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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK  
MULTILATERAL INVESTMENT FUND

**CHILE**

**OPEN SENIORS**

**(CH-T1268 AND CH-G1008)**

**DONORS MEMORANDUM**

This document was prepared by the project team consisting of: Carolina Carrasco (DIS/CCH), Ana Castillo (DIS/CUR), Masato Okumura (LAB/DIS), Christian Díaz (FML/CCO), and Galia Rabchinsky (DSP/DFV).

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**PROJECT SUMMARY**  
**OPEN SENIORS**  
**(CH-T1268 AND CH-G1008)**

One of the main shifts that the global society is undergoing is demographic, driven by increasing life expectancy and declining fertility rates. As a result, the percentage of older adults is growing, a trend that will continue in the years ahead.

Chile is part of this trend, with older adults expected to account for 25% of its population by 2040. A majority of this group will live in vulnerable conditions, whether due to low income or to problems related to health, mobility, dependence, housing, and inclusion, as well as isolation and loneliness.

This project address these challenges by treating them as opportunities for science- and technology-based businesses. This includes consolidating the first silver-economy accelerator in Chile, Open Seniors, and developing the silver-tech ecosystem alongside relevant, committed stakeholders.

The solutions accelerated and incubated through Open Seniors will focus on serving the older adult population living in vulnerable conditions, leveraging science and technology to improve the lives of Chile's senior population, particularly the most vulnerable among them. The model will provide technical assistance and seed financing to 32 innovative companies that will improve the living conditions of 15,000 vulnerable older adults in Chile, 60% of them women.

The executing agency will be UNTEC, a foundation created 30 years ago by the University of Chile to facilitate technology transfer and new market development. OpenBeauchef, the business accelerator of the university's School of Engineering, will be the project's implementing partner and will offer the project its proven acceleration and incubation model and access to a network of mentors and investors. Under the project, this network will be reinforced with specialists on the challenges of the silver economy.

## **ANNEXES**

Annex I	Results Matrix
Annex II	Summary Budget
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## **APPENDICES**

Proposed resolution

**INFORMATION AVAILABLE IN THE TECHNICAL DOCUMENTS SECTION OF THE IDB LAB  
PROJECTS INFORMATION SYSTEM**

Annex IV	Itemized budget
Annex V	Diagnostic assessment of integrity and institutional capacity
Annex VI	Procurement plan

## **ABBREVIATIONS**

CASEN	National Socioeconomic Survey
INE	National Statistics Institute
MVP	Minimum viable product
SDG	Sustainable Development Goal
TRL	Technology Readiness Level
UNTEC	Fundación para la Transferencia Tecnológica [Technology Transfer Foundation]

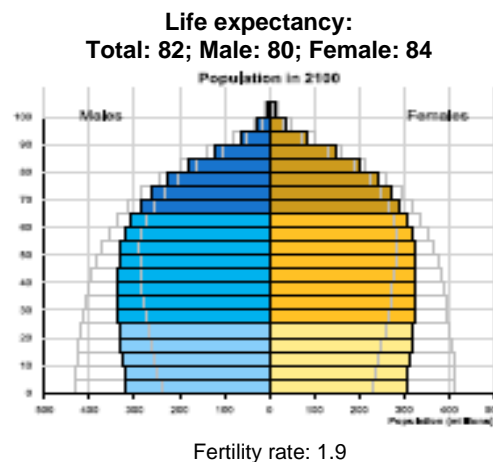
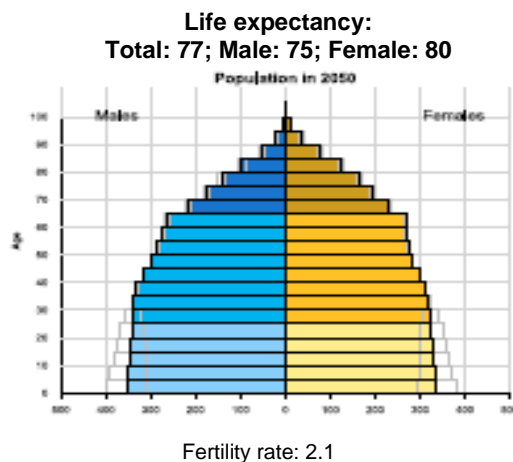
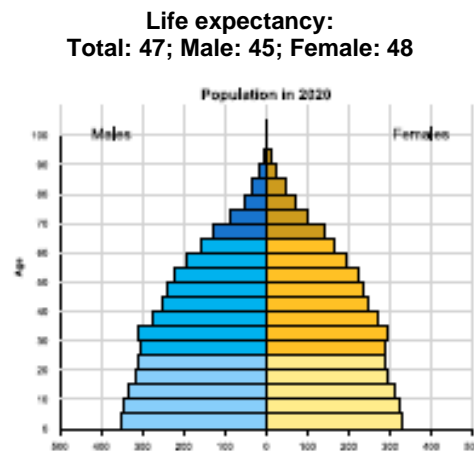
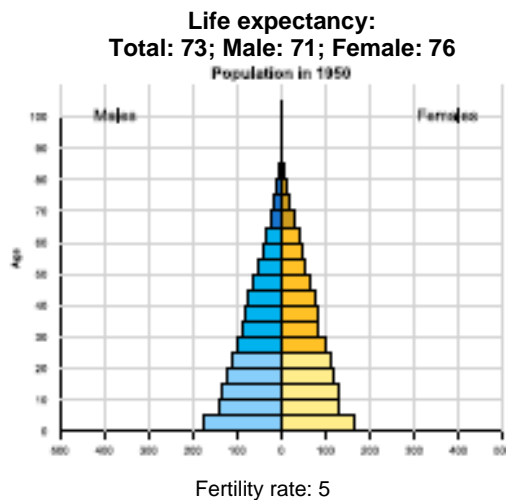
**CHILE  
OPEN SENIORS  
(CH-T1268 AND CH-G1008)  
EXECUTIVE SUMMARY**

