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MULTILATERAL INVESTMENT FUND

CHILE

**MARKET OPPORTUNITIES FOR TECHNOLOGY FIRMS – PUBLIC PROCUREMENT OF
RESPONSIBLE, ETHICAL, AND TRANSPARENT ALGORITHMS**

(CH-T1246)

DONORS MEMORANDUM

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PROJECT SUMMARY

CHILE

MARKET OPPORTUNITIES FOR TECHNOLOGY FIRMS – PUBLIC PROCUREMENT OF RESPONSIBLE, ETHICAL, AND TRANSPARENT ALGORITHMS

(CH-T1246)

The project objective is to create market opportunities for technology firms, especially startups and small and medium-sized enterprises, through the development of ethical automated decision systems and the adoption of ethical standards in the formulation and procurement of algorithms in Chile's public and private sectors. The project will be structured around the empirical testing of tools developed by the fAIr LAC initiative, the World Economic Forum, and others based on the prior experience of the Public Innovation Laboratory of the Universidad Adolfo Ibáñez School of Government (GobLab UAI) and project partners working to make ethics an integral part of such systems.

Technology firms are expected to build capacity for the ethical development of algorithms, contributing to ethical and responsible management of the private sector and enhanced social impact of technology solutions geared toward the vulnerable population.

Specifically, efforts will be made in the following areas: (i) testing of guides for the procurement of responsible and ethical automated decision systems (ADS) in the Chilean government; (ii) design and implementation of a model for the practical implementation of existing standards for ethical data management, to be piloted at two public agencies that have decided to use algorithms in areas posing ethical challenges related, for example, to user services or services involving personal or sensitive data; (iii) capacity-building at the different stakeholders involved in the design, procurement, development, and implementation of algorithmic decision-making systems, especially smaller technology development firms and public officials in charge of implementing procurement processes; (iv) development of knowledge products and sharing them widely via policy documents and public events.

The project draws on the experience of Universidad Adolfo Ibáñez, through its Public Innovation Laboratory (GobLab UAI), as executing agency, as well as other partners, including: Chile's Public Procurement and Contracting Office (ChileCompra), which is the national procurement agency and administers the "Mercado Público" portal; Chile's Digital Government Division (DGD) of the Office of the Minister-Secretary General of the Presidency (SEGPRES); the Ministry of Science, Technology, Knowledge, and Innovation; and, as project coexecuting agency, Magical, a business accelerator specializing in digital startups with a wide network among firms providing data and artificial intelligence services in Chile.

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ABBREVIATIONS

ADS	Automated decision system
CASEN	Encuesta de Caracterización Socioeconómica Nacional [National Socioeconomic Survey]
CGR	Contraloría General de la República [Office of the Comptroller General of the Republic]
ChileCompra	Dirección de Compras y Contratación Pública [Public Procurement and Contracting Office]
DGD	División de Gobierno Digital [Digital Government Division]
DIPRES	Dirección de Presupuestos del Ministerio de Hacienda [Budget Office of the Ministry of Finance]
FONASA	Fondo Nacional de Salud [National Health Fund]
GobLab UAI	Laboratorio de Innovación Pública de la Escuela de Gobierno de la Universidad Adolfo Ibáñez [Public Innovation Laboratory of the Universidad Adolfo Ibáñez School of Government]
IDB Lab	Multilateral Investment Fund
LAC	Latin America and the Caribbean
SEGPRES	Ministerio Secretaría General de la Presidencia [Office of the Minister-Secretary General of the Presidency]
UAI	Universidad Adolfo Ibáñez
WEF	World Economic Forum

CHILE
MARKET OPPORTUNITIES OR TECHNOLOGY FIRMS – PUBLIC PROCUREMENT OF
RESPONSIBLE, ETHICAL, AND TRANSPARENT ALGORITHMS
(CH-T1246)

