

CENTERS OF EXCELLENCE

REQUEST FOR PROPOSALS

SPECIFICATIONS FOR THE FIRST STAGE OF THE CALL FOR CENTERS OF EXCELLENCE—SUBMISSION OF PRELIMINARY PROPOSALS

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1. INTRODUCTION

The National Council for Science, Technology and Technological Innovation (CONCYTEC-Consejo Nacional de Ciencía, Tecnología e Innovación Tecnológica), with resources from the State of Peru, has designed a group of financial instruments through the Framework Fund for Innovation, Science, and Technology (FOMITEC-Fondo Marco para la Innovación, Ciencia y Tecnología). These instruments aim at promoting the generation of scientific and technical research for innovation in the country.

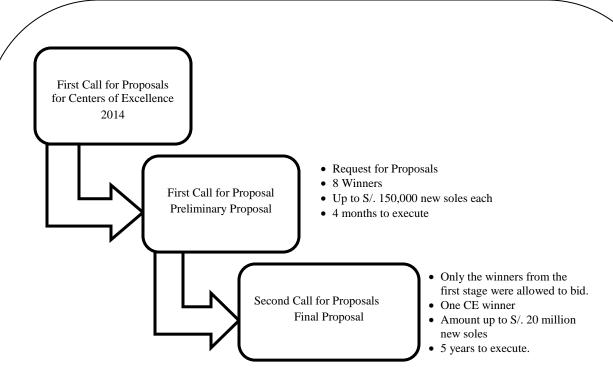
Within this group of instruments, the National Fund for Scientific and Technology Development and Technological Innovation (FONDECYT-Fondo Nacional Científico, Tecnológico y de Innovación Tecnológica) has launched a Call for Proposals for Fórmula C, the implementation of four "Centers of Excellence" (CE). These CEs will comprise a strategic alliance among the country's research centers, foreign or international centers of excellence in I+D+i, and the national business sector. The main purpose of the CEs is to conduct high-level research relevant to the country's business sector needs.

The call for proposals for CEs will be conducted in two stages. In the first stage, FONDECYT will announce a Call for for preliminary CE proposals. Selected applicant teams will receive 150,000 soles from CONCYTEC for the preparation of their final proposal within a period of four months. FONDECYT will finance a maximum of 08 preliminary proposals.

In the second stage, selected bidders will present a fully developed proposal for a CE. The winners of this second stage should implement and start the CEs, securing the respective co-financing assigned to each of the partners, subject to compliance with the established criteria. FONDECYT will co-finance up to 4 final CE proposals² for a maximum amount of S/. 20 million soles each. The stages of the first Call for Proposals for Centers of Excellence and their financing can be seen in the following diagram:

¹ The Centers of Excellence that are financed in this RFP will be new organizations (legal entities) that will develop high-quality research activitiesy (I), development (D), and innovation (i), and will be geared toward resolving problems and taking advantage of opportunities in the Peruvian production and business sector. At a minimum, the Centers of Excellence should be formed by (a) Peruvian universities (centers, research institutions and laboratories affiliated to them), (b) foreign research centers of excellence, and (c) business associations or a group of companies (minimum of three companies that belong to different economic groups)

² One CE will be financed in the first Call for Proposal and three CE's in the second one.



The "Centers of Excellence" Call for Proposals is a nationwide bid.

2. LEGAL BASIS

- Law No. 29951, The Public Sector's Budget Law for Fiscal Year 2013, created by the Framework Fund for Innovation, Science and Technology (FOMITEC).
- Supreme Decree No. 071-2013-EF that approves the Standards for Implementation and Operation of the Framework Fund for Innovation, Science and Technology.

3. OBJECTIVES

The main results expected from the financing that the National Fund for Scientific and Technology Development and Technological Innovation (FONDECYT)³ will award to the CE's, are:

 Generate excellence in scientific research, evidenced by the number of indexed articles published by the CE's researchers, patents granted, licensing contracts awarded, etc., and promote the development of human resources measured by the graduation of PhDs within the CE's research projects.

