

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**ARGENTINA**

**FEDERAL INNOVATION PROGRAM**

**(AR-L1330)**

**LOAN PROPOSAL**

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## ABBREVIATIONS

“the Agency”	Agencia Nacional de Promoción de la Investigación, el Desarrollo Tecnológico y la Innovación [National Agency for the Promotion of Research, Technological Development, and Innovation]
AGN	Auditoría General de la Nación [Office of the Auditor General]
ANII	Agencia Nacional de Investigación e Innovación [National Research and Innovation Agency]
CCLIP	Conditional credit line for investment projects
CORFO	Corporación de Fomento de la Producción [Productive Development Corporation]
CQS	Selection based on the consultants’ qualifications
ENDEI	Encuesta Nacional de Dinámica de Empleo e Innovación [National Innovation and Employment Dynamics Survey]
FINEP	Financiadora de Estudios e Proyectos [Funding Agency for Studies and Projects]
FONARSEC	Fondo Argentino Sectorial [Argentine Sector Fund]
FONCYT	Fondo para la Investigación Científica y Tecnológica [Science and Technology Research Fund]
FONTAR	Fondo Tecnológico Argentino [Argentine Technological Fund]
ICB	International competitive bidding
MinCyT	Ministry of Science, Technology, and Innovation
MSMEs	Micro, small, and medium-sized enterprises
NCB	National competitive bidding
OECD	Organisation for Economic Co-operation and Development
QBS	Quality-based selection
QCBS	Quality- and cost-based selection
R&D	Research and development
RD&I	Research, development, and innovation
SAE	Secretaría de Asuntos Estratégicos [Office of Strategic Affairs]
SIGEN	Sindicatura General de la Nación [Office of the Comptroller General]
SNI	Sistema Nacional de Innovación [National Innovation System]
STEM	Science, technology, engineering, and mathematics
STI	Science, technology, and innovation

**PROJECT SUMMARY**  
**ARGENTINA**  
**FEDERAL INNOVATION PROGRAM**  
**(AR-L1330)**

Financial Terms and Conditions				
<b>Borrower:</b>			<b>Flexible Financing Facility<sup>(a)</sup></b>	
Argentine Republic			<b>Amortization period:</b>	25 years
<b>Coexecuting agencies:</b>			<b>Disbursement period:</b>	5 years
The borrower, acting through the Ministry of Science, Technology, and Innovation (MinCyT); and the National Agency for the Promotion of Research, Technological Development, and Innovation ("the Agency")			<b>Grace period:</b>	5.5 years <sup>(b)</sup>
<b>Source</b>	<b>Amount (US\$)</b>	<b>%</b>	<b>Interest rate:</b>	LIBOR-based
<b>IDB (Ordinary Capital):<sup>(d)</sup></b>	230 million	80%	<b>Credit fee:</b>	<sup>(c)</sup>
			<b>Inspection and supervision fee:</b>	<sup>(c)</sup>
<b>Local:</b>	57.5 million	20%	<b>Weighted average life:</b>	15.25 years
<b>Total:</b>	287.5 million	100%	<b>Currency of approval:</b>	United States dollars
Project at a Glance				
<b>Project objective/description:</b> The general objective of the program is to strengthen the capabilities of public and private actors in the National Innovation System (SNI), so that businesses can become more productive, and stronger action can be taken amid the challenges faced by the Argentine Republic. The specific objectives are: (i) to increase private investment in innovation; (ii) to increase Argentina's national effort to produce knowledge; (iii) to increase coordination among SNI actors; and (iv) to build institutional capacity to design and implement science, technology, and innovation policies.				
<b>Special contractual conditions precedent to the first disbursement of the financing:</b> The borrower, acting through the coexecuting agencies, will provide evidence, to the Bank's satisfaction, that: (i) the program Operating Regulations ( <a href="#">Part I</a> and <a href="#">Part II</a> ) have been approved and have entered into force on the terms and conditions previously agreed upon with the Bank; and (ii) an agreement between the borrower, represented by the Office of Strategic Affairs (SAE), and the Agency, establishing the terms and conditions for use of the loan proceeds and the Agency's authority, as coexecuting agency, during program execution, has been signed and has entered into force on the terms and conditions previously agreed upon with the Bank (see paragraph 3.5).				
<b>Special contractual conditions for execution:</b> As a special contractual condition for execution, before the program evaluations are commissioned by the SAE, the borrower will provide evidence, to the Bank's satisfaction, that an agreement between the SAE and the Agency, establishing the terms and conditions for transfers and for partial use of the loan proceeds, has been signed and has entered in force (see paragraph 3.6).				
<b>Exceptions to Bank policy:</b> None.				
Strategic Alignment				
<b>Challenges:<sup>(e)</sup></b>	SI <input type="checkbox"/>	PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>	
<b>Crosscutting themes:<sup>(f)</sup></b>	GE <input checked="" type="checkbox"/> and DI <input type="checkbox"/>	CC <input checked="" type="checkbox"/> and ES <input type="checkbox"/>	IC <input checked="" type="checkbox"/>	

(a) Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, and commodity conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable policies.

(d) In accordance with document AB-2990, "Enhancing Macroeconomic Safeguards at the Inter-American Development Bank," the disbursement of the loan proceeds will be subject to the following restrictions: (i) a maximum of 15% in the first 12 months; (ii) a maximum of 30% in the first 24 months; and (iii) a maximum of 50% in the first 36 months, counted in all instances from the date the loan operation is approved by the Bank's Board of Executive Directors (see paragraph 2.2).

(e) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

(f) GE (Gender Equity) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

## I. PROJECT DESCRIPTION AND RESULTS MONITORING

### A. Background, problem addressed, and rationale

- 1.1 **Macroeconomic context.** Argentina is undergoing a prolonged crisis marked by recession and high inflation. The COVID-19 pandemic has had macroeconomic and fiscal fallout associated with its impact on economic activity and the fiscal accounts. GDP fell 9.9% in 2020, and a partial recovery of 6.2% is projected for 2021. The government is taking steps to help the economy recover and to enhance fiscal and external liquidity, starting with its ongoing negotiations for a new arrangement with the International Monetary Fund and a fiscal adjustment projected at 2% of GDP.<sup>1</sup>
- 1.2 **The problem in Argentina.** Productivity has been falling away from the international technology frontier in recent decades.<sup>2</sup> Argentina faces the challenge of regaining sustained long-term growth on the basis of increased productivity through a greater innovation effort.<sup>3</sup> Economic growth hinges on the accumulation of factors (capital and labor) stemming from investment flows to increase physical and human capital, as well as the efficiency associated with these factors or productivity.<sup>4</sup> Productivity, in turn, hinges on the allocation of production-related resources among businesses and on businesses' innovation capacity.<sup>5</sup>
- 1.3 Moreover, the COVID-19 pandemic revealed the need for a strong science, technology, and innovation (STI) system capable of responding to such an emergency and supporting the subsequent economic recovery. Both challenges call for capacity-building of the National Innovation System (SNI), consisting of businesses, research and development (R&D) institutions, universities, and skilled workers.<sup>6</sup>
- 1.4 Despite gains in recent decades, Argentina's SNI still has weaknesses affecting its ability to address challenges related to the slow growth of productivity: (i) insufficient investment in innovation by businesses and institutions; (ii) weaknesses in the supply of knowledge; (iii) little cross-disciplinary collaboration between institutions and researchers for the purpose of solving the country's problems; and (iv) limited institutional capacity for establishing, supporting, monitoring, and evaluating STI programs and policies.

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<sup>1</sup> International Monetary Fund, World Economic Outlook, October 2020.

<sup>2</sup> Based on a total factor productivity (TFP) of 100 in 1961, Argentina's TFP was 78.9 in 2019, whereas for the United States (as a proxy for the international technological frontier) it was 164.5.

<sup>3</sup> The Innovation, Science and Technology Sector Framework Document (document [GN-2791-8](#)) explains the relationship between knowledge, innovation, productivity, and economic development in general terms. Crespi, Gustavo, and Pluvia Zuñiga describe this relationship for Argentina in Innovation and Productivity: Evidence from Six Latin American Countries (IDB, 2010).

<sup>4</sup> Total factor productivity.

<sup>5</sup> Prescott (1998).

<sup>6</sup> Organisation for Economic Co-operation and Development (OECD), National Innovation Systems, 1997.

- 1.5 The Argentine economy's indicators for investment in innovation are lower than expected for its income level. Argentina ranks 80th out of 131 countries on the Global Innovation Index,<sup>7</sup> behind comparable countries such as Chile (54th), Mexico (55th), Brazil (62nd), and Uruguay (69th), and far behind benchmark advanced countries such as Finland (7th), Korea (10th), Israel (13th), and Spain (30th). Some of the subindicators reveal underlying causes: Argentina ranks 121st in credit and 113th in innovation linkages. The latest National Innovation and Employment Dynamics Survey (ENDEI, 2017), which focused on the manufacturing industry, found that Argentine enterprises invest only 1.6% of their revenues in innovation, compared an OECD average of 4% and a regional average of 2.5%. The survey also found that the main obstacle to innovation for businesses is the high cost of R&D (cited by 54% of innovative firms); the second most cited obstacle is difficulties in financing (49%), and in third place are a lack of skilled workers and the long time it takes to see returns on investment (30%). Seventy percent of this expenditure was to purchase equipment, machinery, hardware, and software, with only 14% going to R&D. Problems associated with low levels of appropriability<sup>8</sup> and coordination also have a negative impact on private returns on investment in innovation, particularly in R&D.<sup>9</sup>
- 1.6 The supply of knowledge is limited by low levels of investment for knowledge production. Argentina has a relatively high number of researchers; with 4.76 researchers per 1,000 employed persons, it is ahead of Brazil (3.25), Chile (1.61), and Uruguay (1.51).<sup>10</sup> However, the resources needed by researchers to produce knowledge in the form of financing, infrastructure, or equipment are insufficient. One measure of this is R&D investment per researcher (in US\$000s), which is 47 in Argentina, 104 in Uruguay, 113 in Chile, and 173 in Brazil.<sup>11</sup> Moreover, the supply of knowledge often fails to meet social and productive needs because it is horizontal in nature, rather than oriented toward solving problems in one sector or region. Only 8% of the projects financed by the National Agency for the Promotion of Research, Technological Development, and Innovation in 2019 were aimed at specific objectives; the objectives of the remaining projects were horizontal.
- 1.7 The SNI apex entities are the Ministry of Science, Technology, and Innovation (MinCyT) and the National Agency for the Promotion of Research, Technological Development, and Innovation ("the Agency"). The MinCyT develops policies and finances institutions, while the Agency, which is a decentralized, administratively and functionally independent body within the MinCyT's ambit,<sup>12</sup> administers the instruments for the promotion of innovation. Collaboration between these actors is essential to generating knowledge that can lead to better goods and services. Increasingly complex economic and social problems and increasingly rapid

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<sup>7</sup> [World Intellectual Property Organization, 2020.](#)

<sup>8</sup> Due to high turnover of skilled workers at innovative enterprises (Maffioli et al., 2019).

