TC Document

I. Basic Information for TC

- **Country/Region:** COSTA RICA
- **TC Name:** Innovation for the development of XXI century skills in Costa Rica: digital skills with gender focus
- **TC Number:** CR-T1263
- **Team Leader/Members:** Biehl, Maria Loreto (SCL/EDU) Team Leader; Alejandra Forero Perez (SCL/EDU); Barragan Crespo, Enrique Ignacio (LEG/SGO); Blasco, Ivana (SCL/EDU); Hye Ri Yang (SCL/EDU); Juanita Caycedo Duque (SCL/EDU); Laura Torrentes (CID/CCR); Liliana Serrano Pajaro (SCL/EDU); Rhys Lim (SCL/EDU).
- **Taxonomy:** Client Support
- **Operation Supported by the TC:** N/A
- **Date of TC Abstract authorization:** 20 Jan 2023.
- **Beneficiary:** Ministry of Public Education, Costa Rica (MPE)
- **Executing Agency and contact name:** Inter-American Development Bank
- **Donors providing funding:** Knowledge Partnership Korea Fund for Technology and Innovation (KPK)
- **IDB Funding Requested:** US$600,000.00
- **Local counterpart funding, if any:** US$0
- **Disbursement period (which includes Execution period):** 36 months
- **Required start date:** June, 2023
- **Types of consultants:** Firms, Individuals
- **Prepared by Unit:** SCL/EDU-Education
- **Unit of Disbursement Responsibility:** CID/CCR-Country Office Costa Rica
- **TC included in Country Strategy (y/n):** Yes
- **TC included in CPD (y/n):** Yes
- **Alignment to the Update to the Institutional Strategy 2010-2020:** Social inclusion and equality; Institutional capacity and rule of law; Gender equality

II. Objective and Justification of the TC

2.1 **Objective.** The general objective of the Technical Cooperation (TC) is to promote digital skill development in young people in Costa Rica with a gender focus. The specific objectives are: (i) enhance Costa Rican policymakers’ capacity to develop digital skills in schools, by providing one-on-one policy consultations in Korea; (ii) assess Costa Rican youth’s digital skills and provide diagnostics to the Ministry of Public Education (MPE); and (iii) to pilot a program to develop digital skills using an innovative and gender-sensitive pedagogical approach.

2.2 **Importance of Digital Skills in Education and Labor Market.** Digital skills are necessary for work and life as well as to learn other skills and gain knowledge.¹ Digital skills are also in high demand in the labor market, helping

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¹ Carretero Gómez, 2021; Chung & Yoo, 2021; Mateo Diaz et al., 2022.
individuals navigate high-demand occupations.\(^2\) Among the 13 million new jobs created since 2010, at least in the United States, 60% of them required digital skills.\(^3\) Additionally, the Information and Communications Technology (ICT) industry, which requires digital skills but does not necessarily require degrees, provides competitive pay. Teaching digital skills can help people narrow the digital divide, navigate the education and labor market, and hone traditional and transversal skills.\(^4\)

2.3 Gender Gaps in Digital Skills. Countries in Latin America and the Caribbean (LAC), including Costa Rica, have experienced widening gender gaps in digital skills, and digital-related education and employment.\(^5\) Women are significantly underrepresented in digital skills-related jobs and education.\(^6\) In Costa Rica, women showed lower digital skills and performances in Science, Technology, Engineering, and Math (STEM) areas\(^7\) (Programa Estado de la Nación, 2021). It is estimated that such digital gender gaps cost US$1 trillion from the gross domestic product of low- and middle-income countries over the last decade (2022), and thus empowering women with digital skills education and training can close the gender gaps and unlock the potential to increase productivity.\(^8\)

2.4 Digital Skill Development in Costa Rica. The COVID-19 pandemic has significantly heightened the need for younger generations to acquire digital skills. Not only are these skills necessary to navigate the digital world ethically and securely, but they also serve as vital tools for learning, accessing high-quality content, and securing quality employment opportunities. In recognition of the importance of digital skills, Costa Rica has made their development a key component of their education curriculum. In 2021, the MPE updated its policy to improve the use of digital skills in education,\(^9\) with the aim of promoting digital citizenship among students. The implementation of this new policy requires strengthening of the local technical teams to promote evaluation of results; evidence-based interventions and revisions if needed.

2.5 Korea’s Experience and Expertise. The Republic of Korea is considered one of the world’s most innovative and technologically advanced countries (Bloomberg Innovation Index, 2021; International Telecommunication Union, 2022). One of the key explanations for Korea’s success is its robust human capital, ICT and digital skills education according to the World Bank’s Human Capital Index (2020). With the country’s strategic digital skills development, the vision for ICT education, and the constant efforts through the Korea Education and Research Information Service (KERIS)\(^10\) and master plans for ICT education, South Korean students ranked first on ICT literacy skills (WEF, 2015). Korea can share its experiences and know-how regarding policies, programs and evaluation to support digital education. The MPE could benefit from this knowledge to review their own policies and practices on digital skill development and introduce tools to measure its success. Additionally, Costa

