

TERMS OF REFERENCE

Consultancy for conducting a system diagnosis and developing a proposal for architectural model to implement Digital Transformation Process for INDECOPI

PERU
PE-T1434

1. Background and Justification

- 1.1.** Established in 1959, the Inter-American Development Bank (IDB) is the main source of multilateral financing for economic, social and institutional development in Latin America and the Caribbean. It provides loans, grants, guarantees, policy advice and technical assistance to the public and private sectors of its borrowing member countries. The Inter-American Development Bank (IDB), through the Competitiveness, Technology and Innovation Division (CTI), offers financing, technical assistance and knowledge products to promote the creation and the growth of dynamic firms and to support its clients in key action areas such as innovation in companies, social innovation, entrepreneurship ecosystems, digital transformation and productive development. IDB programs in these areas incorporate common dimensions, such as the formation of advanced human capital in science, technology, and innovation; the strengthening of the scientific-technological infrastructure; the design of public policies to promote innovation; and the strengthening of the agencies and ministries in charge of executing these policies.
- 1.2.** The National Institute for the Defense of Competition and Protection of Intellectual Property – INDECOPI, is a Specialized Public Organization attached to the Presidency of the Council of Ministers (PCM), with legal status of internal public law. Consequently, it enjoys functional, technical, economic, budgetary and administrative autonomy (Legislative Decree No. 1033). INDECOPI provides services to end users (citizens, government entities and companies) within the framework of its subjects of competence (Intellectual Property, Consumer Protection, Bureaucratic Barriers, Free Competition, Bankruptcy Procedures, Unfair Competition, and Dumping and Subsidies), for which purpose it has systems and applications that support said rendering of services, however, currently, these tools are old and show deficiencies for an adequate rendering of services to users, thus presenting relevant gaps in Information Technology and Communication (ICT) and Digital Government.
- 1.3.** One of the most requested services at INDECOPI is the registration of trademarks, which includes the processing and evaluation of the corresponding forms and required documents, as well as a prior advisory service through which users consult the viability of their trademark proposals and receive technical support from INDECOPI, leading them to the filing of their trademark applications.

- 1.4. Currently, the figurative or image search service, which allows us to identify whether there are registered trademarks or trademark applications processed at INDECOPI that include figurative similar or identical elements to the trademark under evaluation, takes several days to be assisted. This is mainly because, in addition to conducting a previous classification of each figurative element contained in the evaluated trademark, which is a complex and meticulous activity, the outcome that our system generates is not accurate, so a manual selection of the outcome must be performed, in order to generate a final report. Moreover, there is no registry or database that stores the evaluations carried out previously, with the risk of concluding in a new analysis with results that are inconsistent with the results of the previous exam, which altogether leads to a long service time for the preparation of the report that is sent to the users.
- 1.5. Likewise, INDECOPI has an administrative document called, Unique Text of Administrative Procedures (TUPA), in which 90 administrative procedures are registered in matters of Consumer Protection, Intellectual Property and Defense of Competition, of which said services present a scarce 3% of digitized services for Intellectual Property, and 0% for Consumer Protection and Defense of Competition services, as well as there is no single platform that integrates the systems and / or computer applications of the thematic areas of the entity. Furthermore, there is no digitalization system for the documentation generated by the Decision-Making and Administrative Bodies; nor with an adequate system for the exchange of information with other public entities, showing a low level of interoperability.
- 1.6. Therefore, INDECOPI presents a strong gap in Information and Communication Technologies (ICT) which must be identified in order to reduce these gaps through investments and thus, to comply with its strategic plans, providing quality services to citizens, being these services supported by the new technologies that a globalized world demands.
- 1.7. In this context, the IDB has approved this Technical Cooperation with the main goal to support strengthening the institutional capacity of INDECOPI, specifically by optimizing and simplifying its activities and procedures to improve the attention of the requests and provide services with enhanced predictability.

2. **Objectives**

- 2.1. The objective of this consultancy is to conduct a gap analysis in ICT of the INDECOPI's IP administration system to identify the best technological alternatives including solution architecture, data architecture as well as the management tools for implementation of INDECOPI's integrated management platform as part of the digital transformational process of the institution. This will provide the basis for ICT component of the pre-investment study of the Public Investment Project "Improvement of Information and Communication Technologies (ICT) in the transformation process INDECOPI digital".

- 2.2. Specific objectives of this consultancy is to diagnose ICT gaps for Intellectual Property System and to design the alternatives for intervention of the solution and data architecture for the implementation of INDECOPI's integrated management platform.

3. Scope of Services

- 3.1. The consulting service must carry out a situational diagnosis of all the information systems with which INDECOPI operates for the provision of services to external users (citizens, public entities, organizations and businesses) and internal users, as well as a diagnosis of the technological infrastructure that supports the entity's systems, for which it must identify the shortcomings of each system and propose the best technological alternatives to be implemented.
- 3.2. The consulting service must identify the Information Technology gaps, as well as the Digital Government gaps, which limit the transformation towards an INDECOPI digital, in order to provide quality services to all its users.
- 3.3. The deficiencies in technological knowledge of INDECOPI's key personnel must be identified, which will be necessary for the design, development, implementation, improvement and maintenance of the systems in the INDECOPI Digital Transformation process.
- 3.4. Gathering of information and diagnosis of the current business architecture, data, software and hardware, comparing internationally accepted standards and good practices.
- 3.5. Identify the new needs for data, systems and hardware associated with them, in order to establish the new architecture and the existing gap in Information and Communication Technologies (ICT) and Digital Government.
- 3.6. Hold meetings for gathering information with the functional and technical teams of INDECOPI as well as with other entities of the Peruvian government as needed.
- 3.7. Propose a new technological and data architecture application, that adapts to the needs of INDECOPI and that is based on frameworks and technologies recognized in the market.
- 3.8. Propose tools that collaborate with the design, implementation and governance of the architecture.
- 3.9. Propose a new data architecture model that adapts to INDECOPI's needs and is based on frameworks and technologies such as: TOGAF and BigData, among others.
- 3.10. Prepare a proposal for a Data Architecture Implementation and Management Methodology based on business architecture frameworks.
- 3.11. Propose tools that collaborate with the design, implementation and governance of the proposed model under internationally accepted standards.
- 3.12. Propose alternatives for technological solutions in accordance with the pre-investment study of the investment project.
- 3.13. Respond questions and observations that INDECOPI may have regarding the pre-investment study of the Investment Project in aspects of technological solutions, within the framework of its viability process.

4. Key Activities

- 4.1. Prepare an inventory and situational diagnosis of all the computer systems and / or platforms that operate in INDECOPI at the level of internal users, as well as those used for the provision of services to external users such as citizens, public entities, organizations and private companies.
- 4.2. Prepare an inventory and situational diagnosis of the technological infrastructure that supports all INDECOPI systems and / or platforms, as well as the productive factors for the implementation of the Pisco laboratory.
- 4.3. Identification of gaps in Information Technology (systems and Technological Infrastructure) and Digital Government, for which a technical analysis of the best solution alternatives for closing gaps must be carried out, drawing up a schedule of activities and goals.
- 4.4. Identification of knowledge gaps in ICT by INDECOPI staff, determining the subjects, courses, and methodologies necessary to be implemented to close the gaps.