<sup>9</sup> Sector note on STI in Peru (IDB, 2020).

<sup>10</sup> See <http://www.ricyt.org/category/indicadores/>.

<sup>11</sup> Idem.

<sup>12</sup> Decree 157/2020.

technological change call for greater collaboration to successfully address these challenges. Despite recent efforts to improve coordination, 77% of published papers are still the work of individual researchers or a single institution. This means that efforts are highly dispersed and often duplicated. Incentives, financing, and institutional design should be strengthened to achieve greater levels of collaboration (see [optional link 6](#)).

- 1.8 Functionally, the SNI relies heavily on the capacities of its apex entities to provide strategic guidance and generate quality information on performance so that monitoring and evaluation efforts that can provide relevant feedback. The Agency's capabilities pale in comparison to those of some of its regional counterparts. A study on innovation agencies in Latin America<sup>13</sup> found that the Agency has medium/low capabilities in coordination of actors, whereas those of Brazil's Funding Agency for Studies and Projects (FINEP) and Uruguay's National Research and Innovation Agency (ANII) are high. The Agency's average turnaround time for promotion instruments is 12 months, compared to 6 months for Chile's Productive Development Corporation (CORFO) and 5 months for the ANII. The Agency scored a 6.6 on the indicator for general institutional capacities, which includes human, financial, and learning resources, compared to 7.6 for CORFO and 8.5 for FINEP.
- 1.9 Lastly, gender poses unique challenges of its own. For example, women researchers are underrepresented in important areas such as STEM<sup>14</sup> and research grants. While Argentina's aggregate data indicate equitable participation rates for women researchers (53.7%, Network of Science and Technology Indicators, 2018), gender gaps persist in terms of both horizontal and vertical segregation. In fact, not only are women researchers still underrepresented in most STEM areas,<sup>15</sup> they also face obstacles to advancement in their scientific careers and have a comparatively smaller presence in senior positions.<sup>16</sup> This is the result of multiple factors<sup>17</sup> impacting the selection, participation, and advancement of women in scientific careers. One important factor is related to the existence of gender biases in the allocation of research funding.<sup>18</sup>

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<sup>13</sup> Agencias latinoamericanas de fomento de la innovación y el emprendimiento. IDB, 2017.

<sup>14</sup> Science, technology, engineering, and mathematics (STEM).

<sup>15</sup> Only 9.7% of women researchers and grant recipients are in engineering and technology, whereas this percentage for men is almost double, at 17.8% (Szenkman and Lotitto, 2020).

<sup>16</sup> Nearly 90% of the authorities on the Interagency Science and Technology Council were men in 2017, as were 89% of all university rectors and 73% of all heads of science and technology agencies (or equivalent) (Szenkman and Lotitto, 2020).

<sup>17</sup> The literature identifies the following factors: cultural stereotypes, a lack of suitable role models, difficulties in reconciling professional careers and family responsibilities, and societal biases in STEM disciplines that discourage women's participation (Castillo, Grazzi, and Tacsir, 2014).

<sup>18</sup> Between 2003 and 2015, only 46% of the women-led initiatives submitted in the competitive application process for science and technology research projects have received financing, compared to 54% of those led by men (Fiorentin, Pereira, and Suarez, 2020).



- 1.10 **The Bank's experience in the country.** The Bank has been supporting innovation projects throughout the region. The most recent ones relevant to this operation are the conditional credit lines for investment projects (CCLIPs) BR-O0004 and UR-O1153. In Argentina, the approval of the Technological Modernization Program (loan 802/OC-AR) in 1993 began a series of operations<sup>19</sup> in an uninterrupted relationship with the Bank thus far. A significant milestone in 2009 was the approval of project AR-X1015, a CCLIP for US\$750 million with a 10-year drawdown period. Three of the five individual operations approved under this CCLIP<sup>20</sup> have been completed, while the remaining two have 97% and 90% of their resources committed, respectively. In terms of results, the project completion reports for the satisfactorily completed CCLIP operations show institutional and qualitative achievements.<sup>21</sup> During execution, assistance was provided to strengthen the country's lead entity, create the Ministry of Science, Technology, and Productive Innovation, and consolidate the Agency for the execution of increasingly sophisticated instruments for promoting innovation. Indeed, these programs financed new instruments to promote collective, multiactor innovation efforts, such as specific sector funds, support for business clusters, and development of suppliers. Evaluations of these tools showed a positive impact on the sales of beneficiary enterprises, as well as new products and processes that reached the marketplace.<sup>22</sup> The impact evaluations of the nonreimbursable contributions instrument for enterprises showed a greater tendency to innovate and invest in R&D among supported businesses than among those seeking but not receiving support, and the benefits displayed positive externalities for the workers of beneficiary enterprises who went to nonsupported enterprises, which achieved increases in employment, productivity, wages, and exports.<sup>23</sup> The Bank's support over more than two decades has thus enabled the launch and institutional consolidation of the two key SNI actors, the MinCyT and the Agency, the continuity and consistency of promotion tools in the innovation area, and incremental innovations in promotion instruments following global good practices. These gains made it possible to narrow gaps with more advanced countries, but great challenges remain that this operation will contribute to addressing (see paragraph 1.4).
- 1.11 **Lessons learned.** Lessons from previous operations financed under the CCLIP AR-X1015 were reflected in the program design, and many of the program's instruments were redesigned accordingly. The main lesson in this new operation

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<sup>19</sup> The Bank's efforts in the science and technology sector began in the 1960s with a US\$1 million loan (91/SF-AR) for laboratories of the National Atomic Energy Commission. Since then, another 11 loans totaling US\$1.417 billion have been approved.

<sup>20</sup> Approved as part of the CCLIP AR-X1015 were loan [2180/OC-AR](#) for US\$100 million in 2009; loan [2437/OC-AR](#) for US\$200 million in 2010; loan [2777/OC-AR](#) for US\$200 million in 2012; loan [3497/OC-AR](#) for US\$150 million in 2015; and loan [4025/OC-AR](#) for US\$100 million in 2017.

<sup>21</sup> See project completion reports for loans [2180/OC-AR](#), [2437/OC-AR](#), and [2777/OC-AR](#).

<sup>22</sup> Wasilevsky, Irene. Análisis de Beneficios Económicos Directos e Indirectos de Proyectos Financiados con Fondos de Inversión Sectoriales (FITS). March 2016.

<sup>23</sup> Castillo, Victoria, Alessandro Maffioli, Sofía Rojo, and Rodolfo Stucchi. Knowledge Spillovers of Innovation Policy Through Labor Mobility: An Impact Evaluation of the FONTAR Program in Argentina, IDB. February 2014.

is the importance of promoting mission-oriented STI. Successes in meeting the challenges of COVID-19 with close SNI collaboration around a national priority will be a guiding principle in this operation. The operation also benefits from the knowledge generated by this and other innovation-related CCLIPs being executed in Brazil (BR-O0004) and Uruguay (UR-O1153), as most of the associated interventions have been evaluated using quasi-experimental techniques. An analysis of these evaluations<sup>24</sup> suggests that: (i) partial nonreimbursable contributions correct market failures, particularly when collaborative designs are used; (ii) use of the credit instrument increases private investment in innovation, except in startups; (iii) technological outreach based on technology centers help to make micro, small, and medium-sized enterprises (MSMEs) more productive; and (iv) technology firms benefiting from support programs achieve greater survival rates and growth. In view of lessons learned from previous programs, this operation: (i) puts greater emphasis on the instrument to promote interdisciplinary research; (ii) maximizes the use of new digital technologies in the program of country systems for large instruments; (iii) identifies priorities in conjunction with provincial authorities using a more federal approach; (iv) strengthens program management using a broad-based digitalization process for the Agency; (v) adopts the gender perspective, previously limited to specific actions, now on a comprehensive basis; and (vi) promotes activities to mitigate climate change impact on a generalized basis.

- 1.12 Collaboration with the IDB Group.** This operation offers opportunities for complementarity in the following areas: (i) health: the MinCyT and the Agency are carrying out COVID-19 response actions as part of the Immediate Public Health Response Project in the Context of the COVID-19 Pandemic to Contain, Control, and Mitigate its Effect on Health Service Delivery in Argentina (loan 5032/OC-AR), and at least one of the pilot initiatives for innovation-related public procurement is expected to focus on this area (see paragraph 1.19); (ii) modernization of the State: as part of the Innovation Program for Crisis Response and Strategic Priorities Management (loan 5084/OC-AR), active coordination of the Agency's role in initiatives promoting innovation in public procurement will be sought; (iii) agroindustry: efforts are aimed at ensuring that the various program-financed R&D and innovation projects in the agribusiness sector generate synergies with the outputs and outcomes of the Provincial Agricultural Services Program (loan 3806/OC-AR); and (iv) dynamic entrepreneurship: with the MSME Competitiveness Support Program (loan 2923/OC-AR) and the Competitiveness Program for Regional Economies (loan 3174/OC-AR), executed by the Ministry of Productive Development, efforts are being made to leverage complementarities and avoid duplications in support for innovation in enterprises. Meanwhile, efforts are being carried out with IDB Lab to coordinate support for innovation projects receiving technical or financial assistance from the Agency. This operation aims to leverage the lessons learned from operation EQU/MS-16993-AR, "CITES I: Transforming Science and Technology into Scalable Businesses," to explore the possibility of greater collaboration among the Agency's instruments for technology firms.

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<sup>24</sup> Development Effectiveness Overview (DEO) (2021), in preparation.