³ FONDECYT is responsible for the transfer and follow up of the execution of funds assigned to the Centers of Excellence and will subscribe financing contracts.

- Increase the competitiveness and productivity of the partner companies, as well as the overall industrial sector through the application of results of R+D in production and in the marketplace.
- Strengthening of the linkages between industry and academia in R+D+i, shown by the number of collaboration contracts, investment in R+D+i.
- Technology transfer reflected in the number of patents and licenses that were negotiated and granted to the CE.

4. FUNDING CONDITIONS

FONDECYT's goal is to co-finance up to four (4) Centers of Excellence at the national level through two successive Calls for Proposals. The the terms for funding are:

- 1. The creation of Centers of Excellence will be co-funded, via the setting up of a new legal entity in the country, comprised of the association of at least one I+D Center (research center, institute, or laboratory) of a Peruvian university, a I+D+i⁴ foreign Center of Excellence, and one business association or at least three (3) national companies.⁵
- 2. The State will subsidize the Centers of Excellence for a maximum period of five (5) years, granting public co-funding up to 25% of the CE's total budget, not exceeding a total of S/. 20 million new soles for each CE. The associated partners should co-fund at least 75% of the CE's total budget, of which 35% must be in a monetary contribution. ⁶
- 3. FONDECYT's annual co-funding to the CE winners will be disbursed after evaluation of compliance with the previously set goals and interim results. FONDECYT may disburse a maximum of S/. 6 million soles annually per CE (see Annex II).
- 4. Each CE must have a CE Director and a minimum of two researchers (leader and alternate) holding doctorate degrees for each line of research proposed.
- 5. Eligible costs include expenses for human resources related to a CE's research, management, equipment, infrastructure, and costs for implementation, operation, and services.

Additional information about the co-funding conditions and the second stage of the Call is shown in Annexes I and II respectively for reference.

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⁴ A foreign or international center of excellence is an organization dedicated to research activities, development, and innovation, internationally recognized, and has collaborative projects in different countries. It has researchers who are recognized for their academic degrees and their publications in indexed journals, and modern infrastructure for the development of their activities.

⁵ Public or private companies. Private companies should not belong to the same economic group.

⁶ See more details regarding monetary contributions in Item A, Annex I of this document.

5. ELIGIBILITY

The Centers of Excellence must be integrated by the following organizations⁷:

- 1. Peruvian universities⁸.
- 2. Foreign or international Centers of Excellence in R+D+i.
- 3. Business associations or groups of companies⁹.

Proposals for Centers of Excellence that generate research networks at the national level that include other Peruvian universities, public research institutions or private non-profit research centers will be highly valued.

6. SPECIFICATIONS FOR THE "FIRST STAGE CALL FOR CENTERS OF EXCELLENCE— SUBMISSION OF PRELIMINARY PROPOSALS".

The document referred to as "First Stage Call for Centers of Excellence - Submission of Preliminary Proposals", establishes the rules and conditions for the first CE procurement process to select preliminary proposals.

6.1 Objective of the First Stage Call

To select a group of eight (8) preliminary proposals for the creation of Centers of Excellence. FONDECYT will award non-reimbursable funding of up to S/. 150,000 new soles to develop and formulate the final proposal for a CE that will be submitted to the second stage call for Centers of Excellence.

 $^{^{7}}_{\circ}$ In no case can CE members belong to the same economic group.

⁸ The research centers, institutes or laboratories affiliated with Peruvian universities qualify as a university and can participate as long as they have the support from the legal representative of the Peruvian university.

⁹ These can be either public or private companies. Private companies cannot belong to the same economic group. Companies must have been operating in the country for at least five consecutive years at the date of the Request for Proposals.

