

**PROPOSAL FOR THE FLEMISH
PARTICIPATION IN ESFRI- PROJECTS IN
PREPARATION FOR A REPORT TO THE
FLEMISH GOVERNMENT
2ND ROUND**

**NOTES TO THE FORM FOR SUBMISSION OF A
PROPOSAL**

Applications have to be submitted in English!

1 General note

Context

The development of new or upgrading of existing supermassive research infrastructure of pan-European importance is one of the basic pillars of the current policy of the European Commission on the further development of the European Research and Innovation Area. It is research infrastructure that is considered to be crucial for further developments within a research field. To this end a transparent and global vision of European needs has been developed in the form of a roadmap for research infrastructure in Europe for the next 10 to 20 years. The elaboration of this scientific roadmap has been entrusted to the 'European Strategy Forum on Research Infrastructures' (ESFRI).

The first version of the "Roadmap for Research Infrastructures", the ESFRI roadmap for short, with 35 project proposals was published in 2006. This roadmap is a dynamic process. Proposals already in an implementation phase or turning out to be not viable are removed from subsequent editions and new projects are added.

The first update of the ESFRI roadmap (version 2008) contained 44 project proposals. The second update (version 2010) contains 48 pan-European Research Infrastructures or major upgrades, corresponding to the needs of EU research communities in the next 10 to 20 years. The Roadmap was updated with six more projects, three in the area of Energy and three in the field of Biological and Medical Sciences. With the support of the European Ministers ten of the projects have entered the implementation phase by the end of 2010 while another sixteen proceed towards their implementation until the end of 2012.

The resources of the "Research Infrastructures" programme, which is part of the Seventh R&D Framework Programme, are used to further develop proposals put on the roadmap (refinement of the concept, setting up the management structure, preparation of the financing concept, etc), called the "Preparatory Phase".

To facilitate the joint establishment and operation of research infrastructures of European interest the European Commission designed a special legal form. The Community legal framework for a European Research Infrastructure Consortium (ERIC) entered into force on 28 August 2009.

State of affairs of Flemish involvement in ESFRI projects

At the end of last decade a number of actions were taken to inform the Flemish research community of the European research infrastructure initiatives and to gauge interest and a possible role of Flemish actors in the preparation of projects on the ESFRI roadmap.

In 2009 the Flemish Minister for Science and Innovation preselected eight ESFRI projects taking into account the results of this consultation and the emerging priorities in the Flemish science and innovation policy. For each project a consortium of researchers working at Flemish universities and public research centres formulated a proposal. The minister asked the Hercules Foundation, the Flemish funding agency for research infrastructure, to assess the scientific quality of the proposals. For this assessment the same methodology was used as for large scale research infrastructure.

The Hercules Foundation's Hercules-Science Commission evaluated the proposals and advised the Flemish Government to fund 5 of the proposals as a Flemish contribution for the construction of the ESFRI projects and ranked them in descending order of priority as follows: ICOS, PRACE, SHARE, ESS and LIFEWATCH.

The Commission decided to advise the Flemish Government that the 3 other proposals were not sufficiently mature to be funded as a Flemish contribution for the construction of the ESFRI projects.

For ESS, ICOS, LifeWatch and SHARE the administrative process to join the European consortium is in progress and in the 2012 budget the Flemish Government allocated funding for the Hercules Foundation to subsidise the Flemish contribution to these projects.

Flanders is installing its first TIER1 supercomputing and further upgrading the TIER2 capacity at the Flemish universities. Within the Belgian federal context the application for membership of PRACE is in preparation.

Procedure for drafting the second report on the prioritisation of ESFRI projects in Flanders

The Flemish authorities set up the Flemish Europe Platform to strengthen the coordination and the collaboration between Flemish actors with respect to EU activities in science and innovation.

The Working Group 'Infrastructure' of the Flemish Europe Platform composed of representatives of the department of Economy, Science and Innovation, of the Flemish funding agencies for research and innovation and of the universities and public research centres, supervises the priority setting process for the Flemish participation at ESFRI. The Hercules Foundation is responsible for the scientific evaluation.