EXECUTIVE SUMMARY

Country and geographic location:	Chile		
Executing agency:	Universidad Adolfo Ibáñez (UAI), acting through the Public Innovation Laboratory of its School of Government (GobLab).		
Focus area:	Knowledge Economy		
Coordination with other donors/Bank operations:	Chile's Public Procurement and Contracting Office (ChileCompra); Digital Government Division (DGD); Ministry of Science, Technology, Knowledge, and Innovation; and Magical, a business accelerator.		
Project beneficiaries:	<ul style="list-style-type: none"> • Firms providing technology services to the national government, especially small and medium-sized enterprises and startups. • Government agencies. • Citizens receiving government services, corresponding in most cases to the vulnerable population. 		
Financing:	Technical cooperation:	US\$635,800	49.8%
	Total IDB Lab contribution:	US\$635,800	49.8%
	Counterpart:	US\$639,900	50.2%
	Total project budget:	US\$1,275,700	100%
Execution and disbursement periods:	30 months for execution and 36 months for disbursement.		
Special contractual conditions:	Conditions precedent to the first disbursement: (i) evidence that the project execution unit has been established; (ii) presentation of the annual work plan and execution timetable, to the Bank's satisfaction; (iii) coexecution agreement signed with the business accelerator Magical.		
Environmental and social impact review:	This operation has been screened and classified in accordance with the requirements of the IDB's Environment and Safeguards Compliance Policy (Operational Policy OP-703) of 21 August 2020. Given the limited impacts and risks, the proposed classification for the project is category "C."		
Unit with disbursement responsibility:	IDB Lab staff at the Bank's Country Office in Chile (CCH).		

I. THE PROBLEM

A. Description of the problem

- 1.1 GDP projections for the economies of Latin America and the Caribbean (LAC) in 2020 are converging around a decline of 7.2%, affected mainly by the COVID-19 crisis.¹ The governments of the region have announced many different plans to mitigate the impact of the economic crisis caused by COVID-19, ranging from subsidies and aid for the most disadvantaged sectors to arrangements with the banking sector. Chile has been no exception, and its government announced an economic support plan of US\$11.75 billion, representing approximately 4.7% of the country's annual GDP.²
- 1.2 In the current context, governments are increasingly compelled to target their policies to aid the population most in need, harnessing data to make their processes more efficient and design and evaluate public policies in a cost-efficient way.
- 1.3 Data science and artificial intelligence (AI) can be utilized to transparently, nimbly, and effectively design better ways for both the public and the private sectors to deliver social services in areas as varied as health, education, housing, citizen security, transportation, and others.³
- 1.4 However, data science faces challenges of fairness, transparency, accountability, and explicability. There are a number of documented cases⁴ of biases or discrimination in algorithms and lack of transparency and/or explanation in allocation or decision mechanisms, which undermines the effectiveness of using these new technologies.
- 1.5 The [fAIr LAC](#) initiative, launched by the IDB Group in 2019, seeks to promote the ethical and responsible application of AI in the region, helping the public and private sectors to improve social service delivery and the development of businesses with social impact. fAIr LAC adheres to the AI principles of the Organisation for Economic Cooperation and Development (OECD)⁵ as a basis for the development of self-assessment processes, the development of technical guidelines, a regional observatory, and operational tools for the deployment of AI meeting ethical standards.
- 1.6 More than 80 sets of guidelines for the ethical development of AI have been developed worldwide in the last five years. Although a global convergence is emerging around five ethical principles (transparency, justice and fairness, nonmaleficence, responsibility, and privacy), there is also a “substantive

¹ Global Economic Outlook, World Bank, June 2020.

² <https://prensa.presidencia.cl/comunicado.aspx?id=148684>.

³ Cabrol, M., González, N., Pombo, C., and Sánchez, R. (2020). fAIr LAC: Responsible and Widespread Adoption of Artificial Intelligence in Latin America and the Caribbean. Buenadicha, C., Galdon, G., Hermosilla, M., Loewe, D., and Pombo, C. (2019). La Gestión Ética de los Datos. doi: <http://dx.doi.org/10.18235/0001623>.