6.2 Requirements

The preliminary CE proposals must be submitted by the legal representative of the Peruvian university through FONDECYT's on-line application system, together with the following information:

- 1. A CE preliminary proposal form in accordance with Format 01, which must be duly completed and signed by the legal representative of the applying university.
- 2. Letters of interest from at least: a) a foreign Center of Excellence and b) a business association or three companies, in accordance with Format 02 11. Additional letters of collaboration may be attached from other national or foreign research or technology transfer centers that are interested in becoming member of the CE (according to Format 03).

The preliminary proposal that will be presented using the on-line form should contain information that allows its evaluation in accordance with the selection criteria established in Section 6.4.1 of this document, and must convey, among other aspects:

- The national partner's research capabilities (university and/or research center, institute or laboratory) that will be made available to the Center of Excellence. It is understood that 'capability' refers to the researchers, the research groups, technical staff, available infrastructure, etc.
- The track record of the foreign or international Center of Excellence. Specifically, a summary should be submitted of the main lines of research, achievements, and results generated at the level of research, technology transfer and commercialization (publications in indexed journals, applications for patents and how many were granted, technological licensing contracts). Additionally, information about core R+D+i capabilities (human resources, laboratories, and proprietary technology) that will contribute to the CE should be submitted.
- Capabilities of the group of companies or business association to execute the CE proposal and achieve the expected impact.
- Summary of the Research Proposal including priority areas, lines of research and a preliminary listing of research projects to be

¹¹ FONDECYT may approve, on an exceptional basis, the change of entities that originally submitted their letter of interest through a duly supported application from the proposing university.

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¹⁰ The number of participating foreign or national entities may be increased during the second stage of the call for porposals.

¹¹ FONDECYT may approve on an exceptional basis, the change of optities that principally submitted their

- executed, capabilities to carry out these lines of research, alignment with the objectives of the CE, and their potential impact.
- Schedule of activities and budget¹² for the formulation process of a final proposal for a Center of Excellence.
- A proposal for partnership with other national entities such as public research institutes and non-profit private research centers where research capabilities will be presented that will be will be made available for the Center of Excellence.

6.3 Execution of Non-reimbursable Resources

FONDECYT will underwrite funding agreements with the entity that presents the preliminary CE proposal, which will be accountable for the execution of resources. This agreement will establish the rights and obligations of the parties.

At this stage, no contribution is required from the entity, nor the presentation of financial guarantees.

Disbursements will be made in the following manner:

- 70% upon signing of the contract, which will include the Formulation Process Work Plan of the final CE proposal approved by FONDECYT.
- 2. 30% upon application to the Second Stage Call —Request for Proposals and prior approval of the grant financial report backed up by respective supporting documents 13.

The financial resources granted may be used in:

- Preparing and formulating the Center of Excellence proposal including the business plan, institutional arrangement, and management plan for intellectual property, among others.
- A maximum of 25% of the subsidy may be allocated toward the payment of travel costs, per diem, and activities aimed at generating strategic alliances for the project.

¹² The budget report should be detailed, establishing the budget categories in which the resources will be spent. For example, fees for specialists from the entities that will form the CE, consulting, trips, per diem, materials, etc.

¹³ Supporting documents are understood to be receipts for expenses and technical reports such as consulting, market studies, sector analyses, etc.

6.4 Evaluation process and selection of preliminary proposals

Only those proposals submitted within the established deadlines, by eligible entities, with complete documentation and those that are sent to FONDECYT through the on-line Application System will be processed.

6.4.1. Selection criteria

Institutions of the CE

Peruvian universities: the university must meet the following conditions:

- Availability of a "critical mass" ¹⁴ of high-level scientists: number of researchers with Master's and Doctorate degrees.
- Relevant scientific productivity demonstrated by publications in indexed and/or high-impact journals, citations, and h-index.
- Capability in applied research, technological development or innovation, resulting from research projects also proprietary technologies that were developed and transferred.
- Capability in highly qualified human capital training at the Master's and Doctorate levels.

