred to in Article 1 are as follows:

- (a) to set out a Community reference framework for statistics on research and development and innovation defining the most appropriate concepts and methods for supporting the corresponding Community policies, and for satisfying the needs of national, regional and local administrations, international organisations, economic operators, professional associations and the general public;
- (b) to establish a Community statistical information system for research and development and innovation;
- (c) to promote and support harmonization of statistics on research and development and innovation in the Member States;
- (d) to facilitate the dissemination of comparable information.

**Article 3**

With a view to achieving the objectives referred to in Article 2, the following work shall be carried out by the Commission in line with the action plan set out in the Annex:

- (a) analysis and evaluation of user demand, subject to its feasibility and based on cost efficiency in order to define actions and priorities, for statistics on research and development and innovation;
- (b) improvement, where necessary, of existing methodological framework;
- (c) identification of existing statistical information on research and development and innovation;
- (d) setting up the organizational and technical components of a Community statistical information system for research and development and innovation;
- (e) carrying out pilot surveys and
- (f) developing basic statistical tools.

The Commission shall make use of existing sources of information, instruments and procedures to carry out these tasks.

#### **Article 4**

The Member States shall ascertain and analyse the needs of the main national users for Community data on Research, Technological Development and Innovation Statistics and transmit this information to the Commission within eight months after the adoption of this Decision. The Commission shall coordinate these activities.

#### **Article 5**

For the work referred to in Article 3, Member States shall transmit to the Commission, existing statistics on research and development and innovation and any information it may require concerning the methodology used for collecting such statistics. These shall include any data which are claimed as confidential under national legislation; these data should be clearly marked as such.

#### **Article 6**

- (a) The Commission shall present an interim report to the Council in 1995, accompanied if necessary by proposals it considers appropriate, particularly on the methodological framework referred to in Article 3 (b) and on the implementation of a system based on that methodology, for the regular collection of harmonized statistics on research, development and innovation, as well as to cover the requirements of Community policy on research and technological development (RDT) and innovation, and the requirement for regional data to aid structural policies.
- (b) The Commission shall present a final report in 1997 to evaluate, in 1997, the results of the work referred to in Article 3.

#### **Article 7**

This decision is addressed to the Member States.

Done at Brussels

For the Council

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Annex

**Plan of action for the  
development of Community Statistics on  
Research, Development and Innovation**

- a) Analysis and evaluation of user demand for statistics on research, development and innovation.**

The aim is to collect information on, and analyse the requirements of the main users, i.e. the Community institutions, the CREST, the national, regional and local administrations, the international organisations and the economic operators.

In order to facilitate long term planning and a convergence of statistical actions at international, Community, national and regional levels, the analysis will take into account long term requirements.

- b) Improvement, where necessary, of existing methodological framework.**

The aim will be a reference framework for statistics on research and development and innovation, both for existing data at national level and for additional data collection at Community level. This reference framework will increase the comparability of data between the various Member States.

Further development of the methodology will be done in close collaboration with, and within the framework provided by OECD, in order to take benefit of what has already been done by that institution in the field and in order to guarantee comparability with third countries. Where an adequate or adoptable methodology does not already exist, the Commission shall take the lead and initiative in developing the framework to cater for the special needs of the Community.

The methodology will be used as the basic harmonization tool for the development of official Community statistics on research and development and innovation and as a recommended framework for non-official statistics.

The further methodological development will be formulated in manuals which will be adopted at the Community level.

- c) Identification of existing statistical information on research and development and innovation.**

In order to develop the methodology and the information system, examinations must be made to reveal the amount of existing information on research and development and innovation. This investigation is aimed at showing the extent of accessible data in the Member States and the differences between the Member States. This knowledge is necessary for the collection of identical and comparable data. It stresses and highlights where to make special effort to promote and support the harmonization of statistics on research and development and innovation.



**d) Setting up the organizational and technical components of a European statistical information system for research, development and innovation.**

Priorities will be given to the following:

**Resources:**

- Modes of financing research and development activities (both private and public).
- Research and development personnel by qualification.
- R&D expenditure by sector (of enterprise, the state, higher education).