⁴ For example: (i) Obermeyer, Z., Powers, B., Vogeli, C., and Mullainathan, S. (2019). Dissecting Racial Bias in an Algorithm Used to Manage the Health of Populations. *Science*, 366, 447-453; (ii) Brauneis, R., and Goodman, E. (2018). Algorithmic Transparency for the Smart City. *Yale J.L. and Tech*, 20, 103-1743.

⁵ <https://www.oecd.org/going-digital/ai/principles/>.

divergence in relation to how these principles are interpreted, why they are deemed important, what issue, domain or actors they pertain to, and how they should be implemented.”⁶

- 1.7 Despite the proliferation of such guidelines, few data science projects in the public sector have been designed and implemented with fairness, responsibility, and transparency in mind. Moreover, several countries of Latin America and the Caribbean, including Chile, are still designing their AI policies, which reflects the early stage of development of such tools and the ethical discussions they involve in the region.
- 1.8 In Chile, particularly, the government, under the leadership of the Ministry of Science, Technology, Knowledge, and Innovation, has initiated a consultative process for development of the National Policy on AI,⁷ which will contain strategic guidelines for AI development and identify enabling factors and existing challenges, including ethical issues.
- 1.9 Recently, fAIr LAC conducted the first survey on perceptions of the importance of ethical AI in the region.⁸ The findings of this survey, which included more than 220 experts from the public, private, and academic sectors of 12 countries, are highly indicative: nearly 40% of respondents believe that AI ethics have little or very little importance in the technological dialogue of their countries; 75% said the topic is largely or completely missing from the public debate; and nearly 72% do not know of a use case with a social impact that has already been implemented.
- 1.10 In the current COVID-19 context, when information is becoming increasingly difficult to gather in the field, the development of predictive models and data- and AI-driven solutions are gaining importance. There is therefore an urgent need to quickly build capacity to tap the full economic and social impact potential of these types of solutions by ensuring the necessary legitimacy to foster development of these technologies.
- 1.11 At the national level, the public bidding processes for predictive models or algorithms do not incorporate ethical data management into the bidding conditions beyond basic considerations such as compliance with the data protection law or, in exceptional cases, a generic request for ethical considerations during the implementation phase without specific guidelines, such that the algorithms lack adequate transparency and explicability. This has been revealed in the case observation study of algorithm development in Chile’s public sector, now under way by the Universidad Adolfo Ibáñez School of Government (GobLab UAI).⁹

⁶ Jobin, A., Ienca, M., and Vayena, E. (2019). The Global Landscape of AI Ethics Guidelines. *Nature Machine Intelligence*, 1, 389-399.

⁷ <http://www.minciencia.gob.cl/area-de-trabajo/que-lineamientos-contendra-la-politica-nacional-de-inteligencia-artificial>.

⁸ <https://publications.iadb.org/publications/spanish/document/La-inteligencia-artificial-al-servicio-del-bien-social-en-América-Latina-y-el-Caribe-Panorámica-regional-e-instantáneas-de-doce-paises.pdf>.

⁹ Of seven cases reviewed (including student assignment systems in public schools, fraud detection in the health system, prioritization of patients on waiting lists, and facial recognition to monitor public transportation or safety), only one institution, the Ministry of Education, provided information in a timely manner.

- 1.12 Another GobLab UAI review of information available on the websites of 51 technology firms offering AI services in Chile showed that, in most cases, ethical data management and responsible AI development were not among the information made public by firms. Of these, 75% make no mention of ethical data management or AI on their websites, and only 18% mention them at all, but provide no explanation. Only one of the firms reviewed had an explanation of its approach to ethical data management, corresponding to a code of ethics.
- 1.13 Progress in the public and private domains on greater accountability for the development of algorithmic decision-making systems will contribute not only to the legitimacy and trustworthiness of these solutions in generating the desired social impact but to competitive advantages and mechanisms for validating the effectiveness of automated decision systems (ADS) or algorithms.