<b>Country and geographic location:</b>	Chile		
<b>Executing agency:</b>	Technology Transfer Foundation (UNTEC)		
<b>Focus area:</b>	Knowledge economy		
<b>Coordination with other donors/Bank operations:</b>	This project is an initiative that won the <a href="#">Silver Economy Challenge</a> , which is being implemented in coordination with the Bank's Social Sector (SCL).		
<b>Beneficiaries:</b>	Project beneficiaries: (i) 15,000 older adults (60% of them women) living in vulnerable conditions who will use the solutions generated under the project; (ii) 30 organizations in the innovation ecosystem; and (iii) 32 innovative companies and startups that will be incubated to increase their scale and social impact.		
<b>Financing:</b>	Technical cooperation:	US\$350,000	23%
	Contingent recovery investment grant (IGR):	US\$400,000	27%
	<b>TOTAL IDB LAB CONTRIBUTION:</b>	US\$750,000	50%
	Counterpart:	US\$750,000	50%
	<b>TOTAL PROJECT BUDGET:</b>	US\$1,500,000	100%
<b>Execution and disbursement period:</b>	Technical cooperation: 36 months for execution and 42 months for disbursement. Investment grant: 36 months for disbursement and 72 months for execution.		
<b>Special contractual conditions:</b>	<p>For nonreimbursable and contingent recovery operations, the following will be conditions precedent to the first disbursement, to the Bank's satisfaction: (i) presentation of the annual work plan and corresponding milestone plan; (ii) appointment of the project coordinator; (iii) signed agreement with the implementing partner, University of Chile/OpenBeauchef.</p> <p>For the investment grant portion, delivery of the following, to the Bank's satisfaction, will be additional conditions precedent to the first disbursement: (i) the Operating Regulations for the fund's execution mechanism, including the due diligence process and integrity analysis for the projects to be financed; (ii) the legal instrument for the financing and contingent recovery arrangement; and (iii) the creation of the financing committee.</p>		
<b>Environmental and social impact review:</b>	This project was screened and classified pursuant to the IDB's Environmental and Social Policy Framework (document GN-2965) on 26 January 2022. Given the low impacts and risks, the proposed classification for the project is as a category "C" operation.		
<b>Unit responsible for disbursement:</b>	Country Office in Chile (CSC/CCH)		

## I. THE PROBLEM AND OPPORTUNITIES

### A. Description of the problem

- 1.1 One of the main shifts that the global society is experiencing is demographic.<sup>1</sup> Science and technology advances have increased life expectancy<sup>2</sup> by more than 50% in the past 70 years. Moreover, cultural shifts fostered by access to education and new habits and expectations have resulted in declining fertility rates to larger or smaller degrees depending on the region.<sup>3</sup>
- 1.2 Subsequently, the structure of the world's population pyramid has changed and will continue to do so, with a rapidly expanding proportion of older adults.



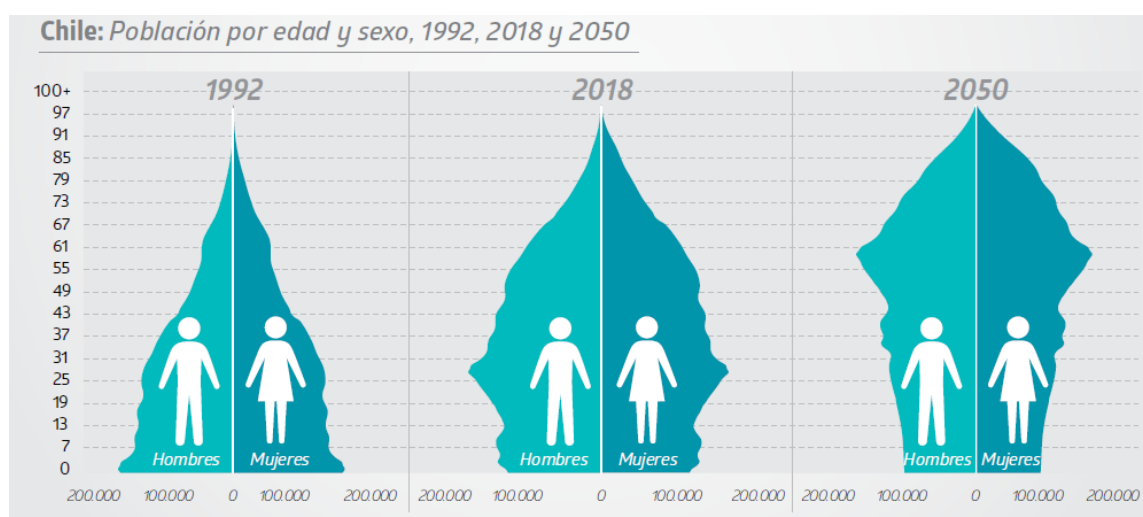
<sup>1</sup> United Nations, World Population Prospects 2019.

<sup>2</sup> Defined as "The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area."

<sup>3</sup> Defined as "The expected average number of children that would be born to a woman in her lifetime, if she were to pass through her childbearing years experiencing the age-specific fertility rates prevailing in a given year/period, for a given country, territory, or geographic area."



- 1.3 This is also happening in Chile, where 25% of the population, or approximately 5 million people, is expected to be over 60 by 2040<sup>4</sup> (16.9% as of end-2019).<sup>5</sup> The fertility rate, which was 2.5 children per woman in 1990, is expected to be 1.5 children for the next 30 years.<sup>6</sup>



Source: National Institute of Statistics (INE).

- 1.4 Although the aging of the population is a heterogeneous phenomenon, in Chile women are living longer than men. Coupled with existing gender gaps, this increases vulnerability and dependence<sup>7</sup> among women. Indeed, according to the Fifth Survey on Quality of Life for Older Adults 2019,<sup>8</sup> 77.8% of older adults surveyed ranked their financial situation as very poor, poor, or fair, with one of three older adults unable to meet their basic needs due to insufficient income. Furthermore, based on the results of the 2017 National Socioeconomic Survey (CASEN), 64% of older adults in Chile are in the three lowest income quintiles.
- 1.5 Economically and socially, the COVID-19 pandemic has particularly impacted the older population. The lockdown has affected access to consumer goods and essential services, such as health care for people with physical or mental health disabilities, especially those lacking the digital skills that facilitate remote monitoring. Moreover, actively working older adults with in-person jobs have faced difficulties in terms of mobility and their ability to earn income.<sup>9</sup> The rising use of

<sup>4</sup> United Nations, World Population Prospects 2019.

<sup>5</sup> INE, Annual Report on Vital Statistics, 2019.

<sup>6</sup> INE, Population Projections 2002–2035, based on 2017 data.

<sup>7</sup> Informe GET, ComunidadMujer, 2016.

<sup>8</sup> Fifth Survey on Quality of Life for Older Adults 2019, UC–Caja Los Andes.

<sup>9</sup> *Hábitos y necesidades de personas mayores en pandemia*, NODO Project, United Nations System in Chile, 2020.

digital tools because of the pandemic has also impacted older people, who are increasingly using technology.

