

## TECHNICAL COOPERATION DOCUMENT

### I. Basic Information for TC

▪ Country/Region:	Regional
▪ TC Name:	fAIr LAC - Responsible Artificial Intelligence for efficient and individualized provision of Social Services for all
▪ TC Number:	RG-T3450
▪ Team Leader/Members:	Cristina Pombo (SCL/SCL) team leader and César Buenadicha (SCL/SCL), co-team leader; Manuel Urquidi (SCL/LMK), Marcelo Perez Alfaro (SCL/EDU), Elena Arias (SCL/EDU), Luis Tejerina (SCL/SPH), Jennifer Nelson (SCL/SPH), Claudia Piras (SCL/GDI), Mario Casco (ITE/IPS); Lourdes Gallardo (KIC/ICD), Kyle Strand (KIC/KLD), Miguel Aldaz (ORP/REM), Esther Rodríguez (ORP/EUR), Mariana Mendoza (ORP/GCM), and Sofia Greco (LEG/SGO)
▪ Taxonomy:	Research & Dissemination
▪ Date of TC Authorization:	March 2019
▪ Beneficiary:	IDB borrowing member countries
▪ Executing Agency:	Inter-American Development Bank
▪ Donors providing funding:	OC Strategic Development Program for Social Development (SOC)- US\$500,000 Other donors <sup>1</sup> - up to US\$250,000
▪ Total funding requested:	US\$750,000
▪ Local counterpart funding, if any:	n/a
▪ Disbursement period (which includes execution period):	36 months
▪ Required start date:	1 May 2019
▪ Types of consultants:	Individual consultants, and consulting firms
▪ Prepared by Unit:	Social Sector (SCL/SCL)
▪ Unit of Disbursement Responsibility:	Social Sector (SCL/SCL)
▪ Included in Country Strategy (y/n);	n/a
▪ TC included in CPD (y/n):	n/a
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Productivity and innovation

### II. Objective and Justification

- 2.1 Governments face rising citizen demand for not only the coverage of social services they offer, but also for the efficiency and quality of these social services. Digital

<sup>1</sup> This amount will be composed of donor contributions in the form of PSGs and will be subject to the corresponding Administrative Agreements to be entered between the Bank and each of the corresponding donors who provide contributions.

transformation<sup>2</sup> creates new opportunities for the provision of social services<sup>3</sup> among the governments in Latin America and the Caribbean (LAC) and holds promise especially for reducing existing inequality and ensuring that innovative technology effectively reaches traditionally excluded populations (e.g. individualized education, health services, development or skills, among others). Central to digital transformation is a more effective use of citizens' data, which also requires the development of comprehensive frameworks in order to ensure that governments avoid abuse of data or biases in the data that negatively impact both decision-making and services' improvements.

- 2.2 In parallel to the availability of enormous data from multiple sources, increases in computational capacity are driving the development of the field of Artificial Intelligence (AI)<sup>4</sup> – one of the most promising technologies for digital transformation. AI allows for predictive models in areas such as education, health or labor markets, and while the use of AI is still nascent within the social sector, it is growing rapidly. To provide a few examples, the UK is using AI to avoid fraud in social benefits and to fight diseases,<sup>5</sup> China is using AI to promote the mainstreaming of health diagnostics,<sup>6</sup> and Argentina<sup>7</sup> and India<sup>8</sup> are fighting school desertion with AI. However, despite the accelerated pace of AI adoption and the potential impact of AI as part of digital transformation agendas, important questions remain that demand urgent responses, questions that include, but are not limited to: How do we ensure that the predictive algorithms do not amplify existing cultural biases? How do we guarantee that innovations adhere to personal data privacy guidelines? How do we make sure that proposed solutions are effective, just, and people centered? How do we ensure that AI is used to benefit all and not only a few, widening social inequalities?<sup>9</sup> These are questions with no simple answers or quick fixes, and while these questions pertain to AI more broadly, they are especially

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<sup>2</sup> Broadly speaking, digital transformation can be defined as the adoption and use of digital technologies; for governments, digital transformation refers to the impact on government operation and the provision of government services from the introduction of digital technologies.