**1.13 The Bank's nonfinancial additionality in this operation's innovations.**

The Bank is providing experience and knowledge for these new tools: (i) on mission-oriented innovation policies, a set of projects aimed at resolving national challenges will be implemented, and the Bank is contributing [the findings of its research](#) along these lines; (ii) on innovation-related public procurement, the Agency is counting on the Bank's support based on the experience of the Bank's research activities and the lessons learned from Bank-supported pilot initiatives in other countries of the region;<sup>25</sup> (iii) on the opportunity to support technology startups with new financing instruments, the Bank is providing all experience gained by IDB Lab on these same activities; (iv) on incorporating promotion instruments additional to the nonreimbursable contributions, in 2019 financing was provided under technical cooperation operation ATN/OC-16886-AR for studies on international experiences in the use of credit to promote innovation; and (v) on digitalization, the Bank is collaborating on the transition to a digital Agency, devoting resources from the same technical cooperation operation to assist the Agency in this effort.

**1.14 International cooperation.** The counterpart has extensive experience in the execution of loans from multilateral agencies. In addition to the series of Bank loans executed consecutively, financial support was also received from the World Bank through two operations completed in 2016 and 2018, as well as an operation with the Latin American Development Bank and another with the Central American Bank for Economic Integration, both completed in 2022. The execution unit for the operations now in execution, the Agency, is the same one for the Bank's current operations, which ensures coordination of the activities for these loans.

**1.15 Strategic alignment.** The program is consistent with the second Update to the Institutional Strategy 2020-2023 (document AB-3190-2) and strategically aligned with the challenge of: (i) productivity and innovation, by explicitly promoting entrepreneurial innovation. The program is also aligned with the crosscutting issues of: (i) institutional capacity and rule of law, by strengthening the capacity of the SNI; (ii) gender equity, by expanding opportunities for women researchers to participate in research projects (see paragraph 1.16); and (iii) climate change, by including competitive challenges for scientific research projects related to climate change mitigation and adaptation, subsidies for new green infrastructure works, and scientific outreach activities that include this topic (see paragraph 1.17). According to the [multilateral development banks' joint methodology for tracking climate finance](#), 13.55% of the operation's resources are invested in climate change mitigation and adaptation activities. These resources contribute to the IDB Group's target of increasing the financing of climate change-related projects to 30% of total approvals by end-2021. The program will also contribute to the Corporate Results Framework 2020-2023 (document GN-2727-12) through the following indicators: (i) micro, small, and medium enterprises financed; (ii) enterprises provided with technical assistance; (iii) women beneficiaries of economic empowerment initiatives; and (iv) countries

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<sup>25</sup> See operation [ATN/FG-17371-RG](#).

with strengthened gender equality and diversity policy frameworks. The project is aligned with the IDB Group's country strategy with Argentina 2021-2023 (document GN-3051), specifically the strategic objective to "promote entrepreneurship, innovation, and the development of competitive business clusters." The program is consistent with the Innovation, Science and Technology Sector Framework Document (document GN-2791-8), in the dimension of investment in STI; with the Gender and Diversity Sector Framework Document (document GN-2800-8), in the dimension of promoting gender equality and the empowerment of women and children; and with the Climate Change Sector Framework Document (document GN-2835-8), by promoting a multisector approach to address climate change. Lastly, the operation is included in the 2021 Operational Program Report (document GN-3034).

- 1.16 **Gender equity.** The program will help close gender gaps in research careers through a holistic approach. At the strategic level, the program will finance implementation of the National Program for Gender Equality in STI (see paragraph 1.22), which seeks to mainstream gender<sup>26</sup> as a crosscutting issue throughout the SNI. The gender perspective will also be included in the competitive application processes for science and technology research projects under Component II (see paragraph 1.20). These activities are consistent with the update to the Gender Action Plan for Operations 2020-2021 (document GN-2531-19) through the lines of action identified for the sector "to promote the participation of women in activities in the fields of science, technology, and innovation, as well as their access to higher education and professional careers in science, technology, engineering, and mathematics."
- 1.17 **Climate change.** The Argentine Republic's Second Nationally Determined Contribution, submitted in December 2020, reaffirms the country's commitment to the Paris Agreement and its adoption of climate change as government policy. In line with this policy, this program will include climate change in its components as follows: (i) Component I: large equipment with energy efficiency labels; (ii) Component II: competitive challenges for science and technology research projects aimed at financing projects related to climate change mitigation; (iii) Component III: projects related to facilities of strategic and interagency interest and interagency centers with the same orientation as described in item (ii), and physical infrastructure build with criteria of bioclimatic architecture, energy efficiency, and efficiency in water usage; and (iv) Component IV: scientific outreach activities with a focus on climate change.

## **B. Objectives, components, and cost**

- 1.18 **Objectives.** The general objective of the program is to strengthen the capabilities of public and private actors in the National Innovation System (SNI), so that businesses can become more productive, and stronger action can be taken amid the challenges faced by the Argentine Republic. The specific objectives are: (i) to increase private investment in innovation; (ii) to increase Argentina's national

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<sup>26</sup> In this document, "gender perspective" or "gender mainstreaming" mean that each program or policy will include measures to account for gender differences in all phases: design, implementation, monitoring, and evaluation.

effort to produce knowledge; (iii) to increase coordination among SNI actors; and (iv) to build institutional capacity to design and implement science, technology, and innovation policies.

- 1.19 **Component I. Promotion of technological innovation (IDB: US\$80 million; Local: US\$20 million).** Support will be provided for innovation at businesses that produce goods and services through partial financing (with reimbursable and nonreimbursable contributions) for innovation processes, including technological services, equipment, and infrastructure related to research, development, and innovation (RD&I) activities (see [optional link 5](#)). Reimbursable and nonreimbursable contributions will be provided through competitive application processes, and the proposals received will be subject to technical and economic evaluation through analysis of the proposal's quality, feasibility, responsiveness, and technical and economic viability and the financial viability of the applicant. The applications will be evaluated by experts from the different areas. An ad hoc committee made up of leaders and senior officials from the different sectors and institutions, appointed by the relevant authority, will review the evaluation reports of the evaluators and make a recommendation to the Agency board to approve or reject the applications (see [optional link 7, Part I](#) of the program Operating Regulations). The activities to be financed under this component include:<sup>27</sup>

- (i) Individual technological innovation projects at businesses (US\$45.5 million). Reimbursable and nonreimbursable contributions<sup>28</sup> will be provided to finance innovation activities at businesses, including the integration of highly skilled workers into the productive sector. These projects are expected to meet the demand of approximately 170 enterprises;
- (ii) Consortium-based and technology services projects (US\$6 million). Financing will be provided for the execution of innovation projects submitted as a consortium, through clusters or value chains. About 14 such projects are expected to be financed;
- (iii) Creation and strengthening of technology centers providing services to businesses in their area (US\$17 million). Three large centers of this type will be financed via an open application process on an anytime basis ("permanent window"). Each project will provide a demand analysis endorsed by a majority group of user businesses;
- (iv) Pilot initiatives for innovation-related public procurement (US\$2.5 million). Through collaboration between public agencies and the RD&I community, these pilots will create incentives for the

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<sup>27</sup> A part of the projects in points (i) and (v) will focus on issues related to climate change mitigation and adaptation.

<sup>28</sup> The Bank is using funds for the preparation of the operation to finance a consulting engagement on global best practices for blending nonreimbursable and reimbursable contributions in the promotion of innovation.

procurement of innovative developments in meet new societal demands. Ten pilot projects are expected to be conducted;

- (v) Strategic sector projects with high impact in response to major problems in key sectors of Argentina's economy, such as health, food, or energy transition (US\$18 million). Nine projects of this type will be financed;
- (vi) Technology firms, which can finance the successive stages of the projects from identification of ideas or opportunities to startup of a technology firm, to market launch and sales (US\$9.5 million). About 15 such enterprises are expected to be financed;
- (vii) Strategic studies to examine the evolution of the SNI in Argentina and identify new demand for promotion instruments of the Agency. About 8 studies in total are expected to be financed (US\$1.5 million).

1.20 **Component II. Support for the supply of scientific and technological knowledge (IDB: US\$45 million; Local: US\$12.125 million).** This component is expected to support public and private nonprofit research institutions in generating new knowledge via nonreimbursable contributions (see [optional link 7](#)). In open, public competitive application processes, the projects will be evaluated by peer experts to assess their scientific and technological quality and adherence to existing social and environmental safeguard policies. Coordination committees for a given discipline will be formed with at least three science/technology specialists that will: (i) build a roster of national and foreign evaluators for each discipline, made up of leading authorities; (ii) select evaluators according to the nature of the projects; and (iii) prepare a report with the results and their own observations, as applicable, to be sent to the ad hoc committees. These peer committees will assess the responsiveness of the projects to the specific conditions of the solicitation, and a ranking of the endorsed projects by merit will be proposed, considering the opinion of the peers ([Part I](#) of the program Operating Regulations).<sup>29</sup> Financing will be provided under this component for the following:

- (i) Science and technology research projects that include a gender perspective, resulting from public competitive application processes open to all areas of science and technology on an interdisciplinary basis in consolidated scientific areas, with an estimated 2,500 such projects to be financed (US\$50 million);
- (ii) Science and technology research projects geared toward solving problems and addressing emergencies, with an estimated 30 such projects to be financed, including at least one related to climate change (US\$3.125 million);

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<sup>29</sup> Gender mainstreaming measures will be reflected in the specifications for the competitive processes under this component.

- (iii) Science and technology research projects (startups) to finance the initial stages of research with the potential for entering the marketplace of goods and services, with an estimated 30 such projects to be financed (US\$3 million);
- (iv) Scientific gatherings (US\$1 million) to be financed through nonreimbursable contributions for regular national/international meetings and workshops organized by science and technology associations and public or private nonprofit research institutions (see [optional link 7](#)). Competitive application processes geared toward climate change related issues will be included.