5. Expected Outcome and Deliverables

- 5.1. Situational diagnosis of all the systems, software and / or computer platforms that operate at INDECOPI.
- 5.2. Situational diagnosis of the INDECOPI technological infrastructure and the productive factors for the implementation of the Pisco laboratory.
- 5.3. Identification of gaps in Information Technology (systems and Technological Infrastructure) and Digital Government.
- 5.4. Identification of ICT knowledge gaps by the INDECOPI staff.

6. Deliverables

- 6.1. **Deliverable 1 : Work plan.** It will detail the work schedule with the main milestones and expected dates for each of the activities and expected results in the consultancy.
- 6.2. **Deliverable 2: Diagnostic Report.** The diagnosis should include the solution architecture and the data architecture.
 - **Solution Architecture:** (i) diagnosis of the current situation of the software and hardware architecture (ii) Identification of the future needs for systems and hardware associated with them; and (iii) analysis of the gap between the current reality and the identified needs.
 - **Data Architecture:** (i) diagnosis of the current situation of processes and data; (ii) Identification of the future information and data needs; and (iii) analysis of the gap between the current reality and the identified needs.

6.3. Deliverable 3: Intervention Alternatives for Solution Architecture and Data.

- **Solution Architecture:** (i) Design of a new architecture for the project solutions, taking into account the identified needs; and (ii) Recommendations for the implementation of the proposed architecture. This report must include a description of each proposal, a technical justification of the reasons for adopting the proposed alternative, its cost including, in a disaggregated form, the replacement, operation and maintenance costs (reference quotation); and the sequence of implementation of INDECOPI's integrated management platform.
- **Data Architecture:** (i) Design of a new data architecture, taking into account the identified needs; and (ii) recommendations for the implementation of the proposed architecture. This report must include a description of each proposal, a technical justification of the reasons that support the adoption of the proposed alternative, its cost including, in a disaggregated form, the replacement, operation and maintenance costs (reference price); and the sequence for the implementation of INDECOPI's integrated management platform.

6.4. Deliverable 4: The final diagnosis report including specifications of the Management Tools. This report should build upon the previous deliverables and additionally include (i) Specification of an architecture management and governance methodology; and (ii) Technical specifications of the services and tools that allow the proposed methodology to be conducted.

7. Reporting Requirements & Acceptance Criteria

7.1. The consulting firm will send the document reports for each stage of the consultancy electronically to the IDB project team leader. The IDB team leader will send his and the other project participants' comments to the reports, which the consulting firm will need to discuss and address in the final versions of each document report. Deliverables must contain the corresponding supporting information by way of annexes, in the case of databases, they must be incorporated as part of the deliverables.

7.2. The consulting firm will work close with the INDECOPI Formulating Unit in the Institutional Planning and Management Department, IT Management Unit, and Citizen Attention Service to conduct the diagnosis.

8. Characteristics of the Consultancy

- Type of contract and modality: PEC, International, Firm
- Length of contract: 6 months
- Starting date: March 2021

- Location: Lima, Peru (depending on the travel conditions)
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI, gcrespi@iadb.org

9. Qualifications

- 9.1.** The Consulting Firm must have at least 15 years of experience in the area of Technology Systems of Information and Communication with experience in diagnosing gaps in Information and Communication Technologies (ICT) and in the design and development of ICT solutions in public entities and / or private. The consulting firm must have a multidisciplinary team that can support technical aspects of Information Technology services, human resources management, project management and application of tools and methodologies of the National System of Multi-year Programming and Management. Investment – “Invierte.pe”.
- 9.2.** It must have a minimum experience of having satisfactorily led the development of at least three (03) studies for the identification of ICT gaps and technological solutions.
- 9.3.** The experience of the firm's team in previous work on the elaboration of diagnosis and indicators of ICT gaps and the design and development of ICT solutions will be valued.

10. Schedule of Payments

- 10.1.** Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required. The Bank wishes to receive the most competitive cost proposal for the services described herein.
- 10.2.** The IDB Official Exchange Rate indicated in the RFP will be applied for necessary conversions of local currency payments.

Payment Schedule	
<i>Deliverable</i>	%
1. <i>Contract Signing and upon reception and approval of Deliverable 1</i>	10%
2. <i>Upon reception and approval of Deliverable 2</i>	30%
3. <i>Upon reception and approval of Deliverable 3</i>	20%
4. <i>Upon reception and approval of Deliverable 4</i>	40%
TOTAL	100%

Consultancy for supporting the technical coordination of application of artificial intelligence (AI) and machine learning to upgrade the IP administration system in Peru

**Peru
IFD/CTI**

PE-T1434

Applying artificial intelligence (AI) and machine learning to upgrade the IP administration system in Peru

TERMS OF REFERENCE

Background

Created in 1992, INDECOPI, as a specialized public agency, has the function to promote the market and protect the rights of the consumers. In addition, it has the mandate to encourage a culture of fair and honest competition, through overseeing the intellectual property from trademarks and author's copy right to patents. This Technical Cooperation aims to enhance the institutional capacity of INDECOPI and upgrade the IP administration system of Peru by learning about the use, advances and benefits from implementing artificial intelligence, big data, machine learning and other related technologies in the analytical process of applications for trademarks in the business operations of INDECOPI. The business operations of INDECOPI are especially active in the processing of trademarks registered by citizens. Trademarks are assessed in two stages. The stage of the procedure and the stage of the analysis of the substance about the impact that the application could have in the market that it is intended to register. The process also needs to validate the consistency in the examination results.

INDECOPI Digital, INDECOPI's institutional vision to deliver digital services for citizens highlights improvement in the services provided by INDECOPI in alignment with modernization of the state and the regulations of the Secretariat of Digital Government (SEGDI). Trademark registration application is one of the most required services, which is offered during office hours and has an operational capacity established by the outstanding staff. Optimize and expedite the activities carried out in the framework of a trademark registration procedure (which includes the processing and evaluation of formal and substantive requirements) as well as in the queries made by users prior to submitting their requests for registration, will improve the attention of requests and provide a service with greater predictability and efficiency.

In this context, the IDB has approved a Technical Cooperation with the main goal to support strengthening the institutional capacity of INDECOPI, specifically by optimizing and simplifying its activities and procedures to improve the attention of the requests and provide services with enhanced predictability. The objective of the TC is to improve INDECOPI's institutional capacity and improve the IP administration system of Peru by learning about the use, advances and benefits of the implementation of artificial intelligence, big data, machine learning and other related technologies in the analytical process of trademark applications in INDECOPI's operations.