- 1.6 All of this poses the challenge of addressing growing social and economic demands, particularly from the most vulnerable groups, while also offering opportunities for innovation, entrepreneurship, and inclusion.<sup>10</sup>
- 1.7 The 2019 survey mentioned above identified pensions and health care as the main issues that impact the quality of life of older adults. Other issues are transportation, housing, employment, and income generation. This survey also found that the main concerns for older adults are dependence, citizen security, their own or a relative's illness, loneliness, and lack of income. The survey also explored technology access and use. While mobile and smart phones showed high penetration (83%), there were significant digital gaps in other areas, such as having Internet access, using other types of devices, and making digital transactions.
- 1.8 Meanwhile, the Survey on the Quality of Life of Older Adults and Impact of the Pension System,<sup>11</sup> conducted by the Office of the Deputy Secretary of Social Security of Chile's Ministry of Labor in June 2018, found that more than 75% of older adults take medications every day and only 42% think that their health is good or very good. The main diseases reported were high blood pressure, rheumatism, arthritis, high cholesterol, and diabetes. With respect to mobility, 40% reported that it is very difficult for them to walk eight blocks or more, or to climb two or more flights of stairs. Likewise, one of three older adults reported having difficulties using public transportation. In terms of nutrition, food insecurity is prevalent among older adults. This could have significant impacts on health, because of the risks of accelerating cognitive impairment and increasing dependence and fragility. This situation was exacerbated by the health crisis that resulted from the COVID-19 pandemic.<sup>12</sup>
- 1.9 The results of these surveys in Chile are rather similar to the findings of an IDB study about the **silver economy** in the region,<sup>13</sup> which identified as the main challenges and opportunities issues related to health, care services, financial services, housing, mobility, connectivity, education, and employment continuity. In all these areas, technology can be a powerful enabler of optimized, accessible solutions, especially for the most vulnerable groups.
- 1.10 Addressing and envisioning these challenges as opportunities involves effectively coordinating efforts from the public and private sectors. This is necessary not only to improve the coordination of existing initiatives but also, and especially, to understand better the needs of this population segment and generate innovative, scalable solutions that respond to these needs in a relevant manner.

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<sup>10</sup> The Silver Economy in Latin America and the Caribbean: Aging as an Opportunity for Innovation, Entrepreneurship, and Inclusion. IDB, 2020.

<sup>11</sup> <https://www.previsionsocial.gob.cl/sps/biblioteca/encuesta-de-proteccion-social/encuesta-de-calidad-de-vida-del-adulto-mayor-e-impacto-del-pilar-solidario-encavidam/>

<sup>12</sup> Social Observatory. Ministry of Social and Family Development, 2020. (<http://observatorio.ministeriodesarrollosocial.gob.cl/>).

<sup>13</sup> The Silver Economy in Latin America and the Caribbean. IDB, 2020.

- 1.11 The **silver economy** represents the emergence of a market segment with unprecedented reach and possibilities, based on the needs and demands of older adults.<sup>14</sup> This offers opportunities to leverage innovation not only to address these challenges but also to create opportunities to advance economic development and reduce vulnerability. Silver tech, or technology for older adults, is in the early stages of innovating to facilitate access to products and services targeting the silver economy, enabling the population as a whole to make the most of longer, healthier, and more productive life expectancies.
- 1.12 **Innovation and entrepreneurship ecosystem focused on the silver economy in Chile:** Until 2020, initiatives targeting older adults in the country mainly focused on training and education. These were implemented by the academic sector, largely as part of initiatives from the Ministry of Social and Family Development, through the National Service for Older Adults (SENAMA) and the Solidarity and Social Investment Fund. Another noteworthy initiative was a 2019 study on population aging<sup>15</sup> led by the National Council of Innovation for Development (CNID). This study highlighted opportunities to harness science and technology to improve the quality of life of older adults. Moreover, in recent years, initiatives aimed at supporting businesses focused on this population segment have emerged, mainly in the social innovation area. Of note are the social innovation fund [Piensa en Grandes](#) from Hogar de Cristo and AFP Habitat; the innovation challenge from compensation fund Caja de Los Andes through its [TECLA](#) program; [SeniorLab](#) from Social Innovation Lab UC (CoLab); and recently, the call to participate in the [Healthy Longevity Global Competition](#) from Chile's National Agency for Research and Development (ANID). Some of the standouts among the innovative solutions identified through these initiatives are: (i) **Liv-up**, a platform offering a flexible group of services to provide companionship, support, and care to parents, grandparents, spouses, and older adults in general, with the objective of improving the quality of life for them and their loved ones; (ii) **Cogniplus**, a platform designed as a "brain gym" to address cognitive impairment among older adults; (iii) **Servisenior**, a job platform to connect economically active older adults with people and companies that could use their services; and (iv) **Alba**, a kinesiology tool to help maintain and improve muscle strength for older adults who suffered a stroke or another event that could impact their mobility and self-sufficiency.
- 1.13 **International experiences:** Some of the interesting experiences in the development of technology ecosystems to address the challenges of aging are: (i) AgeLab<sup>16</sup> from MIT; (ii) Mayores Salud<sup>17</sup> from the University of Alicante, Spain; and (iii) Nagusi Intelligence Center<sup>18</sup> in Basque Country, Spain. In an emerging

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<sup>14</sup> People over 50.

<sup>15</sup> <https://docs.consejoctci.cl/wp-content/uploads/2020/09/Envejecimiento-de-la-Poblacion.-Como-la-Ciencia-Tecnologia-Conocimiento-e-Innovacion-pueden-contribuir-al-desafio-pais.pdf>

<sup>16</sup> <https://agelab.mit.edu/caregiving-and-well-being/overview/>

<sup>17</sup> <https://mayoresalud.ua.es>

<sup>18</sup> <https://www.barrixe.com/es/tendencias/nagusi-intelligence-center-centro-de-la-economia-plateada-en-bizkaia>

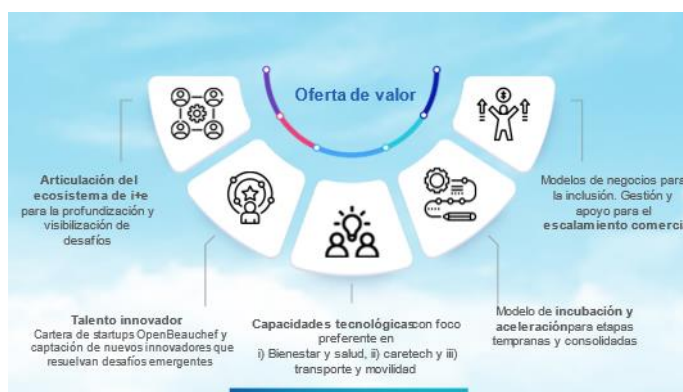
manner, these initiatives are narrowing the gap between technological innovations and the opportunities of the silver economy.