1.21 **Component III. Support for coordination between SNI actors (IDB: US\$71.3 million; Local: US\$22.975 million).** This component will provide nonreimbursable contributions to finance capacity-building activities for the array of SNI actors to work collaboratively. Projects will be submitted as part of specific competitive processes or on an ongoing application basis and evaluated by an advisory board of peer experts that will analyze the viability of the projects based on merit and the objectives, and conditions stipulated in the specification (see [optional link 7](#), [Part II](#) of the program Operating Regulations). Component resources will also be used to finance Argentina's membership in the Gemini Project, so that Argentine astronomical researchers can have access to international telescopes (see Annex III).<sup>30</sup> The following other activities will be supported:

- (i) Interagency projects on strategic issues (US\$6 million), with the objective of promoting coordination and collaboration between SNI institutions by bridging complementary scientific and technological capabilities through financing for specific projects. Thirty projects of this type will be financed, at least five of them related to climate change;
- (ii) Scientific and Technological Facilities Program for facilities of strategic and interagency interest requiring financing for interdisciplinary work that goes beyond a single project but not call for the creation of a new center. Seven projects will be financed (US\$12 million);
- (iii) Interagency centers (US\$25.55 million) with the objective of promoting coordination between institutions of the national science and technology system through the creation, operation, and/or strengthening of multidisciplinary interagency centers, to complement and coordinate capacities and resources around a strategic problem or topic. Financing will be provided for the construction or retrofitting of physical facilities for nine centers (see [optional link 5](#)), at least two of which will address climate change issues (see [optional link 11](#));

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<sup>30</sup> This project is led by an international consortium consisting of the United States, the United Kingdom, Canada, Argentina, Brazil, Australia, and Chile, which operates two telescopes for astronomical research in Hawaii and Chile.



- (iv) Projects to strengthen national systems for large-scale instruments (US\$9.6 million) that promote the efficient use of physical resources (equipment and laboratories) among the different SNI actors, to optimize operations and support the availability of these services to the community. Forty-five projects are expected to be financed (see [optional link 13](#)). This activity will also include the creation of open repositories of primary data and publications, to improve the organization of, and access to, scientific production financed by the Argentine government;
- (v) Strengthening of building infrastructure of SNI institutions (US\$41.125 million), which will finance the improvement, renovation, or new construction of buildings for the effective functioning of the country's science and technology institutions with a priority on addressing higher-risk situations and achieving the right balance of geographical areas and thematic areas of scientific infrastructure. Thirteen building infrastructure projects will be financed (see [optional link 5](#)), at least four of which will include energy and water efficiency measures (see [optional link 12](#)).

1.22 **Component IV. Strengthening of the SNI's capacities (IDB: US\$28.5 million; local: US\$2.4 million).** This component will use nonreimbursable contributions to finance activities to increase the effectiveness of the SNI and the capacities of the MinCyT and the Agency as the SNI's apex institutions. The following activities will be financed:

- (i) Institutional evaluation program (US\$10.4 million) to promote continuous improvement in SNI institutions, including the possibility of agreements to finance an improvement plan based on the diagnostic assessment (see [optional link 10](#)). This program operates on an ongoing application basis, and each proposal is evaluated by an ad hoc advisory board of experts that will independently review each project, as described in [Part II](#) of the program Operating Regulations;
- (ii) Specialized bibliographical material for the MinCyT e-Library (US\$16.5 million);<sup>31</sup>
- (iii) Studies and prospectuses (US\$2 million), an integrated scientific and technological information system, including the completion of the National Innovation and Employment Dynamics Survey, surveys to measure R&D activities by productive sector, and studies on public perception of science;

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<sup>31</sup> This amount reflects the cost of access to reference materials based on the amounts of recent, similar contracts.



- (iv) Actions to promote STI outreach (US\$2 million), including scientific culture projects, addressing such issues as climate change,<sup>32</sup> multimedia mass communication, the “Innovar” nationwide call for proposals, and scientific culture venues such as the Science Cultural Center, and, specifically, activities to mainstream gender in STI as part of the National Program for Gender Equality in STI.<sup>33 34</sup>

**1.23 Program administration, monitoring, and evaluation (US\$5.2 million).**

Program administration, monitoring, and evaluation expenses will be financed and allocated between the two coexecuting agencies as follows: the Agency will execute US\$3.2 million, and the MinCyT will execute US\$2 million. The Agency will transfer US\$1.2 million to the SAE for subexecution of the program evaluation tasks (see paragraph 3.2). Financing will also be provided under this heading for activities related to the Agency’s “digital agency” initiative, which is aimed at the digital transformation of all processes, both internal and those involving beneficiaries, while increasing transparency and reducing turnaround times and costs. For this, financing will be provided to engage consultants with expertise in digitalization.

- 1.24 Beneficiaries.** This operation is expected to benefit the Argentine people in general by supporting innovations to improve their quality of life in several different areas. Specifically, it will benefit the SNI actors: (i) innovative small and medium-sized enterprises, by helping them overcome the problems they face in financing innovation efforts, and by helping to connect their needs for innovation with providers of knowledge and new technologies; (ii) universities, technology centers, and related institutions, by providing financing for their research activities, improving their physical facilities, and upgrading their equipment; and (iii) researchers, by providing them with access to additional resources and infrastructure for their research projects, particularly researchers who will benefit from progress in narrowing gender gaps.

**C. Key results indicators**

- 1.25** Two indicators will be used to evaluate attainment of the general development objective: (i) workforce productivity of beneficiary enterprises versus the control group; and (ii) publications with at least one author with ties to Argentina in Scopus. Specific objective 1 will be evaluated using investment in innovation by

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<sup>32</sup> This activity includes the “Pampa Azul” (conservation and sustainable management of water resources) and “Escuelas Azules” projects.

<sup>33</sup> For more information, see [here](#).

<sup>34</sup> The dimensioning of demand-driven program instruments is based on historical demand. Nonreimbursable contributions accounted for more than US\$14 million per year in disbursements of IDB funds, more than the US\$9.5 million planned for this operation, while annual demand for group-based instruments accounted for some US\$13.4 million per year in previous projects, compared to only US\$1.2 million per year in financing expected on this project. The instrument to support technology firms in the past accounted for US\$4.3 million per year in disbursements, more than the US\$1.7 million planned for this operation. Science and technology research projects are typically met with excess demand from Argentina’s SNI due to the high number of researchers but low investment in research. This instrument totaled US\$25 million in annual disbursements on previous operations and is expected to account for US\$10 million per year on this operation.

beneficiary enterprises versus the control group, and sales of new products as a percentage of total sales by beneficiary enterprises versus the control group. Specific objective 2 will be evaluated using the number of scientific articles per researcher published in journals indexed in Scopus for supported researchers versus the control group, as well as investment in mission-oriented RD&I as a percentage of total investment in research financed by the program. Specific objective 3 will be evaluated using the number of coauthored Scopus-listed articles by researchers, and the number of publications and data made available on the National Digital Repositories System and DACyTAR portals. Specific objective 4 will be evaluated using the number of institutions with plans, approved by resolution, to improve or strengthen mission-oriented institutional capacities, which have begun to be implemented (first disbursement), and cost per use on Science Direct and Scopus by Elsevier.

- 1.26 **Economic analysis.** A [cost-benefit analysis](#) with a time horizon of 10 years was performed, both on an aggregate basis and per component. This evaluation found that the program has a positive net present value of US\$332.61 million and an internal rate of return of 25%, which is higher than the 12% annual discount rate used by the Bank. The results were robust to a sensitivity analysis for the program's main parameters.

## **II. FINANCING STRUCTURE AND MAIN RISKS**

### **A. Financing instruments**

- 2.1 This program is structured as a specific investment loan in view of the need to finance multiple specific subprojects within the framework of the National Innovation System (SNI). The total cost of the program is US\$287.5 million. Of that amount, US\$230 million will be financed by the Bank from the Ordinary Capital resources, and US\$57.5 million will be financed by the local contribution. The disbursement period will be five years, and disbursements will follow the timetable in Table 2.
- 2.2 In accordance with document AB-2990, "Enhancing Macroeconomic Safeguards at the Inter-American Development Bank," the disbursement of the loan proceeds will be subject to the following restrictions: (i) a maximum of 15% in the first 12 months; (ii) a maximum of 30% in the first 24 months; and (iii) a maximum of 50% in the first 36 months, counted in all instances from the date the loan operation is approved by the Bank's Board of Executive Directors. These limits may not apply, if the requirements of the Bank policy have not been met, provided that the borrower has been notified in writing.

**Table 1. Estimated program costs (US\$)**

<b>Components</b>	<b>IDB</b>	<b>Local</b>	<b>Total</b>	<b>%</b>
<b>I. Promotion of technological innovation</b>	<b>80,000,000</b>	<b>20,000,000</b>	<b>100,000,000</b>	<b>34.8</b>
1.1 Innovation projects at businesses (nonreimbursable and reimbursable contributions and highly skilled workers)	32,500,000	13,000,000	45,500,000	15.8
1.2 Consortium-based and technology services projects	5,000,000	1,000,000	6,000,000	2.1
1.3 Technology centers	15,000,000	2,000,000	17,000,000	5.9
1.4 Pilot initiatives for innovation-related public procurement	2,500,000	0	2,500,000	0.9
1.5 Strategic sector projects	15,000,000	3,000,000	18,000,000	6.3
1.6 Technology firm projects	8,500,000	1,000,000	9,500,000	3.3
1.7 Strategic studies	1,500,000	0	1,500,000	0.5
<b>II. Support for the supply of scientific and technological knowledge</b>	<b>45,000,000</b>	<b>12,125,000</b>	<b>57,125,000</b>	<b>19.8</b>
2.1 Science and technology research projects	38,000,000	12,000,000	50,000,000	17.4
2.2.1 Science and technology research projects geared toward solving problems and addressing emergencies	3,000,000	125,000	3,125,000	1.1
2.2.2 Science and technology research projects (startups) to finance the initial stages of research	3,000,000	0	3,000,000	1.0
2.3 Scientific gatherings	1,000,000	0	1,000,000	0.3
<b>III. Support for coordination between SNI actors</b>	<b>71,300,000</b>	<b>22,975,000</b>	<b>94,275,000</b>	<b>32.8</b>
3.1.1 Interagency projects on strategic issues	5,000,000	1,000,000	6,000,000	2.1
3.1.2 Scientific and Technological Facilities Program	10,000,000	2,000,000	12,000,000	4.2
3.1.3 Interagency centers on strategic issues	21,300,000	4,250,000	25,550,000	8.9
3.2 Projects to strengthen national systems	8,000,000	1,600,000	9,600,000	3.3
3.3 Strengthening of building infrastructure	27,000,000	14,125,000	41,125,000	14.3
<b>IV. Institutional strengthening of the SNI</b>	<b>28,500,000</b>	<b>2,400,000</b>	<b>30,900,000</b>	<b>10.7</b>
4.1 Institutional evaluation program	8,000,000	2,400,000	10,400,000	3.6
4.2 e-Library	16,500,000	0	16,500,000	5.7
4.3 Studies and prospectuses	2,000,000	0	2,000,000	0.7
4.4 STI outreach	2,000,000	0	2,000,000	0.7
<b>Administration, monitoring, and evaluation</b>	<b>5,200,000</b>	<b>0</b>	<b>5,200,000</b>	<b>1.8</b>
Subcategory A. Administration, monitoring, and evaluation of Components I and II	3,200,000	0	3,200,000	1.1
Subcategory B. Administration, monitoring, and evaluation of Components III and IV	2,000,000	0	2,000,000	0.7
<b>Total</b>	<b>230,000,000</b>	<b>57,500,000</b>	<b>287,500,000</b>	<b>100</b>

Note: breakdowns under each component are indicative.