The team's mission

The Inter-American Development Bank (IDB), through its IFD/CTI, provides funding, technical assistance and knowledge products to support governments in key action areas, such as business innovation, social innovation, entrepreneurship ecosystems, digital transformation and productive development. IDB

programs in these areas incorporate common themes, such as training in science, technology and innovation for advanced human capital; strengthening scientific and technological infrastructure; designing public policies to promote innovation; and strengthening institutional capacity of the agencies and ministries that are responsible for implementing these policies.

Consultancy objective

The objective of the consultancy is to provide technical support for INDECOPI, coordinate and monitor all activities related to this TC for applying the artificial intelligence and machine learning to upgrade the IP system of the INDECOPI to ensure that the expected objectives and goals of the project are achieved.

What you'll do

The consultant shall perform the following activities:

- Coordinate with all areas and / or people involved in the aforementioned technical cooperation activities, so that the deliverables, goals and objectives of the program are met.
- Coordinate with all areas and / or people involved in consulting services for the Technological Solution and the formulation of the pre-investment study.
- Follow up on the development of terms of reference, deliverables and / or products derived from Technical Cooperation, reviewing compliance with the contents, deadlines, correction of observations.
- Provide the necessary facilities for gathering information that are required in the Technical Cooperation process.
- Participate in internal meetings with the IDB team and technical counterparts.
- Hold coordination and / or follow-up meetings for the fulfillment of the objectives of international technical cooperation.
- Prepare progress reports on the execution of Technical Cooperation, as well as observations of corresponding to the deliverables and / or products.

Deliverables

- Deliverable 1: Preparation of the work plan and administrative procedures to manage the TOR of the processes and conformities for the contracted services, which will be delivered up to 10 days after starting the consulting service.
- Deliverable 2: First progress report on the execution of the contracts made detailing the progress of the project execution, at the level of physical goals and budget execution and the activities that were executed with the signed contracts referring to:
 - Study of the elaboration of gaps, detailed the coordination carried out for the collection of information, review of the advances presented by the consulting company and management to obtain compliance for the service provided.
 - Formulation of the investment project, review of the work plan proposed by the consulting company, coordination for the collection of information with the areas involved, review of the progress and management reports to obtain the conformities for the work presented.
 - Coordination with the areas involved to facilitate the information required for the design of the applications using artificial intelligence tools, validation of the products delivered and coordination for the issuance of conformities for the products delivered.
- Deliverable 3: Detailed report with the final products of the gap study, investment project and first designs of the virtual advisor applications:

- Final study of gaps and investment project proposal, review of the final proposals in coordination with the areas involved, preparation of the review and compliance minutes for the service provided, coordination with the consulting companies to make the requested adjustments and management of the conformities for the work performed.
 - Final designs of the virtual assistants of brands and Sac, review in coordination with the areas involved to validate the designs and manage compliance for the products delivered.
 - Design of the application to carry out the evaluation of brand similarity, coordination with the area involved to manage the required information, facilitate the technical information from the database and review the products delivered by the consulting company.
- Deliverable 3: Final report including a proposal of an investment plan organized according to components and activities for infrastructure, equipment, human resources and intangibles requirements; referential budgets; cost benefit analysis and matrix of indicators.
- Deliverable 4: Progress report on the project execution, describing the activities that were executed to design products using artificial intelligence tools:
 - Statistical report on the use of the designed virtual assistant prototypes and evaluation of the similarity of figurine brands, in coordination with the areas involved and the consulting company, in order to review the final products, the training process of the designed applications and training functional of the team that will be in charge of using the applications.
 - Design of the application to classify the types of marks, it will be coordinated with the DSD team in charge of providing the information and the classification methods that will be provided to the consulting company, as well as the review of the designed application, which will be validated with the DSD team and compliance will be managed through the approval certificates for the application delivered.
 - Design of the application for the distribution of the workload among the teams in charge of evaluating the brands. The delivery of information, review and validation of the designed application will be coordinated and the signing of the certificate of conformity by the designed application will be coordinated.

The report and report will be delivered up to 280 days after starting the consulting service.
 - Deliverable 5: Project report with the final designs of the applications using artificial intelligence tools and the training of personnel at a technical and functional level:
 - Statistical report on the use of virtual assistant prototypes, evaluation of the similarity of figurine brands and the distribution of workload between the teams that evaluate the registrability of the brands.
 - Design of the application to advise the teams in charge of evaluating the registrability of trademarks, based on the collection of resolutions issued in previous years.
 - To give conformity to the designed applications, the review of the designs, validation and signing of the minutes that give conformity to the designed applications will be coordinated with the DSD teams.
 - Deliverable 6: Progress report on the project execution, at the level of physical goals and budget execution, as well as the report of the transfer process of the applications designed to be incorporated as a permanent service of Indecopi.
 - Deliverable 7: Final report of the project, presenting the results achieved at the financial execution level of the project and the physical goals, as well as the project evaluation report.

The person responsible in the IDB for the consultancy and the comments to the reports generated by the Consulting firm will be Gustavo Crespi, Principal Specialist of the Competitiveness, Technology and Innovation Division (CTI) at the IDB. It will be the consultant's responsibility to ensure to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.

For technical coordination, the consultant will communicate with a focal point at INDECOPI. The focal

point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INDECOPi will issue, through the focal point, a technical report regarding compliance with the terms of reference for each of the deliverables presented in the service. In this regard, INDECOPi may issue observations, comments or instructions for changes, or a favorable technical opinion.

All submissions will be reviewed by the Team Leader for approval. The Consultant should address comments provided by the Team Leader for correction and revision for the deliverable to be accepted.

Payment timeline:

Payment will be made per deliverable upon satisfaction of CTI's team leader:

- 10% after the contract signed and upon submission and approval of the work plan
- 15% upon submission and approval of the Deliverable 2
- 15% upon submission and approval of the Deliverable 3
- 15% upon submission and approval of the Deliverable 4
- 15% upon submission and approval of the Deliverable 5
- 15% upon submission and approval of the Deliverable 6
- 15% upon submission and approval of the Deliverable 7

What you'll need:

Education: Required academic background includes a Bachelor's degree or higher in Industrial Engineering, System Engineering, Computer Engineering, Business Engineering, Computer Science, or similar fields.

Experience: At least ten (10) years of proven experience in the area of ICT, systems upgrade. Experience in preparation of plans, projects, or programs related to ICT for public institutions for institutional strengthening. Knowledge evaluation of investment projects and knowledge of cost-benefit analysis methodology.

Areas of Expertise: ICT, Information planning, institutional strengthening, systems upgrade, business Process Engineering, elaboration and evaluation of public Investment plan, project and program management, etc.

Skills: Excellent written and verbal communication skills with an extensive knowledge ICT and the public investment system of Peru. Experience of working in similar projects is desirable.