B. Project beneficiaries

- 1.14 **Firms providing technology services to the national government, especially small and medium-sized enterprises (SMEs) and startups.** Corporations and individuals, both national and international, engaged in selling algorithm development services in procurement processes conducted by Chilean government agencies. According to ChileCompra data, during 2019 there were 1,285 vendors in the software category of the [Mercado Público](#) centralized purchasing platform, with US\$26 million in transactions.
- 1.15 **Government agencies.** Public sector buyers of algorithms span all government agencies and public services subject to Law 19886¹⁰ and its implementing regulations on bidding conditions for supply and service delivery administrative contracts. This includes the central government, municipios, armed forces and law enforcement, and universities, as well as institutions that have voluntarily joined the Mercado Público platform, such as the [Judicial Branch](#), the [National Mint](#), and others. According to ChileCompra's 2019 annual report,¹¹ in total there are 850 government agencies using this platform, and all could potentially benefit when engaging services that require algorithms.
- 1.16 **Citizens receiving government services,** corresponding to the poor and vulnerable population. In Chile, monetary and nonmonetary transfers from the government to citizens are targeted to the most vulnerable groups belonging to the two lowest income deciles, based on the "Social Registry of Households," where individuals and households register to receive such assistance. As of the most recent update (May 2020), 13.69 million people are on the rolls of the Social Registry of Households, representing about 71% of the country's total population. Among the most vulnerable households,¹² 3.1 million are enrolled, representing 55.7% of all registered households.¹³ Lastly, in terms of public health services, 78% of Chile's population is affiliated with the National Health Fund (FONASA).¹⁴ The lower the income decile, the higher the proportion of FONASA members, as

¹⁰ Balance de Gestión Integral 2018, ChileCompra.

¹¹ <https://www.chilecompra.cl/cuenta-publica-chilecompra/>.

¹² In socioeconomic classification bracket 40 (families belonging to the most vulnerable 40%).

¹³ Digital Social Information Analyst. Ministry of Social Development and Family, May 2020.

¹⁴ National Socioeconomic Survey (CAsEN) 2017. Summary of health findings, September 2019, p. 4.

more than 80% of the population belonging to the first thru sixth deciles is affiliated with FONASA. That figure is above 90% for the first thru third deciles.¹⁵

II. THE INNOVATION PROPOSAL

A. Project description

- 2.1 The project objective is to create market opportunities for technology firms, especially startups and small and medium-sized enterprises (SMEs), through the development of ethical automated decision systems and the adoption of ethical standards in the formulation and procurement of algorithms in Chile's public and private sectors.
- 2.2 The project will be structured around the empirical testing of tools developed by the fAlr LAC initiative, the World Economic Forum (WEF), and others based on the prior experience of the Public Innovation Laboratory of the Universidad Adolfo Ibáñez School of Government (GobLab UAI) and project partners working to make ethics an integral part of such systems.
- 2.3 The project will test the incorporation of ethical standards into two, specific planned procurements of automated decision systems (ADS) originating in the Chilean public sector.
- 2.4 The project will focus on: (i) testing of guides for the procurement of responsible and ethical ADS in the Chilean government;¹⁶ (ii) design and implementation of a model for the practical implementation of existing standards for ethical data management; (iii) capacity-building at smaller startups and technology firms for the incorporation of ethical standards into their value proposition and incentives for proactive adoption of self-regulation mechanisms.
- 2.5 The centralized management of public procurement in Chile through the unified public procurement system, ChileCompra, offers a unique opportunity to initiate continuous improvement in practices related to the purchase of technology in Chile, without the need to reform legal frameworks. Additionally, since 2018 government technology projects are evaluated at entry by the Digital Government Division (DGD) of the Office of the Minister-Secretary General of the Presidency (SEGPRES) as a preliminary step to requesting a budget from the Ministry of Finance through the EvalTI system.¹⁷ The project will work with the DGD on strengthening the evaluation process to incorporate ethical considerations.
- 2.6 Work on the supply side—startups and small businesses—will be led by the innovative digital business accelerator Magical targeting entrepreneurs, investment funds, and corporates. This will complement work on the demand side—public sector buyers—enhancing efficiency in the use of public resources, as well as making firms more competitive by instituting good practices at ecosystem entities.

¹⁵ Idem., p. 10.