<sup>3</sup> Eggers, W. & Bellman, J. (2015). "The journey to government's digital transformation". *Deloitte University Press*. Retrieved from: [https://www2.deloitte.com/content/dam/insights/us/articles/digital-transformation-in-government/DUP\\_1081\\_Journey-to-govt-digital-future\\_MASTER.pdf](https://www2.deloitte.com/content/dam/insights/us/articles/digital-transformation-in-government/DUP_1081_Journey-to-govt-digital-future_MASTER.pdf)

<sup>4</sup> While there is no universally agreed-upon definition of AI, we can define AI as referring to computer systems that have been designed to interact with the world through capabilities (for example visual perception and speech recognition) and behaviors (for example making sensible actions to achieve a goal based off of information) that we would conceive of as essentially human or rational.

<sup>5</sup> House of Lords Select Committee on Artificial Intelligence. (2018). "AI in the UK: ready, willing and able?" *Authority of the House of Lords*. Retrieved from: <https://publications.parliament.uk/pa/ld201719/ldselect/ldai/100/100.pdf>.

<sup>6</sup> Wang, X. (2017, October 11). "Use of AI to grow in nation's medical sector." *China Daily*. Retrieved from: [http://www.chinadaily.com.cn/china/2017-10/11/content\\_33101838.htm](http://www.chinadaily.com.cn/china/2017-10/11/content_33101838.htm).

<sup>7</sup> Ministerio de la Primera Infancia. (2017, November 21). "Provincia y Nación trabajarán para prevenir la deserción escolar utilizando Inteligencia Artificial." *Gobierno de la Provincia de Salta*. Retrieved from: <http://www.salta.gov.ar/prensa/noticias/provincia-y-nacion-trabajarán-para-prevenir-la-desercion-escolar-utilizando-inteligencia-artificial/55778>.

<sup>8</sup> Goyal, M. (2018, June 17). "How India is carving out a niche for itself in the field of Artificial Intelligence." *The Economic Times*. Retrieved from: <https://economictimes.indiatimes.com/tech/ites/how-india-is-carving-out-a-niche-for-itself-in-the-field-of-artificial-intelligence/articleshow/64616959.cms>.

<sup>9</sup> To answer the above questions the experience from different countries in the region will be analyze to accelerate the adoption of the AI models.

pertinent when sensitive personal data<sup>10</sup> is involved, which is the case for most interventions within Social Sector units such as health, education, labor markets, social protection, gender, and diversity. Many early government projects involving AI, particularly those involving citizen's data, have received criticism pertaining to the questions outlined above.<sup>11</sup> Furthermore, even though a variety of organizations – spanning the private and public sectors, as well as civil society, academic, and multilateral groups – are working to address the risks of AI, the social sector is typically not a specific concern, and few of these efforts have examined the role of AI in the LAC region.<sup>12</sup>

- 2.3 Accordingly, there is a need for guaranteeing that AI is deployed responsibly, especially within the social sector, and for making sure that policymakers have best practices and resources for effective decision-making in times of AI disruption. LAC governments must therefore develop capacity to confront these ethical and logistical issues if they are to implement AI technologies in a responsible and effective manner. Given these challenges and the salient need for capacity building efforts, it would benefit the region to establish entities that are able to lead integrated discussion around AI and data ethics in Latin America; develop knowledge-transfer platforms and support mechanisms; disseminate protocols, standards, and evaluation frameworks; and spearhead the creation of complete, diverse, and representative data sets. An initiative that brings all actors together in a journey of discovery, interest alignment, and practical application of AI for social good is needed. Because the AI revolution is just starting, there is no better moment than now for government, industry, academia, and civil society to collaborate on a regional joint agenda.
- 2.4 Thus, this Technical Cooperation aims to develop standards and structures to support LAC governments<sup>13</sup> in preparing for the ethical and responsible use of AI as part of their digital transformation agendas, including ensuring that AI, especially within the social sector, will be unbiased, respect users' data privacy, be just and people-centered, and

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<sup>10</sup> Accelerated adoption of AI technologies raises serious risks for data privacy, algorithmic bias, accountability, and equal access; when poorly designed or used for malicious ends, AI technologies can systematize and scale-up existing biases and discrimination.