Languages: Proficiency in Spanish and English

Opportunity Summary:

- Type of contract and modality: PEC, Local, Individual, Lump Sum.
- Length of contract: 20 months
- Starting date: February 2021
- Location: Lima, Peru
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI
- Requirements: You must be a citizen of one of the IDB's 48 member countries and have no family members currently working at the IDB Group.

Our culture: Our people are committed and passionate about improving lives in Latin-America and the Caribbean, and they get to do what they love in a diverse, collaborative and stimulating work environment. We are the first Latin American and Caribbean development institution to be awarded the EDGE certification, recognizing our strong commitment to gender equality. As an employee you can be part of internal resource groups that connect our diverse community around common interests. Because we are committed to providing equal opportunities in employment, we embrace all diversity and encourage women, LGBTQ+, persons with disabilities, afro-descendants, and Indigenous people to apply.

About us: At the IDB, we're committed to improving lives. Since 1959, we've been a leading source of long-term financing for economic, social, and institutional development in Latin America and the Caribbean. We do more than lending though. We partner with our 48-member countries to provide Latin America and the Caribbean with cutting-edge research about relevant development issues, policy advice to inform their decisions, and technical assistance to improve on the planning and execution of projects. For this, we need people who not only have the right skills, but also are passionate about improving lives.

TERMS OF REFERENCE

Consultancy for Design proof of concept using Artificial Intelligence to upgrade the IP system of INDECOPI

PERU
PE-T1434

1. Background and Justification

- 1.1.** Established in 1959, the Inter-American Development Bank (IDB) is the main source of multilateral financing for economic, social and institutional development in Latin America and the Caribbean. It provides loans, grants, guarantees, policy advice and technical assistance to the public and private sectors of its borrowing member countries.
- 1.2.** The Inter-American Development Bank (IDB), through its IFD/CTI, provides funding, technical assistance and knowledge products to support governments in key action areas, such as business innovation, social innovation, entrepreneurship ecosystems, digital transformation and productive development. IDB programs in these areas incorporate common themes, such as training in science, technology and innovation for advanced human capital; strengthening scientific and technological infrastructure; designing public policies to promote innovation; and strengthening institutional capacity of the agencies and ministries that are responsible for implementing these policies.
- 1.3.** The National Institute for the Defense of Competition and Protection of Intellectual Property – INDECOPI, is a Specialized Public Organization attached to the Presidency of the Council of Ministers (PCM), with legal status of internal public law. Consequently, it enjoys functional, technical, economic, budgetary and administrative autonomy (Legislative Decree No. 1033). INDECOPI provides services to end users (citizens, government entities and companies) within the framework of its subjects of competence (Intellectual Property, Consumer Protection, Bureaucratic Barriers, Free Competition, Bankruptcy Procedures, Unfair Competition, and Dumping and Subsidies), for which purpose it has systems and applications that support said rendering of services, however, currently, these tools are old and show deficiencies for an adequate rendering of services to users, thus presenting relevant gaps in Information Technology and Communication (ICT) and Digital Government.
- 1.4.** One of the most requested services at INDECOPI is the registration of trademarks, which includes the processing and evaluation of the corresponding forms and required documents, as well as a prior advisory service through which users consult the viability of their trademark proposals and receive technical support from INDECOPI, leading them to the filing of their trademark applications.

- 1.5. Currently, the figurative or image search service, which allows us to identify whether there are registered trademarks or trademark applications processed at INDECOPI that include figurative similar or identical elements to the trademark under evaluation, takes several days to be assisted. This is mainly because, in addition to conducting a previous classification of each figurative element contained in the evaluated trademark, which is a complex and meticulous activity, the outcome that our system generates is not accurate, so a manual selection of the outcome must be performed, in order to generate a final report. Moreover, there is no registry or database that stores the evaluations carried out previously, with the risk of concluding in a new analysis with results that are inconsistent with the results of the previous exam, which altogether leads to a long service time for the preparation of the report that is sent to the users.
- 1.6. INDECOPI, through the Directorate of Distinctive Signs, has been developing in recent years a set of digital tools to increase and enhance the use of intellectual property. Although these tools have been implemented since 2008, gradually, the situation of social isolation due to the Covid-19 pandemic has generated greater use of digital tools by entrepreneurs, which in addition to facilitating Access to our services has reduced the cost and time of trademark registration procedures.
- 1.7. Likewise, the intense promotion and dissemination work carried out by the Directorate of Distinctive Signs to promote the registration of trademarks and consequently the economic reactivation of our country, has increased the number of applications submitted, and the demand for online consultations by part of the entrepreneurs interested in obtaining the registration of their trademarks, which is why it is necessary to have modern instruments that allow speeding up the procedure, as well as answering queries in real time and with updated information. There is a need to explore the use and incorporation of artificial intelligence into the INDECOPI's system to serve the citizens in a timely and massive manner.
- 1.8. In this context, the IDB has approved this Technical Cooperation with the main goal to support strengthening the institutional capacity of INDECOPI, specifically by optimizing and simplifying its activities and procedures to improve the attention of the requests and provide services with enhanced predictability. The objective of the TC is to improve INDECOPI's institutional capacity and improve the IP administration system of Peru by learning about the use, advances and benefits of the implementation of artificial intelligence, big data, machine learning and other related technologies in the analytical process of trademark applications in INDECOPI's operations.

2. Objectives

- 2.1. The objective of this consultancy is to design solutions that take advantage of the potential of

artificial intelligence for the development of tools that will allow the better management and administration of trademark registration and citizen attention services of INDECOPI.

3. Scope of Services

3.1. To implement solutions that take advantage of the potential of artificial intelligence, the consulting firm must carry out the following actions:

3.2. Collection of the following information:

- i. Collect information on the evaluation criteria from the trademark viability consultancies, in the registrability examinations carried out by the attendees both in the first and second instance, in such a way that databases are generated that allow improvement predictability and avoid dissimilar criteria in the face of identical or similar situations. This information must be stored in databases that can be activated when solved cases are presented.
- ii. Carry out a survey of information about all the services provided by the Distinctive Signs Directorate, especially those related to the distribution of workload in the different activities or stages of the Directorate's procedures, taking into consideration filters such as quantity, personnel to which they will be addressed, subject, complexity, history and some more that may come out of this study.
- iii. Collect information to evaluate different solutions that allow citizens to easily search for images through a vector system with results of identity or similarity. The images are obtained from a database that is fed continuously and are classified according to the product or service category.
- iv. Collect information to evaluate solutions and technological developments based on artificial intelligence that allows the classification of products and services, for internal and external users that allows to identify if a product or service has been correctly described or corresponds to the class in which it is request registration.
- v. Evaluate solutions and technological developments based on artificial intelligence that allows feeding a database that later serves as a search engine that identifies identical or similar cases, this can be used when conducting trademark viability consultancies, where there is no precedent registry, only antecedents based on previous consultations; or at the time of evaluating applications already started; the goal is to avoid contradictory responses and improve predictability. This search engine must feed our system or work based on a webservice and also be compatible with another system.
- vi. Collect information to evaluate solutions and technological developments based on artificial intelligence that allows the Citizen Attention Service to attend massively and in a timely manner to citizens who make inquiries and complaints regarding consumption.
- vii. Carry out a "total cost of ownership" analysis of the solution over 3 and / or 5 years, to determine the costs that Indecopi will have to assume to maintain the operation of the implemented solutions.