The following procedure is used for the purpose of prioritising the Flemish participation in ESFRI projects:

- In the first instance the process is aimed at selecting the proposals in which Flanders can and will potentially play a **"pulling"** role, which involves making a direct contribution to the design and development of the research infrastructure. This also

involves a financial contribution to setting up the research infrastructure, such that Flanders acquires a strong position in the further development of the field of research concerned. This approach differs substantially from a scenario in which the accompanying financing is provided to implement the research projects and programmes on existing or yet-to-be-developed ESFRI infrastructure, as is now the case in the “big science” programme of the FWO. The process of gaining access to ESFRI infrastructure by paying a fee will be covered in a separate section of the second report for the Flemish Government. The report will mainly advise the Flemish Government on the scientific capacity and interest of the universities and Flemish public research institutes on the possible participation in the development of projects that are included in the ESFRI roadmap. The call will primarily deal with the latter.

As a first step in the preparation of a report, the Hercules Foundation carried out a survey on interest of Flemish universities and public research institutes in participating at the construction and exploitation of ESFRI-projects or in gaining the access of these infrastructures on a project basis. Only the projects on the 2008 update of the Roadmap were taken into account as the projects added on the 2010 update are still in a preliminary phase. The upgrade of a number of ‘Big Science’ research infrastructures in which Belgium is already participating, but for which the Belgian contribution, the “membership fee”, is paid by the federal government were also considered outside the scope of the survey. They concern expansions of the CERN, ESRF, ILL, ESO and EMBL infrastructures.

The Working Group examined the survey results and drew up two lists. The first list contains 12 projects Flemish researchers want to have access to on a project basis and the second list also 12 projects for which a Flemish contribution in their realisation is proposed. Both lists of ESFRI-projects are in annex A.

With the consortia in charge of the construction and exploitation of the 12 infrastructures on the first list Flanders will negotiate the conditions under which Flemish researchers can get access on a project basis. These 12 projects are not covered by the call to submit proposals.

- For the development of each of the infrastructures on the second list, a consortium of Flemish researchers is asked to develop a proposal for a Flemish contribution to them. These proposals will then be subject to a detailed evaluation, whereby among others the following elements must be explained:
 - The role and involvement of actors in Flanders
 - The importance of the research field for Flanders in an international context
 - The financing requirements
 - The capacity and quality of the consortium to realise the objectives

For the evaluation of the proposals, the expertise built up within the Hercules Foundation will be used. This implies that the Hercules Science Committee will assess the scientific quality of the proposals.

A similar method will be followed as for the scientific evaluation of the applications submitted in the framework of the calls for large scale research infrastructure:

- Each proposal is assessed by at least three researchers who have international recognition in the research discipline(s) concerned, and of course are neither directly nor indirectly involved in the project.

- The applicants are given the opportunity to respond in writing to the anonymous assessment reports.
 - The applicants are given the opportunity to explain their proposal to the Committee verbally.
- As the ESFRI projects are further developed and the proposals in question are submitted to underpin the drafting of a report to the Flemish Government, a less developed investment and exploitation plan is required in comparison to the applications for large scale research infrastructure. The requested information must enable an understanding to be obtained of the order of magnitude of the necessary financing.
 - On the basis of among other things the scientific proposals and the outcome of their evaluation, a report will be drawn up and submitted to the Flemish minister for Science and Innovation for the purpose of discussions on a possible financial framework for Flemish participation in these international research infrastructures. The final decision will not only be based on the scientific quality of the proposals but also on the Flemish science and innovation policy's overall priorities and budgetary considerations.
 - Then it will be examined how much interest there is in the federal government and the other Regions and Communities, in order to work together on the ESFRI projects that are a priority for Flanders.
 - It should be noted that no financial resources are currently available to support such initiatives. If Flanders decides it wants to play a leading role in the development and/or construction of projects that are on the ESFRI roadmap, the Flemish Government presumably starting in 2014-2015 will have to provide structural, long-term financing for this.

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| <p>Calendar for the submission and assessment of the proposals for the seven ESFRI projects identified in the second phase.</p> |
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For the assessment of the proposals submitted for the seven ESFRI projects identified in the second phase, the following indicative timeline will be employed:

- Opening of the call: Friday December 16, 2011
- Submission of proposals: Friday May 4, 2012 at 17:00 at the latest
- Period in which the researchers can respond to the assessment reports of the referees: September 2012
- Period in which the meeting of the Hercules Science Committee is planned: October 2012.