<sup>11</sup> For instance Ortiz Freuler, J. and Iglesias, C. (2018). "Algorithms and Artificial Intelligence in Latin America: A Study of Implementation by Governments in Argentina and Uruguay." *World Wide Web Foundation*. Retrieved from: [http://webfoundation.org/docs/2018/09/WF\\_AI-in-LA\\_Report\\_Screen\\_AW.pdf](http://webfoundation.org/docs/2018/09/WF_AI-in-LA_Report_Screen_AW.pdf); Corbett-Davies, S. Pierson, E., Feller, A., and Goel, S. (2016, October 17). "A computer program used for bail and sentencing decisions was labeled biased against blacks. It's actually not that clear." *The Washington Post*. Retrieved from: <https://www.washingtonpost.com/news/monkey-cage/wp/2016/10/17/can-an-algorithm-be-racist-our-analysis-is-more-cautious-than-propublicas/>.

<sup>12</sup> See, for instance, the work on AI ethics and governance from groups such as: The OECD Expert group on AI in society (AIGO), The European Commission's High-Level Expert Group on Artificial Intelligence, AI Now, the Berkman Klein Center for Internet & Society at Harvard University, the Future of Humanity Institute at Oxford University, Access Now, Google, and Microsoft. The IDB will build upon this cases in order to lead the deployment of a responsible AI in Latin America.

<sup>13</sup> No specific countries have been defined yet for the use cases and activities under this TC. Governments' interest, partners and potential for scale of the use cases will be taking into consideration when defining the countries covered by the TC. The implementation team will ensure that there is a geographic diversity (ie. different regions) and that C&D countries are included in the activities.

benefit all. It will propose the principles and standards needed to serve as foundations for LAC governments' capacity building on AI-related issues, help establish a group of likeminded practitioners and experts, and will provide the IDB with the ability to serve as a space where new AI-based solutions can be assessed together with LAC governments, with an eye towards ultimately scaling to policy. Also, a communication and capacity building strategy will be developed to make sure that fAIr LAC products and findings are effectively disseminated to the governments in the region. Within the IDB, this capacity will begin with the Department of the Social Sector<sup>14</sup> through the development of analytic and practical skills to support the ethical and widespread use of AI for the provision of social services.<sup>15</sup> The TC will consist of three main activities: (i) develop principles and standards, including capacity building efforts for LAC governments with guides, training, and communications materials as well as a repository of AI for social good use cases; (ii) creation of an AI evaluation tool that will analyze cases for ethics, standards, implementation, and effectiveness; and (iii) promote and foster a diverse network of practitioners and experts working together to develop ethically-informed best practices, raise awareness, and apply responsible AI.

- 2.5 **Strategic alignment.** Considering the above, this TC is consistent with the Institutional Strategy Update (UIS) 2010-2020 (AB-3008), and is aligned with the development challenge of: (i) social inclusion and equality – by promoting equal access to better social services; and (ii) productivity and innovation – by promoting the use of technologies and the generation of information to improve access to health services, improve labor force inclusion, and improve education through the interoperability of systems. Additionally, the TC is aligned to the Corporate Results Framework (CRF) 2016-2019 (GN-2727-6) by supporting the design of systems that will help achieve the goals regarding "students benefited by education projects"; "beneficiaries who receive health services"; and the labor force inclusion of "beneficiaries of on-the-job training programs". The results of the TC will be aligned with the goals and result matrix of OC-SDP for Social Development defined in GN-2819-1, regarding among other indicators social inclusion of vulnerable populations and improving effectiveness of public expending. The TC will support and include the Principles for Digital Development that the IDB has endorsed. Finally, this TC will coordinate closely its activities with IDB Lab operation "fAIr Jalisco - Using responsible AI for the provision of more effective social services to vulnerable populations in Jalisco" (ME-T1409).

### III. Description of activities and outputs

#### **Component 1: Capacity building, principles and standards for the advancement of responsible AI in LAC (US\$ 120,000; PSGs up to US\$ 90,000)**

- 3.1 This component's objective is to set the foundations for governments to start using AI in a responsible and just manner, by generating knowledge, building capacity and

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<sup>14</sup> Goal is to improve LAC government capabilities in the technical and ethical use of AI while developing IDB capacity.