3.3. Design prototype services:

- i. Design a proof of concept, which allows citizens to receive automatic responses about the services provided by the Directorate of Distinctive Signs and with special emphasis on what is related to the registration of trademarks, said proof of concept should consider implementation, installation, configuration and hosting on a platform with Artificial Intelligence tools in the cloud (SAAS type) that provide these services, as well as the mass messaging solution. as well as the mass messaging solution. Design an application for the Citizen Attention Service who will provide attention to queries and advice on consumer claims issues.
- ii. Design a proof of concept of the solution based on artificial intelligence that allows optimizing the tasks when classifying a product or service in some category or class, this classification can be given within a previous consultancy or within a process already initiated In addition, it may involve only one product or service or a group or list of products or services, for which more filters must be considered to be able to locate them as the owner, class, representative, among others. This search engine must feed our system or work based on a web service and be compatible with another system.
- iii. Design a proof of concept of the solution that allows the intelligent analysis of documents for the distribution of the requests to the corresponding examiner, based on the criteria built and past experiences, to allow the expedition of the processing time of files for examination of form and greater predictability in similar cases by preventing contradictory results within INDECOPI examination procedures.
- iv. Design a proof-of-concept application that allows the figurative search (of images) to be carried out, which is part of the viability examination of a brand, in a constant manner, providing a very close comparative result of images and allowing images to be easily classified.
- v. Design a proof-of-concept application that allows the analysis in the classification of products and services, for internal and external users, that allows identifying whether a product or service has been correctly described or corresponds to the class in which it is requested register.
- vi. Design a proof-of-concept application that allows all the evaluation results of registration applications to be stored, and that generates information related to similar cases to examine the registrability of a trademark. This database can provide similar cases during the trademark division examination process to register a product or service trademark to aid in the expediency and accuracy of the administrative process.
- vii. Within the technological proposals to be proposed, technological tools that do not incur a cost for the institution should be prioritized. It should also be considered that any technological tool to be considered must have local support in Peru.

3.4. Analyze the requirements of the Integrations (webservice) to the trademark registration file tracking system so that the services designed and developed can function properly.

- 3.5. Capacity building of the INDECOPI personnel in the design of the proof of concept developed, for service implementation, and the use of solutions and tools developed using artificial intelligence.

4. Key Activities

- 4.1. Design a proof of concept of a virtual assistant to advise on the trademark registration and the traceability of the trademark registration process provided by the Directorate of Distinctive Signs and to attend to inquiries and consumer claims provided by the Service of Citizen Service.
- i. Design an application to evaluate the similarity of figurative marks.
 - ii. Design a proof of concept for an application to advise the entrepreneur on how to properly classify a trademark that he is interested in registering.
 - iii. Design a proof of concept for an application to facilitate the distribution of the workload among the trademark registration team.
 - iv. Design a proof of concept for an application to advise trademark registrars when evaluating the registrability of a trademark, avoiding contradictory answers.
- 4.2. Analyze the configuration of the Artificial Intelligence cloud platform with tools that allow the delivery of the planned services
- 4.3. Conduct capacity building and training of the INDECOPI personnel in the use of the services developed and the use of artificial intelligence tools

5. Deliverables

- 5.1. Deliverable 1: Work Plan
- 5.2. Deliverable 2: Layout of the Artificial Intelligent Platform
- 5.3. Deliverable 3: First detailed report of the services carried out during the detailed proofs of concept (web services carried out, documentation collected, as well as indicate the artificial intelligence tool that was used for the development in each case including the following:
- i. Design of a proof of concept of two virtual assistants to advise on the trademark registration and the traceability of the trademark registration process and the services of attention to queries and claims of the Citizen's Attention Service.
 - ii. Design of a proof of concept of an application to carry out the evaluation of the similarity of figurative marks.
 - iii. Design of a proof of concept of an application to advise the entrepreneur on how to properly classify a trademark that he is interested in registering.
- 5.4. Deliverable 4: Second detailed report of the services carried out during the detailed proofs of concept (web services carried out, documentation collected, as well as indicate the artificial intelligence tool that was used for the development in each case including the following:
- iv. Design of a proof of concept of an application to facilitate the distribution of the workload among the trademark registration team.
 - v. Design of a proof of concept of an application to advise trademark registrars when

evaluating the registrability of a trademark, accessing the collection of resolutions issued from previous years.

- vi. Analysis of the "total cost of ownership" of the solution over 3 and / or 5 years, to determine the costs that INDECOPI will have to assume to maintain the operation of the implemented solutions.
- 5.5. Deliverable 5: Analysis report of the layout of the artificial intelligence platform in the cloud capable of offering availability of use with ISO 27001 certification and of the messaging and chat bot system that allows answering the queries of citizens interested in registering their trademarks and provide information related to the files that are in process.
- 5.6. Deliverable 6: Training manuals and delivery of capacity building programs for INDECOPI personnel related to the proposed prototype services.

6. Reporting Requirements & Acceptance Criteria

- 6.1. The consulting firm will send the document reports for each stage of the consultancy electronically to the IDB project team leader. The IDB team leader will send his and the other project participants' comments to the reports, which the consulting firm will need to discuss and address in the final versions of each document report. Deliverables must contain the corresponding supporting information by way of annexes, in the case of databases, they must be incorporated as part of the deliverables. From INDECOPI, The Directorate of Distinctive Signs and IT Team of INDECOPI will be responsible for reviewing and verifying the deliverables to provide the inputs to the IDB team leader.

7. Characteristics of the Consultancy

- Type of contract and modality: PEC, Local, Firm
- Length of contract: 24 months
- Starting date: May 2021
- Location: Lima, Peru (depending on the travel conditions)
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI, gcespi@iadb.org

8. Qualifications

- 8.1. The Consulting Firm must have at least 7 years of experience in the area of design, prototyping, development, and implementation of chatbot, virtual assistant, cognitive assistant, and other relevant solutions based on artificial intelligence and machine learning. The consulting firm have experience of having satisfactorily led the design, installation, development, and implementation of at least three (3) projects of similar size in developing and implementing technological solutions based on artificial intelligence.

- 8.2. The Consulting Team should be at least comprised of a Project Leader, an AI Specialist, and other technicians. The Team will be led by the Project Leader who will manage and lead the responsibilities indicated within the consultancy.
- 8.3. The Project Leader should hold minimum of Bachelor's degree or higher in System Engineering, Computer Engineering, or similar fields. A minimum 10 years of relevant work experience in system development for both the public and private sector, and a minimum of 5 years of experience as a practitioner and specialist in AI to develop technological tools is required.
- 8.4. The AI Specialist should hold minimum of Bachelor's degree or higher in System Engineering, Computer Engineering, Computer Science, or similar fields. The specialist should have a minimum of 5 years of experience as a practitioner and specialist in AI to develop technological and must have expertise in AI, cloud computing, system development, or in relevant areas. Certification in relevant area is desirable.