¹⁶ The project will focus on algorithms commissioned by the government to improve public policy decision-making that are subject to important ethical considerations.

¹⁷ EvalTI is the technology project evaluation system of the Chilean government that must issue a positive recommendation as a necessary condition for public budget allocations. <https://digital.gob.cl/servicios/plataformas-compartidas/evaltic>.

- 2.7 **Component I: Capacity-building (IDB Lab US\$84,800; Counterpart US\$87,000).** The component objective is to build capacity at the public and private stakeholders involved in the ethical and responsible design, procurement, development, and implementation of ADS, especially smaller technology development firms and public officials in charge of implementing procurement processes. This will involve training and awareness activities, as well as a partnering program for the private sector.
- 2.8 This component will include the following activities: (i) a course on the ethical development of data science projects aimed at public agencies that have projects approved by the EvalTI system targeting vulnerable populations with an approved budget for their execution. The selection criteria for participants will include the social impact of the technology project, existence of ethical risk, and use of personal data. Two cohorts of the course will be offered for 24 hours over eight sessions; (ii) data ethics courses for startups aimed at raising awareness and building capacity at technology firms implementing ADS with social impact potential, so that they incorporate ethical criteria as part of their value proposition; (iii) in-depth talks on topics such as disparity analysis, algorithmic bias, data privacy impact assessment, etc.; (iv) creation of an association of ethical algorithm development firms and mechanisms for their self-regulation.
- 2.9 The outcome will be capacity-building at the private and public stakeholders involved in the ethical and responsible design, procurement, development, and deployment of algorithmic decision systems. In the private sector, an association of ethical algorithm development firms will be created, initially with at least 15 members.
- 2.10 **Component II: Creation and implementation of tools (IDB Lab US\$365,000; Counterpart US\$398,900).** The component objective is to develop, systematize, and implement the tools that will help the public and private sectors incorporate ethical criteria during ADS development.
- 2.11 This component will include the following activities: (i) multidisciplinary support throughout the life cycle of two pilot cases of public procurement of ADS; (ii) systematization of risks in the development of the pilot ADS related to justice, transparency, traceability, and privacy, taking the available data into consideration. Community concerns will also be taken into account from the initial phase through data science ethnography methodologies (review of the literature on the problems addressed by the two projects, semistructured interviews with interest groups, stakeholder mapping, reviews by institutional ethics committees, onsite observations, etc.); (iii) systematic documentation and recommendations of the consultation and evaluation processes for ADS competitive bidding processes; (iv) implementation of an ethical piloting plan through multidisciplinary support for the firms developing, and public agencies procuring, the systems during development and implementation of the algorithmic model, to ensure that the ADS meets ethical, responsible, and traceable standards; (v) based on existing methodologies, adaptation of the development and testing of guides aimed at startups, accelerators, and investment funds; and (vi) development of a

procurement directive¹⁸ for the public sector and standard bidding documents¹⁹ for ADS procurement.

- 2.12 The selection criteria for the two cases to be piloted during project execution, which will be subject to the Bank's ex ante no objection, are as follows: ethical risks of the algorithm, number of people impacted by the algorithm, social impact, leadership commitment of the public agency, project viability, and potential for lessons learned spreading in the public sector, i.e., diversity of sectors, different types of data science solution, etc. The project executing agency will sign collaboration agreements with the ministries or public services spearheading the pilot implementations.
- 2.13 The expected outcomes are: (i) two ADS developed that incorporate ethical criteria, including the ethical piloting plan, with their lessons learned documented; (ii) manual for investment funds and accelerators; (iii) manual for startups; (iv) guide for the ethical development of data science projects for the government; (v) procurement directive with recommendations for SDA procurements, approved by ChileCompra; (vi) standard bidding documents for ethical ADS procurement, approved by ChileCompra.²⁰
- 2.14 **Component III: Knowledge and evaluation (IDB Lab US\$156,000; Counterpart US\$124,000).** The component objective is to raise awareness regarding the risks of not incorporating ethical principles into the development of artificial intelligence (AI) and how to mitigate them by generating knowledge products to evaluate the results of the initiative.
- 2.15 This component will include the following main activities: (i) large-scale dissemination events to raise awareness and launch manuals and guides developed by the project; (ii) presentation of know-how at the national and international levels; (iii) development, in partnership with the WEF Centre for the Fourth Industrial Revolution, of capacity-building workshops for public officials on the procurement of advanced technologies; (iv) development of knowledge products to be shared widely via policy documents and public events; (v) reports of the impact on the population of the ADS that incorporated ethical criteria into their design and implementation with project support; (vi) reports on implementation of the standards in the private sector; (vii) four postgraduate theses based on project experience; (viii) study of best practices in public procurement of ADS, especially AI.