<sup>15</sup> This work will relate to the Principles for Digital Development that the IDB has endorsed ([www.digitalprinciples.org](http://www.digitalprinciples.org)).

developing best-practice principles and standards for AI development. Activities in the component will include: (i) developing a webpage and repository of AI for social good use cases, especially within the social sector around social services;<sup>16</sup> (ii) conducting mapping study (regulatory, practices, government, other actors) on the use and impact of AI for social good; and (iii) generating methodological assessments and guides, training, and communication materials around the use of ethics in AI and the fAIr LAC program (including translation of materials). All this material will be publicly shared and distributed across LAC. In the case of those materials sponsored by third parties (i.e. PSGs), their contribution will be publicly acknowledged in the material produced.

**Component 2: AI ethics evaluation (US\$210,000; PSGs up to US\$40,000).**

- 3.2 This component's objective is to assist governments and IDB initiatives and systems assessing digital proposals that include AI and ensuring that these projects/systems are adhering to best practices, based on three main elements:<sup>17</sup> (i) that the system has an ethical purpose – including a design to do good and not do harm – and is built with vulnerable groups and power asymmetries in mind; (ii) that it is technically robust and achieves what it sets out to achieve in terms of social goals; and (iii) that it is socially beneficial, meaning the system outperforms the existing model. The AI ethics evaluation will aim to analyze cases within the first two years, including at least one case each from the healthcare sector, education sector, and social protection. The evaluation will run through a process that includes pre-screening the project (including an ethics check), a full ethical assessment, a technical check, and the development of key performance indicators. Activities in the component will include: (i) design and pilot the evaluation assessment tool, including training of IDB specialist in the use of the tool<sup>18</sup>; (ii) assess the effectiveness and adoption of the AI evaluation tool and propose improvements; and (iii) carry out pilot algorithm audits that complement the assessment as part of the Bank's portfolio of tools.

**Component 3: Foster a Diverse Network of Practitioners and Experts to Develop Ethically-Informed Best Practices, Raise Awareness, and Apply Responsible AI (US\$140,000; PSGs up to US\$107,500).**

- 3.3 This component's objective is to raise awareness on the importance of AI ethics and to build a network of experts and practitioners that supports governments and IDB initiatives for a responsible use of AI. This component will include: (i) workshops and conferences on responsible AI; (ii) the establishment of a network of practitioners and experts (from academia, civil society, industry and governments, to be selected among recognized experts in the area) working to apply AI ethics within LAC and ensure that best practices and standards are incorporated in the activities of the fAIr LAC; (iii)

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<sup>16</sup> This repository will relate to the IDB efforts to keep a repository of innovative practices. The details on the repository (ie. whether only general cases or also code will be stored), will be defined in combination with other initiatives of the IDB.

<sup>17</sup> Based on the EU draft ethics guidelines – see: [https://ec.europa.eu/futurium/en/system/files/ged/ai\\_hleg\\_draft\\_ethics\\_guidelines\\_18\\_december.pdf](https://ec.europa.eu/futurium/en/system/files/ged/ai_hleg_draft_ethics_guidelines_18_december.pdf)

<sup>18</sup> The tool should be tailored to Bank policies, including any safeguard regulations that the Bank may have regarding for example minorities.

provide advice on use cases, designing principles and guidelines for an ethical use of AI for governments and institutions related to the social sector in the region; and (iv) an open AI impact challenge to identify and award best practices on responsible AI for social impact.

#### IV. Budget

- 4.1 The total amount of funding requested is US\$750,000, out of which US\$500,000 will be provided by the Ordinary Capital Strategy Development Program for Social Development (SOC), and US\$250,000 will be provided by donor partners.