9. Schedule of Payments

- 9.1. Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required. The Bank wishes to receive the most competitive cost proposal for the services described herein.
- 9.2. The IDB Official Exchange Rate indicated in the RFP will be applied for necessary conversions of local currency payments.

Payment Schedule	
<i>Deliverable</i>	<i>%</i>
1. <i>Contract Signing and upon reception and approval of Deliverable 1</i>	10%
2. <i>Upon reception and approval of Deliverable 2</i>	25%
3. <i>Upon reception and approval of Deliverable 3</i>	25%
4. <i>Upon reception and approval of Deliverable 4</i>	20%
5. <i>Upon reception and approval of Deliverable 5</i>	10%
6. <i>Upon reception and approval of Deliverable 6</i>	10%
TOTAL	100%

TERMS OF REFERENCE

Consultancy for Proposing the Pre-Investment Plan For Digital Transformation Process of INDECOPI

PERU
PE-T1434

1. Background and Justification

- 1.1. Established in 1959, the Inter-American Development Bank (IDB) is the main source of multilateral financing for economic, social and institutional development in Latin America and the Caribbean. It provides loans, grants, guarantees, policy advice and technical assistance to the public and private sectors of its borrowing member countries.
- 1.2. The Inter-American Development Bank (IDB), through its IFD/CTI, provides funding, technical assistance and knowledge products to support governments in key action areas, such as business innovation, social innovation, entrepreneurship ecosystems, digital transformation and productive development. IDB programs in these areas incorporate common themes, such as training in science, technology and innovation for advanced human capital; strengthening scientific and technological infrastructure; designing public policies to promote innovation; and strengthening institutional capacity of the agencies and ministries that are responsible for implementing these policies.
- 1.3. The National Institute for the Defense of Competition and Protection of Intellectual Property – INDECOPI, is a Specialized Public Organization attached to the Presidency of the Council of Ministers (PCM), with legal status of internal public law. Consequently, it enjoys functional, technical, economic, budgetary and administrative autonomy (Legislative Decree No. 1033). INDECOPI provides services to end users (citizens, government entities and companies) within the framework of its subjects of competence (Intellectual Property, Consumer Protection, Bureaucratic Barriers, Free Competition, Bankruptcy Procedures, Unfair Competition, and Dumping and Subsidies), for which purpose it has systems and applications that support said rendering of services, however, currently, these tools are old and show deficiencies for an adequate rendering of services to users, thus presenting relevant gaps in Information Technology and Communication (ICT) and Digital Government.
- 1.4. INDECOPI, has been preparing a pre-investment study with the idea of proposing its financing through a loan contract. The investment project focuses on the improvement of Indecopi's Information and Communication Technology (ICT) systems within the framework of the implementation of the Digital Government Law. The objective of this public investment project is to improve the provision of services that INDECOPI provides to its users (citizens, public

entities, organizations and private companies). To achieve this objective, the following specific objectives have been established: (i) identify the gaps in Information and Communication Technologies and (ii) Formulate and evaluate a pre-investment study to reduce gaps in ICT to improve the systems of Information Technology. Information and Communication (ICT) of Indecopi and provide an adequate provision of services to citizens.

- 1.5. In order to guide the use of public resources destined for investment, in an adequate management that results in an effective provision of services and provision of infrastructure necessary for the development of the country, there is a National System of Multi-year Programming and Management of Investments - Invierte.pe, which according to its regulations determines the investment cycle, and which considers the Phases of: i) Multi-year Investment Programming, which implies the elaboration of the diagnosis and indicators of infrastructure gaps or access to services , ii) Formulation Phase, which implies the formulation of Preinvestment Studies, III) Execution, which implies the physical and financial development of the project, iv) Operation, which implies the operation and maintenance of the project.
- 1.6. In this sense, with the purpose of supporting INDECOPI in the elaboration of the diagnosis of ICT and Digital Government gaps, as well as the formulation of the pre-investment study of the public investment project associated with a probable credit operation, the IDB and the INDECOPI have considered appropriate the hiring of a consultancy that provides technical assistance in said diagnosis of ICT and Digital Government gaps, and the formulation of the pre-investment study of the project within the framework of the Invierte.pe System.
- 1.7. Likewise, INDECOPI, within the framework of its functions and powers, is the entity responsible for protecting the Designation of Origin of Pisco, for which it has the Regulations for the Designation of Origin of Pisco, which indicates that the use of the Pisco Denomination of Origin, is recognized, reserved and authorized for products that meet the characteristics defined in said standards and its Regulations, and comply with all the requirements of the latter and in the applicable legislation.
- 1.8. At present, INDECOPI presents a strong gap in ICT and Digital Government, which limits an adequate provision of quality services, since at present, according to the 90 services registered in the Single Text of Administrative Procedures (TUPA) in matters of Consumer Protection, Intellectual Property and Defense of Competition, there is only a scarce 3% of digitized services only for Intellectual Property, and 0% for Consumer Protection and Competition Defense services , which makes it impossible in the current situation, to improve and develop new digital services. Likewise, there is no Single Platform that integrates the computer systems and / or applications of the seven thematic areas of INDECOPI (Intellectual Property, Consumer Protection, Bureaucratic Barriers, Free Competition, Bankruptcy Procedures, Unfair Competition, and Dumping and Subsidies) , making it difficult for the users of these services to have a good

experience.

- 1.9.** On the other hand, the documentation generated by the Resolutive and Administrative Bodies of the entity, present a low level of digitization, for which the physical information is kept in peripheral files of each area or in the central file of INDECOPI, occupying a large physical space in infrastructure, in addition to exposure to risks such as loss of information, wear and tear due to time, losses due to fires, maintenance costs of the central file, in addition to generating inefficiencies in the consultation of files for INDECOPI procedures, or monitoring online by internal and external users of the documents that are generated in each procedure of the entity, so it is necessary, the digitization of the documentary collection in order to design, develop and implement information systems based on the digitized documentation, through the use of technologies such as big data and / or artificial intelligence.
- 1.10.** Another important point in the INDECOPI Digital Transformation process is interoperability for the exchange of information between entities, users and the private sector, at present, INDECOPI does not have interfaces that allow such information exchange, which limits the capacity to provide adequate services, which reduce the times and costs of users when carrying out government procedures, causing a bad experience when the citizen performs a procedure in the entity.
- 1.11.** Likewise, to enable the INDECOPI Digital Transformation process, it is necessary to have personnel trained in the new Information and Communication Technologies (ICT), capable of carrying out the design, development and implementation of all digital procedures for said transformation. , as well as to later maintain and improve the implemented systems, however, there is a gap in said technological capabilities in Indecopi's staff, which must be identified in order to be included in the Indecopi People Development Plan through the Human Resources Management of the entity.
- 1.12.** It should be noted that as a result of an external audit by the Institutional Control Body of INDECOPI, recommendations were issued to the Information Systems of INDECOPI, indicating that they have a low level of integration, due to the fact that the computer system and software used by INDECOPI, ERP SIA (Integrated Administration System), has deficiencies in its management processes, and that applications and validations are required to the information reported by ERP SIA, such as for example the SICOB (Collection System), SAE (File Administration System) and SIRPC (Consumer Protection Resolutive System), which lack interfaces that link their information, generating duplication of information.
- 1.13.** Therefore, it is necessary to be able to identify the technological and Digital Government gaps and formulate a pre-investment study that identifies the best alternatives for technological solutions in order to reduce such gaps in ICT and Digital Government, and to be able to have an