¹⁸ Procurement directives are recommendations issued by ChileCompra for implementation of the different stages of public procurement and contracting processes conducted by public agencies under Chile's Public Procurement Law (Law 19886).

¹⁹ Standard bidding documents are a new procurement instrument promoted by ChileCompra, where the administrative aspects of competitive bidding processes have been established by ChileCompra and validated by the Office of the Comptroller General of the Republic (CGR).

²⁰ In addition to implementation experience, the knowledge products to be developed as part of the execution of this project will be based on the methodologies developed by the Public Innovation Laboratory of the Universidad Adolfo Ibáñez School of Government (GobLab UAI), the fAIr LAC initiative, the World Economic Forum (WEF), and other relevant initiatives.

B. Project results, measurement, monitoring, and evaluation

- 2.16 The main Results Matrix indicators are as follows: (a) number of inhabitants of Chile benefited by government service delivery using ethical algorithms; (b) number of people benefited by services delivered by businesses using ethical algorithms; (c) number of businesses implementing ethical criteria for the development of algorithms; (d) number of public data science projects incorporating ethical criteria as a requirement in their procurement terms of reference; (e) number of algorithm projects implemented by public agencies incorporating ethical criteria; (f) number of public sector projects developed involving an identification of their ethical risks; (g) number of private entities participating in the training series on criteria for the development and procurement of ethical algorithms; (h) number of firms joining the Ethical Algorithm Developers Association; (i) number of public agencies participating in training on ethical development of data science projects.
- 2.17 The ADS projects submitted through the EvalTI system will also be reviewed annually, to determine whether they have been formulated in a way that reflects their ethical risks. Additionally, the ADS procurements will be reviewed every six months through ChileCompra's Mercado Público platform, to monitor the addition of requirements to the project terms of reference and verify the transparency information of the participating firms, in order to determine how the ethical criteria are incorporated as part of their value proposition.
- 2.18 An assessment will be completed during the third year of execution, to determine the impact of the two selected pilot projects on the beneficiary population (see paragraph 2.11) and on the services provided by the firms adopting the development of ADS ethical principles, looking at whether incorporating ethical criteria **lessens biases** and **improves targeting** and, as a consequence of better targeting, **delivers greater value for beneficiaries or users**. The specific terms of the assessment will be based on the areas addressed by each pilot and the services provided by the participating firms.
- 2.19 Project progress will be reported every six months in IDB Lab's project status report (PSR) system via the Salesforce platform.

III. ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND PROJECT RISKS

A. Alignment with the IDB Group

- 3.1 **IDB Lab.** The project is part of IDB Lab's Knowledge Economy focus area, promoting ethical and responsible technology development and private sector capacity-building for the development of solutions based on new technologies with high social impact.
- 3.2 **IDB Group.** The project is closely aligned with various IDB Group initiatives that will be leveraged and promoted: (i) the fAIr LAC initiative, which promotes the ethical and responsible development of artificial intelligence (AI). The project, in addition to testing tools already developed by the initiative, will contribute specific use cases to its observatory;²¹ (ii) the Bank-led Inter-American Network on

²¹ <https://fairlac.iadb.org/en/observatory>.

Government Procurement. The Bank will be responsible for transfer of the knowledge and experience gained from the project to this network.