**Table 2. Financial execution timetable (US\$)**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
<b>IDB</b>	33,730,843	33,757,432	44,824,201	56,952,112	60,735,412	230,000,000
<b>Local</b>	6,375,001	8,998,081	12,222,615	15,230,533	14,673,770	57,500,000
<b>Total</b>	40,105,844	42,755,513	57,046,816	72,182,645	74,409,182	287,500,000
<b>%</b>	14	15	20	25	26	100

**B. Environmental and social safeguard risks**

- 2.3 In accordance with the guidelines of the Environment and Safeguards Compliance Policy (operational policy OP-703), this operation has been classified as category “C.” Negative impacts related to construction and improvement of buildings are expected to be minimal and will be addressed by the Agency’s social and environmental management unit. The Bank’s team will work the Agency’s environmental unit to better identify how the program can improve its work in these areas and strengthen its role as a member of the country’s climate change cabinet. In addition, a [technical annex](#) has been prepared on environmental considerations in program-financed small-scale building works.

**C. Fiduciary risks**

- 2.4 The institutional capacity analysis of the MinCyT and the Agency considered that they have executed similar operations in the past five years and confirmed that their institutional capacity has a satisfactory degree of development. Measures will be adopted to help bridge the gaps identified at each, for example: (i) the corresponding part of the program Operating Regulations will indicate personnel assigned exclusively to the program for each coexecuting agency; (ii) infrastructure management will be strengthened with relevant specialists; (iii) procedure manuals will updated and/or developed, or technical, operational, and fiduciary arrangements will be included in [Part II](#) of the program Operating Regulations; and (iv) new personnel joining the MinCyT’s fiduciary team will be trained.
- 2.5 The operation was found to have a medium level of fiduciary risk (see Annex III). Both entities are deemed capable of completing the actions identified in the evaluation in the short term and executing the majority of the operation with a satisfactory level of capacity. A medium-high level of human resources risk was identified in the possibility that, if there are not enough specialized fiduciary personnel for the tasks related to fiduciary management of the project, the fiduciary requirements may not be met, leading to delays in procurements and ineligible expenditures. This risk will be mitigated by including a list of personal assigned exclusively to the program in [Part I](#) of the program Operating Regulations, and the exclusive, specialized fiduciary personnel of the Agency and the MinCyT will be identified and then trained.

**D. Other key risks and issues**

- 2.6 **Risks.** Two additional medium-high risks were identified. In terms of the economic and financial environment, if Argentina’s economy averages slow growth or none at all, businesses may be less willing to invest, prompting a delay placement of the resources, and therefore leading to underexecution in program Components I and II. This risk will be mitigated by including a higher percentage subsidy of nonreimbursable contributions for enterprises in [Part I](#) of the program Operating Regulations, and dissemination measures will be strengthened with program administration resources, to stimulate business demand. In terms of the institutional environment, failure to allocate a sufficient budget appropriation during the program could lead to delays and underexecution of resources. This risk will be mitigated by securing a budget increase, based on the government’s

prioritization of STI and a new law for the sector (see paragraph 2.7) preventing each annual budget from being smaller than the previous year's.

- 2.7 **Sustainability.** In terms of sustainability commitments upon completion of the operation, both the MinCyT and the Agency in recent decades have had fiscal resource flows that allowed them to sustain successful execution of their programs and policies. A highly positive sign for the sustainability of this program's actions is that on 11 February 2021 the National Congress passed the [Law on Financing of the National Science, Technology, and Innovation System](#), which calls for gradual, steady increases in the national budget for these areas, starting at the current level of 0.21% of GDP and increasing to 1% of GDP in 2032. Additional resources obtained as mandated by the new law will make it possible to properly maintain the physical and digital investments.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 **Borrower and coexecuting agencies.** The borrower will be the Argentine Republic. The program coexecuting agencies will be the borrower, acting through: (i) the Ministry of Science, Technology, and Innovation (MinCyT), which will be responsible for Components III and IV; and (ii) the National Agency for the Promotion of Research, Technological Development, and Innovation ("the Agency"), which will be responsible for Components I and II. The coexecuting agencies will execute the program in a coordinated manner. The Office of Strategic Affairs (SAE) will act as subexecuting agency, responsible for execution of one part of the evaluation agenda, in coordination with the coexecuting agencies.
- 3.2 To execute the components for which they are responsible, the Agency and the MinCyT will: (i) open competitive processes and application processes on an anytime basis ("permanent window") for the projects described in the four components; (ii) coordinate the evaluation processes for proposals submitted by beneficiaries; (iii) formalize contracts for the transfer of resources to beneficiaries; and (iv) supervise and monitor the financed projects. The permanent windows and competitive processes for selection of beneficiaries will follow the eligibility criteria described in the program Operating Regulations and will require the Bank's prior no objection. Projects for Components I and II will be approved by the Agency's board of directors, as described in [Part I](#) of the Operating Regulations, and projects for Components III and IV will be approved by the authorities of the MinCyT departments, as described in [Part II](#) of the Operating Regulations. The Agency will execute its actions through three national entities: the Argentine Technological Fund (FONTAR), the Science and Technology Research Fund (FONCYT), and the Argentine Sector Fund (FONARSEC). The SAE will subexecute the resources allocated for the strategic evaluation of the program, as part of its crosscutting task of evaluating the contribution of programs with international financing, focused on: (i) the governance priority guidelines; (ii) attainment of the sustainable development objectives; and (iii) the institutional strengthening of the national government.

- 3.3 **Program Operating Regulations.** The program will be executed in accordance with [Part I](#) and [Part II](#) of the program Operating Regulations, one part for each coexecuting agency, which will establish the operational requirements in the technical, fiduciary, financial, and other areas. The Operating Regulations will include: (i) selection criteria and eligibility conditions for each instrument; (ii) guidelines for the use of resources for financial management of the program; and (iii) execution mechanisms.
- 3.4 **Interagency coordination.** The Interagency Science and Technology Council is the principal coordination body of the federal government for all innovation policies, with representatives of all main SNI institutions. The federal government's efforts are coordinated with those of each province through the Federal Science, Technology, and Innovation Council, created by Law 25,467 on Science, Technology, and Innovation and comprised of the senior STI authorities of the federal and provincial governments. Lastly, the MinCyT and the Agency coordinate through the Office of the Chief of Staff of the MinCyT, which meets weekly with the participation of key actors of both institutions and the other decentralized agencies of the MinCyT (see [optional link 6](#)). These coordination mechanisms are described in the program Operating Regulations.
- 3.5 **Special contractual conditions precedent to the first disbursement of the financing.** The borrower, acting through the coexecuting agencies, will provide evidence, to the Bank's satisfaction, that: (i) the program Operating Regulations ([Part I](#) and [Part II](#)) have been approved and have entered into force on the terms and conditions previously agreed upon with the Bank; and (ii) an agreement between the borrower, represented by the Office of Strategic Affairs (SAE), and the Agency, establishing the terms and conditions for use of the loan proceeds and the Agency's authority, as coexecuting agency, during program execution, has been signed and has entered into force on the terms and conditions previously agreed upon with the Bank. For the first condition, both parts of the program Operating Regulations will establish execution and fiduciary arrangements for successful program execution. For the second condition, the agreement will establish: (i) the Agency's commitment, as a decentralized entity with a legal status separate from that of the borrower; and (ii) the Agency's authority and responsibilities in the context of the program execution mechanism.
- 3.6 **Special contractual conditions for execution.** As a special contractual condition for execution, before the program evaluations are commissioned by the SAE, the borrower will provide evidence, to the Bank's satisfaction, that an agreement between the SAE and the Agency, establishing the terms and conditions for transfers and for partial use of the loan proceeds, has been signed and has entered into force. This condition is deemed essential to ensure that the SAE, as subexecuting agency, can commission the appropriate evaluation tasks (see paragraph 3.2).
- 3.7 **Maintenance of works.** The borrower and the coexecuting agencies commit that the works and equipment included in the program will be properly maintained in accordance with generally accepted technical standards (see [monitoring and evaluation plan](#)).