Foreign (CEIE) Centers of Excellence in R+D+i: The CEIE must provide the following:

- Their recent background and progress highlighting main achievements.
- International recognition, measured by its international R+D rankings¹⁵, technology and innovation, publications, patents or other indicators.
- Availability of financial resources and structure of the annual budget (public, competitive public 16 and/or private funding). Provide information on the last 3 years.
- Availability of a significant number of professional scientists with high-level capabilities in applied research: number of researchers with a doctorate degree.
- Capabilities in research and relevant scientific and technological productivity: amount of publications in journals, citations, and h-index, research projects, research investment, and availability of machines and equipment.
- Experience in the training of highly qualified professionals in research and technological development, shown by the number of post-doctorates, doctorates, and master's and/or prepared theses.

¹⁴ Critical Mass is understood to be the optimum number of scientists to adequately develop the project.

¹⁵ Rankings can be general (research centers) or specific (by research subject).

¹⁶ Resources accessed through government programs.

- Capability and experience in Technology Transfer, measured in terms of the amount of activities and income related to patents, licenses, and spinoffs.
- Experience participating in consortiums or associations with other international institutions, and collaborative networks in R+D. This experience must be evidenced by agreements, contracts, number of visiting research and scientific staff, or other documents that validate this experience.

Companies or Associations: A minimum of 3 companies or one business association is required for participation and they must comply with the following conditions:

- To have a recognized presence in the economic sector to which they belong, measured by their participation in the market share.
- Have a research and innovation agenda with identified R+D projects. Additionally, value will be placed on the development of research projects in collaboration with universities and/or research centers.
- Have operations in the country for at least five consecutive years at the date of the Call for Proposals.
- Commitment of monetary contribution to the CE.

Scientific-technical quality of the lines of research and the preliminary work agenda

Quality: Under this criterion, the following aspects will be evaluated:

- Relevance: The relevance of the R+D+I lines and research proposals to meet the productivity challenges identified, as well as the additionality generated with respect to what is currently researched and developed in the R+D centers in the country.
- Research capacities: The partners' capacities made available to the CE to initiate and implement the proposed projects will be evaluated, as well as the team for each R+D project and line.
- Ability to leverage resources for research: this will be evaluated on the basis of projects related to the proposed lines of research that are in progress or about to start and already funded.
- Clarity: Clarity in the presentation of the research projects will be evaluated in aspects such as the approach to the problem and objectives of the research proposal.
- Coherence: Alignment of the business plan to the objectives of the CE's research agenda. Adequacy of the budget to the development of the proposed activities. Adequacy of physical and human resources to implement a research agenda.

Impact:

As part of this criterion, the following aspects will be evaluated:

- Economic impact: potential contribution of the CE to the competitiveness of the participating CE's group of companies and, in general, of national industry.
- Relevance in the preliminary lines of research and their impact on local industry and its value chain.
- Scientific and technological impact: potential generation of new or improved technologies with application in production and markets, development of equipment, scientific facilities and infrastructure, and differentiated technology.
- Capacity building in the country: capability to contribute to training of staff that is highly qualified in research, specific technology, and transfer of technology and knowledge.
- Business opportunities associated with the lines of R+D and their projects: potential technological partnerships and spin-offs to be created during the applied research and technology development phase. Potential for technology transfer (contracts on technology licensing, knowledge transfer and the CE's results to industry and society in general). Mechanisms for the dissemination of knowledge and access to intellectual property rights by third parties.

6.4.2 Selection process for preliminary proposals

FONDECYT will organize an evaluation panel for all of the preliminary proposals in coordination with CONCYTEC's relevant directorates. The panel will be composed of four national members and at least two international experts, and will be organized as follows:

- The national members will be: one CONCYTEC representative with a doctorate degree who will act as the panel's president; one scientist with a doctorate degree; one representative from the business sector; and, one CTI management expert.
- In this panel, international experts will be incorporated who have experience in collaborative university-corporation research, innovation and technology commercialization according to the proposed lines of research.