- 3.3 **Country strategy.** The project is aligned with the IDB Group Country Strategy with Chile 2019-2022 (document GN-2946), specifically the objectives to “promote business innovation” and “improve the quality of life of the population.” It will also contribute to the IDB Group Corporate Results Framework 2020-2023 (document GN-2727-12) in the areas of productivity and innovation (enterprises provided with technical assistance) and institutional capacity and rule of law (agencies with strengthened digital technology capacity).

- 3.4 **Sustainable development goals (SDG).** The project contributes directly to SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.” Specifically, it will help support technology development and innovation in Chile by assuring an enabling regulatory environment.

B. Scalability

- 3.5 The project regards scalability as an integral part of its design, developing a replicable model at both national and regional levels, to be built upon by the fAlr LAC initiative.

- 3.6 In the public sector, scalability will take the form of approval by ChileCompra of a directive for incorporating ethical criteria into ADS procurements and the submission of standard bidding documents for such processes to the Office of the Comptroller General of the Republic (CGR) for consideration.

- 3.7 In the private sector, it will seek to consolidate an Ethical Algorithm Developers Association, resulting in ethical and responsible ADS-based service delivery to citizens.

C. Project and institutional risks

- 3.8 **Operational risk.** There is a risk that the beneficiary entities will not incorporate lessons learned into future ADS developments. To mitigate this risk: (i) the guides and manuals to be developed will be co-created with ChileCompra and the Digital Government Division (DGD), incorporating ongoing feedback from future users; and (ii) startups and SMEs that develop technology will also be supported in the same way, encouraging ongoing reflection on the impact of ADS solutions on quality of life.

- 3.9 **Institutional risks.** Given the academic nature of Universidad Adolfo Ibáñez, there is a risk that the generation of knowledge products will be emphasized, instead of their adoption. As a mitigation measure, the project will allow 12 months for monitoring results, especially as they relate to users of the solutions to be developed applying ethical criteria under this initiative.

- 3.10 **Market risks.** The project seeks to expand market opportunities for technology firms, mainly startups and SMEs. There is a risk that these companies may lack the necessary support to scale their solutions. As a mitigation measure, the project will work directly with investment funds and accelerators operating at the national level, so that startups have a network of connections enabling them to effectively prepare offers for submission in public sector competitive bidding processes.

IV. INSTRUMENT AND PROPOSED BUDGET

- 4.1 The project has a total cost of US\$1,275,700. Of that amount, US\$635,800 (49.8%) will be contributed by IDB Lab in the form of nonreimbursable technical cooperation funding, and US\$639,900 (50.2%) will be contributed by the counterpart.

	IDB Lab	Counterpart	Total
Project components			
Component 1: Capacity-building	84,800	87,000	171,800
Component 2: Creation, delivery, and implementation of tools	365,000	398,900	763,900
Component 3: Knowledge and evaluation	156,000	124,000	280,000
Ex post reviews	15,000	15,000	30,000
Contingencies	15,000	15,000	30,000
Grand total	635,800	639,900	1,275,700
% of financing	49.8%	50.2%	100%

V. EXECUTING AGENCY AND IMPLEMENTATION STRUCTURE

A. Description of executing agency

- 5.1 Universidad Adolfo Ibáñez (UAI), acting through the Public Innovation Laboratory of its School of Government (GobLab UAI), will be the project executing agency and sign the agreement with the Bank. Its mission is to promote the use of data science to improve the design and implementation of public policies. GobLab UAI has extensive experience in human capital formation for the development of projects based on data science and data ethics. It has also developed predictive models for government agencies and designed ethical recommendations for their implementation. The Public Innovation Laboratory also conducts data ethics research.
- 5.2 Partners in the initiative will be: (i) Chile's Public Procurement and Contracting Office (ChileCompra), which is the national procurement agency and administers the "Mercado Público" public procurement platform used by more than 850 government agencies for purchasing from over 114,000 vendors, around 80% of which are MSEs, and 36% are businesses led by women; (ii) the Digital Government Division (DGD) of the Office of the Minister-Secretary General of the Presidency (SEGPRES), dedicated to providing coordination and advisory support and assistance for the digital development strategy of the Government of Chile; (iii) the Ministry of Science, Technology, Knowledge, and Innovation, which is preparing the national artificial intelligence (AI) policy and coordinates an interministry forum on the subject; and (iv) Magical, a business accelerator specializing in digital startups with a wide network among firms providing data and artificial intelligence services in Chile. A series of events are held annually with AI firms nationwide.
- 5.3 UAI will sign a coexecution agreement with Magical, whose legal name is Incubadora de Negocios Elevaglobal SPA, for activities with the tech startup ecosystem. The coexecution agreement, which must have the Bank's no objection