adequate provision of quality services to the internal user and external user (citizens, public sector and businesses).

- 1.14.** Finally, in order to guarantee the quality, suitability and safety of Pisco to consumers, the necessary equipment and infrastructure is required that is immersed in the Indecopi Digital Transformation process, to carry out the analyzes and evaluations of Pisco samples that ensure compliance with the regulatory requirements established in the Pisco production process. In this way, the Directorate of Distinctive Signs of Indecopi, will be able to develop its supervisory function, carrying out directly and without intermediaries, the control of Pisco after its placement on the market, in order to guarantee its origin and quality of the products designated with the Pisco denomination of origin, for the benefit of all consumers; as well as, maintaining and preserving the prestige of said denomination of origin, in safeguarding the interests of the State.
- 1.15.** In this context, the IDB has approved this Technical Cooperation with the main goal to support strengthening the institutional capacity of INDECOPI, specifically by optimizing and simplifying its activities and procedures to improve the attention of the requests and provide services with enhanced predictability. The objective of the TC is to improve INDECOPI's institutional capacity and improve the IP administration system of Peru by learning about the use, advances and benefits of the implementation of artificial intelligence, big data, machine learning and other related technologies in the analytical process of trademark applications in INDECOPI's operations.

2. Objectives

- 2.1.** The objective of this consultancy is to support INDECOPI in the preparation of a pre-investment proposal at the profile level for the improvement of INDECOPI's Information and Communication Technologies (ICT) systems within the framework of the implementation of the Digital Government Law and institutional strengthening to In order to provide an adequate provision of services to citizens under the guidelines of the National System for Multi-year Programming and Investment Management. In addition, there will be the gap analysis of the Pisco testing and institutional strengthening within the framework of Invierte.pe.

3. Scope of Services

- 3.1.** The consulting firm will elaborate indicators of gaps in ICT and Digital Government and to strengthen the institutional capacity in accordance with the regulations of the Invierte.pe System. The firm will also formulate the pre-investment proposal.
- 3.2.** Based on the diagnostics of the INDECOPI's information system, including its services rendered

to the external and internal users, technological infrastructure including the equipment, technological solutions proposed, capacity of the institutional human resources, the Consulting Firm must identify the Information Technology gaps, as well as the Digital Government gaps, which limit the transformation towards a digital Indecopi, in order to provide quality services to all its users.

- 3.3.** The needs for equipment, services, ICT and infrastructure for the implementation of a laboratory for the physical-chemical analysis of samples of grape brandy (Pisco) must be identified, in accordance with the Regulation of Designation of Origin of Pisco.
- 3.4.** For the formulation of the pre-investment study, all the corresponding contents and the structure must be strictly complied with- EF / 63.01 of the National System for Multi-year Programming and Investment Management and its amendments, if applicable. The contents for the preparation of the pre-investment study at the profile level are divided into the following requiring the details to be elaborated in the below: i) Executive Summary, ii) Identification, iii) Formulation, iv) Evaluation, v) Conclusions, vi) Recommendations, and vii) Annexes;
- i. **Executive Summary.** It is the document that will show the conditions in which the project is declared viable. The Executive Summary must be a document that reflects, in a concise manner, the main characteristics of the project and the results of the study at the profile level. The content of the executive summary is found in the appendix of Annex N ° 07 of the General Directive of the Invierte.pe System.
 - ii. **Identification.** It will include a diagnostic section, with quantitative and qualitative information that supports the analysis, interpretation, and measurement of the current situation that the project seeks to intervene, among others. You must define the problem, its causes and effects, specifying the set of evidence and indicators that allow them to be sustained. It must define the objective, its ends, and its means, as well as the approach to the alternative solution to the problem.
 - iii. **Formulation.** It will include the definition of the project evaluation horizon, it will analyze the demand and supply of the project services (situations with and without a project), it will determine the gap of the public good or service to be provided, it will carry out a technical analysis of the alternative solution by sizing the resource requirements for the investment and operation phases. This module should also include product goals, describe Project management, and calculate costs at market prices.
 - iv. **Evaluation.** It should include social costs and benefits, social profitability indicators and sensitivity, sustainability, and environmental impact analysis (if applicable). It must also carry out, if applicable, a private evaluation, in addition to proposing the organization for the management of the project in its execution and operation (sustainability analysis). This module will include the financing structure of the investment and of the operation and maintenance. Finally, it will present the logical framework matrix of the alternative solution with the relevant indicators and their values in the base and expected year, for the purposes of monitoring and ex post evaluation of the intervention.
 - v. **Conclusions.** The result (viable or not viable) of the project formulation and evaluation process must be indicated and the main arguments that support said result must be detailed.

- vi. **Recommendations.** Technical recommendations should be made for the UEI that will assume the execution and subsequent operation and maintenance, if applicable. Such recommendations must be linked to the actions or conditions that must be ensured to reduce or eliminate the risks that the project could face during the following phases of the Investment Cycle.
- vii. **Annexes.** Include as annexes the information that supports or details the topics analyzed in the profile.

3.5. To support the work of the firm, INDECOPI will deliver the necessary information requirements that it has at its disposal in the appropriate and opportune times. The IDB technical team will also support the consulting firm in this task with relevant information that could strengthen the document, in particular, in the institutional analysis of INDECOPI as executing agency and in the economic evaluation of the project.