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\(^{2}\) Azuara Herrera et al., 2019; Mateo Diaz et al., 2020; Kalache, 2021
\(^{3}\) Muro et al., 2017.
\(^{4}\) Mateo Diaz et al., 2020.
\(^{5}\) Castillo et al., 2014; Näslund-Hadley et al., 2022; Tarín et al., 2022.
\(^{6}\) Bustelo et al., 2019; López-Bassols et al., 2018; García-Holgado et al., 2019; Näslund-Hadley et al., 2022.
\(^{7}\) Programa Estado de la Nación, 2021.
\(^{8}\) UN Women, 2022.
\(^{9}\) PADTE, Política para el aprovechamiento de las Tecnologías Digitales en Educación.
\(^{10}\) KERIS - ABOUT KERIS.
Rica can adapt the KERIS digital skills assessment\textsuperscript{11} that measures digital literacy skills and has proven to be a very robust instrument.

2.6 **An innovative proposal to develop digital skills for girls in Costa Rica.** The MPE is interested in piloting an innovative program called "Chicas STEAM", that is being designed with the support of CINDE\textsuperscript{12}, a specialized agency that promotes foreign investment in the country. A key element of the proposal is to develop digital skills in girls in order to close the gender gap and encourage more girls to choose STEM related careers. This 200-hour curriculum of the program includes socio-emotional skills, digital skills, and vocational orientation, all with a strong gender focus. The program relies on courses available on Coursera that were specially curated for this program, plus tutoring sessions to follow each student's path. The program will lead to certifying students' participation and learning process. The MPE has requested support to implement this program and evaluate the results.

2.7 **Beneficiaries.** The beneficiary of this TC will be the MPE given that they have requested Inter-American Development Bank's (IDB) support to strengthen their capacity to analyze digital skill policies and practices; assess the level of basic digital skills in students; and pilot an innovative intervention that allows to improve basic digital skill development with a gender perspective.

2.8 **Strategic Alignment.** The TC is consistent with: (i) the Second Update to the Institutional Strategy (UIS) 2020-2023 (AB-3190-2) and is strategically aligned with the development challenge of social inclusion and equality by promoting education and potential labor market opportunities for girls and women and developing their potential; the institutional capacity and rule of law given that this TC aims to strengthen the capacity of the MPE to evaluate and develop digital skills with a gender focus; and gender equality, considering that it will support closing the digital gender gaps. The TC is also aligned with the Costa Rica country IDB strategy (GN-2977) "Improve the quality and relevance of training for 21st-century jobs. This project additionally fosters STEAM skills, which is a priority within the Bank’s Sector Framework Document for Education and Early Childhood Development (GN-2708-5). Finally, the TC is also aligned with the Knowledge Partnership Korea Fund for Technology and Innovation (KPK) and the corresponding Operational Guidelines (CC60151) since it is expected to support institutional strengthening by studying the best practice of Korean Governments’ policies, strategies, and technologies; and supporting the development of digital skills assessments and programs for the country.

### III. Description of activities/components and budget

3.1 **Component 1. Digital skills assessment and diagnostics (US$150,000).** This component aims to assess Costa Rican youth’s digital skills as a mean to improve policies and programs and to have a better understanding of the gender gap. It will also allow for the evaluation of the Component 2 results. A sample of youth will be

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\textsuperscript{11} KERIS administers the digital skills assessment at the national level every year with more than 20,000 students to diagnose their digital skills and improve their curriculums, while continuing to develop the assessment. The KERIS digital skills assessment has showed satisfactory reliability and validity over the years and the population tested. Basic digital skills include the ability to search, analyze, evaluate, organize, create, utilize, manage, and communicate information, as well as computational thinking skills, such as abstraction and automation.

\textsuperscript{12} https://www.cinde.org/es
assessed by the KERIS instrument and will include beneficiaries of Component 2. KERIS will measure their basic and advanced digital skills to define, assess, create, manage, communicate, and evaluate information. To this end, the TC resources will finance: (a) technical assistance to validate the KERIS instrument to fit the context of Costa Rica; (b) define a representative sample of young people in Costa Rica who will take the KERIS assessment (as stated earlier the KERIS will measure basic and advanced ICT skills); and (c) analysis of the data and reporting of results. It is expected that the results of the assessment will inform MPE policies and provide more information on the gender gap in digital skills.

3.2 **Component 2. Gender-focused digital skills development program design and implementation (US$300,000).** This component aims to develop digital skills using an innovative pedagogical approach, focusing on empowering women and girls with digital skills. The digital skills development program will be designed based on existing content and the results from Component 1. It is expected that high-school students will receive the digital skills curricula, plus tutoring sessions to support the learning process. Results will be evaluated after a year of implementation. The evaluation will include the result of the digital skills assessment based on the KERIS instruments, as well as information regarding the aspirations of participants to study STEAM careers, in comparison with non-participants. The component will finance the implementation of the program for the approximately 1,000 high school students.