##### Indicative Budget

Activity/Component	Ordinary Capital Strategic Development Program for Social Development (SOC)	PSGs
<b>Component 1: Capacity building, principles and standards for the advancement of responsible AI in LAC</b>	<b>120,000 US\$</b>	<b>90,000 US\$</b>
1.1 Integral mapping study on the situation of AI in LAC and developing a Repository of AI for Social Good Use Cases and webpage. Other studies.	90,000 US\$	60,000 US\$
1.2 Methodological assessments and guides, training materials and communication	30,000 US\$	30,000 US\$
<b>Component 2: AI ethics evaluation</b>	<b>210,000 US\$</b>	<b>40,000 US\$</b>
2.1 Developing AI Evaluation tool	90,000 US\$	
2.2 Consultants to coordinate assessment and use cases activities	120,000 US\$	40,000 US\$
<b>Component 3: Foster a Diverse Network of Practitioners and Experts to Develop Ethically-Informed Best Practices, Raise Awareness, and Apply Responsible AI</b>	<b>140,000 US\$</b>	<b>107,500 US\$</b>
3.1 Workshops and conferences on Responsible AI	90,000 US\$	62,500 US\$
3.2 Establishment of a Network of Practitioners and Experts	50,000 US\$	5,000 US\$
3.3 AI impact challenge	0	40,000 US\$
<b>Contingencies</b>	<b>30,000 US\$</b>	
Fee 5%		<b>12,500 US\$</b>
<b>TOTAL</b>	<b>500,000 US\$</b>	<b>250,000 US\$</b>

- 4.2 It is expected that donor partners such as Google, Microsoft, NTT Data and Telefónica, will commit up to US\$250,000 to this project. Resources received from the donors for this project will be channeled to the Bank through a Project Specific Grant (PSG). The Bank administers these operations in accordance with the “Report on COFABS, Ad-Hocs and CLFGS, and a Proposal to Unify them as PSGs” (document SC-114). According to those procedures, the donor contributions commitment will be established separately through an administrative agreement. The Bank will administer the resources of this project and charge a nonrefundable administration fee equal to 5% of the contribution.<sup>19</sup>

<sup>19</sup> In case of contributions committed and received in non-USD currencies, the final resources in US dollars will be dependent on the exchange rate of the date when the resources are received by the Bank and converted into US Dollars. If a significant adverse fluctuation in the exchange rate reduces the amount of US dollars in this budget and such amount cannot be covered by the contingency line, the project activities will be decreased, and the budget will be adjusted accordingly by the project team

- 5.1 The Inter-American Development Bank (IDB), through the IDB Social Sector, will execute this TC, in accordance with the guidelines and requirements established in the Technical Cooperation Policy (GN-2470-2) and the TC Operating Guidelines (GN-2629-1). This is due to the regional nature of the project and the experience and capacity of the Bank in executing this type of project, its ability to hire high-level international consultancies as a value add, the Bank's additional options for using tools to transfer lessons learned from other countries, and the Bank's capacity to promote the transfer of best practices from within and outside the region. The Bank will supervise the consultants, and the beneficiary will be able to provide technical inputs to the consultants' reports. Intellectual property rights resulting from the execution of the TC will be owned to the Bank or be an open source product. All activities to be executed under this TC have been included in the Procurement Plan (see Annex III) and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-1 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and; (c) GN-2303-20 for logistics and other related services. Prior to the execution of the project activities in any of the beneficiary countries, the Bank shall obtain the corresponding non-objection from the respective country authority.
- 5.2 The Team Leader and alternate Team Leader will supervise this TC and will be responsible for monitoring the TC and facilitating the activities required to achieve the expected results. The TC will be monitored and evaluated in accordance with the Bank's requirements, through the Results Matrix. Annual reports and a final report will be prepared in Convergence, in accordance with document OP-1385-2 approved by OPC.

## **VI. Major issues**

- 6.1 The team of this operation has not identified substantial risks at the level of accountability, public administration, macroeconomic, or fiduciary.
- 6.2 Due to its nature, the execution of this TC is not expected to result in a significant negative impact on the environment or on a social level.

## **VII. Exceptions to Bank policy**

- 7.1 There are no exceptions to Bank policies.

## **VIII. Environmental and Social Classification**

- 8.1 The TC is not anticipated to have direct environmental or social impacts and has been classified as "C" according to the Safeguard Classification tool (see [Safeguard Policy Filter Report](#) and [Safeguard Screening Form](#)).

### **Required Annexes:**

- [Results Matrix](#)
- [Terms of Reference](#)
- [Procurement Plan](#)