Each panel member will evaluate each preliminary proposal individually, assigning a score of one (1) to five (5) to each selection criterion (Section 6.4.1), according to the following scale:

Table 1: Evaluation Scores

Quality level	Score
Irrelevant	1
Deficient	2
Regular	3
Good	4
Excellent	5

The panel will be responsible for preparing the final list of awardees in accordance with the evaluation guidelines to be approved by FONDECYT from the preliminary proposals that submitted the best plan for utilizing the funding

6.5 Results: Preparation of the final Center of Excellence proposal

The outcome of this first subsidy should lead to responding to the "Second Stage Call — Final Proposals for the Centers of Excellence", within four (04) months of the first disbursement of funds. The final CE proposal should be prepared in accordance with the information in Annexes I and II.

During the preparation period of the final proposals, the entities may make specific queries to FONDECYT on the operating aspects associated with funding for the CE. A list of frequent questions and their respective answers will be provided to all applicants.

Preparation of the Final Proposal must include at least 17:

A proposal for research and technological development programs.

The proposal should define specific lines of research or scientific/technological problems and support them in accordance with the priorities of the productive sector.

The proposal should show the research projects to be developed during the first two (02) years of operation of the Center of Excellence, including the expected results by the number of indexed publications, master's or doctorate degree theses presented, patent applications, contracts for licensing and technological transfer.

¹⁷ This is for reference purposes. The final content will be included in the "Second Stage Call — Final Proposals for the Centers of Excellence".

The proposal must include R+D+I projects that show additionality with respect to what is currently being researched and developed in the national R+D centers and significantly contribute to the development of decentralized research capabilities in the country. Value will also be placed on the integration with international academic circles.

Identification of technology priorities from the business sector

The proposal must identify the research and technology development needs from the productive sector, which are expected to be served by the Center of Excellence, from a globally competitive perspective.

Strategic goals according to the CE's execution stages

Considering the guidance contained in Annexes I and II, the proposal must include the strategic goals and appropriate indicators to be used in the monitoring of the actions to the CE.

It is necessary to clearly identify the goals for the implementation stage of the CE, distinguishing them from the activities and goals of the CE's operating stage.

The Center of Excellence's models for governance and for business

The proposal must include the legal form of incorporation and the governance model that assures appropriate representation of interests for the three parties that compose the CE.

It must also include the CE's administrative organization and a proposed Executive Director who would ensure appropriate operation and management of public resources.

The proposal must specify the manner in which monetary contributions will be made from each member of the CE in the implementation and operating stages, as well as actions to be taken to generate sustainable resources for its future operation without public funding.

The proposal must include intellectual property guidelines that establish the CE's policy for management of future rights and licensing of technology.

The proposal must also include guidelines to regulate the creation of spin-offs or other companies that could result from the activities of the CE, as well as guidelines for contracting staff.

The Center of Excellence's capability and operation model

The proposal must indicate the research capabilities contributed by each of the CE partners, such as the level of the dedication of national and foreign researchers, as well as laboratories and principal equipment. The Center of Excellence must have multidisciplinary research teams.

Business plan for the Center of Excellence

The CE proposal must include a business plan that considers its life cycle, specifically the implementation and operation stages.

Annual operating and financing program

The proposal will include a budget on the basis of the activities planned for both implementation and operation stages).

6.6 Schedule for the first request for proposals—preliminary proposals

The Selection for Preliminary Proposals stage will be subject to the following schedule:

Activity	Deadline
Publication of Call for Proposals	February 26, 2014
On-line application	Beginning March 10, 2014
Final deadline for applicants	April 30, 2014
Evaluation of preliminary proposals	May 2014
Publication of results	Starting in May 2014
Signing of the contract	Starting in May 2014

Important note:

The english translation is for referential use only. Should any discrepancy appear, the spanish version (*Bases de Centros de Excelencia*) is the legally binding version.