- 1.14 Based on the information from the studies and experiences mentioned above, the following key areas or sectors for silver-tech opportunities in Chile were identified: (i) health and care services; (ii) mobility and well-being; and (iii) healthy eating. This project will facilitate the validation of user-focused, silver-tech business models by using a proven incubation and acceleration model and developing mechanisms for collaboration between ecosystem stakeholders.

## II. THE SOLUTION

### A. Project description

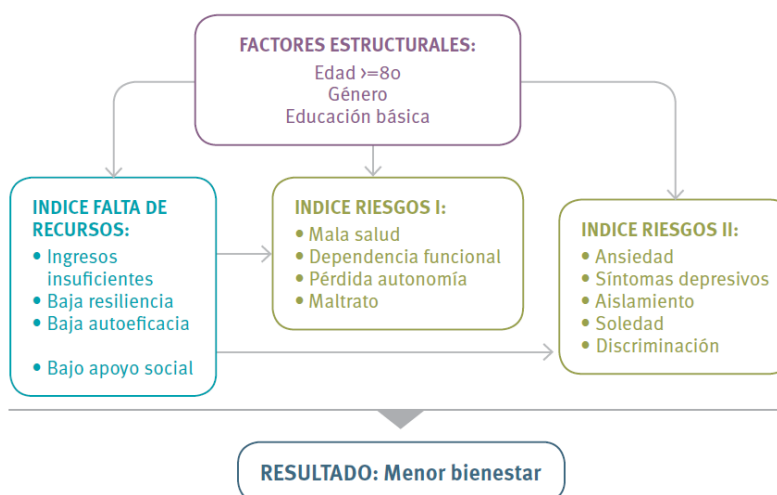
- 2.1 The **objective of the project** is to promote and consolidate a dynamic ecosystem of silver-tech business ventures focused on vulnerable older adults that facilitates the development, growth, and sustainability of science- and technology-based solutions.
- 2.2 **Intervention model:** Open Seniors will be the first accelerator for businesses focused on the silver-economy market in Chile. Its areas of work will be based on the proven experience of OpenBeauchef—the Innovation and Entrepreneurship Center of the Faculty of Physical and Mathematical Sciences at the University of Chile—with the incubation, acceleration, and commercial scaling of technology-based startups that respond to the thematic challenges that the older population faces. UNTEC will leverage the experience of OpenBeauchef accelerating science- and technology-based startups at a university level. OpenBeauchef has worked with more than 150 business ventures. Its current portfolio consists of more than 100 projects. Of the total ventures that currently comprise this accelerator's portfolio, 65% are in the incubation stage, 20% in the acceleration stage, and 15% in the scaling stage, the latter with annual revenue levels of approximately US\$2 million.
- 2.3 **Innovation:** The project will implement and consolidate the first silver-economy accelerator in Chile, as part of OpenBeauchef's value proposition, enlarging the stakeholder ecosystem, drawing attention to the needs of older adults, and capitalizing on technology-based entrepreneurial talent.



## B. Beneficiaries:

- 2.4 The direct beneficiaries of the project will be 15,000 older adults who live in vulnerable conditions, 60% of them women. It will provide them better access to products and services that address their main needs through technology solutions scaled under the project.
- 2.5 Considering that 64% of older adults in Chile are in the three lowest income quintiles (CASEN, 2017), with monthly per capita income of up to approximately US\$285,<sup>19</sup> this older population is vulnerable or is at risk of becoming vulnerable. Therefore, **the project will target its support (incubation and acceleration) to business ventures with a clear social purpose that focus on improving the quality of life of vulnerable older adults** by addressing one or more of the risk factors for vulnerability in old age identified in the model based on the Fifth Survey on Quality of Life for Older Adults in Chile.<sup>20</sup> This model identified structural aspects such as age, education level, and gender, which interact with risk factors for vulnerability and the availability of resources to address those factors, taking into consideration income level, health status, degree of autonomy, degree of isolation, connectivity, use of technology, etc.

Modelo de vulnerabilidad en la vejez en Chile



## C. Project components

- 2.6 To achieve the objectives, the project has three components:
- Component 1: Ecosystem coordination and governance (IDB Lab: US\$59,000; local counterpart: US\$102,000)**
- 2.7 The objective of this component is to coordinate the main actors in the entrepreneurship and innovation ecosystem focused on older adults in Chile, in

<sup>19</sup> As of January 2022, the exchange rate was Ch\$801 per dollar.

<sup>20</sup> Fifth Survey on Quality of Life for Older Adults, 2019, UC-Caja Los Andes.

order to identify challenges that can be addressed by developing science- and technology-based ventures and establishing spaces for cooperation, as well as partnership opportunities for scaling the silver-tech ventures that are accelerated under Open Seniors.

- 2.8 The activities that the executing agency will be responsible for are: (i) mapping relevant actors<sup>21</sup> to establish an innovation and entrepreneurship ecosystem focused on vulnerable older adults; (ii) establishing the system's governance with an advisory council and workgroups by prioritized sectors and areas, with a joint road map; (iii) collecting primary and secondary information to confirm the prioritization of sectors and areas, particularly with respect to vulnerable older women and their communities; (iv) identifying challenges by area, jointly with prioritized sector and area workgroups; (v) coordinating the management of incubation process challenges (identify partnerships, essential partners, potential sponsors, counterpart); (vi) raising awareness and disseminating the challenges that impact vulnerable older adults among the national entrepreneurship ecosystem, the students and faculty of the University of Chile's Faculty of Physical and Mathematical Sciences and other related subjects, and the press and mass media; (vii) developing the ecosystem to establish a network of mentors in the silver economy; and (viii) managing networks to establishing linkages with partners for the scaling of startups.
- 2.9 The expected outputs of this component are: (i) documentation of partnerships with relevant actors; (ii) advisory council and sector workgroups established and with a road map, work methodology, and metrics prepared; (iii) description of sectors, areas, and key elements to develop silver-tech ventures (classification of population segments, case studies, collection of insights on relevant population groups); (iv) definition of one challenge per prioritized area as the basis for the call for proposals, incubation, and acceleration cycles; (v) a signed agreement with allies, essential partners, potential sponsors, and institutional counterparts associated with the challenges; (vi) an awareness campaign on the challenges of aging and the relevance of older adults to society; (vii) a mentor network for the silver economy established at OpenBeauchef; and (viii) agreements achieved for the scaling of solutions regionally and worldwide, with at least one key institution for each prioritized sector (preliminarily, the key sectors identified were health and well-being, caregiving, transportation, and mobility).