2 Guidelines for filling in the proposal

PLEASE USE THE E-FORM AND FILL IT OUT IN ENGLISH

Please complete everything in Arial, size 11, single line spacing

Please do not exceed the maximum number of characters allowable for your answer. Exceeding this amount could have a negative influence on the proposal's review. If applicable, the maximum amount of characters for an answer should be respected. As an indication : 1 A4 page = 3.750 characters.

To complete the application form, Adobe Reader 9.0 or higher (preferably version X) is required. To get a free version see: <http://get.adobe.com/uk/reader>.

To save the document you need to click the 'Save Form As' button in the footer. Alternatively, you can choose either Save As in the File menu or the following keyboard combination: ctrl+shift+s.

For numbers, the input is limited to two decimal places. The form automatically recognizes a dot or a comma as the decimal separator and places a separator stabbing between thousands.

Where applicable, to add an image in the document click on the button "Add an image", click on the field and browse to the image. A box will appear and you can add a picture. If you have more than one picture to add, repeat this procedure.

In this chapter the numbering of the sections in the application form is used.

Front Page

Give the name of the promoter-spokesperson on the front page of the proposal form along with the institution with which he/she is associated and for which he/she is submitting the proposal. If a person is associated with several institutions please state to which of these the application relates.

There may be only one promoter-spokesperson per proposal.

The acronym of the ESFRI-project for which the proposal is submitted must be mentioned.

On this page please also give the title and/or name of the submitted proposal which is a component of above-mentioned ESFRI-project.

The summary

Please summarise the proposal in 3750 characters, blanks incl. and in a language which can be easily understood by a scientist/scholar who is not a specialist in the subject.

I. Scientific Section

1.1 Introduction (max. 7500 characters, blanks incl.)

Give the international context of the research field or fields to which the ESFRI -project and as a component of this submitted proposal relates, the 'state of the art' research infrastructure available for this research in Flanders, the European Union and internationally, and recent breakthroughs and 'hot topics'.

1.2 Description of the requested infrastructure (max. 11500 characters, blanks incl.)

Describe the requested infrastructure (including planned upgrades) and specify all necessary technical specifications.

State whether the proposal relates to the purchase of new infrastructure or the extension/replacement of existing infrastructure. If it relates to an expansion and/or replacement of existing infrastructure, indicate the year in which the existing infrastructure was purchased / installed and the means by which the purchase was financed.

State whether the infrastructure is already commercially available or at an experimental stage and if the proposal relates to the purchase of components to build the infrastructure. If the infrastructure is still at an experimental stage state indicate whether the applicants are collaborating in its development.

1.3 Description of the proposed research programme(s) to be carried out using the infrastructure (max. 11500 characters, blanks incl.)

In this section describe the proposed research programme or proposed research programmes for which the requested infrastructure is required.

Do(es) the proposed research programme(s) tie in with the applicants' long term research? Do(es) the proposed research programme(s) represent a new research direction for the applicants? Explain.

1.4 Added value of the infrastructure and the proposed research programme(s) (max. 11500 characters, blanks incl.)

Explain the relevance, the scientific, technological and/or policy-relevant added value and innovative character of the requested infrastructure for the research field(s) involved. Indicate how this infrastructure as a Flemish component is part of the - within the framework of ESFRI-project - research infrastructure to be developed. Give the Flemish, Belgian, European and international context.

Explain the relevance, scientific, technological and/or policy-relevant added value and innovative character of the proposed research programme(s) that shall be carried out with the requested infrastructure for the research field(s) involved.

Give also any known similar infrastructures at your own institutions, in Flanders, in Belgium and/or in other countries. Clarify the necessity for the acquisition of this infrastructure to carry out the research work, given that the infrastructure is already present in your own institution(s) or elsewhere.

To what extent does the proposal fit in with the strategic research policy of the requesting institutions and their entities (e.g. group, faculty, department).

To what extent do the requested infrastructure and associated research programme(s) fit in with initiatives and infrastructure in the research field in question in Belgium?