- 3.8 **Fiduciary agreements and requirements.** Since the operation will be executed by two coexecuting agencies, each will independently prepare and manage its own fiduciary and operational planning, as well as the different fiduciary instruments related to the components for which each is responsible (procurement plan, financial plan, annual work plans, disbursement requests, audited financial statements, etc.), which will be delivered to the Bank separately by each coexecuting agency. The loan proceeds may be disbursed under the modalities of advance of funds, reimbursement of incurred expenses, and direct payments to the provider. For the advance of funds modality, disbursements will be based on projected expenditures for up to 180 days. The minimum percentage required from each coexecuting agency for the replenishment of advances of funds will be 70%, since this is a decentralized program of complex execution (see document OP-273-12, “Flexibilización permanente”). The coexecuting agencies will deliver their respective audited financial statements for the resources under their responsibility annually within 120 days after the end of each fiscal period or, for the final audited financial statements, within 120 days after the date of the last disbursement, in accordance with the terms previously agreed upon with the Bank.
- 3.9 **Procurement.** Procurements financed in whole or part with Bank resources will be conducted in accordance with the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-15). If these policies are amended during execution of the project, the borrower must indicate accept in writing that the revised policies will apply to the program (see [procurement plan](#)).
- 3.10 **Direct contracting.** Specialized bibliographical materials will be purchased for the MinCyT's Science and Technology e-Library via direct contracting under the Bank's procurement policies (see document GN-2349-15, paragraph 3.7(c)). This is justified because the vendor (Elsevier B.V.) is the exclusive owner of the intellectual property and the sole source of this good, thus satisfying the specific criterion of document GN-2349-15, paragraph 3.7(c). The contract value is US\$17,538,265 and covers three annual subscriptions (2021, 2022, and 2023) (see [optional link 3](#)).
- 3.11 **Special provisions for procurement and financial management.** The selection criteria for the competitive application processes (reimbursable and nonreimbursable contributions), associated requirements, and execution mechanisms (including modalities for the transfer of resources to beneficiaries, accountability requirements for expenditures, and, for reimbursable contributions, the guarantees provided by beneficiaries) will be established in each part of the program Operating Regulations. The model agreements to be signed by the coexecuting agencies with the beneficiaries will be reviewed by the Bank prior to signature, in order to confirm their overall consistency with the procurement principles of policy documents GN-2349-15 and GN-2350-15; the inclusion of rules on eligibility, prohibited practices, and auditing; and fulfillment of the financial management requirements established in the Financial Management Guidelines for IDB-financed Projects (document OP-273-12), which will be part of the program Operating Regulations in the corresponding annexes.

- 3.12 Procurement processes conducted within the framework of projects selected through the public competitive application processes or open application processes on an anytime basis ("permanent window"), where the beneficiaries are private sector firms, must use procurement procedures consistent with market practices for the private or commercial sector that are acceptable to the Bank, in accordance with Appendix 4 of each of the Bank's procurement policy documents (GN-2349-15 and GN-2350-15). The coexecuting agencies will ensure that these procedures result in competitive market prices for goods and services and that these goods and services meet the project's needs.
- 3.13 Eligible expenditures will be understood to mean disbursements made by the Agency and the MinCyT to the different projects selected as a result of the public competitive application processes or open application processes on an anytime basis ("permanent window") approved by the Bank, regardless of the date on which the beneficiary makes the investment, provided that such expenditures are incurred after the date on which the Bank's Board of Executive Directors approved the program and before the end of the original disbursement period or as extended.

**B. Summary of arrangements for monitoring results**

- 3.14 **Monitoring.** The MinCyT and the Agency will use the following documents to monitor the program: (i) Results Matrix; (ii) [monitoring and evaluation plan](#); (iii) progress monitoring report; and (iv) six-monthly status reports. The coexecuting agencies will prepare and deliver the six-monthly status reports, the multiyear execution plans (including the annual work plans), and the procurement plan separately to the Bank, in accordance with the terms and conditions described in the [monitoring and evaluation plan](#).
- 3.15 **Evaluation.** The verification of Results Matrix targets met will be through: (i) the midterm evaluations under the responsibility of each coexecuting agency, to be delivered within 120 days after 50% of the program's original disbursement period has elapsed, or 50% of the resources under the responsibility of the corresponding coexecuting agency have been disbursed, whichever occurs first; and (ii) the final evaluations to be delivered by each coexecuting agency within 90 days after the Bank has disbursed 100% of the resources under the responsibility of the corresponding coexecuting agency. The Bank will perform a final evaluation as part of the project completion report, which will begin once the project reaches financial completion and include a quasi-experimental impact evaluation measuring the program's effectiveness in terms of private investment in innovation by the enterprises, results of innovation projects, productivity gaps of micro, small, and medium-sized enterprises (MSMEs), and other factors. The Bank's final evaluation will also include an ex post economic evaluation, which will calculate the actual costs and benefits of the intervention by replicating the cost-benefit analysis methodology used for the ex ante economic analysis (see [monitoring and evaluation plan](#)).



Development Effectiveness Matrix		
Summary		AR-L1330
I. Corporate and Country Priorities		
Section 1. IDB Group Strategic Priorities and CRF Indicators		
Development Challenges & Cross-cutting Issues	-Productivity and Innovation -Gender Equality and Diversity -Climate Change -Institutional Capacity and the Rule of Law	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	-Micro / small / medium enterprises financed (#) -Enterprises provided with technical assistance (#) -Women beneficiaries of economic empowerment initiatives (#) -Countries with strengthened gender equality and diversity policy frameworks (#)	
2. Country Development Objectives		
Country Strategy Results Matrix	GN-3051	The operation is aligned with the strategic objective of "promoting entrepreneurship, innovation and the development of competitive business clusters."
Country Program Results Matrix	GN-3034	The intervention is included in the 2021 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		8.4
3.1 Program Diagnosis		1.4
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		3.5
4. Ex ante Economic Analysis		7.5
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		0.0
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		1.0
5. Monitoring and Evaluation		7.2
5.1 Monitoring Mechanisms		2.8
5.2 Evaluation Plan		4.4
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium Low
Environmental & social risk classification		C
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, Accounting and Reporting, External Control, Internal Audit.  Procurement: Information System.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		
		See paragraph 1.13 of the main loan document

Argentina's Federal Innovation Program (AR-L1330) has, as a general objective, to strengthen capabilities among public and private actors within the National Innovation System (NIS) to improve firms' productivity and buttress responses to the country's challenges. This program aims to contribute to that objective via achieving the following specific objectives: (i) to increase private investment in innovation; (ii) to increase national efforts around the production of knowledge; (iii) to improve articulation among NIS actors, and (iv) to improve institutional capabilities to design and implement Science and Technology policies.

The program diagnostics identify a series of weaknesses in the NIS that impede the resolution of challenges associated to a low growth of productivity. These challenges include: (i) insufficient investment in innovation by firms and institutions; (ii) weaknesses in the supply of knowledge; (iii) low levels of collaboration among institutions and researchers from different areas to solve specific problems facing the country; and (iv) limited institutional capacity to define, sustain, monitor, and evaluate programs and policies in Science and Technology. To achieve its objectives, the program is based on four components that focus on (i) the promotion of technological innovation through financing to companies, (ii) support for the supply of scientific and technological knowledge generation, (iii) support for the articulation between SIN actors through the financing of collaborative projects, (iv) strengthening the capacities of the SIN. In general, there is evidence of the effectiveness of the intervention in terms of financing for innovation in companies and knowledge production, but not for the most innovative ones, such as public procurement for innovation. The program has indicators related to the specific and general objectives that are SMART, and that allow measuring their achievement, however, some targets of the indicators are not justified with evidence. The economic analysis quantifies economic benefits associated to the increase of sales among innovative firms, the increase of scientific production, and savings emanating from lower costs of access to information. The analysis concludes that the project has an expected internal rate of return of 25% and shows different sensitivity scenarios. However, some of the assumptions and expected targets are not based on evidence.

The monitoring and evaluation plan presents two evaluation strategies: (i) a before and after strategy for the indicators related to articulation and institutional strengthening objectives; and (ii) an impact evaluation based on a nonexperimental methodology (differences in differences with matching) for the innovation investment and knowledge production objectives. However, it is important to consider that, for the innovation investment theme, according to power calculations there is no certainty that there will be sufficient statistical power to identify the expected effects.

## RESULTS MATRIX

<b>Project objective:</b>	The specific objectives of this operation are: (i) to increase private investment in innovation; (ii) to increase Argentina's national effort to produce knowledge; (iii) to increase coordination among actors in the National Innovation System (SNI); and (iv) to build institutional capacity to design and implement science, technology, and innovation policies. Achieving these objectives will contribute to the general objective of strengthening the capabilities of public and private actors in the SNI, so that businesses can become more productive, and stronger action can be taken amid the challenges faced by the Argentine Republic.
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### GENERAL DEVELOPMENT OBJECTIVE

Indicators	Unit of measure	Baseline value	Baseline year	Expected year of fulfillment	Target	Means of verification	Comments
General development objective: To strengthen the capabilities of public and private actors in the SNI, so that businesses can become more productive, and stronger action can be taken amid the challenges faced by the Argentine Republic.							
Workforce productivity of beneficiary enterprises vs. control group	%	0	2014	2025	10%	Specific study based on the National Innovation and Employment Dynamics Survey (ENDEI). In addition to the ENDEI, the Agency has an innovation survey that it administers to those responding to its calls for proposals. This survey covers a subset of the ENDEI's indicators and therefore can be used as a complementary data source for this indicator.	Calculated as the difference in work productivity between beneficiary enterprises and enterprises in the control group.  See <a href="#">monitoring and evaluation report</a> .

Indicators	Unit of measure	Baseline value	Baseline year	Expected year of fulfillment	Target	Means of verification	Comments
Publications with at least one author with ties to Argentina in Scopus	Number of publications	100	2020	2025	113	Specific study based on Scopus. <sup>1</sup>	The number of publications was 16,343 in 2020, which is taken as 100 for this indicator.  See <a href="#">monitoring and evaluation report</a> .

#### SPECIFIC DEVELOPMENT OBJECTIVES

Indicators	Unit of measure	Baseline value	Baseline year	End of Project	Means of verification	Comments
Specific development objective 1: To increase private investment in innovation						
Investment in innovation of beneficiary enterprises vs. control group	%	0	2014	25	Specific study based on the ENDEI. In addition to the ENDEI, the Agency has an innovation survey that it administers to those responding to its calls for proposals.  This survey covers a subset of the ENDEI's indicators and therefore can be used as a complementary data source for this indicator.  Party responsible for reporting the indicator: the Agency.	Calculated as the difference between investment in innovation in beneficiary enterprises and in the control group (per 100).  See <a href="#">monitoring and evaluation report</a> .

<sup>1</sup> Scopus is a bibliographical database of abstracts and citations of articles in scientific journals. It includes some 24,500 titles (journals, conferences, research book series) from more than 5,000 publishers in 140 countries, including peer-reviewed journals in the fields of science, technology, medicine, and the social sciences, including arts and humanities.