**Component 2: Incubation, acceleration, and scaling of solutions (IDB Lab: US\$602,000; local counterpart: US\$434,000)**

- 2.10 The objective of this component is to generate science- and technology-based businesses offering products and/or services focused on the silver economy market, with strong sustainability models and high potential for global scaling. The project will provide specific support for every solution during the design, integration, prototyping, pilot, marketing, and scaling stages, in order for these solutions to develop, strengthen, grow, and positively impact the target population, taking into account vulnerability and gender considerations.

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<sup>21</sup> Private and public sectors, academia, civil society organizations, entrepreneurs, groups of older adults, gender and inclusion experts, demand aggregators for silver-tech solutions, etc.

- 2.11 For component activities, the executing agency will conduct two innovation cycles. Each cycle includes a call for proposals and selection of solutions, incubation, acceleration, and commercial scaling. The conditions of entry for each call for proposals will have the Bank's no objection and include the following selection criteria, under the responsibility of a panel of experts: (i) existence of at least one minimum viable product (MVP) at a Technology Readiness Level (TRL) 5;<sup>22</sup> (ii) capabilities and competencies of the entrepreneurial team; (iii) existence of a real market opportunity; (iv) business model and expected returns; (v) differentiation based on the use of new technologies; (vi) problem addressed and social purpose clearly established and related to the beneficiary population for this project (see paragraphs 2.4 and 2.5 in this document).
- 2.12 For each cohort, up to 40 science- and technology-based solutions will be selected. For an average of four months, these solutions will have access to: (i) incubation through customized advisory support and mentorship; (ii) financial and technical support; (iii) connections with relevant ecosystem stakeholders for the technical and commercial validation of the solutions; (iv) technological progress up to TRL 8; (v) spaces for pilot projects in a real context through existing strategic partnerships and others to be identified under Component 1; (vi) technical, commercial, and social impact validation, considering the gender dimension; and (vii) business model design and validation for scalability.
- 2.13 When the incubation process ends, a panel of experts will select 16 ventures per cycle. These will have access to OpenBeauchef's acceleration program and the potential for access to finance under the investment loan modality, contingent on the success of the solutions. Resources will be allocated based on the impact potential and scalability of the solutions, using the following criteria: (i) the business team has been consolidated and dedicates time to the expansion process; (ii) it has been verified that the solution has achieved TRL 8; (iii) the business has been incorporated; (iv) there are records of sales or formal business agreements; and (v) the business model and financial projections have been validated by a panel of experts.

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<sup>22</sup> Technology Readiness Level (TRL) is a system used to assess the maturity level of a particular technology on a scale from 1 to 9, based on: (1) idea; (2) concept formulated; (3) proof of concept; (4) validation in a laboratory environment; (5) validation in a relevant environment; (6) demonstration of results in a relevant environment; (7) validation in a real environment; (8) system developed and commercially viable; and (9) technology deployed at scale.

- 2.14 The acceleration program will have a duration of between 8 and 17 months and will focus on consolidating commercial, operational, and technological elements and validating the business and social impact model. Before contingent financing is allocated to each venture, a loan contract will be formalized, and a promissory note will be signed. The loan contract, for an amount between US\$6,000 and US\$24,000, will establish: (i) the conditions for disbursement (tied to the formal existence of future revenue flows) and repayment (tied to the achievement of commercial viability); (ii) the social impact metrics that the venture commits to monitoring, as indicated in paragraph 2.5; and (iii) the terms of access to corporate information for OpenBeauchef and delivery of the venture's financial information.
- 2.15 Startups that are already consolidated can also access the acceleration program, as long as they meet the criteria mentioned above (paragraph 2.13). These consolidated ventures do not necessarily need to have participated in the previous incubation stage. Some of these types of science- and technology-based solutions that were identified and could focus on the silver-economy market as consolidated ventures are:

Startup	Description	Social impact	Applied technology and development level
Calce	Development of sockets for all types of prostheses.	Digital tool to develop prostheses, reducing costs and time by up to 50%.	Digital technologies for scanning and 3D printers and an intuitive online platform are used to enable remote interaction with a medical specialist, to build a prostheses socket without the need for a fully equipped workshop. Its current development level is expansion.
Lazarillo	Mobile application for people with visual impairments, providing voice cues for spatial navigation.	An application that improves the autonomy and independence of people with visual impairments.	Software as a service. Its current development level is expansion.
Sima Robot	Social robot for education that can interact naturally using voice, gestures, and movements to execute pedagogical activities.	A tool that serves as a companion for older adults.	A robotic body that works with a smartphone, and using an application, becomes a fully interactive companion robot for playing and learning. Its current development level is expansion.
WIZZ	Invisible orthodontics that use 3D printers and artificial intelligence for inputs and production, monitored by orthodontists.	An invisible orthodontic solution at an affordable price.	Software to plan and monitor orthodontic treatments. Its current development level is expansion.



Startup	Description	Social impact	Applied technology and development level
TranSapp	Smartphone application that enables public transportation users to obtain information about the system's current status and easily report problems.	A model with inputs based on the travel experiences of public transportation users.	Online platform and an application for users. Its current development level is expansion.
Safewave	System that uses Wi-Fi radio frequency for a security system.	System for use in private homes, businesses, and communities.	Uses Internet of Things sensors and artificial intelligence to provide companies and communities the best security experience. Its current development level is expansion.
Dual vision	Company offering computer vision and machine learning services to detect incidents, gather information, and optimize processes, using the latest advances in research.	A service for sending immediate notifications and responses to criminal incidents, therefore preventing potential robberies.	Artificial intelligence solution in the development stage.
Toraxia	Screening system for X-ray imaging. Chest X-rays are evaluated using an algorithm that finds signs of disease, determines severity, and prioritizes them autonomously.	Reduced cost for X-ray evaluation	Based on interoperable, convolutional neural networks. This is in the development stage.

- 2.16 The expected outputs of this component are: (i) 80 solutions incubated; (ii) 32 science- and technology-based startups focused on improving the quality of life of vulnerable older adults, with scalable business models and formal business agreements; and (iii) 32 startups scaled with financing from the project.