If you are requesting several items of equipment at the same time explain why these constitute a whole and demonstrate how the research programmes cannot be carried out if one of them is not available.

To what extent does the requested infrastructure contribute to the strengthening of the Flemish position in the research field in question, and which is its economic, societal and/or policy-relevant valorisation potential.

To what extent might the infrastructure function as a locus to generate new projects and partnership agreements other than those already described in the proposal? Could there be an interest of firms located in Flanders, Belgium and European Union to use the infrastructure or collaborate in research projects?

1.5 Qualifications of the research groups and partners involved

1.5.1 Scientific position of the research groups (max. 7500 characters, blanks incl.)

Describe and place in an international context the scientific position of the research group(s) submitting the proposal, and show their involvement in managing and setting

policy in relation to (international) research infrastructures. Indicate why the consortium is well suited to carry out the proposal.

Show to what extent the research groups possess the scientific and technological competencies and management experience needed to carry out the proposed research programme(s) using the requested infrastructure within the context of the ESFRI-project and, where necessary, the extra competencies in need of development.

1.5.2 Curricula Vitae of the promoter-spokesperson and co-promoter(s)

Scientific output: to demonstrate the scientific excellence of all members of the consortium as a whole, please give the ten most relevant publications (articles, books, chapters in books, databases, the proceedings of scientific congresses and patents). If the publications relate to the proposal, this should be indicated by means of an asterisk.

Add as an appendix submitted by the promoter-spokesperson and (each of) the co-promoter(s) a brief scientific CV – max. 10 A4 per person – divided into at least the following categories:

- Research funding granted in the last 5 years: (co-)promotership of research projects (give also: financing body, project title, budget, duration)
- Publications (confine these to the 10 most relevant, demonstrating the relevance of the proposal or scientific excellence). There is no restriction in time or in form here (articles, books, chapters in books, the proceedings of scientific congresses, policy-relevant studies and patents)
- Experience in research with and management of large-scale research infrastructure, possibly as part of a consortium or in an international context
- Contribution to policy-relevant research
- Contribution to the valorisation of research results (patents, licences, spin-offs, etc.)
- Academic titles and diplomas
- Where relevant for the partner(s): (co-)promotership of defended doctoral degrees and doctoral degrees under preparation in the last 5 years
- If relevant to the proposal or the partner(s): other applicable information

PLEASE NOTE

In the electronic format, CVs should be added as **one or more separate files, next to the E-form**. A proposal may not be submitted as a single (PDF) file.

1.6 Proposal for the possible expansion of the consortium with partners in Flanders (text limited to max. 3750 characters, blanks incl.)

Explain whether all relevant actors from the Flemish public knowledge centres (Flemish universities, polytechnics, strategic research centres, scientific institutions, postgraduate education institutions, etc.) are participating in the consortium submitting the proposal.

Explain, if necessary / advisable, how the consortium can be expanded in the next phase with other Flemish actors from the public and private sector.

Are the applicants aware of firms, located or not in Flanders, eventually interested to join in the consortium?

1.7 Proposed (forbidden) referees

1.7.1 Referees proposed by applicants (text limited to 2500 characters, blanks incl.)

In order to support the work of the Hercules-Science Committee, scientific recommendations are obtained for each proposal from at least three not in Belgium working experts. The Hercules-Science Committee draws up the list of experts per proposal.

Applicants have the possibility of proposing a maximum of five people whom they consider suitable to assess the proposal. Applicants must not contact these referees themselves.

There may occur however no conflict of interest between the experts and the applicant because of personal relations, professional relations (during the past three years), scientific relations (e.g. co-authors) or economic reasons.

1.7.2 Forbidden referees (text limited to 2500 characters, blanks incl.)

Applicants can list a maximum of three people or institutions whom they do not want as a referee, or do not want referees to be chosen from.

II. Investment Plan

2.1 Description of how the infrastructure will be obtained and the legislation regarding installation and exploitation (max. 7500 characters, blanks incl., except for construction, max. 22500 characters, blanks incl.)

Give a description of how the infrastructure or parts of the infrastructure to be built will be obtained (purchase, leasing, public-private partnership, etc.).