3.3 **Component 3. One-on-one policy consultation for capacity enhancement (US$100,000).** This component aims to provide one-on-one policy consultations with prominent Korean private and public organizations, such as KERIS, NAVER, and EBS, to enhance Costa Rican policymakers’ capacities. Through this component, a group of Costa Rican policymakers – directly involved in digital skill policy and programming – will visit Korea and learn first-hand about the country’s experiences and know-how and subsequently create and design the digital skills education standard and policies in Costa Rica. The component will finance a logistical service to organize the study tour for up to 6 MPE selected personnel.

3.4 **Component 4. Knowledge generation and dissemination (US$50,000).** This component aims to generate technical knowledge for Costa Rica and LAC countries to assess and develop digital skills. The MPE and IDB will create a knowledge product, which analyzes the process and results of Components 1, 2 and 3, and provides policy recommendations and disseminate them to policymakers, and the private sector; and (ii) at least two disseminations products (webinar, video, blog, etc.).

3.5 The development of all products will be monitored by SCL/EDU who will provide guidance to ensure that the products will meet the needs and standards of the Bank.

3.6 **Budget.** The total cost of the TC is US$600,000, which will be charged against the KPK fund. A counter-part funding is not expected.

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13 Korea Education and Research Information Service (KERIS), NAVER (South Korea's largest internet search engine and web portal, Naver.com), and Korea Educational Broadcasting System (EBS).
Indicative Budget (US$)

<table>
<thead>
<tr>
<th>Activity/Component</th>
<th>Description</th>
<th>IDB/KPK</th>
<th>Total Funding</th>
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<tbody>
<tr>
<td><strong>Component 1:</strong> Digital skills assessment and diagnostics</td>
<td>This component aims to assess Costa Rican youth’s digital skills and adapt diagnostic tools.</td>
<td>US$150,000.00</td>
<td>US$150,000.00</td>
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</tr>
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<td>This component aims to generate technical knowledge for Costa Rica and LAC countries to assess and develop digital skills.</td>
<td>US$50,000.00</td>
<td>US$50,000.00</td>
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<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td><strong>US$600,000.00</strong></td>
<td><strong>US$600,000.00</strong></td>
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IV. Executing agency and execution structure

4.1 As requested by the Costa Rican Government, the TC will be executed by the IDB in close coordination with the technical teams of the MPE. This is justified given that currently the MPE does not have the technical or operational staff to deal with this execution and, additionally, it does not comply with national requirements (allocation of budgetary space, approval in the Assembly). The request that the IDB executes this TC is also consistent with Appendix 10 in the Operational Guidelines for Technical Cooperations (as modified Annex 2 of OP-619-4 which identifies the need of a strong institutional, operational, and technical capacity for the execution of the contemplated activities in this TC.

4.2 The Education Division (SCL/EDU) will have overall technical responsibility for the execution of the TC and will work in coordination with the MPE. Annual reports will be provided through IDB monitoring systems to be reviewed by the Korean Fund. Follow-up meetings will be organized with the MPE and IDB. The Unit Responsible for Disbursements will be the Country Office in Costa Rica (CID/CCR).

4.3 Procurement. The Bank will select and contract consulting services following the guidelines of Policy for the Selection and Contracting of Consulting Firms for Bank-executed Operational Work (GN-2765-4) and its Operational Guidelines (OP--1155-4) for consulting firms; for individual consultants in accordance with regulation AM-650; and Corporate Procurement for logistic and other related services in accordance with GN-2303-28. For the execution of Component 2, there will be a Single Source Selection (SSS) of Coursera for an approximate amount of
US$300,000. Coursera is a U.S.-based massive open online course (MOOC) provider founded in 2012, providing more than 4,000 courses and working with universities and organizations to offer online courses, certifications, and degrees in various subjects. In line with the policy is GN-2765-4, Coursera will be contracted, since the firm has experience of exceptional worth for the assignment, and it presents a clear advantage over competition. In particular, Coursera has developed a methodology to generate certification or “insignia’s” bases on existing courses delivered by accredited universities or institutions. On the other hand, they have been working with the MPE to produce a curriculum for digital skills development with a gender focus, aligned with and validated by the MPE.

4.4 All deliverables and any other material prepared under this TC are the sole and exclusive property of the Bank, and as such, the Bank has title, rights (including copyrights) and exclusive interests in the ownership of said products.

V. Major issues

5.1 Issues identified with this operation are low and manageable. The main risks identified for the implementation is difficulty to ensure adequate participation in the study tour to Korea. The risk will be managed and contained through the definition of technical criteria for participation, including being permanent staff on the Technical Education Division, and an ongoing dialogue with authorities to ensure lessons learned are used to improve digital skill policies.

VI. Exceptions to Bank policy

6.1 No exceptions to the Bank’s policies are expected from the execution of this TC.

VII. Environmental and Social Strategy

7.1 This TC is not intended to finance pre-feasibility or feasibility studies of specific investment projects or environmental and social studies associated with them; therefore, this TC does not have applicable requirements of the Bank’s Environmental and Social Policy Framework (ESPF).

Required Annexes:

Request from the Client - CR-T1263

Results Matrix - CR-T1263

Terms of Reference - CR-T1263

Procurement Plan - CR-T1263