4. Key Activities

- 4.1.** Prepare an inventory and situational diagnosis of all the computer systems and / or platforms that operate in INDECOPI at the level of internal users, as well as those used for the provision of services to external users (citizens, public entities, organizations and companies private).
- 4.2.** Prepare an inventory and situational diagnosis of the technological infrastructure that supports all INDECOPI systems and / or platforms, as well as of the productive factors for the implementation of the Pisco laboratory and institutional strengthening.
- 4.3.** Review the gap analysis and proposed model of the Information Technology (systems and Technological Infrastructure) and Digital Government, and institutional strengthening, for which a technical analysis of the best alternative solutions for the closure of gaps, developing a schedule of activities and goals.
- 4.4.** Review the gap analysis of knowledge in the area of ICT, Analysis of samples and institutional strengthening by INDECOPI personnel, determining the subjects, courses, and methodologies necessary to implement to close these gaps.
- 4.5.** Identify gaps for analysis of Pisco samples in the Pisco Laboratory
- 4.6.** Prepare the indicator of gaps in Information Technology and Digital Government in accordance with the regulations of the National System of Multi-year Programming and Investment Management - Invierte.pe.
- 4.7.** Formulate a pre-investment study that identifies the best alternative technological solutions to reduce gaps in ICT- Digital Government, equipment in the Pisco laboratory and institutional strengthening at INDECOPI.
- 4.8.** Carry out a feasibility analysis for the National System for Multi-year Programming and Investment Management
- 4.9.** The consulting service will carry out the following activities:
 - The consulting service will support the Project Formulating Unit and the Office of Multi-year Investment Programming of the Presidency of the Council of Ministers (PCM) in technical and methodological aspects related to the preparation of the public investment project

profile.

- Carry out all the corresponding analyzes to be included in the profile of the public investment project.
- Provide comments to the IDB project documents when requested.
- Continuously share draft inputs to the INDECOPI team for feedback and validation and to the IDB team when requested.
- Adjust the deliverables in accordance with comments or observations from INDECOPI or the IDB.
- Respond to the comments or observations that the INDECOPI Formulating Unit or other competent area may make, within the framework of reviews of partial deliverables or the final pre-investment study issued for a favorable opinion prior to the declaration of viability.
- Other tasks that were identified as contributing to the objective of the consultancy and that fall within the same level of expected effort.

5. Deliverables

- 5.1. Deliverable 1: Work plan.** It will detail the work schedule with the main milestones and expected dates for each of the activities and expected results in the consultancy. The work plan must include the maximum feasibility date of the public investment project profile.
- 5.2. Deliverable 2: Indicators of gaps in Information Technology and Digital Government.** Report containing the indicators of gaps in ICT-Digital Government and productive factors to implement the Pisco laboratory based on the diagnosis conducted, which must contain a (01) Report executive, background, inventory and situational diagnosis of ICT-Digital Government of INDECOPI, Identification of gaps in ICT and Digital Government, Pisco Laboratory for sample analysis, institutional strengthening, technical analysis, conclusions and recommendations. As well as the Preparation of Format N ° 04-A (ICT Gap and Digital Government Indicator) of the General Directive of the National System of Multi-year Programming and Investment Management - Invierte.pe.
- 5.3. Deliverable 3: Identification module of the public investment project.** Based on the description in the previous section and the updated requirements of the National System for Multi-year Programming and Investment Management.
- 5.4. Deliverable 4: Formulation of the public investment project proposal.** Based on the description in the previous section and the updated requirements of the National System for Multi-year Programming and Investment Management.
- 5.5. Deliverable 5: Evaluation of the public investment project and feasibility analysis in the National System for Multi-year Programming and Investment Management.** Based on the description in the previous section and the updated requirements of the National System for Multi-year Programming and Investment Management, said deliverable must contain the final pre-investment study with all the contents including the feasibility analysis and agreement with Annex N ° 07 of the General Directive of Invierte.pe.

6. Project Schedule and Milestones

#	Detail	M1	M2	M3	M4	M5	M6	M7
1	Work Plan							
2	Indicators of gaps in Information Technology and Digital Government							
3	Identification module of the public investment project							
4	Formulation of the public investment project proposal							
5	Evaluation of the public investment project and feasibility analysis in the National System for Multi-year Programming and Investment Management.							

7. Reporting Requirements & Acceptance Criteria

7.1. The consulting firm will send the document reports for each stage of the consultancy electronically to the IDB project team leader. The IDB team leader will send his and the other project participants' comments to the reports, which the consulting firm will need to discuss and address in the final versions of each document report. Deliverables must contain the corresponding supporting information by way of annexes, in the case of databases, they must be incorporated as part of the deliverables. All deliverables should be presented electronically in excel, word, ppt, or images.

8. Characteristics of the Consultancy

- Type of contract and modality: PEC, Local, Firm
- Length of contract: 7 months
- Starting date: September 2021
- Location: Lima, Peru (depending on the travel conditions)
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI, gccrespi@iadb.org

9. Qualifications

9.1. The Consulting Firm must specialize in Information Technology and Communication Systems with experience in formulation and evaluation of pre-investment studies in ICT and public management, with emphasis on government solutions within the framework of the results-based management system. , as well as the design and evaluation of investment policies, strategies and projects. The consulting firm must have a presence in Lima and have a multidisciplinary team that can support technical aspects of Information Technology services, human resources

management, project management, formulation and evaluation of public investment projects.

- 9.2. The consulting firm must have at least 10 years of experience and a minimum experience of having satisfactorily led the formulation and declaration of viability of at least three (3) public investment projects with financing from multilateral credit organizations within the framework of the National System of Multiannual Programming and Investment Management that has been in force since 2017. The firm must have in-depth knowledge of the rules and management instruments of the public sector in Peru, and especially the public investment system. Experience of leading at least 2 projects on elaboration of the diagnosis and indicators of ICT gaps and the formulation of pre-investment studies in ICT will required.
- 9.3. The Consulting Team should be comprised of Project Leader, ICT and Digital Government Specialist, Investment Project Specialist, etc. The Team will be led and coordinated by the Project Leader who will manage and lead the responsibilities indicated within the consultancy. The Project Leader should hold minimum of Bachelor's degree or higher in System Engineering, Computer Engineering, or similar fields. A minimum 10 years of relevant work experience in formulation and evaluation of pre-investment studies in ICT, Digital Government, and implementation or implementation of quality systems.
- 9.4. ICT and Digital Government Specialist should hold minimum of Bachelor's degree or higher in Computer Engineering, Computer Science, System Engineering, or similar fields. The Specialist in Information and Communication Technologies (ICT) and Digital Government should have a minimum 10 years of experience in digital transformation processes in public or private entities.
- 9.5. Investment Project Specialist: The Investment Project Specialist should hold minimum of Bachelor's degree or higher in Economics or business sciences. The Specialist should have a minimum 5 years of experience in formulation and evaluation of pre-investment studies in Information and Communication Technologies (ICT) and implementation of procedures or management systems.

10. Schedule of Payments

- 10.1. Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required. The Bank wishes to receive the most competitive cost proposal for the services described herein.
- 10.2. The IDB Official Exchange Rate indicated in the RFP will be applied for necessary conversions of local currency payments.

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<i>Deliverable</i>	<i>%</i>
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13. <i>Upon reception and approval of Deliverable 3</i>	25%
14. <i>Upon reception and approval of Deliverable 4</i>	20%
15. <i>Upon reception and approval of Deliverable 5</i>	20%
TOTAL	100%