**Results:**

- Technological innovation in the enterprises
- Exchange of goods and services of high technology

On a circumstantial basis, the works are also undertaken on the direct repercussions of the research on patents and bibliography.

Data will be classified according to European nomenclatures (NABS, NACE Rev.1...). Special attention will be given to the regional dimension.

Data are stored in data bases which will contain:

- 1) harmonised data on R&D and Innovation;
- 2) national data collected according to national practices not yet fully harmonised;
- 3) data collected by the Commission.

**e) Carrying out pilot surveys.**

Improving the availability of data on research and development and innovation requires sometimes the carrying out of pilot surveys in order to test the feasibility of some data collection exercises. The pilot surveys will prepare the way for regular data collection based on the methodology. These pilot surveys will be carried out in accordance with the concepts and methods developed in the methodology.

**f) Developing the basic statistical tools.**

Basic statistical tools must be developed in order to simplify as far as possible data collection procedures for suppliers, whilst maintaining data quality. These statistical tools will include registers, EDI techniques (Electronic Data Interchange), classification systems, sampling, questionnaires, survey processing tools, data analysis systems.

## **Annex**

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- a) **Analysis and evaluation of user demand for statistics on research, development and innovation.**

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**FINANCIAL STATEMENT**

**SECTION 1: FINANCIAL IMPLICATIONS**

**1. Title of operation**

Statistical Programme of the EC (1993-97)

**2. Budget headings involved**

- Financial prospects - Heading 4. Other policies.
- Subsection B-5 - Consumers, internal market, industry and innovation.
- Chapter B5-60 - Statistical information policy connected with the completion of the internal market and in support of Community policies.

Line B5 - 6000

(former B5-600, 10, 20, 30)

Line B8 - 5900

(former B8-5900, 10, 20, 30)

**3. Legal basis**

Article 213 of the Treaty

**4. Description of operation**

**4.1 Specific objectives of operation**

- a) analysis and evaluation of the demand from users of statistics on research, development and innovation;
- b) improvement, where necessary, of the existing methodological framework;
- c) identification of the statistical information available on research, development and innovation;
- d) establishment of the organizational and technical components of a European system for statistical information on research, development and innovation;
- e) pilot surveys;
- f) development of basic statistical tools.

**4.2 Duration**

One-off

#### 4.3 Target population

- The beneficiaries of this operation are: the Community Institutions, the governments of the Member States, the economic and social decision-makers in the Member States, research institutes, universities and the media.

#### 5. Classification of expenditure or of revenue

##### 5.1 NCE

##### 5.2 DA/NDA

##### 5.3 Type of income envisaged: NONE

#### 6. Type of expenditure or revenue

##### 6.1 100% subsidy

NO - the Commission's contribution represents only a small part of the actual cost of collecting the data, i.e. some 1-5%, since the Commission's statistical work is subsidized to a very large extent. Nevertheless, the expenditure is essential to provide an incentive for standardizing the data collected, processing them and forwarding them data to Eurostat.

##### 6.2 Subsidy for cofinancing with other sources in the public and/or private sector

YES - cofinancing with the public sector (budgets of the national statistical services) (income from sales of statistical products and financing of surveys by businesses).

##### 6.3 Interest subsidy

NO

##### 6.4 Other

NONE

##### 6.5 Should the operation prove an economic success, is there provision for all or part of the Community's financial contribution to be reimbursed?

NO

##### 6.6 Will the proposed operation cause any change in the level of revenue?

#### 7. Financial impact on appropriations for operations (Part B of the budget)

**7.1 Method of calculating total cost of operation:**

- PDB 1993 Total: ECU 400 000

including

- Provision of services (studies, analysis, data management):  
ECU 320 000

**7.2 Proportion of mini-budget in total cost of operation:**

- B8-5900 for ECU 80 000

**7.3 Indicative schedule of commitment and payment appropriations**

<u>Financial year</u>	<u>C.A.</u>	<u>P.A.</u> (ECU '000)
1993	400	280
1994		120

**8. What anti-fraud measures are planned in the proposal for the operation?**

- a) For the contracts and agreements entered into by the Commission payment is solely on results.
- b) The statistical information is considered to be an objective instrument for evaluating Community action programmes and thus contributes to consolidating the anti-fraud provisions.