before signing, will detail the project execution responsibilities of the coexecuting agency and the respective transfers of resources from UAI and counterpart contributions.

B. Implementation structure and mechanism

- 5.4 GobLab UAI will establish an execution unit and the necessary structure to execute the project activities and manage project resources effectively and efficiently. GobLab UAI will also be responsible for delivering status reports on project implementation.
- 5.5 The project partners will make technical and financial resources available during implementation that contribute to the proposed objectives. The project will have two consultative bodies, to ensure effective governance and coordination among the partners: (i) **Advisory Board**: a strategic body made up of the project partners and the Bank, which will receive a project status report at least every six months and can suggest any improvements, as appropriate; (ii) **Technical Committee**: an operational body also made up of the project partners and the Bank, which will ensure effective implementation of the project activities and recommendations of the Advisory Board. It will also supervise fulfillment of the respective institutional commitments and the effective coordination of communications, measurement of results, and any other area deemed appropriate.

VI. ACHIEVEMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS

- 6.1 **Results-based disbursement and fiduciary arrangements.** The executing agency will agree to the IDB Lab standard arrangements concerning results-based disbursements, procurement policies, and financial management applicable to the private sector. Project disbursements will be contingent on the achievement of milestones,²² according to the means of verification agreed upon between the executing agency and IDB Lab. Achievement of milestones does not exempt the executing agency from responsibility for compliance with the Results Matrix indicators and the project objectives.
- 6.2 Under the risk- and performance-based project management modality, the project disbursement amounts will be determined in accordance with the project's liquidity needs, estimated for a maximum period of six months. These needs will be agreed between IDB Lab and the executing agency, reflecting the activities and costs programmed in the annual planning exercise. The first disbursement will be contingent on the fulfillment of conditions precedent, and successive disbursements will be made, provided that the following two conditions are satisfied: (i) IDB Lab has verified that the milestones have been met, as agreed in the annual planning exercise; (ii) the executing agency has justified at least 80% of the cumulative advances of funds.
- 6.3 **Procurement.** Unless otherwise determined by the Bank during execution, the executing agency's policies will be used to conduct procurements. Annual planning

²² Each milestone is a minimum expected outcome or output of a critical activity for the project associated with a specific point in time. It reflects progress towards the project's development objective and, if delayed, would prevent the project from being fully executed and, if unmet, would technically jeopardize achievement of that objective.

will be submitted for the procurements necessary for execution of the project and fulfillment of the milestones. IDB Lab will review ex ante the technical aspects of only those acquisitions that in its judgment so require, which will be reflected in the procurement planning.

VII. ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY

- 7.1 **Intellectual property.** The Bank will retain intellectual property rights to all works and results achieved under the project. The Bank will grant the executing agency an irrevocable, worldwide, perpetual, royalty-free, and nonexclusive license to use, copy, distribute, reproduce, exhibit, and publicly display any copyrighted product deriving from execution of the project, as well as to develop derivative works. The executing agency may grant sublicenses to third parties without new authorizations or licenses from the Bank.
- 7.2 The Bank and the executing agency will identify the list of project outputs subject to intellectual property registration under a creative commons license.²³
- 7.3 The executing agency undertakes to include assignment of the respective intellectual property rights, including copyright, to the Bank in all contracts it enters into with consultants under the project.
- 7.4 The Bank may disclose, reproduce, and publish any information associated with the project and include the executing agency's name and logo in that information.

²³ <https://creativecommons.org/about/>.