**Component 3: Knowledge and dissemination (IDB Lab: US\$30,000; local counterpart: US\$57,000)**

- 2.17 The objective of this component is to systematize the Open Seniors model detailed under Component 2 and make it available to the ecosystem, communicating the lessons learned and results of the startups that receive support.
- 2.18 The activities that the executing agency will be responsible for are: (i) systematization of the lessons learned: diagnostic assessment documents, problem tree, theory of change, and model adjusted following implementation, including gender considerations; (ii) an online platform with a project summary, with documents on the lessons learned, support materials, and presentation of results for the portfolio, in aggregate for the portfolio and individually for each venture; (iii) website launch with a demo day with the ventures that were

accelerated; and (iv) dissemination and communication activities designed to expand the base of relevant actors in this ecosystem.

#### **D. Results, measurement, monitoring, and evaluation**

- 2.19 The expected outcome indicators are: (i) 15,000 older adults (60% of them women) who live in vulnerable conditions benefit from the products or services offered by the science- and technology-based ventures supported by Open Seniors; (ii) 30 ecosystem actors<sup>23</sup> are committed to the initiative; (iii) 80 solutions focused on the silver-economy market are incubated under the project; and (iv) US\$11.7 million in revenue is generated by the portfolio of companies by year 6 of the project.
- 2.20 A monitoring plan will be prepared to track the indicators of the project's Results Matrix and the technical, financial, and impact performance of the solutions supported. All the indicators associated with individuals will be disaggregated by gender. The number of businesses led by participating women and the number of women in the startup teams will also be reported. Project progress will be reported semiannually through the IDB Lab platform set up for these purposes.

### **III. ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND RISKS**

#### **A. Alignment with the IDB Group and the Sustainable Development Goals**

- 3.1 **Vision 2025:** The project contributes to a sustainable and inclusive economic recovery, positioning the IDB Group as a key actor in advancing the silver economy in the region.
- 3.2 The project also aligns with the **Update to the Institutional Strategy** (document GN-2933-5), which reinforces the IDB Group's emphasis on fostering productivity through the adoption of technology and innovation, incorporating crosscutting themes such as "gender equality and diversity" and "social inclusion and equality."
- 3.3 **The Bank's strategy with Chile:** The operation is aligned with the IDB Group Country Strategy with Chile 2019–2022 (document GN-2946), with the strategic objectives of promoting business innovation through increased adoption of digital technology and improving the quality of life for the population by making society more inclusive of older adults.
- 3.4 Moreover, the project is part of a portfolio of initiatives financed by IDB Lab for the **silver economy**, focused on the development of silver-tech ecosystems and innovation. These initiatives, which are aligned with the IDB Lab knowledge economy thematic area, include PE-T1501, Peru's Silver Ecosystem: Maximizing the Value of Experience; UR-T1246, The Future is "Silver": Building an Entrepreneurial Ecosystem; and DR-T1232, FÁCIL: Financial Inclusion for the Silver Economy.

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<sup>23</sup> Institutional representatives of companies with the potential to aggregate demand, central and local public utilities interacting with older adults, risk investment networks, and academic and civil society entities with expertise about this population segment.

- 3.5 In addition, the project is aligned with the following Sustainable Development Goals (SDGs): (i) SDG 8, Decent work and economic growth, by creating decent jobs in the silver-economy market; (ii) SDG 9, Industry, innovation and infrastructure, by fostering innovation in the entrepreneurship ecosystem; (iii) SDG 10, Reduce inequality within and among countries, regardless of considerations such as age, gender, disability, ethnicity, origin, religion, or any other; and (iv) SDG 17, Partnerships for the goals, by seeking and promoting partnerships between the private and public sectors, potentially including international actors.

## **B. Scalability**

- 3.6 The project's scalability will be provided by the growth of the ventures that are accelerated as well as replication and expansion of this sector with other ecosystem actors and UNTEC/OpenBeauchef. In Chile alone, the silver-economy market is expected to surpass five million people by 2040.<sup>24</sup>
- 3.7 Each of the business ventures that is incubated and accelerated will have its own scalability and market identification model. Acceleration actions will focus on those businesses that show the largest potential for growth and social impact, which will be strengthened using, for example, compensation funds, workers' compensation funds, public sector agencies, and companies that facilitate scaling and access to vulnerable older adults. A support strategy for the early internationalization of the ventures to be supported through Open Seniors will be implemented, identifying soft-landing strategies in other countries in the region, such as Uruguay, Colombia, and Peru.
- 3.8 The development strategy of the entrepreneurship ecosystem associated with the silver economy is the second part of scalability. This is intended to integrate key actors at the national level that make growth feasible for startups focused on this segment. This includes financial sector agents, early-stage venture capital investors, research and development institutions, and grassroots organizations that enable startups to become familiar with the needs and necessities of this population segment. For this purpose, OpenBeauchef has an established investor network and is connected to GERO Lab,<sup>25</sup> a research network focused on older adults.
- 3.9 The third part of scalability is associated with the replication and expansion strategy implemented by UNTEC and OpenBeauchef to integrate the Open Seniors model into ongoing innovation cycles along with business partners committed to developing this new market. This will involve opening spaces for technological and commercial pilot projects for the solutions supported under the project, such as by financing new innovation challenges. The initial business partners identified are Hospital del Trabajador, affiliated with the Chilean Security Association; Pro Salud, a network of health care provider companies and organizations; and public agencies for innovation, such as Corporación de

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<sup>24</sup> <https://www.ine.cl/estadisticas/sociales/demografia-y-vitales/proyecciones-de-poblacion>

<sup>25</sup> <http://www.medicina.uchile.cl/investigacion/institutos-y-centros/centro-de-gerociencia-salud-mental-y-metabolismo>

Fomento (CORFO) and the National Agency for Research and Development (ANID), which have financial resources for seed financing stages for these types of solutions.

### C. Project and institutional risks

- 3.10 Risk: Potential shortage of science- and technology-based businesses interested in focusing on the silver economy and willing to take a reimbursable, contingent loan. Mitigating factor: OpenBeauchef uses a systematized process to scout for startups with the potential to redirect their efforts toward the silver economy and the capacity to attract talent among engineering, medicine, and science students at the University of Chile.
- 3.11 Risk: The lack of capacity to meet the demand for space for pilot projects and integration of silver-tech solutions. Mitigating factor: Work will be coordinated with ecosystem actors and entities focused on serving the silver economy, which address the innovation and digitalization challenges that exist in the current post-pandemic context.