Indicators	Unit of measure	Baseline value	Baseline year	End of Project	Means of verification	Comments
Sales of new products / Total sales of beneficiary enterprises vs. control group	%	0%	2016	9%	Specific study based on the ENDEI. Party responsible for reporting the indicator: the Agency.	
Specific development objective 2: To increase Argentina's national effort to produce knowledge						
Number of scientific articles published in journals listed in Scopus by supported researchers vs. control group	Number of articles	0	2020	0.8	Specific study based on Scopus. Party responsible for reporting the indicator: the Agency.	Calculated as the difference between the number of scientific articles published in listed journals by financed scientists and those in the control group.  See <a href="#">monitoring and evaluation report</a> .
Investment in mission-oriented RD&I / total investment in RD&I financed by the program	%	8% IDB instruments	2020 (average Agency 2016-2020)	20%	Amounts specified in decisions of the Agency's board of directors. Party responsible for reporting the indicator: the Agency.	Calculated by dividing the amount of investment in mission-oriented research by total investment in research financed by the program.  See <a href="#">monitoring and evaluation report</a> .
Specific development objective 3: To increase coordination among actors in the National Innovation System (SNI)						
Number of Scopus-listed coauthored articles by researchers	Number of coauthored articles	100	2020	117	Specific study based on Scopus-Scival. Party responsible for reporting the indicator: the Agency.	Defined as the number of coauthored articles listed in Scopus that have at least two authors, at least one of which has ties to Argentina.  See <a href="#">monitoring and evaluation report</a> .

Indicators	Unit of measure	Baseline value	Baseline year	End of Project	Means of verification	Comments
Number of publications and databases on the sites of the National Digital Repositories System (SNRD) and DACyTAR	Number of freely accessible publications and databases	100	2020	120	Data from the SNRD and DACyTAR portals. Party responsible for reporting the indicator: MinCyT.	The cumulative number of publications since 2013 is 336,163, which is taken as 100 for this indicator.  See <a href="#">monitoring and evaluation report</a> .
Specific development objective 4: To build institutional capacity to design and implement science, technology, and innovation policies						
Number of institutions with resolution-approved plans to improve or strengthen mission-oriented institutional capacities which have begun to be implemented (first disbursement)	Number of institutions	23	Cumulative 2020	33	Documentation held in electronic files. Party responsible for reporting the indicator: MinCyT.	Over the course of the project, 10 institutions are expected to have mission-oriented improvement plans for strengthening institutional capacities, with an ultimate cumulative total of 33.
Science and Technology e-Library: cost per use on Science Direct and Scopus by Elsevier	Amount in US\$	5.40	2017	3	The numerator is based on documentation available electronically. The denominator is based on statistics provided by Elsevier through the Sushi protocol in Counter format. Processed by the Office of the Executive Secretary of the library. Party responsible for reporting the indicator: MinCyT.	Calculated by dividing the amount in U.S. dollars actually disbursed on the Science and Technology e-Library by the number of users in Science Direct and Scopus by Elsevier.  See <a href="#">monitoring and evaluation plan</a> .

**OUTPUTS**

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
Component 1: Promotion of technological innovation											
1.1 Innovation projects at businesses financed (nonreimbursable and reimbursable contributions and highly skilled workers)	Number of projects	100	2020	30	35	35	35	35	170	The Agency's accounting system: projects with first actual disbursement recorded in the accounting system. Party responsible for reporting the indicator: the Agency.	
1.2 Consortium-based and technology services projects financed	Number of projects	29	2020	0	5	5	2	2	14		
1.3 Technology centers financed	Number of centers	6	Cumulative 2020	0	0	1	1	1	3		
1.4 Pilot initiatives for innovation-related public procurement financed	Number of projects	0	2020	0	2	3	3	2	10		
1.5 Strategic sector projects financed	Number of projects	4	Cumulative 2020	0	0	3	3	3	9		
1.6 Technology firm projects financed (startup and strengthening of technology firms)	Number of projects	7	Cumulative 2020	0	2	5	5	3	15		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
1.7 Strategic studies prepared	Number of studies	7	Cumulative 2020	0	2	2	2	2	8	Digital document submitted to the Agency.  Party responsible for reporting the indicator: the Agency.	See <a href="#">monitoring and evaluation plan</a> .
Component 2: Support for the supply of scientific and technological knowledge											
2.1 Science and technology research projects financed, resulting from public competitive application processes with a gender perspective	Number of projects	600	2020	500	500	500	500	500	2.500	The Agency's accounting system: projects with first actual disbursement recorded in the accounting system. Party responsible for reporting the indicator: the Agency.	See <a href="#">monitoring and evaluation plan</a> .
2.2.1 Research projects geared toward solving problems and addressing emergencies financed	Number of projects	30	Cumulative 2020	0	5	10	10	5	30		
2.2.2 Science and technology research projects (startups) to finance the initial stages of research financed	Number of projects	30	Cumulative 2020	0	5	10	10	5	30		
2.3 Scientific gatherings financed	Number of meetings	0	2020	75	75	75	75	75	375		See <a href="#">monitoring and evaluation plan</a> .

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
2.3.1 Competitive application processes geared toward climate change related issues	Number of competitive application processes	0	2020	0	1	0	0	0	1	Posting on the Agency's website. Party responsible for reporting the indicator: the Agency.	See <a href="#">monitoring and evaluation plan</a> .
Component 3: Support for coordination between SNI actors											
3.1.1 Interagency projects on strategic issues financed (with first disbursement)	Number of projects	0	2020	4	4	5	6	6	25	The MinCyT's accounting system: projects with first actual disbursement recorded in the accounting system. Party responsible for reporting the indicator: MinCyT.	
3.1.2 Projects for facilities of strategic and interagency interest financed (with first disbursement)	Number of projects	0	2020	1	1	1	2	2	7		
3.1.3 Interagency projects directly related to climate change approved	Number of projects	0	2020	1	1	1	1	1	5	Postings of projects on the MinCyT website. Party responsible for reporting the indicator: MinCyT	See <a href="#">monitoring and evaluation plan</a> .



Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
3.1.4 Interagency centers financed (with first disbursement)	Number of centers	3	2020	1	1	1	2	2	7	The MinCyT's accounting system: projects with first actual disbursement recorded in the accounting system. Party responsible for reporting the indicator: MinCyT.	
3.1.5 Interagency centers directly related to climate change approved	Number of centers	0	2020	0	0	0	1	1	2		See <a href="#">monitoring and evaluation plan</a> .
3.2 Projects to strengthen national systems for large-scale instruments financed (with first disbursement)	Number of projects	39	2020	2	3	12	14	14	45		
3.2.1 Projects to create open-access repositories financed (with first disbursement)	Number of projects	3	2020	0	0	1	1	2	4		
3.3 Building infrastructure strengthened	Number of works	0	2020	0	4	5	0	0	9	Files held at MinCyT. Party responsible for reporting the indicator: MinCyT.	See <a href="#">monitoring and evaluation plan</a> .
3.3.1 Works including energy and water efficiency measures completed	Number of works	0	2020	0	2	2	0	0	4		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
Component 4: Strengthening of the SNI's capacities											
4.1 Institutional evaluation program: number of self-evaluation agreements and external evaluation agreements financed	Number of agree-ments	47	2020	0	3	5	6	6	20	Files held at MinCyT. Party responsible for reporting the indicator: MinCyT.	
4.1 Institutional evaluation program: improvement plans or projects to strengthen institutional capacities finalized	Number of plans	23	2020	0	0	2	2	3	7		
4.2 e-Library up and running	e-Library available for down-loading science and technology articles	1	2020	1	1	1	1	1	1	Use of resources on Science Direct, Scopus, and Reaxys available. Source: Elsevier. Party responsible for reporting the indicator: MinCyT.	
4.3 Studies and prospectuses to guide strategic STI planning completed	Number of studies and prospec-tuses	0	2020	3	4	4	4	3	18	Files held at MinCyT. Party responsible for reporting the indicator: MinCyT.	See <a href="#">monitoring and evaluation plan</a> .
4.4 STI outreach: Outreach activities focused on sustainable development (ocean science and climate	Number of activities	1	2020	2	2	2	2	2	10		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Means of verification	Comments
change) completed											
4.5 STI outreach: Outreach activities focused on gender mainstreaming completed	Number of activities	1	2020	2	2	2	2	2	10		See <a href="#">monitoring and evaluation plan</a> . Pro-gender indicator.

Country: Argentina

Division: IFD/CTI

Project number: AR-L1330

Year: 2021

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

**Coexecuting agencies:** Ministry of Science, Technology, and Productive Innovation (MinCyT) and Nacional Agency to Promote Research, Technological Development, and Innovation ("the Agency")

**Project name:** Federal Innovation Program

### I. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

1. Use of country systems in operation (any system or subsystem subsequently approved could be applicable to the operation, under the terms of the Bank's validation)

<input checked="" type="checkbox"/> Budget	<input checked="" type="checkbox"/> Reports	<input checked="" type="checkbox"/> Information system	<input type="checkbox"/> NCB
<input checked="" type="checkbox"/> Treasury	<input checked="" type="checkbox"/> Internal audit	<input type="checkbox"/> Shopping	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Accounting	<input checked="" type="checkbox"/> External control	<input type="checkbox"/> Individual consultants	

2. Fiduciary execution mechanism

<input checked="" type="checkbox"/>	Coexecuting/subexecuting agencies	(i) MinCyT; and (ii) the Agency The Office of Strategic Affairs (SAE), as subexecuting agency responsible for part of the evaluation agenda.
<input checked="" type="checkbox"/>	Details related to fiduciary execution	The operation will include several different types of expenditures: public competitive application processes for nonreimbursable and reimbursable contributions, open application processes on an anytime basis ("permanent windows"), and ordinary procurement processes. Each coexecuting agency will separately prepare and manage its own procurement plan, financial plan, annual work plan, disbursement requests, audited financial statements, etc.