If the infrastructure is to be constructed explain the technological feasibility of the proposal and explain in a project plan the construction and operation of the infrastructure (staff, schedule, work, benchmarking, etc.). Drawings and other relevant material can be added as a separate appendix to the proposal.

Describe the licences needed for the installation and use of the infrastructure (e.g. building permit, environmental licence, insurance, etc.).

Give the timeline in months with milestones for the acquisition/ installation/ construction.

2.2 Housing (max. 7500 characters, blanks incl.)

Give a detailed description of any housing required for the requested research infrastructure. Pay attention a.o. to needs specific to installation, alterations, new buildings.

Indicate if the infrastructure requested in this proposal as a component of ESFRI-project will be installed in Flanders and if not, explain this.

2.3 Exploitation plan (max. 11500 characters, blanks incl.)

Give an exploitation plan for the infrastructure in the first three years after its purchase, or if constructed after the commissioning of it by the applicants.

The exploitation plan must contain an estimate of the operating and maintenance costs. The number of employees required for this (expressed in FTE) and their qualifications are to be specified. It also has to state whether these people are already working in the research group(s) or have to be recruited, as well as the costs of training and refresher courses on the use and maintenance of the equipment. For the personnel in service, the current total wage costs are used, and for the people to be recruited the rules used by the FWO for estimating personnel costs have to be followed: for a full-time academic or research staff: 60,000 euro and a full-time technical assistant: 50,000 euros;

for half-time employees, respectively 30,000 euros for scientific staff and 25,000 euros for technical staff.

As the infrastructure will form part of a European infrastructure, an estimate also has to be made of the coordination costs attached to this within Flanders and/or within the ESFRI project.

In addition, this also explains the following:

- + The expected period between concluding a subsidy agreement and the time at which the research infrastructure can be used for research.
- + The exploitation of the research infrastructure with attention on quality assurance and safety aspects.
- + The estimated available usage time (stating the estimated maintenance time).
- + The way in which the available usage time will be managed:
 - How the prioritisation will be done within the research groups of the consortium that submits a proposal, and
 - How the other users (Flemish and European research groups, (Flemish) businesses or other) will gain access and under what conditions (e.g. user rules and calculation of a reasonable payment), and how these possibilities will be made known to the different target groups ('open access').

As the proposed infrastructure is part of a distributed European research infrastructure, particular attention has to be paid to this last aspect of the exploitation plan.

2.4 Optimum date for a decision on European and Flemish level from the perspective of the applicants (max. 2000 characters, blanks incl.)

The applicants of the proposal are asked to give (and explain) the optimum date from their point of view on which a decision must be made on a European and Flemish level regarding the realisation of the ESFRI project for which the Flemish proposal is submitted. This must be supported by a timeline for the construction (on a Flemish and/or European level) and the commissioning of the infrastructure.

III. Financing

3.1 Depreciation period

A fixed depreciation period of 5 years is assumed, with the exception of ICT equipment (hardware and software, including databases) where the depreciation period is set at 3 years. In the case of a licence acquired for a database the depreciation period shall be equivalent to that for ICT equipment.

3.2 Total amount of the costs for the acquisition, the maintenance and the exploitation of the infrastructure

At the estimation of the budget for the proposal a distinction must be made between:

a) costs of research investments¹. These break down into the following cost types:

- a1) costs for the purchase of the infrastructure
- a2) costs for components for the construction of the planned research infrastructure
- a3) upgrades of the research infrastructure
- a4) costs for modifying buildings and connection costs for the research infrastructure

b) personnel costs for the development and construction of the research infrastructure

c) maintenance and exploitation costs during the first three years after the start of the exploitation. These break down into the following cost types:

- c1) costs arising from maintenance contracts
- c2) repair costs
- c3) personnel costs for the permanent maintenance of the research infrastructure
- c4) personnel costs for operating the research infrastructure

d) coordination costs from the multilateral perspective of the proposal as a part of the ESFRI-project

All sums are inclusive of (the non-refundable portion of the) VAT.

Wages and costs should be given as figures for 2012.

At this stage overhead costs claimed by the Flemish institutions involved in this proposal, must not be taken into account.