## IV. INSTRUMENT AND PROPOSED BUDGET

- 4.1 The project will have a total cost of US\$1,500,000, of which US\$750,000 (50%) will be provided by IDB Lab and US\$750,000 (50%) by the counterpart.
- 4.2 Financing from IDB Lab will be in the form of two instruments:
- A nonreimbursable technical-cooperation funding of US\$350,000 to finance ecosystem development, incubation, and knowledge activities.
  - Contingent recovery financing of US\$400,000 to cover the scaling processes for the accelerated startups that show the highest potential for commercial, financial, and social impact viability.

**Budget summary table**

Category of expenditure	IDB Lab		Counterpart		Total US\$
	Nonreimbursable CH-T1268	IGR CH-G1008	Cash	Kind	
Component 1: Ecosystem coordination and governance	59,000	-	22,000	80,000	161,000
Component 2: Incubation, acceleration, and scaling of solutions	202,000	400,000	276,000	158,000	1,036,000
Component 3: Knowledge and dissemination	30,000	-	10,000	47,000	87,000
Project administration	45,000	-	67,000	90,000	202,000
Contingencies*	14,000	-	-	-	14,000
<b>Total</b>	<b>350,000</b>	<b>400,000</b>	<b>375,000</b>	<b>375,000</b>	<b>1,500,000</b>
<b>% of financing</b>	<b>23%</b>	<b>27%</b>	<b>25%</b>	<b>25%</b>	<b>100%</b>

\* Resources that the Bank may use, disburse, and credit without requiring a disbursement request from the executing agency.

- 4.3 The additionality of IDB Lab comes from experience supporting the development of innovation and entrepreneurship ecosystems with high social impact and providing

innovative financing through a contingent recovery mechanism for the scaling of the silver-tech solutions to be accelerated under the project.

- 4.4 The following are the terms and conditions for the contingent recovery investment grant from IDB Lab:<sup>26</sup>

<b>Executing agency</b>	UNTEC
<b>Objective</b>	<b>Open Seniors, a sustainable model for acceleration and financing of technology-based startups with social impact</b>
<b>Use of resources</b>	The resources will provide seed financing for the portfolio of Open Seniors (silver-tech solutions incubated under the project, allocated based on their potential social impact and scalability) to finance actions such as performing consulting services, procuring licenses and equipment, developing technology, and other incremental expenses to achieve the scaling, social impact, and gender impact expected from the ventures.
<b>Amount to be financed</b>	Up to US\$400,000, which will finance some 32 initiatives from the Open Seniors portfolio.
<b>Execution and disbursement period</b>	The disbursement period will be 36 months and the repayment period up to 72 months, both as of the date of signature of the investment grant agreement.
<b>Disbursement mechanism</b>	Resources will be released in up to three disbursements. The first disbursement will be of up to US\$150,000.
<b>Conditions precedent to the first disbursement</b>	As conditions precedent to the first disbursement of the contingent recovery financing, evidence of the following will be presented to the Bank's satisfaction: (i) the Operating Regulations, approved by the project steering committee, for the execution mechanism for the Open Seniors fund, including the due diligence process and integrity analysis for the projects to be financed; (ii) the legal instrument for contingent recovery and structured financing of technology-based startups with high social impact; (iii) the creation of the financing committee (see paragraph 5.7); (iv) the opening of an independent bank account to manage the resources of the contingent recovery financing; and (v) a statement on the performance of representations, warranties, and obligations as of the date of the disbursement request, signed by the legal representative.
<b>Conditions precedent to the second disbursement</b>	As conditions precedent to the second disbursement of the contingent recovery financing, evidence of the following will be presented to the Bank's satisfaction: (i) substantiation of expenditures for at least 80% of the amount of the first disbursement and a performance report for the portfolio of projects financed; and (ii) a statement on the performance of representations, warranties, and obligations as of the date of the disbursement request, signed by the legal representative.
<b>Conditions precedent to the third disbursement</b>	As conditions precedent to the third disbursement of the contingent recovery financing, evidence of the following will be presented to the Bank's satisfaction: (i) substantiation of expenditures for at least 80% of pending disbursements and a performance report for the portfolio of projects financed; and (ii) a statement on the performance of

<sup>26</sup> These terms and conditions are preliminary and subject to modification after final negotiations with the executing agency.

	representations, warranties, and obligations as of the date of the disbursement request, signed by the legal representative.												
Promissory note	The conditions precedent to each disbursement will include the delivery of a negotiable note (the “note”) issued by UNTEC for an amount equal to each disbursement requested, to the Bank’s satisfaction.												
Activation of contingent resources	<p>As part of the project’s sustainability and scaling strategy, with the financing, the ventures accelerated are expected to generate cash flow that enables them to repay the amount provided. The total revenue that the executing agency receives from this will be reimbursed to IDB Lab on a semiannual basis. The contingency mechanism will be activated from the 13th month after the signing of the investment grant agreement to the 72nd month from the signature date of the respective agreement.</p> <p>Unless one of the events indicated in the section “Other contractual conditions” occurs, if UNTEC does not receive any revenue as repayment for seed financing provided to the Open Seniors portfolio, reimbursement to the Bank will not be required.</p>												
Payment mechanism	<p>No later than 90 days following the end of each six-month period,<sup>27</sup> as of the 12th month after the signing of the respective agreement, UNTEC will report to the Bank, with a notarized statement signed by its legal representative, the revenue received as repayment from businesses in the Open Seniors portfolio during the previous six-month period.</p> <p>UNTEC will reimburse 100% of this revenue to IDB Lab, until the total amount of the contingent recovery financing has been reimbursed or 72 months have elapsed since the date of signature of the investment grant agreement, whichever occurs first.</p> <p>Based on the financial model prepared by UNTEC, the estimated flow of the reimbursement will be as follows, as a percentage of the investment grant:</p> <table><tr><td></td><td>Year 2</td><td>Year 3</td><td>Year 4</td><td>Year 5</td><td>Year 6</td></tr><tr><td>% reimbursed</td><td>1.6%</td><td>7.2%</td><td>10.0%</td><td>23.4%</td><td>57.8%</td></tr></table>		Year 2	Year 3	Year 4	Year 5	Year 6	% reimbursed	1.6%	7.2%	10.0%	23.4%	57.8%
	Year 2	Year 3	Year 4	Year 5	Year 6								
% reimbursed	1.6%	7.2%	10.0%	23.4%	57.8%								
Portfolio monitoring	The executing agency will be responsible for monitoring the portfolio of projects financed through Open Seniors and will make every effort to ensure that these resources are fully recovered by the end of the execution period for the investment grant agreement.												
Other contractual conditions	<p>The executing agency has the obligation to inform the Bank if its board of directors adopts an agreement providing for its termination or dissolution during the disbursement and repayment period.</p> <p>If such event occurs and has the effect of interrupting the reporting and repayment obligations mentioned above, the full amount of the contingent recovery financing disbursed and pending reimbursement will be callable immediately.</p>												
Applicable laws	This contract will be governed by and interpreted pursuant to the laws of the State of New York, United States.												