3. Fiduciary capacity

Fiduciary capacity of the coexecuting agencies	The coexecuting agencies and the Office of Strategic Affairs (SAE) have executed similar operations in the past five years, and have been confirmed to possess sufficient institutional capacity. Measures will be adopted to help bridge gaps: (i) the corresponding part of the program Operating Regulations will indicate personnel assigned exclusively to the program for each coexecuting agency; (ii) the MinCyT's infrastructure management will be strengthened with relevant specialists; (iii) procedure manuals will be updated and/or developed, or technical, operational, and fiduciary arrangements will be included in <a href="#">Part II</a> of the Operating Regulations; and (iv) new personnel joining the MinCyT's fiduciary team will be trained. This is justified in view of the risk mitigation measures, the institutional capacity analysis, and the need for personnel to assume duties on an exclusive basis so as not to affect the necessary level of execution of the program.
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4. Fiduciary risks and risk response

Type of risk	Risk	Level of risk	Risk response
Human resources	If there are not enough specialized fiduciary personnel for the tasks related to fiduciary management of the project, the fiduciary requirements may not be met, leading to delays in procurements and ineligible expenditures.	Medium-high	A list of personal assigned exclusively to the program will be included in <a href="#">Part I</a> of the program Operating Regulations. The exclusive, specialized fiduciary personnel of the Agency and the MinCyT will be identified and then trained.
Internal processes	If the MinCyT does not have defined roles and responsibilities and its own procedure manuals, there may be delays affecting execution, leading to underexecution of Components III and IV.	Medium-low	Both parts of the program Operating Regulations will include a detailed description/mechanism establishing how coordination between departments will occur and detailing the decision-making and supervision flows at the level of the instruments.
Internal processes	If the beneficiaries of certain instruments are late in accounting for advances of funds to coexecuting agencies, the fiduciary requirements may not be met, leading to delays and ineligible expenditures.	Medium-low	Both parts of the program Operating Regulations will include a detailed description/mechanism establishing how coordination between departments will occur and detailing the decision-making and supervision flows at the level of the instruments. The Bank will support the training of the fiduciary team designated by the MinCyT (new personnel).
Internal processes	Procurement processes may not be completed, or contracts may not be executed in a timely manner, due to the impact of further outbreaks of the COVID-19 pandemic and difficulties the relevant supervision work.	Low	Bidding documents will include mechanisms to ensure that offers are received electronically and opened virtually.

5. Policies and guidelines applicable to the operation: Documents GN-2349-15, GN-2350-15, OP-273-12, and OP-274-2.

6. Exceptions to policies and guidelines: None.

## II. CONSIDERATIONS IN THE SPECIAL PROVISIONS OF THE LOAN CONTRACT

For the purposes of Article 4.10 of the General Conditions of the Loan Contract, the parties agree that the exchange rate to be used will be: (a) for the program resources under the responsibility of the Agency, the rate stipulated in Article 4.10(b)(ii). For the purpose of determining the equivalency of expenditures incurred in local currency chargeable against the local contribution, the agreed exchange rate will be the rate in effect on the effective date of payment; and (b) for the program resources under the responsibility of the MinCyT, the rate stipulated in Article 4.10(b)(i). For the purpose of determining the equivalency of expenditures incurred in local currency chargeable against the local contribution or reimbursement of expenditures against the loan proceeds, the exchange rate will be the rate in effect on the first working day of the month of payment.

**Sole annex.** Eligible expenditures will be understood to mean disbursements made by the Agency and the MinCyT to the different projects selected as a result of public calls for proposals or open application processes on an anytime basis ("permanent window") approved by the Bank, regardless of the date on which the beneficiary makes the investment, provided that such expenditures are incurred after approval of the program by the Bank's Board of Executive Directors and before the end of the original disbursement period or as extended. The execution mechanisms, including methods for passing resources on to beneficiaries and the accountability requirements applicable to expenditures by them, will be stated in each part of the program Operating Regulations.

## III. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

<input checked="" type="checkbox"/>	Bidding documents	Procurements of works, goods, and nonconsulting services and the selection and contracting of consulting services in accordance with policy documents GN-2349-15 and GN-2350-15, subject to international competitive bidding (ICB), will use the Bank's standard bidding documents and standard request for proposals, or documents agreed upon between the respective coexecuting agency and the Bank for the specific procurement. For the shopping method, the documents issued by the Bank's country office in Argentina will be used.
<input checked="" type="checkbox"/>	Use of country systems	The information system will be used. The COMPR.AR system may be used for the procurement of goods and nonconsulting services for up to US\$1.5 million.
<input checked="" type="checkbox"/>	Single-source selection	Specialized bibliographical materials will be purchased for the MinCyT's Science and Technology e-Library via direct contracting under the Bank's procurement policies (see document GN-2349-15, paragraph 3.7(c)). This is justified because the vendor (Elsevier B.V.) is the exclusive owner of the intellectual property and the sole source of this good, thus satisfying the specific criterion of document GN-2349-15, paragraph 3.7(c). The contract value is US\$17,538,265 and covers three annual subscriptions (2021, 2022, and 2023) (see <a href="#">optional link 3</a> ).
<input checked="" type="checkbox"/>	Special procurement provisions applicable to the operation	The selection criteria for the competitive application processes for reimbursable and nonreimbursable contributions will be established in each part of the program Operating Regulations. The model agreements will be previously approved by the Bank. Financing will be provided for the annual membership fees of the Gemini Project, an expenditure that is technically eligible under the program and included in the country financing parameters for Argentina (see document GN-2331-5).

☑	Procurement supervision	<p>The supervision method will be ex post, except where ex ante supervision is justified, as determined for each selection process in the procurement plan. The ex post reviews will be each year, according to the project supervision plan, subject to change during program execution, and may be conducted digitally. The thresholds for ex post review for each coexecuting agency are as follows:</p> <table border="1"> <thead> <tr> <th>Works</th><th>Goods/Services</th><th>Consulting services</th></tr> </thead> <tbody> <tr> <td>MinCyT US\$25 million The Agency and SAE US\$5 million</td><td>MinCyT US\$1.5 million The Agency and SAE US\$300,000</td><td>MinCyT, the Agency, and SAE US\$200,000</td></tr> </tbody> </table>	Works	Goods/Services	Consulting services	MinCyT US\$25 million The Agency and SAE US\$5 million	MinCyT US\$1.5 million The Agency and SAE US\$300,000	MinCyT, the Agency, and SAE US\$200,000
Works	Goods/Services	Consulting services						
MinCyT US\$25 million The Agency and SAE US\$5 million	MinCyT US\$1.5 million The Agency and SAE US\$300,000	MinCyT, the Agency, and SAE US\$200,000						
☑	Records and files	<p>The coexecuting agencies and the SAE will maintain files and supporting documentation of procurement processes, competitive application processes, investments, and vouchers for payments made with project resources. Digital files and records will also be kept for the same purpose and for Bank supervision.</p>						

Main procurements

Description of procurement	Selection method	Estimated date	Estimated amount (US\$000)
<b>Goods</b>			
Computer equipment – A	National competitive bidding (NCB)	January 2022	1,000
<b>Nonconsulting services</b>			
Specialized bibliographical materials (BE – MinCyT) <a href="#">(optional link 3)</a>	Direct contracting	December 2021	17,538
Web content – 5 years	Shopping	August 2022	150
“Innovar” display catalog	Shopping	March 2022	250
Production services for various initiatives and scopes	Multiple shopping or national competitive processes	June 2022	500
TECtv production	National competitive processes	January 2021	820
National surveys of various sectors and innovation and development topics	Multiple national competitive processes	November 2021 and in 2023	760

Description of procurement	Selection method	Estimated date	Estimated amount (US\$000)
<b>Consulting firms</b>			
Strategic monitoring for Argentina's Plan 2030	Quality-based selection (QBS)	August 2023	100
Diagnostic assessment for energy transition	QBS	June 2024	130
Map of future agendas and capacities	Selection based on the consultants' qualifications (CQS)	April 2023	120
Regulatory frameworks for transfers	CQS	April 2025	120
Study on management of intangible assets	CQS	April 2025	100
SAE evaluations – A	Quality- and cost-based selection (QCBS)	December 2022	1,200
Design of digital agency system – A	QCBS	January 2022	1,000

To access the procurement plan, click [here](#).

#### IV. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

<input checked="" type="checkbox"/>	Programming and budget	Each coexecuting agency will be responsible for preparing and programming its annual budget and will complete all procedures for consolidation of its annual budget for approval. The budget includes programmatic categories and other classifications based on the purpose of the expenditure (line items). Expenditures are categorized economically as current expenditures, capital expenditures, or short-term assets.
<input checked="" type="checkbox"/>	Treasury and disbursement management	The coexecuting agencies will manage and control the bank accounts opened in U.S. dollars and in local currency for separate and exclusive management of the loan proceeds, as well as for reconciliation of these accounts. The Bank will disburse funds via the modalities established in document OP-273-12. Funds will be advanced to each program coexecuting agency in accordance with a detailed financial plan based on projected expenditures for up to 180 days, once the payments have been made and duly documented. The minimum percentage required from each coexecuting agency for the replenishment of advances of funds will be 70%, since this is a decentralized program of complex execution (see document OP-273-12, "Flexibilización permanente").



<input checked="" type="checkbox"/>	Accounting, information systems, and reporting	The Agency will continue using the EMERIX system as its financial management system (as on previous operations). The UEPEX system has been put in place for budget execution, and the "Digital Agenda" tool, which will integrate the systems and enable greater interoperability with UEPEX, is in the process of implementation. The Bank may perform an analysis of this tool, once implemented. The MinCyT will use UEPEX as its financial management system, to identify program funds and sources of financing, categorizing investments by component in accordance with the cost table. Accounting will be on a cash basis, and International Financial Reporting Standards will be used, as applicable, in accordance with established national requirements. The required financial reports will be as established in Article 7.03, paragraph (a), of the General Conditions of the Loan Contract.
<input checked="" type="checkbox"/>	Internal control and internal audit	The national entity for internal control is the Office of the Comptroller General (SIGEN). Internal auditing of the coexecuting agencies will be performed through the Internal Audit Unit.
<input checked="" type="checkbox"/>	External control and financial reports	In 2011 the Bank completed a diagnostic assessment of governmental audit practices of the Office of the Auditor General (AGN), which validated the AGN as an auditor of Bank projects. In accordance with the terms of reference previously agreed upon with the Bank, the program's annual financial statements will be audited by an independent auditor acceptable to the Bank, which may be either the AGN or an independent audit firm.
<input checked="" type="checkbox"/>	Financial supervision	The initial financial supervision plan will be based on risk and fiduciary capacity assessments of the coexecuting agencies, conducted through onsite supervision visits and desk reviews, as well as analysis and monitoring of the results and recommendations of audits of the program's annual financial reports.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/21

Argentina. Loan \_\_\_\_/OC-AR to the Argentine Republic  
Federal Innovation Program (FIP)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Argentine Republic, as borrower, for the purpose of granting it a financing to cooperate in the execution of the Federal Innovation Program (FIP). Such financing will be for an amount of up to US\$230,000,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on \_\_\_\_ 2021)