**SECTION 2: ADMINISTRATIVE EXPENDITURE**  
(Part A of the budget)

1. Will the proposed operation involve an increase in the number of Commission staff?

DG unit mainly involved in the work (in accordance with the Directory as at 1 January 1991)

G0 (sector attached to the Director-General)

Staff: two persons on 1 January 1991,

three requested from 1993 budget  
one requested from 1994 budget  
two requested from 1995 budget.

2. Indicate the amount of staff and administrative expenditure involved in the proposed operation:

- proportional to the staff attached to the operation, two persons on 1 January 1992.

**SECTION 3: ELEMENTS OF COST/EFFICIENCY ANALYSIS**

**1. Objectives and cohesion with financial programming**

**1.1 Specific objective(s) of proposed operation:**

**Statistics in the context of research and development:**

Public and private statistics on research and development,  
statistics on technological innovation

**1.2 Is the operation incorporated in the financial programming of the DG for the years concerned?**

**YES**

**1.3 To which broader objective defined in the DG's financial programming does the objective of the proposed operation correspond?:**

**General objective: EC statistical action 1993-1997**

**2. Grounds for the operation**

**2.1 Reasons for choosing this operation rather than an alternative which would achieve the same objectives**

**This operation will achieve four objectives:**

- it gives the Institutions the quantitative data for drawing up, monitoring and evaluating any plan of action in accordance with Article 3 (2) of the Financial Regulation: "it therefore contributes to the more effective and appropriate use of the Community budget".

- it gives the national governments comparable statistics on all the Member States for evaluating and monitoring the progress of Community and national R&D programmes and policies.

- it provides political, economic and social bodies in the Community with statistical information on which to make and evaluate their decisions in their respective fields of action: it is therefore an essential part of the European information market.

- it makes available to the scientific community the information needed to enhance its analysis and knowledge of economic and social life in the Community as regards research, development and innovation.



**a) cost:**

- The finance for this operation comes mainly from the Member States (Section 1, item 6.1), which have a well-established structure for collecting and processing data. If the Commission had to finance the whole of this programme, the cost would be extremely high for a product which would certainly be less reliable.

**b) spin-off effect:**

- Statistical information is collected by a highly decentralized system, in which the national systems have a responsibility at individual Member State level. The Community statistical programme is becoming an integral part of the national statistical programmes, thereby contributing to establishing a European statistical area.

**c) multiplier effect:**

- Effect of drawing the national statistical systems into a European statistical area and thus into further integration at Community level.

**3. Monitoring and evaluation of the operation**

**3.1 Performance indicators selected:**

- monitoring the operational objectives using the TBPS (Statistical Programme Monitoring File), interim reports and the annual report.

**3.2 Annual progress report on programme:**

The statistical programme is continuously monitored by a TBPS (Statistical Programme Monitoring File), which lays down for each general operation the operational objectives and resources required on the basis of the programming/execution principle. At the beginning of each year Eurostat produces a report on the progress of its programme during the preceding year. This report falls into three parts, as follows:

- the first summarizes, for each policy, the main achievements in the year;
- the second describes, for each operation, the objectives laid down and the results achieved;
- the third gives statistics on the utilization of human, budgetary, computer and administrative resources during the preceding year.

The Council Decision provides for a report on the execution of the programme.

**Annexes:**

- 1) Mini-budget
- 2) Timetable

BUDGET LINES WITH MINI-BUDGETS

ECU '000

Budget line	TITLE	Total mini-budget	ALLOCATION CODES					Planned number of staff
			Expenditure on infrastructure					
	Operation support appropriations - B5-6000	(For information)	20 Exp. on staff	30 Operating exp.	40 Direct exp. (DGs)	41 DG IX quota (1)	50 Exp. on information and publications	
B8-5900	EC Statistical Programme 1993	80	60			20		1

The indicative schedule of commitment and payment appropriations is as follows:

Art. B5-6000 - DA -  
ECU '000

COMMITMENTS		PAYMENTS	
		1993	1994
4. 1993 appropriations	400	280	120

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