<sup>27</sup> This consists of six-month calendar periods, ending on 30 June and 31 December of every year.

## **V. PARTNERS AND IMPLEMENTATION STRUCTURE**

### **A. Description of the executing agency**

- 5.1 Fundación para la Transferencia Tecnológica (UNTEC) will be the project's executing agency and will sign the agreement with the Bank. UNTEC is a private endowment created by the University of Chile in 1989 to promote and execute actions that facilitate the use of technology to foster economic, social, and cultural development in Chile. During its more than 30-year history, UNTEC has led numerous development and technology transfer projects, in both the public and private sectors, in six strategic areas: (i) mining; (ii) land economics; (iii) organizational and personal development; (iv) engineering; (v) technological innovation and entrepreneurship; and (vi) astronomy.
- 5.2 UNTEC has extensive experience managing technology-based projects and administering reimbursable and nonreimbursable resources from third parties, with support from the University of Chile's knowledge base for project implementation. Since its creation, it has been financially self-sustaining, with revenues of approximately US\$1 million in 2020 and 2021. In the framework of implementing UNTEC's current strategic plan for 2022–2023, its board of directors identified as a key objective to increase the portfolio of projects executed with support from the capabilities and specialization area of the Faculty of Physical and Mathematical Sciences at the University of Chile, such as from its OpenBeauchef accelerator. This plan is projected to reach an annual billing level of approximately US\$2.5 million in 2023, maintaining sustainability rates. The revenues of this foundation originate from public sector research funds and the execution of private sector innovation and development projects, such as those involving open innovation.
- 5.3 Therefore, to execute the acceleration and incubation actions for this project, the implementing partner will be the University of Chile, through its OpenBeauchef<sup>28</sup> business accelerator, the Innovation and Entrepreneurship Center of the University of Chile's Faculty of Physical and Mathematical Sciences. OpenBeauchef has seven years of experience and an incubation and acceleration methodology aligned with the main international good practices to support science- and technology-based ventures. The executing agency will sign an agreement with the implementing partner, which will have the Bank's approval prior to its signature. This agreement will detail the responsibilities for project execution and the respective transfers of resources for UNTEC, counterpart contributions, and obligations for resource use and management.

### **B. Structure and implementation mechanism**

- 5.4 The executing agency will establish an execution unit and the structure necessary to execute project activities and administer project resources efficiently and effectively. It will also be responsible for submitting progress reports on implementation of the project.

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<sup>28</sup> <https://openbeauchef.cl/>

- 5.5 The project's governance framework will include an **steering committee** with participation from the executive director of OpenBeauchef, and a representative each from UNTEC, the University of Chile, and the IDB Group. They will evaluate the project's performance and make recommendations for adjustments to fulfill the objectives. The project's executive coordinator will be responsible for reporting on the main progress, results, and implementation gaps.
- 5.6 The project will also have an **advisory council** and workgroups by prioritized sectors and areas, which will be responsible for identifying thematic challenges and coordinating opportunities for scaling and technical and commercial validation of the businesses supported, along with being part of the network of mentors<sup>29</sup> at OpenBeauchef specializing in the silver economy.
- 5.7 For the acceleration process, there will be: (i) a project **selection committee** consisting of the current members of the OpenBeauchef selection committee, plus a representative of the project's advisory council; and (ii) a **financing committee** consisting of an IDB representative, the executive director of OpenBeauchef, and a representative of the OpenBeauchef angel investor network.<sup>30</sup>

## VI. FULFILLMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS

- 6.1 **Results-based disbursements and fiduciary arrangements.** The executing agency will commit to the standard IDB Lab arrangements on results-based disbursements and the procurement and financial management policies applicable to the private sector pursuant to the "Guidelines for Management by Milestones and Financial Supervision for IDB Lab and Social Entrepreneurship Program Technical Cooperation Operations."
- 6.2 The risk level identified in the diagnostic assessment of institutional capacity and integrity of the executing agency is low. This evaluation showed that UNTEC has a financial management system that is acceptable to IDB Lab as well as a monitoring and accountability structure for presenting its institutional financial statements to the Bank.
- 6.3 Disbursement amounts for the project will be determined according to its liquidity requirements, as agreed upon by IDB Lab and the executing agency, and will be conditioned on verification that the milestones, activities, and costs scheduled in the annual work plan were achieved. Fulfillment of milestones will not exempt the executing agency from the responsibility of attaining the agreed-upon results.
- 6.4 The executing agency's policies will be followed for procurement, except if the Bank determines otherwise during execution. An annual procurement plan for project execution and fulfillment of milestones will be submitted along with the annual work plan. IDB Lab will be able to review the technical elements of the procurement processes it deems necessary on an ex ante basis, particularly those that are considered critical.

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<sup>29</sup> <https://openbeauchef.cl/red-de-mentores/>

<sup>30</sup> <https://openbeauchef.cl/red-de-inversion-beauchef/>



- 6.5 The executing agency will submit to the Bank its audited annual financial statements. With resources from the contribution, the Bank may review the financial statements and the use of the resources for the project, verifying financial, procurement, and integrity practices.

## **VII. ACCESS TO INFORMATION AND INTELLECTUAL PROPERTY**

- 7.1 **Access to information.** The information contained in this document will be classified as public once approved, pursuant to the Bank's Access to Information Policy.<sup>31</sup>
- 7.2 **Intellectual property.** The project will be conducted using the know-how and methodologies previously developed by the executing agency or the implementing partner, which will remain under their ownership. The intellectual property of all the work and results obtained under the project will be the property of the Bank. The Bank will grant the executing agency a nonexclusive, free, and noncommercial purposes license to use, copy, distribute, reproduce, display, and publicly perform any project work or outcome.
- 7.3 The executing agency will commit to include in all the contracts it enters into with consultants for the project an assignment in favor of the Bank of the respective intellectual property rights, including copyright, with the broadest coverage allowed pursuant to the laws of the Republic of Chile, and to take all measures to ensure those rights.
- 7.4 The Bank may disclose, reproduce, and publish any information relating to the project and include in this information the name and logo of the executing agency.

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<sup>31</sup> <https://www.iadb.org/en/access-information/home>