3.3 Amount(s) of co-financing by the institutions participating in the consortium

If at this stage there is already a possibility that Flemish institutions forming part of the consortium can bear part of the costs given under point 3.2, this must be stated in the table under point 3.3.

This contribution does not need necessarily be financial. It can be also personal or material. An example of a personal contribution is the provision of specialist construction personnel. An example of a material contribution is the free supply of building materials or technical components. Equipment already available can form an 'in kind' contribution. In other words a contribution of this kind is possible, but they must have a financial value.

¹ If possible you must make here a break up between equipment and possible extension modules or options.
Proposal for the Flemish participation in ESFRI –projects in preparation for the second report to the Flemish Government – Notes to the form for submission of a proposal

The financial value of a material contribution must be assessed at the time of contribution under standard accounting rules.

Also the origin of this financial/financially valuable contribution must briefly be commented (max. 1000 characters, blanks incl.).

IV. General Information

4.1 Research Type

State whether the requested infrastructure will be used for fundamental and/or strategic basic research and/or policy-relevant research.

4.2 Possible confidentiality implications

In some cases the infrastructure involved in research projects falls under a confidentiality clause, e.g. in the case of application procedures for patents or other forms of valorisation. If this is the case, it must be stated. The people involved in evaluation and selection, including the referees, will need to sign a Non Disclosure Agreement.

V. Administrative Information

5.1 Details of promoter-spokesperson

Proposals are initiated by researchers active in one or more research groups at one or more Flemish universities, university colleges, strategic research centres or institutions for post-initial education. These researchers appoint one from among them to act as proposal spokesperson. This promoter is referred to as promoter-spokesperson.

Give here the name and contact information for the person acting as the proposal promoter-spokesperson. He / she is required to date and sign the designated section of the proposal.

If within three years of the proposal being granted the promoter-spokesperson is granted emeritus status or retires, the name of a co-promoter besides this promoter-spokesperson, associated with the same institution, to take over responsibility for the infrastructure from the former, shall be given. Give here the name and contact details of this co-promoter. Give also his / her status (including the nature and start of his / her appointment). He / she is required to date and sign the designated section of the application.

5.2 Name and address of the receiving institution

The receiving institution is the institution at which the infrastructure will be installed or who will manage the infrastructure.

5.3 Information on participating researchers at Flemish universities, university colleges, strategic research centres and institutions for post-initial educations

Researchers associated with the institution with which the promoter spokesperson himself is associated and from which he/she submits the proposal, and researchers at another Flemish public institution (university, university college, strategic research centre and or institution for post-initial education) may act as co-promoter.

In the proposal please group the information on co-promoters by the institution with which they are associated, starting with the promoter-spokesperson's institution. Co-promoters associated with several institutions must decide against which of these they wish to be listed.

There is no limit to the number of promoters per institution; however the number of institutions is of course limited to the number of Flemish public institutions. Give the name and contact information for each co-promoter.

Please give the status of each co-promoter (including the nature and start of their appointment). Each co-promoter is required to date and sign the designated section of the application.

VI. Authorisation by the Institution's Management

The promotor–spokesperson and the co-promoters must demonstrate that they have proper authorisation from the management of the institution involved.

The head of the institution or an authorised member of staff must therefore sign the application. In the case of universities this is the rector, and of university colleges the (general) directors.

ANNEX A

ESFRI-projects preselected for an access on a project basis

CESSDA
ECCSEL
ELI
EMFL
EMSO
ERINHA
EURO-ARGO
EuroFEL
EUROPEAN XFEL
SKA
SIOS
SPIRAL2

ESFRI-projects preselected for an evaluation of the Flemish research community's scientific interest and capacity to contribute in the construction and exploitation

ANAEE
BBMRI / EATRIS / ECRIN (1)
CLARIN
DARIAH
ELIXIR
EMBRC
EURO-BIOImaging
EU-OPENSCEEN
INFRAFRONTIER
INSTRUCT

- (1) These three projects are grouped and an integrated proposal has to be submitted containing for each EFRI-project a component. As the Flemish Government will take in the next couple of weeks a number of decisions on the Flemish science and innovation landscape directly related to the subjects covered by the three ESFRI-projects, for this cluster a separate evaluation track will be used.